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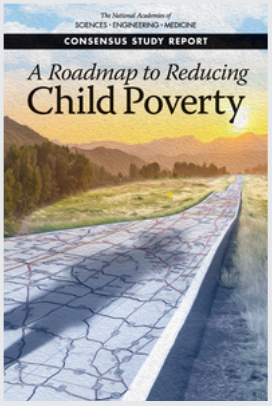

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A Roadmap to Reducing Child Poverty

Committee on Building an Agenda to Reduce the
Number of Children in Poverty by Half in 10 Years

Greg Duncan and Suzanne Le Menestrel, *Editors*
Board on Children, Youth, and Families
and
Committee on National Statistics
Division of Behavioral and Social Sciences and Education

A Consensus Study Report of

The National Academies of
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The U.S. Congress asked the National Academies of Sciences, Engineering, and Medicine to provide a nonpartisan, evidence-based report that would provide its assessment of the most effective means for reducing child poverty by half in the next 10 years. The National Academies appointed the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years to address its charge. The committee thanks the following sponsors of this study for their support: the Doris Duke Charitable Foundation; the Foundation for Child Development; the Joyce Foundation; the Russell Sage Foundation; the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services; the William T. Grant Foundation; and the W.K. Kellogg Foundation.

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This Consensus Study Report was reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise. The purpose of this independent review is to provide candid and critical comments that will assist the National Academies in making each published report as sound as possible and to ensure that it meets the institutional standards for quality, objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process.

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Although the reviewers listed above provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations of this report nor did they see the final draft before its release. The review of this report was overseen by V. Joseph Hotz, Department of Economics, Duke University, and Joseph P. Newhouse, Harvard University. They were responsible for making certain that an independent examination of this report was carried out in accordance with the standards of the National Academies and that all review comments were carefully considered. Responsibility for the final content rests entirely with the authoring committee and the National Academies.

One of the pleasures of serving on a National Academies committee such as ours is that it provides opportunities to strike up friendships with

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individuals with very different interests and viewpoints. It also allows us to share in the joys and sorrows of fellow committee members. We dedicate this report to the memory of Joseph Smeeding, a bright young doctoral student at the University of Arizona and son of committee member Timothy Smeeding. He died on January 12, 2018, after a 2-year battle with glioblastoma multiforme.

Greg Duncan, *Chair*
Committee on Building an Agenda to Reduce
the Number of Children in Poverty by Half in 10 Years

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Summary

The strengths and abilities children develop from infancy through adolescence are crucial for their physical, emotional, and cognitive growth. And that growth in turn enables them to achieve success in school and to become responsible, economically self-sufficient, and healthy adults. Capable, responsible, and healthy adults are the foundation of any well-functioning and prosperous society, yet in this regard the future of the United States is not as secure as it could be. This is because millions of American children live in families with incomes below the poverty line. A wealth of evidence suggests that a lack of adequate family economic resources compromises children's ability to grow and achieve success in adulthood, hurting them and the broader society as well.

Recognizing this challenge to America's future, Congress included in an omnibus appropriations bill that was signed into law in December 2015 a provision directing the National Academies of Sciences, Engineering, and Medicine to conduct a comprehensive study of child poverty in the United States. The heart of this congressional charge is to identify evidence-based programs and policies for reducing the number of children living in poverty in the United States by half within 10 years. This 10-year window meant that the National Academies' study would need to focus on policies that could affect poor parents' resources in the near term, rather than on investments such as improved education for poor children that might well reduce poverty for future generations. Specifically, Congress requested that the committee provide the following:

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A Roadmap to Reducing Child Poverty

1. a review of research on linkages between child poverty and child well-being;
2. objective analyses of the poverty-reducing effects of major assistance programs directed at children and families; and
3. policy and program recommendations for reducing the number of children living in poverty—including those living in deep poverty (with family incomes below one-half the poverty line)—in the United States by half within 10 years.

After nearly 2 years of work, the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years (hereafter, the committee) has completed a review of the research literature and its own commissioned analyses to answer some of the most important questions surrounding child poverty and its eradication in the United States. Moreover, the committee was able to formulate two program and policy packages, described below, that meet the 50 percent poverty-reduction goals while at the same time increasing employment among low-income families.

WHY IS CHILD POVERTY SUCH A SERIOUS PROBLEM?

Although some children are resilient to the adverse impacts of economic poverty, many studies show significant associations between poverty and poor child outcomes, such as harmful childhood experiences, including maltreatment, material hardship, impaired physical health, low birthweight, structural changes in brain development, and mental health problems. Studies also show significant associations between child poverty and lower educational attainment, difficulty obtaining steady, well-paying employment in adulthood, and a greater likelihood of risky behaviors, delinquency, and criminal behavior in adolescence and adulthood.

Because these correlations do not in themselves prove that low income is the active ingredient producing worse outcomes for children, the committee focused its attention on the literature addressing the *causal* impacts of childhood poverty on children. The committee concludes from this review that **the weight of the causal evidence does indeed indicate that income poverty itself causes negative child outcomes, especially when poverty occurs in early childhood or persists throughout a large portion of childhood.**[1] (The full text of this and other conclusions and recommendations included in the Summary are presented in Box S-1.)

The committee also reviewed the much less extensive evidence on the macroeconomic costs of child poverty to measure how much child poverty costs the nation overall. Studies in this area attempt to attach a monetary

[1] Conclusion 3-8, Chapter 3.

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value to the reduction in adult productivity, increased costs of crime, and increased health expenditures associated with children growing up in poor families. Estimates of these costs range from 4.0 to 5.4 percent of the Gross Domestic Product—roughly between $800 billion and $1.1 trillion annually if measured in terms of the size of the U.S. economy in 2018.[2] As we demonstrate below, outlays for new programs that would reduce child poverty by 50 percent would cost the United States much less than these estimated costs of child poverty.

DO POVERTY-REDUCING PROGRAMS IN THE UNITED STATES PROMOTE CHILDREN'S HEALTHY DEVELOPMENT?

Given the evidence that poverty harms children's well-being, policies designed to reduce poverty by rewarding work or providing safety-net benefits might be expected to have the opposite effect. The committee examined research findings to assess whether that is the case. A number of researchers have studied the effects on children of changes in policies, such as the emerging availability of food stamps across the country in the 1960s and 1970s and expansions of the Earned Income Tax Credit (EITC) Program in the 1990s. Further expansions of some of these policies are obvious candidates for meeting the 50 percent poverty-reduction goal in the committee's statement of task, so it is particularly important to assess the evidence of their past impacts on children. **The committee finds that many programs that alleviate poverty—either directly, by providing income transfers, or indirectly, by providing food, housing, or medical care—have been shown to improve child well-being.**[3]

Specifically, we find that

- **periodic increases in the generosity of the Earned Income Tax Credit Program have improved child educational and health outcomes,**[4]
- **the Supplemental Nutrition Assistance Program (SNAP) has improved birth outcomes as well as many important child and adult health outcomes,**[5]
- **expansions of public health insurance for pregnant women, infants, and children have led to substantial improvements in child and adult health, educational attainment, employment, and earnings,**[6] **and**

[2] This is based on a Gross Domestic Product of $20.41 trillion in the second quarter of 2018. See Table 3, https://www.bea.gov/system/files/2018-09/gdp2q18_3rd_3.pdf.

[3] Conclusion 3-8, Chapter 3.

[4] Conclusion 3-3, Chapter 3.

[5] Conclusion 3-5, Chapter 3.

[6] Conclusion 3-7, Chapter 3.

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BOX S-1
Conclusions and Recommendations Referenced in the Summary

CONCLUSION 3-3: Periodic increases in the generosity of the Earned Income Tax Credit Program have improved children's educational and health outcomes.

CONCLUSION 3-5: The Supplemental Nutrition Assistance Program has been shown to improve birth outcomes as well as many important child and adult health outcomes.

CONCLUSION 3-6: Evidence on the effects of housing assistance is mixed. Children who were young when their families received housing benefits enabling them to move to low-poverty neighborhoods had improved educational attainment and better adult outcomes.

CONCLUSION 3-7: Expansions of public health insurance for pregnant women, infants, and children have generated large improvements in child and adult health and in educational attainment, employment, and earnings.

CONCLUSION 3-8: The weight of the causal evidence indicates that income poverty itself causes negative child outcomes, especially when it begins in early childhood and/or persists throughout a large share of a child's life. Many programs that alleviate poverty either directly, by providing income transfers, or indirectly, by providing food, housing, or medical care have been shown to improve child well-being.

CONCLUSION 4-4: Government tax and transfer programs reduced the child poverty rate, defined by the Supplemental Poverty Measure (SPM), modestly between 1967 and 1993, but became increasingly important after 1993 because of increases in government benefits targeted at the poor and near poor. Between 1993 and 2016, SPM poverty fell by 12.3 percentage points, from 27.9 to 15.6 percent, more than twice as much as market-income-based poverty.

CONCLUSION 5-1: Using a threshold defined by 100 percent of the Supplemental Poverty Measure, no single program or policy option developed by the committee was estimated to meet the goal of 50 percent poverty reduction. The $3,000 per child per year child allowance policy comes closest, and it also meets the 50 percent reduction goal for deep poverty.

CONCLUSION 5-2: A number of other program and policy options lead to substantial reductions in poverty and deep poverty. Two involve existing programs—the Supplemental Nutrition Assistance Program and housing vouchers. The option of a 40 percent increase in Earned Income Tax Credit benefits would also reduce child poverty substantially.

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CONCLUSION 5-3: Programs producing the largest reductions in child poverty are estimated to cost the most. Almost all of the committee-developed program options that lead to substantial poverty-reduction cost at least $20 billion annually.

CONCLUSION 5-4: Projected changes in earnings and employment in response to simulations of our program and policy options vary widely, but taken as a whole they reveal a tradeoff between the magnitude of poverty reduction and effects on earnings and employment. Work-based program expansions involving the Earned Income Tax Credit and the Child and Dependent Care Tax Credit were estimated to increase earnings by as much as $9 billion and employment by as many as half a million jobs. Programs such as the child allowances and expansions of the housing voucher program were estimated to reduce earnings by up to $6 billion and jobs by nearly 100,000. The bulk of the remaining program and policy proposals are estimated to evoke more modest behavioral responses.

CONCLUSION 5-5: The 20 program and policy options generate disparate impacts across population subgroups in our simulations. Although virtually all of them would reduce poverty across all of the subgroups we considered, disproportionately large decreases in child poverty occur only for Black children and children of mothers with low levels of education. Hispanic children and immigrant children would benefit relatively less.

CONCLUSION 6-1: Two program and policy packages developed by the committee met its mandated 50 percent reduction in both child poverty (defined by 100% of Supplemental Poverty Measure [SPM]) and deep poverty (defined by 50% of SPM). The first of these packages combines work-oriented policy expansions with increases in benefit levels in the housing voucher and Supplemental Nutrition Assistance Programs. The second package combines work-oriented expansions with a child allowance, a child support assurance program, and elimination of immigrant restrictions on benefits built into the 1996 welfare reforms. Both packages increase work and earnings, and both are estimated to cost between $90 and $111 billion per year.

CONCLUSION 6-2: The committee was unable to formulate an evidence-based employment-oriented package that would come close to meeting its mandate of reducing child poverty by 50 percent. The best employment-oriented package it could design combines expansions of the Earned Income Tax Credit, the Child and Dependent Care Tax Credit, a minimum wage increase, and a promising career development program. Although this package is estimated to add more than a million workers to the labor force, generate $18 billion in additional earnings, and cost the government only $8.6 to $9.3 billion annually, its estimated reductions in child poverty are less than half of what is needed to meet the goal.

continued

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BOX S-1 Continued

CONCLUSION 7-1: Increasing both awareness of and access to effective, safe, and affordable long-acting reversible contraception (LARC) devices reduces the incidence of unplanned births, which could in turn reduce child poverty. In contrast, policies that reduce access to LARC by cutting Medicaid, Title X funding of family planning services, or mandated contraceptive coverage appear to increase the number of unintended births and thus also child poverty.

CONCLUSION 7-2: Although increasing the proportion of children living with married or cohabiting parents, as opposed to single parents, would almost certainly reduce child poverty, the impacts of existing social programs designed to promote such a change are uncertain. Evidence from these programs is inconclusive and points to neither strong positive nor negative effects. In the early 2000s, an ambitious attempt to develop programs that would improve couple-relationship skills, promote marriage, and improve child well-being failed to boost marriage rates and achieve most of their other longer-run goals.

CONCLUSION 7-4: There is insufficient evidence to identify mandatory work policies that would reliably reduce child poverty, and it appears that work requirements are at least as likely to increase as to decrease poverty. The dearth of evidence also reflects underinvestment over the past two decades in methodologically strong evaluations of the impacts of alternative work programs.

RECOMMENDATION 9-10: The U.S. Office of Management and Budget (OMB) should convene working groups of appropriate federal program, research, and statistical agencies to assess this report's conclusions about program packages that are capable of reducing child poverty by half within 10 years of adoption. OMB should also convene working groups charged with assessing the report's recommendations for research and data collection to fill important gaps in knowledge about effective anti-child-poverty programs. These working groups should be tasked to recommend action steps, and OMB should work with relevant agencies to draw up implementation plans and secure appropriate resources. The working groups should consult with relevant state agencies and outside experts, as appropriate, to inform their deliberations.

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- **evidence on the effects of housing assistance is mixed, although children who were young when their families received housing benefits that allowed them to move to low-poverty neighborhoods had improved educational and adult outcomes.**[7]

HOW MUCH DO CURRENT PROGRAMS IN THE UNITED STATES REDUCE CHILD POVERTY?

Mindful of the evidence that links childhood poverty with problems in adulthood, as well as studies showing the benefits for children from some of the nation's anti-poverty programs, the committee sought to understand how child poverty has been affected by current programs and policies. In 2015, the latest year for which the committee was able to generate estimates that took full account of benefits from federal tax credits and other safety net programs, more than 9.6 million U.S. children (13.0%) lived in families with annual incomes below a poverty line defined by the Supplemental Poverty Measure (SPM).[8]

That same year, some 2.1 million children (2.9%) lived in "deep poverty," defined as having family resources below one-half of the poverty-based line. Child poverty rates were much higher for Black children (18%) and Hispanic children (22%) than for non-Hispanic White children (8%); for children in single-parent families (22%) than for those in two-parent families (9%); for children in immigrant families (21%) than for those in non-immigrant families (10%); and for children in families with no workers (62%) than for those in families with part-time workers (28%) or with full-time workers (7%). Poverty rates also appear to be much higher among American Indian children; however, precise rates are unavailable.

The committee examined the poverty-reducing impacts of the current set of major federal assistance programs by estimating how child poverty rates would have changed had each of these programs *not* been operating (see Figure S-1).[9] The two refundable tax credits—the EITC and the refundable portion of the Child Tax Credit—are the most successful at alleviating poverty, as shown in Figure S-1. We estimate that the elimination of these

[7] Conclusion 3-6, Chapter 3.

[8] The committee's child poverty estimates are lower than those in official statistics. Its estimates were produced by a widely used microsimulation model, TRIM3, which corrects for the underreporting of a number of important sources of income in household surveys. The 2015 SPM poverty lines for two-parent, two-child families were about $22,000 for those owning a home free and clear and about $26,000 for renters and homeowners with a mortgage.

[9] It is important to note that these estimates of the poverty-reducing impact of current programs do not account for the extent to which eliminating a given program might also affect work and other decisions that would in turn affect a family's market income.

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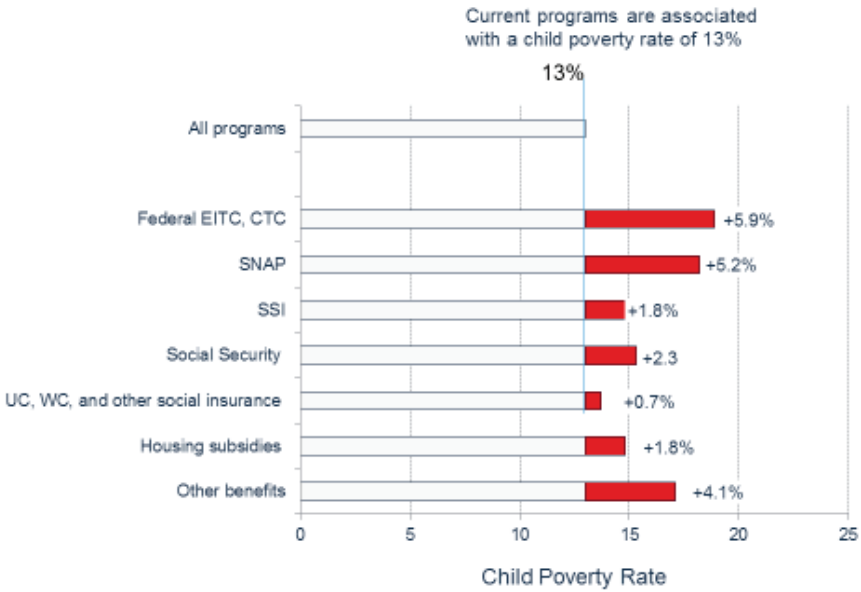

FIGURE S-1 Changes in child poverty rates if each current income support program were eliminated.
NOTE: CTC = Child Tax Credit, EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program, SSI = Supplemental Security Income, UC = Unemployment Compensation, WC = Workers' Compensation.
SOURCE: Estimates from TRIM3 commissioned by the committee, using the Supplemental Poverty Measure with the Current Population Survey Annual Social and Economic Supplement, with income corrected for underreporting.

tax credits would raise SPM child poverty to 18.9 percent, an increase of 5.9 percentage points or 4.4 million children.

The poverty-reducing benefits from the Supplemental Nutrition Assistance Program (SNAP) are the next largest: In the absence of SNAP benefits, the child poverty rate would have increased to 18.2 percent. In the absence of Social Security benefits, which go to many multigeneration households containing children, the child poverty rate would have been 15.3 percent. Without the Supplemental Security Income (SSI) Program, the child poverty rate would have increased to 14.8 percent.

In contrast to rates of child poverty defined by SPM thresholds, rates of deep poverty (50% of SPM thresholds) are affected very little by refundable tax credits. This is because most families in deep poverty have very low levels of earned income, and all three of the tax benefits are based on earnings. SNAP is by far the single most important federal program for reducing deep poverty; it is estimated that eliminating SNAP would nearly

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double (from 2.9 to 5.7%) the fraction of children in families with incomes below the deep poverty threshold.

The demographic groups with the highest child poverty rates—Blacks and Hispanics, single-parent families, and families with poorly educated parents—benefit disproportionately from both SNAP and the tax benefit programs. The two exceptions are children in noncitizen families, who benefit less from both programs, and children in families with no workers, who do not benefit from tax-related benefit programs.

IS A GOAL OF 50 PERCENT REDUCTION IN CHILD POVERTY REALISTIC?

Both the U.S. historical record and the experience of peer countries show that reducing child poverty in the United States is an achievable policy goal. Child poverty fell by nearly one-half between 1967 and 2016 (see Figure S-2).[10] Rates of deep child poverty declined as well over that period, both overall and across subgroups of children defined by race and ethnicity.

Historically, macroeconomic growth has fueled growth in wages and employment, which in turn has led to corresponding reductions in poverty. However, during the past several decades economic growth has not been shared equally across the income distribution. Wages have stagnated or declined for lower-skilled male workers since the early 1970s, while the wages of lower-skilled women have stagnated since 2000. **During the 1967–2016 period, child poverty rates varied with both business cycles and changes in social benefit programs. Government tax and transfer programs reduced child poverty modestly between 1967 and 1993, but they became increasingly important after 1993 because of increases in government benefits (mainly the Earned Income Tax Credit) targeted at the poor and near poor. Between 1993 and 2016, SPM poverty fell by 12.3 percentage points, dropping from 27.9 to 15.6 percent.**[11]

The United States spends less to support low-income families with children than peer English-speaking countries do, and by most measures it has much higher rates of child poverty. Two decades ago, child poverty rates were similar in the United States and the United Kingdom. That began to change in March 1999, when Prime Minister Tony Blair pledged to end child poverty in a generation and to halve child poverty within 10 years. Emphasizing increased financial support for families, direct investments in children, and measures to promote work and increase take-home pay,

[10] As defined by the U.S. Census Bureau, an SPM-based poverty measure that counts cash income, tax credits, and near-cash benefits (e.g., SNAP benefits) in its measure of household resources.

[11] Conclusion 4-4, Chapter 4.

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A Roadmap to Reducing Child Poverty

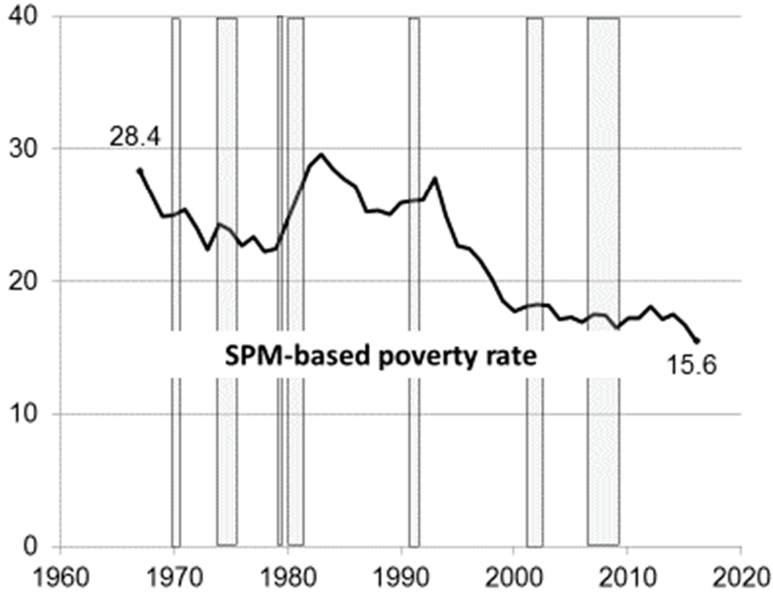

FIGURE S-2 Child poverty rates as measured by the Supplemental Poverty Measure (SPM), 1967–2016, using the Current Population Survey Annual Social and Economic Supplement (CPS ASEC).
NOTE: Shaded areas indicate recession years. Poverty estimates use the SPM with income that is not corrected for underreporting, as it is not feasible to correct income reporting in the CPS ASEC over the entire period shown. Corrections for underreporting account for the bulk of the 13.0% vs. 15.6% poverty rate differences shown in Figures S-1 and S-2.
SOURCE: Analyses commissioned by the committee and conducted by Christopher Wimer (2017).

the United Kingdom enacted a range of measures that made it possible to meet the 50 percent poverty-reduction goal by 2008—a year earlier than anticipated. More recently, the Canadian government introduced the Canada Child Benefit in its 2016 budget. According to that government's projections, the benefit will reduce the number of Canadian children living in poverty by nearly one-half.

REDUCING CHILD POVERTY IN THE UNITED STATES BY HALF IN 10 YEARS

The heart of the committee's charge is to identify policies and programs that have the potential to reduce child poverty and deep poverty in the United States by half within 10 years. With hundreds of local, state, federal,

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and international anti-poverty program and policy models to choose from, the committee developed a set of criteria to guide its selection process. These included (1) the strength of the research and evaluation evidence; (2) likely reductions in the number of poor children; (3) the extent of child poverty reduction achievable within the subgroups with the highest child poverty rates; (4) cost; and (5) positive impacts on work, marriage, opportunity, and social inclusion.

The committee examined 10 program and policy options. Four of them are tied to work, three of them modify existing safety net programs, two come from other countries, and the final one modifies existing provisions relating to immigrants. It then formulated two variations for each of the 10 options, yielding 20 scenarios in all. The 10 options are as follows:

Program and policy options tied to work:

1. expanding the EITC;
2. expanding child care subsidies;
3. raising the federal minimum wage; and
4. implementing a promising training and employment program called WorkAdvance nationwide.

Modifications to existing safety net programs:

5. expanding SNAP;
6. expanding the Housing Choice Voucher Program; and
7. expanding the SSI program.

Options used in other countries:

8. introducing a universal child allowance (which, in the U.S. context, can also be thought of as an extension of the federal child tax credit delivered monthly instead of once a year); and
9. introducing a child support assurance program that sets guaranteed minimum child support amounts per child per month.

Modifications to existing provisions relating to immigrants:

10. increasing immigrants' access to safety net programs.

The committee's simulations showed that no single program or policy option that we considered could meet the goal of reducing child poverty by one-half. A $3,000 per child per year child allowance policy would produce the largest poverty reduction, and it would meet the goal of reducing deep poverty (50% of SPM poverty) by one-half.[12] A number of other program and policy options were also estimated to reduce child poverty substantially

[12] Conclusion 5-1, Chapter 5.

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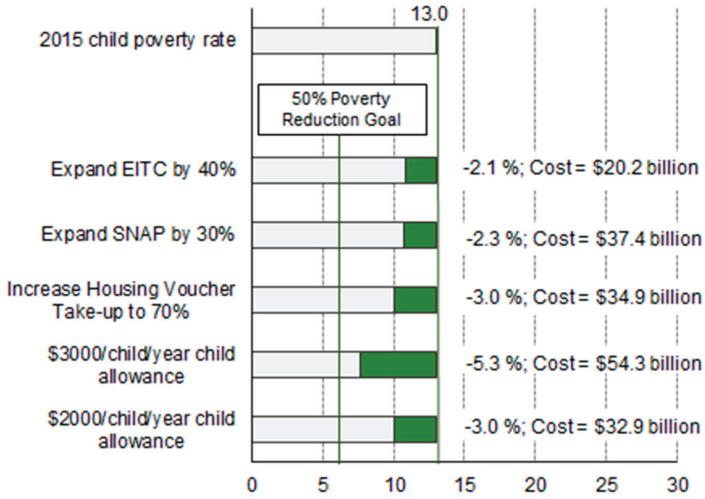

FIGURE S-3 Reductions in child poverty and cost of several policy and program options developed by the committee.
NOTES: Costs are based on provisions of the 2015 tax law applied to income for 2015. Incomes are corrected for underreporting. EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program.
SOURCE: Estimates from TRIM3 commissioned by the committee.

(see Figure S-3). Three of them involve modifications to existing programs: the EITC, SNAP, and subsidized housing.[13]

Policy makers may wish to balance poverty reduction against other policy goals, including boosting employment among low-income families as well as containing costs, keeping in mind the consequences of raising revenues to pay for the policies and programs that reduce the number of children raised in a poor family. As might be expected, **there is a strong positive relationship between cost and the number of children moved out of poverty. Almost all of the committee-developed program options that would lead to substantial poverty reductions were estimated to cost at least $20 billion annually.**[14]

The committee devoted significant effort to estimating how families might change their work effort in response to each of the policy and program options under consideration. It found considerable variation in the changes in employment and earnings resulting from the simulated implementation of the 20 program and policy options. **Work-based program**

[13] Conclusion 5-2, Chapter 5.
[14] Conclusion 5-3, Chapter 5.

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expansions involving the Earned Income Tax Credit and the Child and Dependent Care Tax Credit were estimated to increase earnings by as much as $9 billion and employment by as many as half a million jobs. Programs such as child allowances and expansions of the housing voucher program were estimated to reduce earnings by up to $6 billion and jobs by nearly 100,000.[15]

The 20 program and policy options the committee examined generated different impacts in different subgroups of the population. **Although virtually all of these options reduced poverty across all of the subgroups considered, there were disproportionately large decreases in child poverty for Black children and children of mothers with low levels of education. Hispanic children and children in immigrant families benefited relatively less.**[16]

PACKAGES OF POLICIES AND PROGRAMS TO REDUCE CHILD POVERTY AND DEEP POVERTY

Since none of the committee's individual policy and program options met both of the 50 percent reduction goals—for both poverty and deep poverty—the committee developed the four program and policy "packages" shown in Table S-1 and assessed their expected impacts.

The *work-oriented package* attempted to capitalize on the fact that gains in steady employment and earnings are among the strongest correlates of escaping poverty. Accordingly, this package was focused exclusively on policies tied to paid employment by combining expansions of two tax credits (the EITC and Child and Dependent Care Tax Credit [CDCTC]) with an increase in the minimum wage and implementing the WorkAdvance Program nationwide. **Although combining these four programs was estimated to add a million workers to the labor force, generate $18 billion in additional earnings, and cost only $8.7 billion, the reduction in child poverty it was estimated to bring about was less than one-half of what is needed to meet the 50 percent poverty-reduction goal.**[17]

It was disappointing to conclude that this work-oriented package would be unable to achieve adequate reductions in child poverty, in light of the often-stated policy goal of moving low-income families from reliance on government assistance and toward greater participation in the labor force. Although states have been testing a number of new work-oriented programs, especially those including work requirements, most states have evaluated the new programs using weak methods that fall far short of the evidentiary standard set by the National Academies for its reports. Some of

[15] Conclusion 5-4, Chapter 5.
[16] Conclusion 5-5, Chapter 5.
[17] Conclusion 6-2, Chapter 6.

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TABLE S-1 Components of the Four Packages and Their Estimated Costs and Impact on Poverty Reduction and Employment Change

		1. Work-oriented Package	2. Work-based and Universal Supports Package	3. Means-tested Supports and Work Package	4. Universal Supports and Work Package
Work-oriented Programs and Policies	Expand EITC	X	X	X	X
	Expand CDCTC	X	X	X	X
	Increase the Minimum Wage	X			X
	Roll Out WorkAdvance	X			
Income Support-oriented Programs and Policies	Expand Housing Voucher Program			X	
	Expand SNAP Benefits			X	
	Begin a Child Allowance		X		X
	Begin Child Support Assurance				X
	Eliminate 1996 Immigration Eligibility Restrictions				X
	Percentage Reduction in the Number of Poor Children	–18.8%	–35.6%	–50.7%	–52.3%
	Percentage Reduction in the Number of Children in Deep Poverty	–19.3%	–41.3%	–51.7%	–55.1%
	Change in Number of Low-income Workers	+1,003,000	+568,000	+404,000	+611,000
	Annual Cost, in Billions	$8.7	$44.5	$90.7	$108.8

NOTE: CDCTC = Child and Dependent Care Tax Credit, EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program.

the committee's research recommendations address the need for building a more solid and reliable body of evidence on current programs.

Our second package, the *work-based and universal supports package,* builds on the work-based package by combining expansions of two tax credits (the EITC and CDCTC) with a $2,000 child allowance designed to replace the Child Tax Credit. **This package generates an estimated 36 percent reduction in poverty and 41 percent reduction in deep poverty, which**

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also falls short of meeting the full 50 percent reduction goals. However, at a cost of $44.5 billion per year, and with increases of employment and earnings amounting to 568,000 jobs and $10 billion, respectively, it offers a potentially appealing approach to meeting policy goals that are often in competition with one another.

The *means-tested supports and work package* combined expansions of the two tax credits in the work-oriented package with expansions of two existing income support programs: SNAP (formerly known as food stamps) and housing voucher programs. **The committee estimates that this package of programs would in fact meet the goal of reducing both poverty and deep poverty by one-half, at a cost of $90.7 billion per year.** On balance, the work incentives associated with the two tax credits outweigh the disincentives arising from the income support programs: The package is estimated to add about 400,000 workers and generate $2.2 billion in additional earnings.

The *universal supports and work package* was designed to meet the 50 percent poverty-reduction goals by enhancing income security and stability while at the same time rewarding work and promoting social inclusion. The cornerstone of this package is a child allowance, but the package also includes a new child support assurance program, an expansion of the EITC and CDCTC, an increase in the minimum wage, and elimination of the immigrant eligibility restrictions imposed by the 1996 welfare reform. **This package of programs, which also meets the 50 percent poverty-reduction goals, is estimated to cost $108.8 billion.** The net effect of this full package of universal supports and work promotion policies is to increase employment by more than 600,000 jobs and earnings by $13.4 billion.

What Other Policy and Program Approaches Should Be Considered?

The committee considered a number of other program and policy ideas. One involved family planning. **Research evidence suggests that increasing both awareness of and access to effective, safe, and affordable long-acting reversible contraception devices reduces the incidence of unplanned births, which could in turn reduce child poverty.**[18] At the same time, the evidence was not strong enough to support a calculation of the likely magnitude of this poverty-reduction effect for the nation as a whole.

We also examined marriage promotion policies. Although increasing the proportion of children living with married or cohabiting parents, rather than single parents, would almost certainly reduce child poverty, whether and how policy can achieve this goal remains uncertain. Evidence from existing social programs is inconclusive and points to neither strong positive

[18] Conclusion 7-1, Chapter 7.

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nor negative effects. **In the early 2000s, an ambitious attempt to develop programs that would improve couple relationship skills, promote marriage, and improve child well-being failed to boost marriage rates and achieve most of their other longer-run goals.**[19]

Similarly, evidence was insufficient to identify mandatory work policies that would reliably reduce child poverty. It appears that work requirements are at least as likely to increase as to decrease poverty. The dearth of evidence on mandatory work policies also reflects an underinvestment over the past two decades in methodologically strong evaluations of the impacts of alternative work programs.[20]

WHICH CONTEXTUAL FACTORS PROMOTE OR IMPEDE ANTI-POVERTY POLICIES AND PROGRAMS?

Any policies aimed at reducing child poverty will necessarily be implemented in complex societal and individual contexts, and these contexts can influence the policies' success. The committee identified six major contextual factors that policy makers and program administrators should consider when designing and implementing anti-poverty programs:

1. *Stability and predictability of income:* Because unstable and unpredictable income makes it difficult for families to juggle their everyday challenges, programs that provide regular income support—whether through tax credits, cash, or vouchers—may be more helpful to families if they provide adequate benefits at well-timed intervals.
2. *Equitable and ready access to programs:* Unnecessarily burdensome administrative procedures can discourage families—especially the most needy families—from applying for the income assistance benefits they are eligible to receive, and thus prevent them from receiving them at all.
3. *Equitable treatment across racial/ethnic groups:* Discrimination in hiring and employment may undermine policies that aim to increase or subsidize wages as well as policies that require beneficiaries to work. Similarly, housing discrimination reduces racial/ethnic minority families' access to and benefits from housing programs.
4. *Equitable treatment by the criminal justice system:* Involvement of a parent or other relative in the criminal justice system harms

[19] Conclusion 7-2, Chapter 7.
[20] Conclusion 7-4, Chapter 7.

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significant numbers of low-income children, particularly minority children, both economically and in other ways.

5. *Positive neighborhood conditions:* Living in areas of concentrated poverty makes it difficult for parents to lift themselves and their children out of poverty. Supportive, thriving social networks and neighborhood conditions enrich family life, personal connections, and access to opportunities, yet too frequently the poor live in urban areas of concentrated poverty or are widely dispersed in rural areas with limited transportation and little access to employment, poverty-reduction programs, or community resources.
6. *Health and well-being:* Because physical and mental ailments, substance abuse, and domestic violence can undermine parents' ability to make sound decisions, care for their children, gain education, obtain and keep work, and support their households, anti-poverty programs that require participants to be employed in order to maintain eligibility or that have cumbersome eligibility requirements may be less effective for families with these issues.

SUMMARY AND NEXT STEPS

The committee's work has identified two program and policy packages that would enable the nation to meet the ambitious goal of reducing by half the number of poor children and children living in deep poverty. Other packages are also conceivable. **Both of the committee's packages involve combinations of program enhancements, some of which encourage and reward paid employment, while others provide basic income support to help cover the expenses incurred when raising children. Both are also quite costly in an absolute sense. They would require an investment of between $90 and $110 billion per year, although this cost is much lower than the estimated annual macroeconomic cost of child poverty, which is estimated to range from $800 billion to $1.1 trillion.**[21] A third package fell short of the full 50 percent poverty-reduction goal but, at $44.5 billion, cost considerably less and increased work and earnings.

The virtues of bundling work- and supports-oriented policy and program enhancements into packages are clear from the committee's analyses. No single modification we considered met the 50 percent poverty-reduction goals, and those that came close led more people to leave than enter the labor force. And while work-oriented enhancements, such as expanding the EITC or making the CDCTC fully refundable, would reduce child poverty at a relatively low cost, they would be much less effective at reducing the number of children living in deep poverty. The committee found that it is

[21] Conclusion 6-1, Chapter 6.

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possible to combine the two approaches in a way that would meet both the poverty and deep poverty-reduction goals and, on balance, increase work and earnings among low-income families with children.

Assuming that stakeholders—Congress, federal and state agencies, and the public—agree that further reduction of child poverty is a priority goal for U.S. policy, the committee recommends that a coordinating mechanism be put in place to ensure that its report is followed up and that well-considered decisions are made on priorities for new and improved anti-poverty programs and policies. This mechanism should also ensure that the associated research and data needed for monitoring, evaluating, and further improvement are supported as well.[22]

In the view of the committee, the U.S. Office of Management and Budget (OMB) is the appropriate agency to coordinate the assessment of these conclusions and recommendations and to put together an action plan. It could do this by convening working groups of appropriate federal program, research, and statistical agencies to assess this report's conclusions regarding the program packages capable of reducing child poverty by half within 10 years of adoption. Further, the committee recommends that OMB convene working groups charged with assessing the report's recommendations for research and data collection to fill important gaps in knowledge about programs that are effective at reducing child poverty. A number of additional research recommendations embraced by the committee can be found in Chapter 9 of the report.

Acting on this report's conclusions and recommendations has the potential not only to reduce child poverty, but also to build a healthier and more prosperous nation.

[22] Recommendation 9-10, Chapter 9.

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1

Introduction

From their infancy to their adolescence, children continuously develop capacities that are crucial for their physical and emotional well-being and their cognitive abilities, which in turn help to promote their success in school, their responsible behavior as adults, their eventual economic self-sufficiency, and lifelong health. These capacities, therefore, are the foundation of a well-functioning and prosperous society. Numerous studies suggest that a lack of adequate resources in childhood compromises the development of these capacities. Accordingly, the widespread poverty among American children today is cause for serious concern.

Using the Supplemental Poverty Measure (SPM) threshold of about $25,000 for a family of four, in 2017 the U.S. Census Bureau counted more than 11 million U.S. children—nearly one-sixth of all our children—living in families with incomes that fell short of that poverty line (Fox, 2018).[1] It also determined that 3.5 million of those children were living in "deep poverty," defined as having family resources less than one-half the SPM poverty line (Fox, 2018). As detailed in Chapter 2 of this report, child poverty rates are much higher for Black, Hispanic, and American Indian children than for White or Asian children. They are also much higher for children in single-parent families than those two-parent families

[1]See Tables A-2 and A-4 in *The Supplemental Poverty Measure: 2017* at https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-265.pdf. The number of children in deep poverty was calculated by multiplying the percentage of people under age 18 with family incomes below 50 percent of the SPM poverty threshold by the number of children under age 18 in the United States (estimated to be 73.7 million in 2017 by the U.S. Census Bureau).

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and for children in families with no workers than for those in families with part- or full-time workers. By most measures, poverty among U.S. children is higher than in peer English-speaking countries such as Canada and Australia, and it is much higher than in most other industrialized countries.

A robust research literature (reviewed in Chapter 3) shows that children growing up in poverty fare much worse than other children. Differences favoring children in more affluent families are already evident in toddlers' and preschoolers' language, memory, self-regulation, and socioemotional skills, with corresponding differences observed in neural structure and function in the brain regions that support these skills. Children living in deep poverty have the worst outcomes among all children on important health and development indicators, such as blood lead levels, obesity, and a composite indicator of flourishing that measures children's mood, affection, and resilience (Ekono, Jiang, and Smith, 2016). By the time they reached their 30s, individuals whose families had incomes below the poverty line during early childhood completed two fewer years of schooling and were earning less than one-half as much income, on average, when compared with peers whose family incomes were at least twice the poverty line (Duncan, Ziol-Guest, and Kalil, 2010). Not all these differences can be attributed to poverty *per se*. Nevertheless, our review of the literature on the causal effects of childhood poverty (see Chapter 3) shows that the weight of the evidence indicates that income poverty itself causes negative child outcomes. This is especially the case when poverty begins in early childhood and/or persists throughout a large share of a child's life.

Whether a family's income is above or below a poverty threshold depends on parents' decisions regarding their own schooling, work, and marriage, as well on a host of structural factors such as the availability of work, housing, and public transportation, the prevalence of neighborhood crime, and institutional racism, all of which are well beyond the control of families. However, government programs also matter a great deal. Child poverty rates in the United States would be much higher were it not for programs such as the Supplemental Nutrition Assistance Program (SNAP), which provides nutrition assistance benefits to low-income individuals, the Earned Income Tax Credit (EITC), and the Child Tax Credit (CTC) (see Chapter 4).

If all countries' child poverty rates were measured solely by the earned income of parents, U.S. children would have poverty rates that fell in the middle of the rankings among peer English-speaking countries. Part of what drives our child poverty rates so much higher than those in peer Anglophone and other high-income nations is the much smaller fraction of U.S. Gross Domestic Product that is devoted to redistributive social programs (see Chapter 4). According to *Kids' Share 2018* (Isaacs et al.,

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2018), spending on children younger than age 19 accounted for 9 percent of the U.S. federal budget in 2017. This figure, which does not include state spending on education, is projected to fall to 6.9 percent by 2028, while at the same time spending on adults under Social Security, Medicare, and Medicaid, which accounted for 45 percent of the budget in 2017, is projected to rise to 50 percent by 2028.

THE COMMITTEE'S CHARGE

Given the problems generated by child poverty in the United States and the demonstrated effectiveness of many child poverty programs, the omnibus appropriations bill signed into law in December 2015 included a provision directing the National Academies of Sciences, Engineering, and Medicine to conduct a comprehensive study of child poverty in the United States. Specifically, the study was to provide an evidence-based, nonpartisan analysis of the macroeconomic, health, and crime/social costs of child poverty, to study current efforts aimed at reducing poverty, and to propose recommendations with the goal of reducing the number of children living in poverty in the United States by one-half in 10 years.[2] This policy goal mirrors the aims of anti-poverty initiatives that have been undertaken in other English-speaking countries in the past two decades, most notably in the United Kingdom beginning in 1997 (Waldfogel, 2010; see also Chapter 4).

The heart of the charge issued by the U.S. Congress to the National Academies is the goal of reducing the number of children living in poverty in the United States by one-half within 10 years. Congress has requested objective analyses of the existing research on the poverty-reducing effects of major assistance programs directed at children and families and specific policy and program recommendations for accomplishing this goal.

Ad hoc committees appointed by the National Academies are guided by a statement of task that defines and constrains their work.[3] Committee reports are expected to address all of the issues raised in the statements of task but not to go beyond them unless the committee judges it absolutely necessary for carrying out the full scope of the statement of task. The statement of task for the present study is shown in Box 1-1.

In developing its list of policy and program proposals for reducing child poverty by half in 10 years, the committee considered existing federal programs as well as innovative programs developed by states and localities

[2] See Consolidated Appropriations Act, 2016, Pub.L. No. 114-113.

[3] This study's statement of task was developed jointly by staff members from Congress, the Office of the Assistant Secretary for Planning and Evaluation within the Department of Health and Human Services, and the National Academies, as well as researchers and policy makers with expertise in the reduction of child poverty.

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BOX 1-1
Statement of Task

An ad hoc committee of experts will convene to conduct a consensus study of the costs of child poverty in the United States and the effectiveness of current efforts aimed at reducing poverty. The committee will review available high-quality research on current programs, with emphasis on evaluations that include benefit-cost analysis. Based on these analyses the committee will make recommendations for federal investment aimed at reducing the number of children living in poverty in the United States by one-half within 10 years. The committee will address five specific charges:

1. Briefly review and synthesize the available research on the macro- and microeconomic, health, and social costs of child poverty, with attention to linkages between child poverty and health, education, employment, crime, and child well-being.
2. Briefly assess current international, federal, state, and local efforts to reduce child poverty. The committee will provide an analysis of the poverty-reducing effects of existing major assistance programs directed at children and families in the United States, as well as relevant programs developed in other industrialized countries, such as the United Kingdom, Canada, and Ireland.
3. Identify policies and programs with the potential to help reduce child poverty and deep poverty (measured using the Supplemental Poverty Measure) by 50 percent within 10 years of the implementation of the policy approach.
4. For the programs the committee identifies as having strong potential to reduce child poverty, the committee will provide analysis in a format that will allow federal policy makers to identify and assess potential combinations of policy investments that can best meet their policy objectives.
5. Identify key, high-priority research gaps the filling of which would significantly advance the knowledge base for developing policies to reduce child poverty in the United States and assessing their impacts.

and in other countries, such as the United Kingdom and Canada. The scope of the programs the committee considered was broad. In addition to traditional anti-poverty programs, such as cash transfers, food and nutrition programs, and housing programs, the committee considered work support, health insurance, foster youth, juvenile and adult justice, and education and training programs.

For each program and policy option it developed, the committee attempted to estimate what impact it could have on reducing child poverty as defined using the SPM; how its poverty-reducing impacts would be distributed across demographic groups and across groups at three different levels of poverty: those at the poverty level; those in deep poverty; and

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those in near poverty; and what would be the annual cost of implementing the program or policy at scale. To the extent possible, the committee examined the sensitivity of the impacts of its policy or program proposals to economic conditions, and it also considered other possible benefits the proposals could provide for government and society, such as improvements in child health, educational achievement, and welfare.

Because virtually none of the program and policy options we developed, if considered individually, would meet the 50 percent poverty-reduction goal, we also considered packages that would combine a number of policy and program changes to meet that goal. These are presented in Chapter 6. The task of designing these packages led us to identify interactions among programs that could result in synergies or redundancies.

TEMPORAL AND OTHER CONSIDERATIONS ASSOCIATED WITH THE STATEMENT OF TASK

Timing is a key element of the committee's statement of task. The policies and programs identified by the committee are intended to "help reduce child poverty and deep poverty . . . by 50 percent within 10 years of the implementation of the policy approach." This relatively brief, decade-long interval focuses attention on actions that aim to quickly increase the resources available to the families of poor children—programs and policies such as tax credits or work requirements. Although programs such as those that support early childhood education may boost family income by enabling a mother to work, their main goals are to reduce poverty among future—rather than current—generations of children. Accordingly, they fall outside the committee's statement of task, although they may be important to reducing poverty over the longer term.

Reducing Poverty or Building Children's Capacities and Health?

The concern that growing up in poverty compromises children's opportunities to develop to their full potential provides a powerful motivation for seeking to reduce or even eliminate child poverty. However, with children's development in mind, the goal of child poverty reduction alone, whether in the short or long term, is limiting because it focuses all our attention on family resources and ignores other important factors in healthy development. An alternative goal to poverty reduction might be to *promote children's human capital*, conceived broadly to include cognitive and noncognitive capacities as well as physical and mental health, both during childhood and into the adult years. Poverty reduction will help to build children's human capital, but so too will attention to a much broader range of factors that promote children's health and development, both

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within the family and in the schools, neighborhoods, and other contexts of children's lives.

For example, a broader goal of human capital development might lead us to favor policies and programs to promote more nurturing homes or more effective school environments over equally costly programs and policies that would benefit children only by improving their material circumstances. This report responds to the committee's short-term poverty-focused congressional charge, but readers should bear in mind that adequate family material resources are but a single, albeit important, input for the healthy long-term development of children.

That said, programs targeting child poverty can build human capital in other ways. As an example, consider food assistance programs. Child poverty, as measured by the SPM, falls when benefits from a program like SNAP boost family resources. But, as explained in Chapter 3, the evidence also indicates that SNAP's predecessor program, food stamps, reduced the incidence of low birth weight among children born into low-income families and, if benefits were received during early childhood, improved that child's cardiovascular health in adulthood as well. When making decisions, policy makers might want to consider these kinds of human capital impacts along with the reductions in shorter-term child poverty that a specific program or policy might achieve. With that in mind, the committee's review of the poverty literature in Chapter 3 includes evidence on programs that both reduce child poverty and promote children's health development.

HOW THE COMMITTEE SELECTED PROGRAMS TO REVIEW

The heart of the committee's charge is to "identify policies and programs with the potential to help reduce child poverty and deep poverty . . . by 50 percent within 10 years." To identify these programs and policies, the committee sought suggestions from its members and invited outside testimony from experts in the field. These included experts from universities, from policy organizations, and from practitioner organizations and represented a diverse array of political perspectives. In addition to holding two public information-gathering sessions, the committee received 25 policy memos, 19 of them from the 40 individuals we invited to submit memos and 6 more that were unsolicited. The committee also drew on the expertise of its own members to develop a list of possible policies and programs that might meet the charge. In addition, the committee commissioned papers from experts in Medicaid and American Indian and Alaska Native (AIAN) children living in poverty.[4]

[4] These commissioned papers are available at http://www.nap.edu/25246.

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Criteria for Selecting Programs and Policies

With hundreds of local, state, federal, and international anti-poverty program and policy models to choose from, the committee developed a set of criteria to guide its selection and then considered the strengths and weaknesses of each policy or program. The criteria are as follows:

1. Strength of the research and evaluation evidence
2. Magnitude of the reduction in child poverty
3. Child poverty reduction within high-risk subgroups
4. Cost of the program or policy
5. Impacts on the widely held values of work, marriage, opportunity, and social inclusion

The most important criterion was the *strength of the research and evaluation evidence* indicating that, if enacted, the policy would reduce child poverty in the short run. Here the committee gave preference to evidence from random-assignment program evaluations as well as methodologically strong "natural experiments," that is, those that examined the impacts of unanticipated changes in the timing and structure of policies on children and their families. To generate estimates of poverty reduction from the committee's program and policy ideas, it commissioned research from the Urban Institute's Transfer Income Model, Version 3 (TRIM3) micro-simulation model.[5]

Second, with a target of reducing child poverty by one-half within 10 years, an obvious guiding criterion was the *magnitude of the reduction in overall child poverty*. The committee's statement of task speaks of reductions in both the number of poor children and the fraction of children whose family incomes are below the poverty line. Since these two indicators may differ slightly in the context of a growing population of children, the committee chose to focus on reductions in the rate of child poverty.

Discussions with study sponsors led the committee to consider the *distribution of poverty-reducing impacts across high-risk groups of children*, defined by such characteristics as race, location, immigration status, and age of parent, who have above-average levels of poverty. Accordingly, the committee assigned importance to anti-poverty programs with relatively larger impacts on the children in these groups.

The fourth criterion was the likely *cost of the program or policy*. We defined cost as the incremental budgetary expense after accounting for all of the secondary impacts of the program or policy change such as

[5] For more information, see http://trim3.urban.org/T3Welcome.php.

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participation in other programs and changes in taxes paid resulting from changes in employment (for example, payroll taxes).

Fifth, the committee considered whether the program or policy was likely to *promote widely agreed-upon values*. Although not an explicit element of the statement of task, societal values have always figured prominently in debates over the nature of anti-poverty programs in the United States (Lamont and Small, 2008). We focus on four such values: work, marriage, opportunity, and social inclusion. None is without complications or qualifications. In the case of work, for example, expectations that program participants seek paid employment may be suspended in the case of a parent with an infant or a severely disabled child. In the case of marriage, relationship quality is also a criterion, so an abusive or violent relationship, for example, would not be valued. Considerations of social inclusion figure prominently in debates over whether programs should be offered universally rather than targeted to the neediest individuals (Garfinkel, Smeeding, and Rainwater, 2010). Universal programs are obviously more costly, but targeted programs can generate unforeseen incentives for people to qualify for or remain in programs, and recipients of targeted programs can run the risk of being stigmatized and confined to separate programs for the poor. In some cases, targeted programs that reward work, like the EITC, appear to generate a strong sense of social inclusion among recipients (Halpern-Meekin et al., 2015).

In keeping with the spirit of its charge, the committee omitted political feasibility from its list of criteria, although we understood that some policies and programs might be more politically feasible than others. As the charge from Congress directs, the committee endeavored to "provide an evidence-based, nonpartisan analysis."

The committee did not insist that all of the anti-poverty programs and policies it identified meet all of its five criteria. Strong research evidence was vital, but at the same time the committee recognized the inevitable tradeoffs in any policy or program proposal. Some of the approaches it chose were stronger on some criteria and weaker on others. The committee sought to balance the strengths and weaknesses of each proposal in light of the criteria taken as a whole.

CONSIDERATIONS IN ESTIMATING POLICY AND PROGRAM IMPACTS

At first glance, estimating poverty reductions for any given program may appear to be a straightforward calculation. If Program A provides, say, $5 billion in additional benefits to families with children, why not just conduct a simulation in which the incomes of recipient families are increased by the value of the added benefits and then determine how many families

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are raised above the poverty or deep poverty thresholds by the incremental income? A first complication is that in the course of reducing poverty, anti-poverty policies and programs can produce behavioral responses on the part of parents. For example, programs like the EITC boost the (after-tax) hourly earnings of some low-wage workers, which can induce them to work and earn more, and this would then increase the poverty-reducing impact of the EITC well beyond what is accomplished by the tax credits alone (Hoynes and Patel, 2017). Other programs can discourage work by reducing program benefits when earnings increase, or may discourage marriage by imposing rules that provide fewer benefits to married parents than to single parents. These kinds of behavioral responses are difficult to gauge but, as explained in Chapter 5, the committee, supported by the research literature, attempted to incorporate such responses in its estimates of child poverty reductions.

A second complication in some programs is that not every potential recipient will in fact take up the benefit. Housing vouchers are an obvious example, because a substantial number of families offered vouchers today are not able to use them. As explained in Appendix F, the TRIM3 microsimulation model the committee used attempts to incorporate adjustments for behavioral responses and incomplete program take-up.

In some cases, the committee concluded that while a program met its criteria, it was not amenable to a quantitative policy simulation. One example is a program to promote the use of long-acting reversible contraception (LARC) devices, which have the potential to reduce poverty by delaying or reducing births into poor families; however, evidence on program take-up and impacts is fragmentary (See Chapter 7 for more information). Indeed, a number of promising small-scale demonstration programs have never been scaled up sufficiently to show whether key program features could be preserved if they were to be implemented across the nation or even across a single state. Expansions of the Medicaid medical insurance program are another example. The committee's literature review in Chapter 3 suggests that health insurance programs can improve child health, but estimating short-run impacts of program expansion on poverty reduction is complicated by the various ways poverty measures handle health care benefits and expenditures.

Therefore, Chapter 5 includes programs and policies for which evidence on behavioral responses, take-up, and other complicating issues is definitive enough to support a reasonably precise set of estimates of child poverty reduction. In Chapter 6, the committee anticipated that programs and policies interact and so they estimated synergies and redundancies across programs and policies in its examination of packages. Chapter 7 discusses programs for which the evidence base was sufficient to suggest

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considerable promise but not strong enough to support precise estimates of national impacts on child poverty.

Poverty reduction may benefit children in some families more than others. Parents coping with the stresses of unstable work schedules, personal or family illnesses and disabilities, uninvolved partners, neighborhood crime, low-quality schools, or discriminatory workplaces may find it difficult to engage in responsive parenting or longer-run planning on behalf of their children (McLoyd, 1998; Mullainathan and Shafir, 2013). These problems, in turn, may dilute some of the possible benefits of policy-induced increases in material resources. Because these contextual considerations are so important, and most are not part of the simulation model, the committee devotes an entire chapter (Chapter 8) to them and their implications for the committee's conclusions.

Finally, the expertise of committee members spans a wide range of disciplines and includes policy work in state and federal governments as well as in the nonprofit sector. All members share a commitment to the standards of evidence embraced by the National Academies but at the same time brought diverse political orientations to issues surrounding anti-poverty policies. For the programs featured in Chapters 5 and 6, it is important to understand that committee consensus on their inclusion was based *solely on the strength of the evidence base supporting them* and not on individual committee members' endorsements of the policies themselves.

ORGANIZATION OF THE REPORT

The report proper begins in Chapter 2 with a demographic portrait of child poverty in the United States. In this chapter we explain how poverty is measured and why the relatively new SPM, which our statement of task directs us to use, provides a somewhat different view of child poverty than the much older official measure. Child poverty rates are lower with the SPM than with the cash-based Official Poverty Measure (OPM). Over the past half-century, SPM-based child poverty has declined more rapidly than OPM-based poverty. In Chapter 2, we also compare child poverty in the United States and in peer anglophone countries. By and large, the United States has considerably higher rates of child poverty than these other countries, although the concentration of poor children among single-parent and nonworking families is broadly similar.

In Chapter 3, we respond to the first element of the statement of task by reviewing the literature on the consequences of child poverty, including macroeconomic, microeconomic, health, and social costs. The chapter explains how the technical sophistication of these literatures has increased markedly over time, as studies of the consequences of child poverty have progressed from an emphasis on correlational methods to the use of natural

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experiments that track how measures of child well-being change in response to large changes in policies such as the EITC and SNAP.

Chapter 4 responds to the second element of the statement of task by providing an assessment of current local, state, federal, and international efforts to reduce child poverty. As directed by the statement of task, the committee provides a separate look at poverty lines drawn to distinguish *deep* poverty (defined as below 50% of the SPM poverty line), *conventional* poverty (as defined by the SPM), and *near* poverty (the upper limit of which is defined as 150% of SPM poverty). At the federal level, a noteworthy distinction can be made between program impacts on the poverty of children whose families are near the poverty threshold and impacts on children in families well below the threshold. Tax-based programs such as the EITC move millions of children above the SPM-based poverty line but have much smaller impacts on the economic status of children in families with little taxable income. On the other hand, income-tested programs such as SNAP proved most effective at increasing the economic resources of the families of children in deep poverty.

Peer English-speaking countries provide some interesting examples of efforts to reduce child poverty, most notably the United Kingdom, where the government pledged in 1999 to halve child poverty within a decade and to eradicate it completely within two decades (Waldfogel, 2010). More recently, Canada enacted a very substantial child benefit for low-income families that is estimated to have reduced poverty among Canadian children by 5 to 6 percent within a year of its 2016 enactment (Sherman, 2018). These efforts are also reviewed in Chapter 4.

A crucial element in the committee's charge is to compose a list of promising anti-poverty policies and programs. As discussed above, we did so by drawing on the evaluation research literature as well as on ideas from individuals and groups representing a broad range of political orientations and experiences working in local and county governments, at the local social services and school systems level, and in state and federal government. Chapter 5 details the policy and program proposals that were amenable to a quantitative policy simulation to estimate net impacts. The summary section of Chapter 5 covers several issues that cut across the set of program and policy proposals the committee developed. Several are based on how the various proposals rank based on the selection criteria, for example, ranking proposals based on cost, degree of poverty reduction both overall and in key demographic subgroups, and impacts on employment.

In Chapter 6, the committee presents program packages that are projected to meet the 50 percent poverty-reduction goal set by its authorizing legislation. Chapter 7 describes additional programs and policies that were judged to be promising but for one reason or another were not amenable to precise estimates of impact on child poverty.

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The focus of Chapter 8 is on contextual factors that affect child poverty—from program administration to discriminatory behaviors and criminal justice policies and practices. These factors are not typically incorporated in the simulation models, but they can have a profound effect on the success of programs, providing useful infrastructure in some cases and interfering with policy, thereby creating "leaky buckets," in others.

The final chapter (Chapter 9) summarizes the committee's recommendations and outlines a research agenda. Chapter 9 also discusses the importance of implementing high-quality monitoring and evaluation to measure progress and identify further steps.

Appendix A includes biosketches of committee members and project staff and Appendix B provides the agenda for the two public information-gathering sessions. Appendix C lists the individuals and organizations that submitted memos to the committee. Appendix D comprises the appendixes for Chapters 2, 3, 4, and 5. Appendix E includes the TRIM3 summary tables, and Appendix F contains the Urban Institute TRIM3 technical specifications.

Finally, a note on the overall organization of this report: As with all consensus reports produced by the National Academies, we provide evidence supporting all of our conclusions and recommendations. But in contrast to many of those reports, here the bulk of this evidence is presented in online appendixes associated with most of the chapters. Separating the detailed evidence in this way enabled us to write a shorter and, we hope, more accessible presentation of our analyses and conclusions. The online appendixes (D through F) are available on the National Academies Press webpage at http://www.nap.edu/25246 under the Resources tab.

REFERENCES

Duncan, G.J., Ziol-Guest, K.M., and Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development, 81*(1), 306–325.

Ekono, M.M., Jiang, Y., and Smith, S. (2016). *Young Children in Deep Poverty*. Columbia University Academic Commons. Available: https://doi.org/10.7916/D86Q1X3.

Fox, L. (2018). T*he Supplemental Poverty Measure: 2017*. Current Population Reports, P60-265. Washington, DC: U.S. Census Bureau.

Garfinkel, I., Smeeding, T., and Rainwater, L. (2010). *Wealth and Welfare States: Is America a Laggard or Leader?* New York: Oxford University Press.

Halpern-Meekin, S., Edin, K., Tach, L., and Sykes, J. (2015). *It's Not Like I'm Poor: How Working Families Make Ends Meet in a Post-Welfare World*. Berkeley: University of California Press.

Hoynes, H.W., and Patel, A.J. (2017). Effective policy for reducing poverty and inequality? The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources*. doi: 10.3368/jhr.53.4.1115.7494R1.

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Isaacs, J.B., Lou, C., Hahn, H., Hong, A., Quakenbush, C., and Steuerle, C.E. (2018). *Kids' Share 2018: Report on Federal Expenditures on Children Through 2017 and Future Projections*. Washington, DC: Urban Institute.

Lamont, M., and Small, M.L. (2008). How culture matters: Enriching our understandings of poverty. In A. Chih Lin and D.R. Harris (Eds.), *The Colors of Poverty: Why Racial and Ethnic Disparities Persist* (pp. 76–102). New York: Russell Sage Foundation.

McLoyd, V.C. (1998). Socioeconomic disadvantage and child development. *American Psychologist*, *53*(2), 185.

Mullainathan, S., and Shafir, E. (2013). *Scarcity: Why Having Too Little Means So Much*. New York: Macmillan.

Sherman, A. (2018). *Canadian-style Child Benefit Would Cut U.S. Child Poverty by More Than Half*. Washington, DC: Center for Budget and Policy Priorities. Available: https://www.cbpp.org/blog/canadian-style-child-benefit-would-cut-us-child-poverty-by-more-than-half.

Waldfogel, J. (2010). *Britain's War on Poverty*. New York: Russell Sage Foundation.

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2

A Demographic Portrait of Child Poverty in the United States

In light of the committee's charge to identify programs that would reduce child poverty in the United States by half within a decade, and to set the stage for the program and policy proposals we make later in this report, in this chapter we provide an overview of child poverty in the United States. We begin with a brief explanation of how poverty is defined. Next we offer an overview showing which demographic subgroups of U.S. children suffer the highest poverty rates today and how child poverty rates have changed over time. The chapter's final section compares the extent of child poverty in the United States and in peer English-speaking countries. The impacts of poverty on child development are discussed in Chapter 3, while contextual factors that reinforce poverty among low-income families are discussed in Chapter 8.

MEASURING U.S. CHILD POVERTY

"Poverty" typically refers to a lack of economic resources, but measuring it requires careful consideration of the types of economic resources to be counted as well as agreement on a minimum threshold below which a family's economic resources may be considered insufficient. In the 1960s, the U.S. federal government developed a method for identifying a threshold amount of household cash income below which a given household, and all related individuals living in that household, would be designated as "poor." (See Appendix D, 2-1 for a brief history of poverty measurement in the United States.) This Official Poverty Measure (OPM) of income poverty is still being used to determine social program eligibility as well as to track

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BOX 2-1
How Much Child Poverty Is There?

Disagreements over how poverty should be defined and how the definitions should be applied using data from the federal statistical system have generated a wide range of poverty estimates. The Official Poverty Measure (OPM), published by the U.S. Census Bureau, estimates that 20 percent of U.S. children were poor in 2015. The Supplemental Poverty Measure (SPM), also published by the Census Bureau, estimates for the same year that 16 percent of children were poor. Our report uses the SPM, corrected for underreporting of some kinds of income in the Annual Social and Economic Supplement to the Current Population Survey, resulting in an estimated 13 percent child poverty rate in 2015. The rationale for using the SPM corrected for underreporting rather than using the OPM is detailed in Appendix D, 2-2—importantly, the SPM takes account of taxes, in-kind benefits, and nondiscretionary expenses (e.g., child support payments) and so is suited for the kinds of policy analysis that we were charged to undertake, and the corrected SPM accounts more completely for families' resources.

Based on an alternative approach to poverty measurement, using consumption rather than income to determine poverty status, a 2018 Council of Economic Advisers (CEA) report declared that "our War on Poverty is largely over and a success" (Council of Economic Advisors, 2018, p. 29). This alternative measure (based on Consumer Expenditure Survey data) produced just a 5 percent poverty rate for children in 2015, dropping to 4 percent in 2016 (Meyer and Sullivan, 2017, Table 3). While many economists believe that consumption is theoretically a better measure than income in determining how families are actually faring, the committee considered the SPM to be superior to currently available consumption-based poverty measures (see Appendix D, 2-3)—importantly, it is difficult to trace the effects of more generous assistance programs (e.g., a more generous child tax credit) on consumption, whereas it is straightforward to do so for income; also, it is difficult to evaluate the measure cited by the CEA given how its poverty thresholds were derived and updated, which resulted in contemporary thresholds and poverty rates that seem unrealistically low.

There are sources of error in both federal income and expenditure statistics, as well as more work that is needed to improve both income-based and consumption-based poverty measures. The committee concludes that the corrected SPM is the preferred measure for its purposes but also recommends investment in better data and measures (see Chapter 9).

long-term trends in poverty rates. Also available are poverty measures based on consumption instead of income. Nevertheless, the statement of task for our committee directed us to use the Supplemental Poverty Measure (SPM) of income poverty, which we adjusted for underreporting of some types of income in the survey data. Box 2-1 illustrates differences in estimated child poverty among these measures. For the reasons detailed in Appendix D, 2-2 (on income poverty) and Appendix D, 2-3 (on consumption poverty),

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we consider the adjusted SPM to be currently the best available approach to poverty measurement.[1]

Measuring Poverty with the Supplemental Poverty Measure

For this report, the committee was directed to use the SPM, which bases poverty thresholds on the expenditures U.S. families must make for food, clothing, shelter, and utilities (FCSU) plus a small additional amount for other needs (such as personal care, transportation, and household supplies). Expenditures are measured using the average of 5 years of data from the Consumer Expenditure Survey, with the poverty threshold set at the level of FCSU expenditures for family units with two children, which separates the bottom one-third of such families, ranked by FCSU expenditures, from the top two-thirds. For 2016, thresholds ranged between about $22,000 and $26,000 for two-adult, two-child families, depending on whether the family owned or rented its housing (Fox, 2017). The SPM thresholds are also adjusted for family size, using an equivalence scale, and for local cost-of-living differences in housing.[2]

The household resources considered are the sum of money income from all sources, including earnings and government cash benefits such as Social Security and Unemployment Compensation. A key difference between the OPM and SPM is that SPM-based household resources also include "near-cash" income benefits such as the Supplemental Nutrition Assistance Program (SNAP, formerly called food stamps) and housing subsidies, as well as benefits from many smaller programs. Deducted from household resources are child care and other work expenses, child support payments made, and out-of-pocket medical expenses (including insurance premiums).

Taxes paid, most notably payroll taxes, are also deducted from household resources, while refundable tax credits from programs like the Earned Income Tax Credit, Child Tax Credit, and the Additional Child Tax Credit are added to resources. As we show below, because government spending on tax credits and programs that provide "near-cash" (as opposed to cash) benefits have grown markedly over the past 50 years, conclusions about trends in child poverty largely depend on whether poverty is measured using the OPM or the SPM. Key differences between the official measure and the SPM are summarized in Table 2-1 and in Appendix D, 2-6.

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[1] The large literature of poverty measurement, in the United States and abroad, addresses types of poverty measures and measurement issues that are not central to our charge—for example, the merits of deprivation indexes compared with income- or consumption-based indexes. We briefly note these other measures and measurement issues in Appendix D, 2-2.

[2] Appendix D, 2-4 provides a detailed explanation of how equivalence scales are used to adjust threshold levels. Appendix D, 2-5 discusses how cost-of-living adjustments (COLAs) are used in the SPM, including how geographic COLAs compensate for differences in the price of rental housing.

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TABLE 2-1 Key Differences in Poverty Measure Concepts Between the Official Poverty Measure (OPM) and the Supplemental Poverty Measure (SPM)

Concept	Official Poverty Measure	Supplemental Poverty Measure
Measurement Units	Families (individuals related by birth, marriage, or adoption) or unrelated individuals	Resource units (official family definition plus any co-resident unrelated children, foster children, or unmarried partners and their relatives) or unrelated individuals (who are not otherwise included in the family definition)
Poverty Threshold	Three times the cost of a minimum food diet in 1963	Based on expenditures for food, clothing, shelter, and utilities (FCSU), and a little more
Threshold Adjustments	Vary by family size, composition, and age of householder	Vary by family size and composition, as well as geographic adjustments for differences in housing costs by tenure
Updating Thresholds	Consumer Price Index: all items	5-year moving average of expenditures on FCSU
Resource Measure	Gross before-tax cash income	Sum of cash income, plus noncash benefits that resource units can use to meet their FCSU needs, minus taxes (or plus tax credits), minus work expenses, out-of-pocket medical expenses, and child support paid to another household

SOURCE: Fox (2017).

The Census Bureau has published SPM-based poverty statistics every fall since 2011. Its most recent report (Fox, 2018) indicates that, in 2017, 15.6 percent of children lived in families with incomes below the SPM-based poverty line. That rate is lower than the 18.0 percent rate based on the OPM (Semega, Fontenat, and Kollar, 2017), owing primarily to the SPM's more comprehensive measure of household resources. For certain demographic groups other than children, poverty rates are higher when measured by the SPM as compared with the OPM. An example is the elderly, whose higher out-of-pocket medical payments are deducted from household resources in the SPM but not in the OPM. In addition, the 15.6 percent overall child poverty rate conceals considerable demographic and geographic variation, which we explore in subsequent sections of this chapter and Appendix D, 2-8 and 2-9.

The committee's statement of task directs it to identify programs and policies that reduce both SPM-based poverty and deep poverty by half in

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10 years. To address deep poverty, the committee adopted a common definition, namely having resources below 50 percent of those used to define poverty based on the SPM. We also provide data on "near poor" children by including those with household resources below 150 percent of poverty. These three sets of thresholds are used consistently throughout this report.

Indirect Treatment of Health Care Needs and Benefits in the SPM

One important family need that is difficult to incorporate into poverty measurement is health care—both households' medical costs and the extent to which health insurance programs for low-income families help households afford them and shield families from falling into poverty as a result of health shocks. The importance of health care and health insurance has historically been recognized by making health insurance through Medicaid part of the package of benefits offered to low-income families such as those who qualified for Aid to Families with Dependent Children (the program that preceded Temporary Assistance for Needy Families [TANF]).

The OPM takes no account of health care needs or insurance benefits. It was developed before the life-extending advances of the past 50 years in medical treatments, such as treatment for childhood cancer, and before the expansion of health insurance to cover such treatments. However, for reasons detailed in National Research Council (1995; see also Remler, Korenman, and Hyson, 2017, and the discussion in Chapter 7), the SPM takes only a partial step forward. SPM thresholds do not include any estimated expenditure amounts for medical care, but the SPM definition of resources subtracts families' medical out-of-pocket expenditures for any insurance premiums, copayments, deductibles, or bills for uncovered care.[3] This deduction of medical out-of-pocket expenses puts some people below the SPM poverty line whom the OPM would not count as poor.[4] Conversely, reductions in out-of-pocket medical care costs—through Medicaid expansion, for example—will reduce measured SPM poverty rates, all else equal (see, e.g., Summers and Oellerich, 2013).

These adjustments in the SPM, despite being a step forward, still do not account for the full contribution of government health insurance programs to reducing poverty, particularly Medicaid and the Children's Health Insurance Program (CHIP), to the well-being of low-income

[3] The reason for subtracting medical out-of-pocket costs is that, unless low-income families receive free care from providers or qualify for insurance (e.g., Medicaid) that does not require the family to contribute toward their care, then obtaining health care will require out-of-pocket expenditures.

[4] For example, see U.S. Census Bureau, Table A-6: Effect of Individual Elements on SPM Poverty Rates: 2016 and 2015, September 21, 2017. Available: https://www.census.gov/library/publications/2017/demo/p60-261.html.

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children and their parents. As we discuss in more detail in Chapter 7, one problem with the SPM approach is that families that defer medical care because they cannot afford it will appear to be better off than they really are. On the other hand, families who are covered by Medicaid but have little or no out-of-pocket expenses in a particular year will be appear to be worse off than they really are, because having insurance in case of future illness is much better than having no insurance at all. Nevertheless, both types of families are treated the same in this instance by the SPM. As we discuss in Chapter 7, a conceptually complete approach to the problem, one suggested in a paper by Korenman, Remler, and Hyson (2017) commissioned by the committee is to include the value of a basic health insurance plan in the poverty threshold and to include in resources the amount of government subsidy received by a family for insurance coverage. Korenman, Remler, and Hyson report some new estimates of the impact of Medicaid on poverty using this approach (see Chapter 7).[5]

Adjusting the Supplemental Poverty Measure Using the TRIM3 Model

Both the SPM and the OPM poverty rates are based on annual data from government surveys. To obtain these data, large national samples of households are chosen at random to participate in the Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS), which is conducted by the U.S. Bureau of Labor Statistics. Consequently, both poverty rates are subject to bias when households misreport their incomes. The total amount of income that households report receiving from social programs in a given year can be checked against estimates of the total benefits that were paid out based on government administrative data. These comparisons often reveal large discrepancies, which have grown over time (Meyer, Mok, and Sullivan, 2009; Moffitt and Scholz, 2009; Wheaton, 2008). For example, household reports of food stamp income in the 1986 CPS accounted for 71 percent of administrative benefit totals, but in the 2006 CPS they accounted for only 54 percent of administrative benefit totals (Meyer, Mok, and Sullivan, 2009).

[5] We discuss the benefits of Medicaid and CHIP in improving child health in Chapter 3. An alternative approach to valuing health care for poor families is to create a medical care financial risk index; this is discussed in Institute of Medicine and National Research Council (2012). This is a useful perspective and adds extra information to how risk varies by income in the population, but it not easily incorporated into a poverty index (Korenman, Remler, and Hyson, 2018).

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To address this underreporting, the committee relied on the Transfer Income Model, Version 3 (TRIM3).[6] TRIM3 is a microsimulation model that adjusts benefits from tax and transfer programs across households so that aggregated benefits reported by or assigned to households match the totals shown by administrative records.[7] Imputing or modeling government transfers in this manner increases the estimated incomes of many low-income households, and in some cases it raises them above a poverty threshold. As a result, the SPM-based child poverty rates presented in this chapter and used in the policy simulations in Chapters 4, 5, and 6 are almost always lower than SPM rates reported in Census Bureau publications.

The committee used the most recent version of the TRIM3 model that was available when the bulk of its simulation work was conducted. It is based on incomes in calendar year 2015 as reported in the 2016 ASEC. Importantly, that version of TRIM3 is based on program rules and federal and state tax codes that prevailed in 2015.[8] Given the potential importance of changes in federal income tax rules taking effect in 2018, the committee includes some data in later chapters showing that its key conclusions regarding child poverty reductions associated with program and policy proposals were largely unaffected by the recent changes in the tax code.

Figure 2-1 compares child poverty rates using the OPM and SPM, as well as using our modification of the SPM—labeled "TRIM3-SPM" in the remainder of this report—which is adjusted for underreported income. Some of the differences are stark. Based on the conventional definition of OPM poverty (household income below 100% of the applicable poverty line, with no adjustment for underreporting of income), nearly one-fifth (19.7%) of U.S. children—14.5 million children in all—were poor in 2015.[9] The addition of tax credits, in-kind income, and other adjustments in the

[6] TRIM3 is developed and managed by the Urban Institute with primary funding from the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. See http://trim3.urban.org/T3Welcome.php for more details about the TRIM3 model.

[7] TRIM3 corrects underreporting of TANF, SSI, and SNAP only. In the 2001 CPS, just 52% of self-employment income was reported, 59% of dividends, 70% of retirement and disability benefits (excluding Social Security and Workers' Compensation), and 73% of interest income. Unemployment Compensation is also underreported and not corrected by TRIM3. Discussions of these and other estimates are provided in Winship (2016, Appendix 3). In contrast, earnings are actually overreported at the bottom of the CPS earnings distribution when compared to administrative data (Bollinger et al., 2018; Hokayem, Bollinger, and Ziliak, 2015).

[8] TRIM3 baselines for a particular year always involve applying that year's rules to that year's data. The results are aligned and validated using the actual benefit and tax data for that year.

[9] The 19.7% figure for 2015 SPM-based poverty is considerably higher than the 18.0% figure reported above in Fox (2017), because the latter is based on 2016 incomes. Economic growth between 2015 and 2016 increased family income and decreased poverty rates among low-income families.

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A Roadmap to Reducing Child Poverty

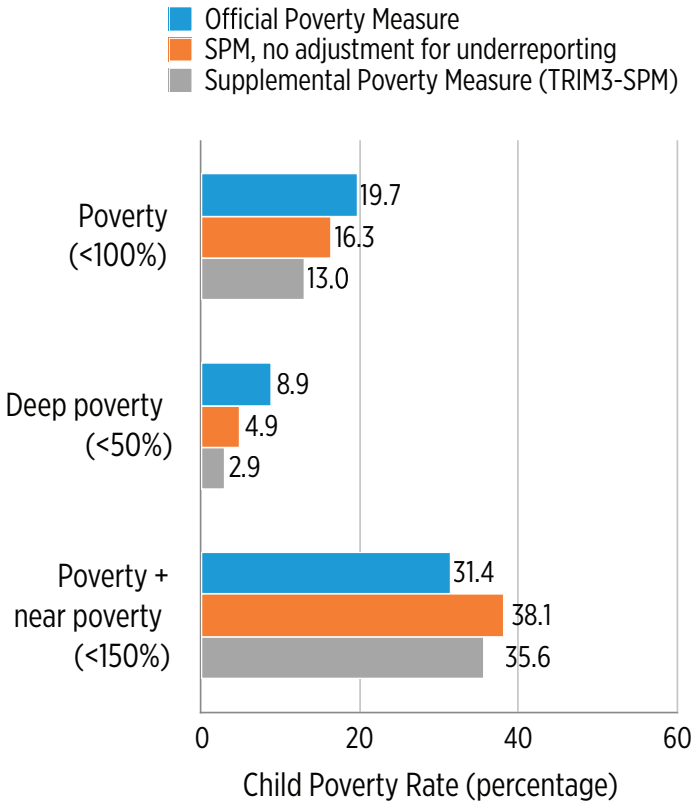

FIGURE 2-1 Rates of poverty, deep poverty, and near poverty for children using three alternative poverty measures, 2015.
NOTE: SPM = Supplemental Poverty Measure.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

SPM drove the poverty rate down to 16.3 percent. Census Bureau publications use the "SPM, no adjustment for underreporting" poverty measure in their reports. But adjustments for underreporting reduced the SPM child poverty rate to 13.0 percent. Such large impacts from adjusting poverty rate estimates for underreporting of income—a 3.3 percentage-point reduction in the case of child poverty in 2015—led the committee to one of its research recommendations, presented in Chapter 9.

Although it produces a poverty count that is one-third lower than the official OPM-based count reported by the Census Bureau, our adjusted SPM-based poverty rate of 13.0 percent still represents 9.6 million U.S. children living in households with economic resources judged by the SPM

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to be inadequate. The congressional charge to the committee is to identify programs that—either alone or in combination—would lift nearly 5 million of these 9.6 million children out of poverty within 10 years.

A look at rates of deep poverty, defined by the percentage of children whose families' resource levels are less than half the poverty line, shows even more measurement sensitivity to the inclusion of taxes, in-kind income, and adjustments for underreporting. According to the OPM, which makes none of those adjustments, some 8.9 percent of children lived in deep poverty in 2015. When all three adjustments are made, the deep-poverty rate drops by more than two-thirds, to 2.9 percent. This 2.9 percent rate translates into 2.1 million children living in households with grossly inadequate resources. The congressional charge to the committee regarding deep poverty is identifying programs and policies that reduce this 2.1 million figure by more than 1 million children.

By contrast, when poverty is defined to include the "near poor"—those with incomes up to 150 percent of the poverty line—the 31.4 percent rate based on the OPM actually increases: It rises to 38.1 percent with no adjustments for underreporting and to 35.6 percent with adjustments. Substantial numbers of near-poor families pay more in taxes than they receive in tax credits, and they also incur additional work-related expenses. These factors combine to reduce net incomes and push some near-poor families below 150 percent of the SPM poverty line (Short and Smeeding, 2012).

CONCLUSION 2-1: The Supplemental Poverty Measure (SPM) has advantages over the Official Poverty Measure (OPM), the most important of which is that it includes government benefits, such as near-cash benefits and tax transfers, which are not included in the OPM. Current estimates of child poverty based on the SPM are substantially lower than those based on the OPM, and lower still when the SPM poverty estimate is adjusted for the underreporting of income in Census Bureau surveys. SPM-based estimates of poverty, combined with underreporting adjustments, indicate that 13.0 percent of U.S. children—more than 9.6 million children in all—were poor in 2015. In the case of deep poverty (defined by 50% of the SPM poverty thresholds), the corresponding rate is 2.9 percent, representing 2.1 million children.

A DEMOGRAPHIC PORTRAIT OF U.S. CHILD POVERTY IN 2015

Policy makers and researchers share a broad interest in understanding the distribution of poverty as well as the impacts of poverty-reducing programs across demographic groups. In this section, we therefore discuss how child poverty varies according to six demographic factors: race and

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A Roadmap to Reducing Child Poverty

ethnicity, maternal schooling, family structure, adult work, immigration status, and parent's age. Throughout this section, except where defined otherwise, the poverty rates we cite are based on the TRIM3-SPM measure described in the previous sections.

Note that a complete set of poverty-rate estimates for selected demographic groups and definitions, provided in Appendix D, Table D2-5 and Appendix E, includes demographic breakdowns not discussed in this chapter. Also note that American Indian and Alaska Native status is not included because the ASEC data did not provide a sufficient sample size to support reliable estimates for this group; a discussion of American Indian and Alaska Native child poverty using other sources of data is provided in Appendix D, 2-7 and in a research recommendation in Chapter 9.

Race and Ethnicity

The U.S. population is becoming more racially and ethnically diverse, and the diversity of the child population is increasing even more rapidly than that of the population as a whole. As detailed in Appendix D, 2-8, the proportion of racial/ethnic minority children in the total U.S. child population increased from less than one-third in 1990 to nearly one-half in 2017 (U.S. Census Bureau, 2018). The Hispanic child population has shown especially dramatic growth, increasing from 9 percent in 1980 to 25 percent in 2017 (U.S. Census Bureau, 2018). According to the Census Bureau, as of 2013 racial/ethnic minority groups combined comprised more than 50 percent of the population of children under age 1 (Pew Research Center, 2016). By 2020, the entire child population is projected to include more Hispanics, Blacks, Asians, and other minorities than non-Hispanic Whites (U.S. Census Bureau, 2018).

Concerns over varying rates of child poverty across racial/ethnic groups are long-standing (Eggebeen and Lichter, 1991; Hill, 2018; Lichter, Qian, and Crowley, 2008). These differences are readily apparent in our TRIM3-SPM-based estimates, as shown in Figure 2-2. Hispanic children experience the highest rates of poverty and deep poverty. The poverty rates for Black (17.8%) and Hispanic (21.7%) children were more than double those of non-Hispanic White (7.9%) children.[10] Similar relative disparities are found for rates of deep poverty. If the line is drawn at 150 percent of SPM to include near poverty, more than one-half of all Black (50.6%) and Hispanic (54.6%) children, but less than one in four (22.9%) non-Hispanic White children, are counted as poor or near poor.

[10] The TRIM3-SPM poverty rate for children in the Other Races (non-Hispanic) category, which includes American Indian and Alaska Native, Asian and Pacific Islander, and multiracial children, is 11.1%.

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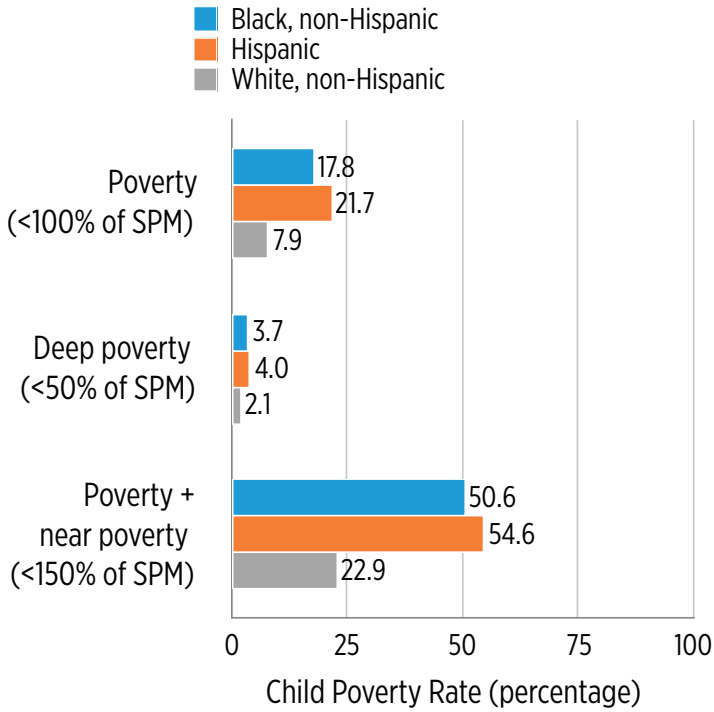

FIGURE 2-2 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children by race and ethnicity, 2015.
NOTES: Based on TRIM3-SPM measurement. Fraction of all children in each group: Black, non-Hispanic–13.9%; Hispanic–24.7%; White, non-Hispanic–51.4%; Other–10.0%. SPM = Supplemental Poverty Measure.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

Another way of describing poverty across racial/ethnic groups is by asking what share of a given poverty group comprises children from specific racial/ethnic categories. Such a breakdown of data is shown in Figure 2-3.[11] Again using our TRIM3-SPM-based estimates, non-Hispanic White children comprise a little more than one-half of all children but only about one-third of children in poverty or in deep poverty. The largest share of poor children are Hispanic. Similar shares of children in deep poverty are Hispanic and non-Hispanic White.

[11] Figure 2-3 also shows poverty shares for children living in persistently poor counties. These data are discussed below.

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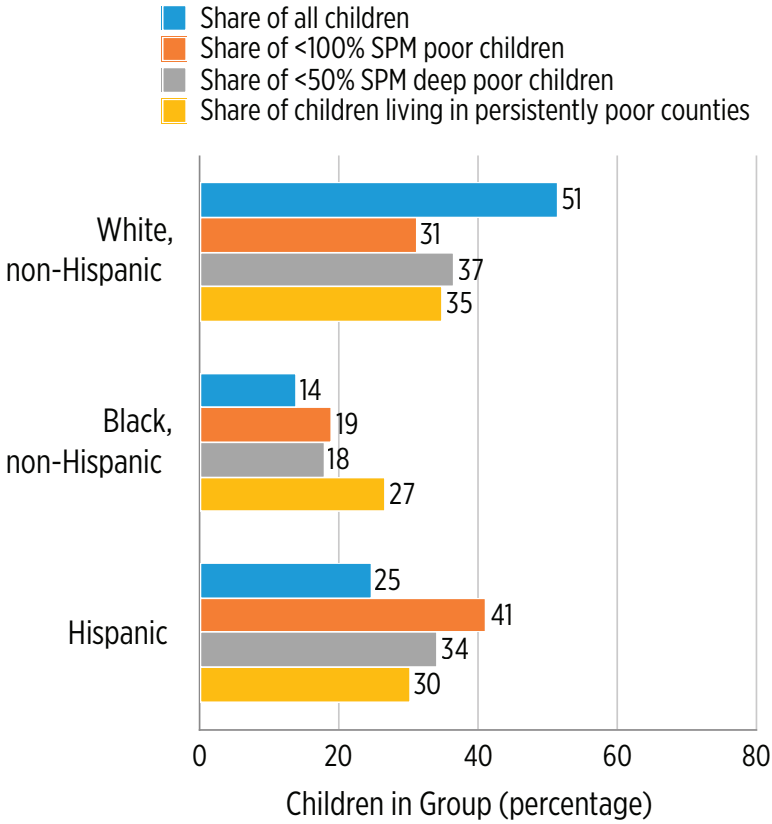

FIGURE 2-3 TRIM3-SPM estimates of the share of children by racial/ethnic category comprising poor children, deeply poor children, and children living in persistently poor counties, 2015.
NOTES: Children in other racial/ethnic groups are not shown. SPM = Supplemental Poverty Measure.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

CONCLUSION 2-2: Poverty rates for children vary greatly by the child's race and ethnicity. Based on our Transfer Income Model, Version 3 Supplemental Poverty Measure poverty estimates, Black and Hispanic children have substantially higher rates of poverty and deep poverty than non-Hispanic White children. Hispanic children constitute the largest share of poor children and nearly as large a share of deeply poor children as non-Hispanic Whites.

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Education of Parents

Adults' educational attainment is a strong correlate of their poverty status (National Academies of Sciences, Engineering, and Medicine, 2017; Wood, 2003). Completing more schooling is associated with higher rates of employment, higher earnings, better health, and a greater chance of having a spouse or partner, all of which are in turn associated with higher household income (Child Trends Data Bank, 2016). Figure 2-4 shows that child poverty rates are inversely related to the education level of the parents. Based on the TRIM3 model, one-third of children whose parents dropped

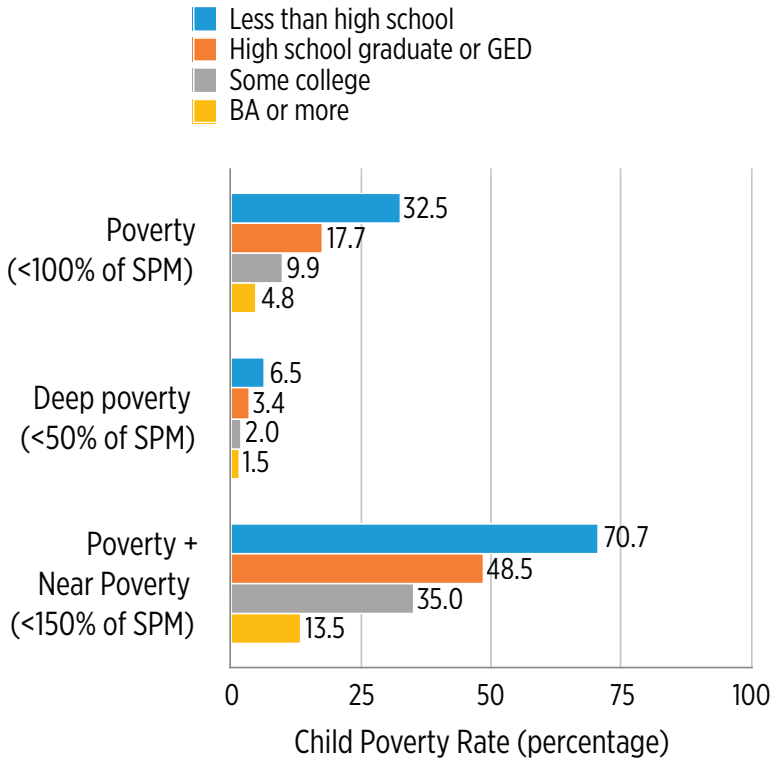

FIGURE 2-4 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children by education level of parents, 2015.
NOTES: Fraction of all children in each group: Less than high school–12.4%; HS grad or GED–24.4%; Some college–29.0%; BA+–33.9%; Other–0.2%. SPM = Supplemental Poverty Measure; BA = Bachelor's degree; GED = General Educational Diploma.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

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out of high school are living below the 100 percent SPM poverty line and more than two-thirds (70.7%) of these children are within 150 percent of the SPM poverty line.

Family Composition

Family structure has grown increasingly diverse over recent decades (Furstenberg, 2014); for example, more than 40 percent of children today are born to unmarried parents (Martin et al., 2018) and more than one-half of children will spend some of their childhood not living with both of their biological parents (McLanahan and Jencks, 2015). Although most unmarried biological parents are living together when their child is born, nearly half of these couples will separate before that child's 5th birthday (Kennedy and Bumpass, 2008). Children born to unmarried parents may experience several different family structures over the course of their childhoods, such as living with a step-parent, with a grandparent, or in single-parent households (Manning, Brown, and Stykes, 2014). The proportion of children in single female-headed households is substantially higher for Black children (57%) than for either White (18%) or Hispanic (32%) children (National Center for Education Statistics, 2018).

For children living with both biological parents, our TRIM3 estimates find that poverty rates are less than one-half those of children with other family structures (see Figure 2-5). But even given the economic advantages of having two potential earners in the household, more than one in four (27.5%) children living with their two biological parents have family incomes below the 150 percent (near-poor) poverty line. Children living with a single parent or with neither biological parent (including foster children) have the highest rates of poverty and deep poverty.

Workers in the Household

Nearly four-fifths of all children live in families with at least one full-time working adult and, as shown in Figure 2-6, the TRIM3 SPM poverty rates for these children (6.5%) are correspondingly low. The poverty rates among children living with a part-time, as opposed to full-time, worker are correspondingly higher. By far the highest child poverty rates are observed for the relatively small fraction (6.3%) of children living in households with no workers: nearly one-quarter (22.3%) of these children are in deep poverty, three-fifths (61.5%) are below the poverty line, and the vast majority (90.8%) are below the 150 percent near-poverty line.

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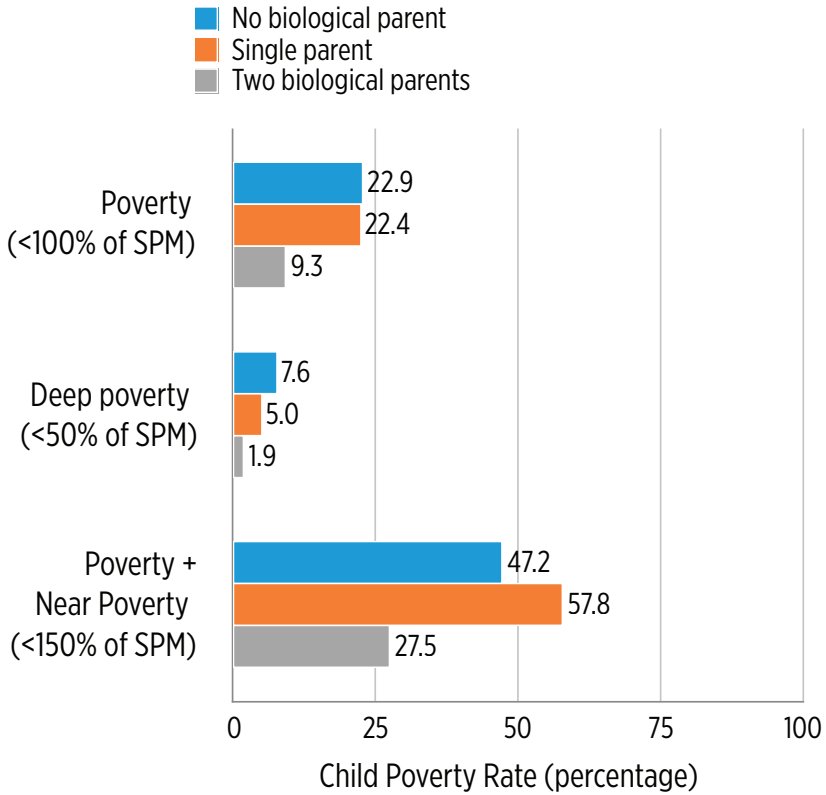

FIGURE 2-5 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children, by family composition, 2015.
NOTES: Fraction of all children in each group: No biological parent–4.6%; Single parent–23.6%; Two biological parents–71.8%; Other–0.1%. SPM = Supplemental Poverty Measure.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

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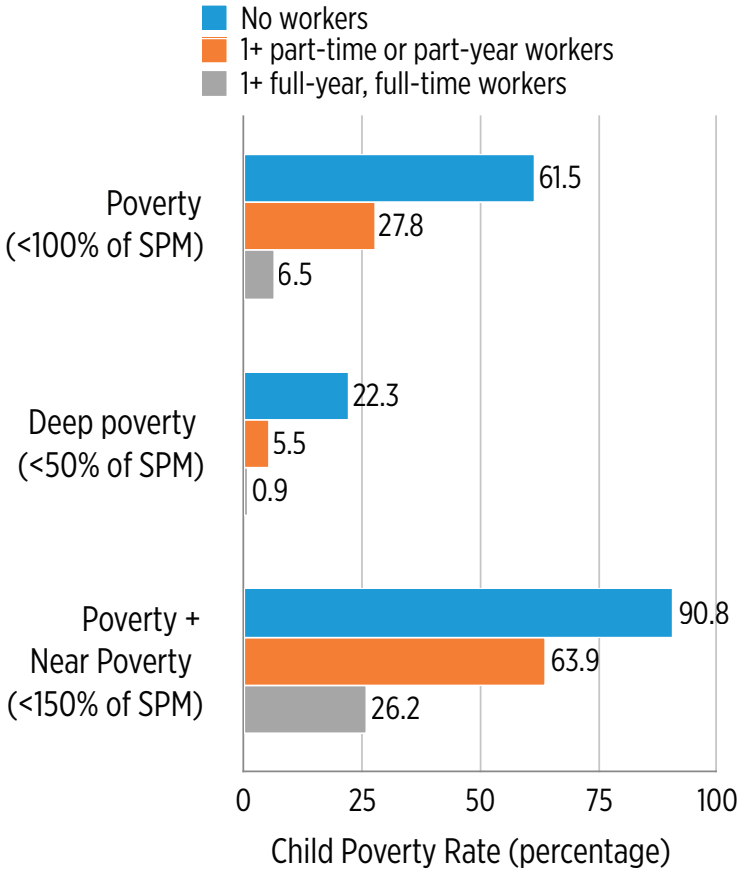

FIGURE 2-6 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children, by number of working adults in household, 2015.
NOTES: Fraction of all children in each group: No workers–6.3%; 1+ part-time or part-year worker–14.1%; 1+ full-year, full-time worker–79.6%. SPM = Supplemental Poverty Measure.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

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Immigration Status

Children in immigrant families, defined as those with at least one foreign-born parent, represent about one-quarter of all children (Woods and Hanson, 2016).[12] The TRIM3 SPM poverty rate of children in immigrant families (20.9%) is twice as high as that of children in nonimmigrant families (9.9%) (Appendix D, Table D2-6). The majority of children in immigrant families are U.S. citizens: Some 88 percent of all children in all types of immigrant households are citizens, and 79 percent of children living in households with members who are unauthorized immigrants are citizens. The immigrant status of their families is associated with a higher risk of poverty (Capps, Fix, and Zong, 2016; Migration Policy Institute, 2017; Woods and Hanson, 2016).

The relationship between poverty, citizenship, and immigration status is shown in Figure 2-7 and Appendix D, Table D2-6, again based on the TRIM3-SPM model. Children living in households in which all members are citizens have a poverty rate of 10.2 percent, nearly 3 percentage points below the 13.0 percent overall child poverty rate. By contrast, living in households with noncitizens—particularly unauthorized immigrants—is associated with higher poverty rates, even for children who are themselves U.S. citizens.

Child Citizenship

When the household includes recent or unauthorized immigrants, the poverty rate among noncitizen children is even higher: 31.8 percent and 33.3 percent, respectively. Citizenship for the child appears to buy very little in the way of poverty reduction if other household members are unauthorized: 31.5 percent of citizen children whose households have at least one unauthorized resident are poor, as are 24.7 percent of citizen children whose households have at least one recent immigrant. However, child citizenship is associated with a much lower rate of deep poverty: 6.4 percent versus 15.2 percent, respectively, for citizen versus noncitizen children, in both cases living with unauthorized household members.

[12] In the TRIM3 analyses, a child is considered to *have an immigrant parent* if he or she has at least one biological, adoptive, or stepparent that was born in another country. A *recent immigrant* is defined as a person entering as a legal permanent resident within the last 5 years. Children are classified by their own status. For example, in the case of an SPM unit containing unauthorized immigrant parents, an unauthorized immigrant child, and a native-born citizen child, the unauthorized immigrant child would be categorized as "Child is a noncitizen, unit contains unauthorized immigrant" and the native-born child would be classified as "Child is a citizen, unit contains unauthorized immigrant."

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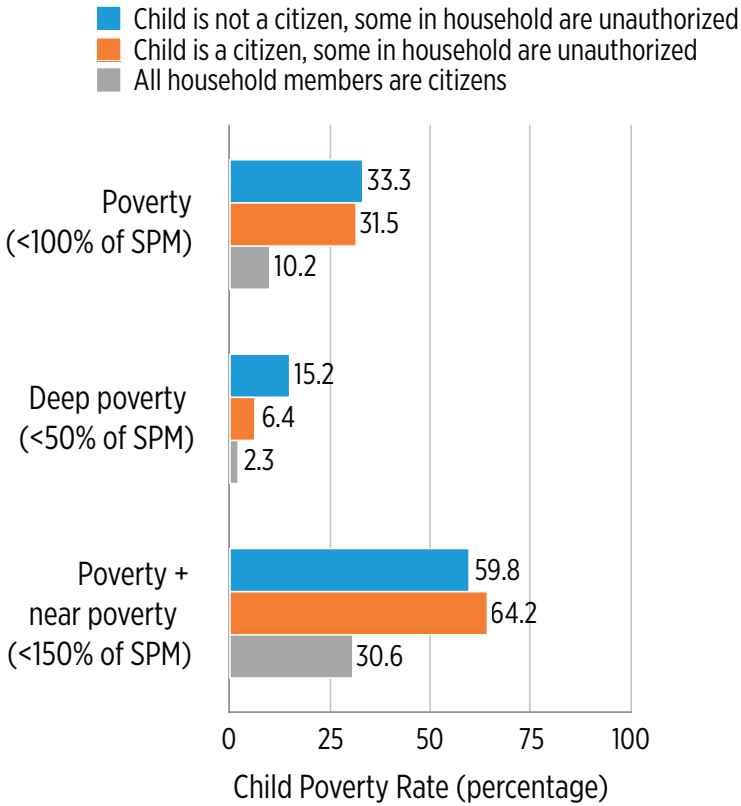

FIGURE 2-7 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children, by citizenship status of child and adults in household, 2015.
NOTE: Fraction of all children in each group: Child is not a citizen, some in household are unauthorized–1.1%; Child is a citizen, some in household are unauthorized–6.9%; All household members are citizens–81.5%; Other–10.0%.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

Age of Parent

Our final demographic dimension is the age of the parent, defined as the age of the biological parent, adoptive parent, or stepparent if present.[13] Children born to younger mothers are more likely to live in poverty (Mather, 2010). On average, maternal age at first birth has been increasing (Mathews and Hamilton, 2016), and over the last three decades births to teen

[13] Age of parent is determined first by asking the mother, if present. If the mother is not present, then the biological, adoptive, or stepfather (if present) is asked.

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mothers have declined very significantly—by more than 64 percent (Martin, Hamilton, and Osterman, 2017). Despite these trends, in 2015 more than one-quarter of children were born to mothers under age 25, and racial/ethnic minority children were more likely than their White counterparts to be born to young mothers (Martin, Hamilton, and Osterman, 2017).

The poverty risk for living with a younger parent (which we define here as under age 25) is readily apparent in Figure 2-8; nearly one-quarter (23.8%) of children living with a young parent fall below the 100-percent-of-SPM

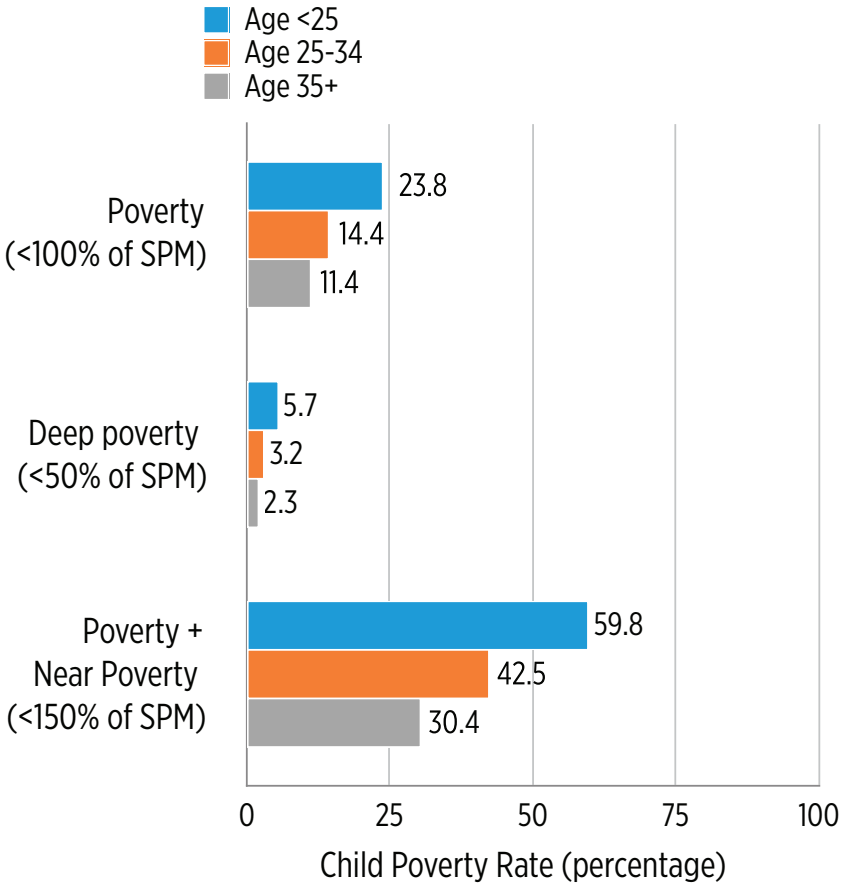

FIGURE 2-8 TRIM3-SPM rates of poverty, deep poverty, and near poverty for children, by age of parent, 2015.
NOTE: Fraction of all children in each group: Age 35+—64.4%; Age 25–34—30.8%; Age <25—4.5%; Other—0.2%.
SOURCE: Commissioned by the committee, estimates are from TRIM3, which include adjustment for underreporting.

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poverty line.[14] Nearly three-fifths of children with a young parent live in families with incomes less than 150 percent of the poverty line.

CONCLUSION 2-3: Poverty rates for children vary greatly depending on other characteristics of parents and households. Higher poverty rates are associated with low levels of parental schooling and with living with a single parent, no parent, or a young parent. Poverty is more prevalent when both children and other family members are not citizens, although these poverty rates improve only a little when children are U.S. citizens but living in households with family members who are unauthorized. Children in families with no workers have by far the highest rates of poverty and near poverty, but even full-time work is insufficient to lift one-quarter of children living with full-time workers above the 150 percent Supplemental Poverty Measure poverty line.

Geographic Distribution of Poverty

Child poverty rates also vary across communities. As documented in Chapter 8, the experience of child poverty in a community with good schools, resources for families, and pathways for economic mobility may be different than the experience in a community that has suffered from persistent poverty for decades.

To examine the geographic distribution of both point-in-time and persistent poverty, we use county data based on the OPM, because SPM county-level estimates are not available (see Appendix D, 2-9).[15] For the point-in-time analyses, we classified counties as poor if 20 percent or more of children under age 18 lived in families with incomes below poverty thresholds in 2015. As shown in Figure 2-9 and Appendix D, 2-9, nearly all counties in the South and Southwest and many counties in the West and the Appalachian region had child poverty rates of 20 percent or higher in 2015. Relative to the total number of children of a given race and ethnicity, the

[14] Note this is not the age at birth but the age of the parent at the time of the survey. As shown in the notes to Figure 2.8, only 4.5% of all parents of children less than 18 are to parents of age less than 25.

[15] The committee assessed the lowest geographic disaggregation level that can be achieved with the SPM and found that there are no county or other substate (besides metropolitan area) SPM estimates. This is primarily because the CPS ASEC is the primary dataset used for SPM, and its sample size does not allow estimates for such small geographic areas. Because of its larger sample size, the ACS is the most likely alternate dataset, but it is missing critical variables used in calculating SPM. While there has been some work, primarily Renwick (2015), has experimented with using the CPS ASEC to inform ACS imputations of missing variables so that the ACS can hypothetically be used to estimate substate SPM; in the end those researchers created only state-level (single-year) estimates and reached no conclusions about substate level SPM estimates.

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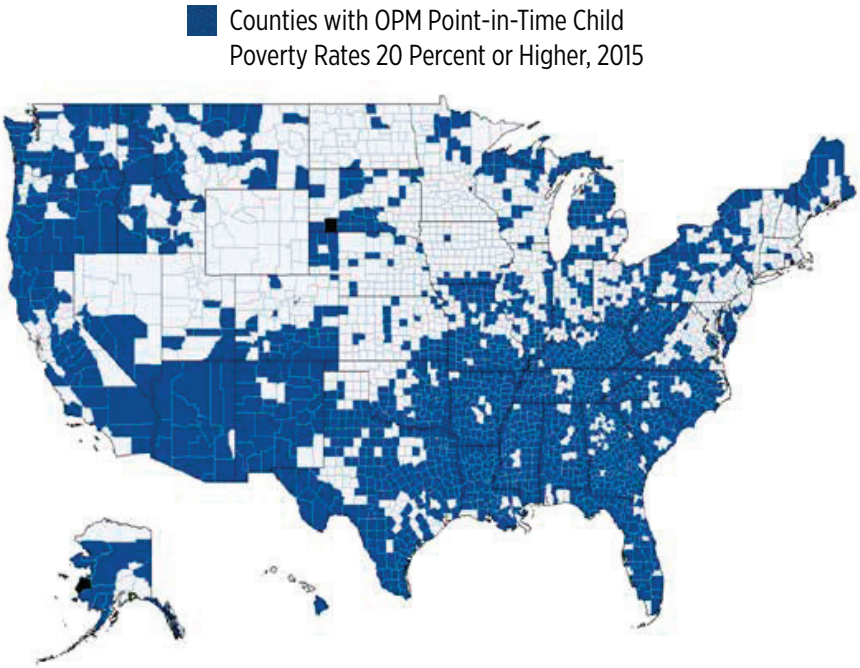

FIGURE 2-9 Counties with OPM point-in-time child poverty rates 20 percent or higher, 2015.
NOTE: OPM = Official Poverty Measure.
SOURCE: Estimates by the committee from U.S. Population Estimates, 2016 Vintage, Census Bureau; data as of July 1, 2015. 2015 county child poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

risk of residing in a point-in-time poor county is highest among Black children (70.8%), followed by American Indian and Alaskan Native (70.6%), Hispanic (65.0%), and non-Hispanic White children (46%).

We also examined the geographic distribution of persistently high child poverty. A county was classified as having persistently high child poverty if 20 percent or more of its children were classified as OPM-poor over four decades: in the 1980, 1990, and 2000 decennial censuses and in the 2007–2011 American Community Survey 5-year estimates (see Appendix D, 2-9). Some 10.2 million children (13.9% of all children) lived in persistently poor counties in 2015. The 10.2 million figure includes 3.6 million White children, 3.1 million Hispanic children and 2.7 million Black children (refer to Figure 2-3). The risk of living in a persistently poor county is highest among American Indian and Alaska Native children (36%) followed by Black (27%), Hispanic (17.1%), non-Hispanic White (9.4%), and Asian and Pacific Islander (8.2%) children (Appendix D, Figure D2-7).

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Persistently high poverty is more geographically concentrated than point-in-time poverty (see Figure 2-10). The South and Northeast regions have the highest proportion of children in persistently poor counties (22.1% and 17.3%, respectively; see Appendix D, Figure D2-9) and account for the vast majority of children (81.3%) living in those counties. Although not readily apparent in Figure 2-10, due to their small land mass the persistently poor counties in the Northeast, which include the cities of New York, Philadelphia, Newark, and Boston, account for 2.1 million children.

CONCLUSION 2-4: Poverty rates for children vary considerably by geographic location. About one in seven children live in counties with persistently high child poverty (Official Poverty Measure child poverty rates always above 20% since 1980). The South and several large metropolitan areas in the Northeast regions have the highest proportions of children in counties with persistently high child poverty.

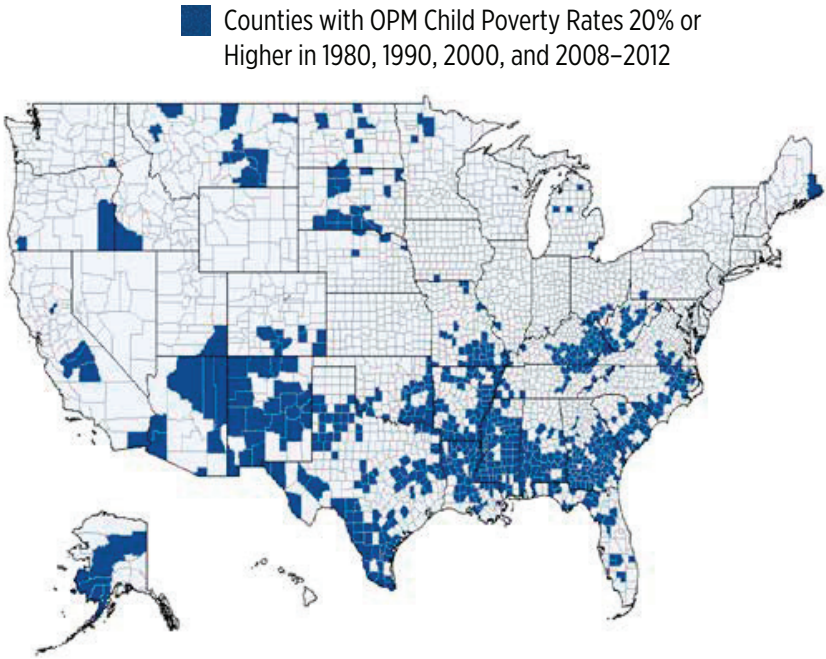

FIGURE 2-10 Counties with Official Poverty Measure (OPM) child poverty rates 20% or higher in 1980, 1990, 2000, and 2008–2012.
SOURCE: Estimates by the committee from U.S. Population Estimates, 2016 Vintage, Census Bureau; data as of July 1, 2015. 2015 county child poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

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HISTORICAL TRENDS IN CHILD POVERTY, 1967–2016

Historical trends in the OPM are published annually by the Census Bureau. As shown in Figure 2-11, they suggest that virtually no progress has been made in reducing child poverty between the late 1960s and today. If anything, child poverty rates as measured by the OPM were a little higher in 2016 (18.0%) than they had been 50 years before, in 1967 (16.6%; U.S. Census Bureau, 2018, Table 3).

Given the growth in near-cash benefits over this period, it is possible that child poverty rates based on the SPM, which counts most near-cash benefits as income, and the OPM, which does not, may show different trends. A first step in investigating whether this is the case is to construct a consistent time series of SPM-based rates, as shown in Figure 2-11 (Hardy, Smeeding, and Ziliak, 2018).

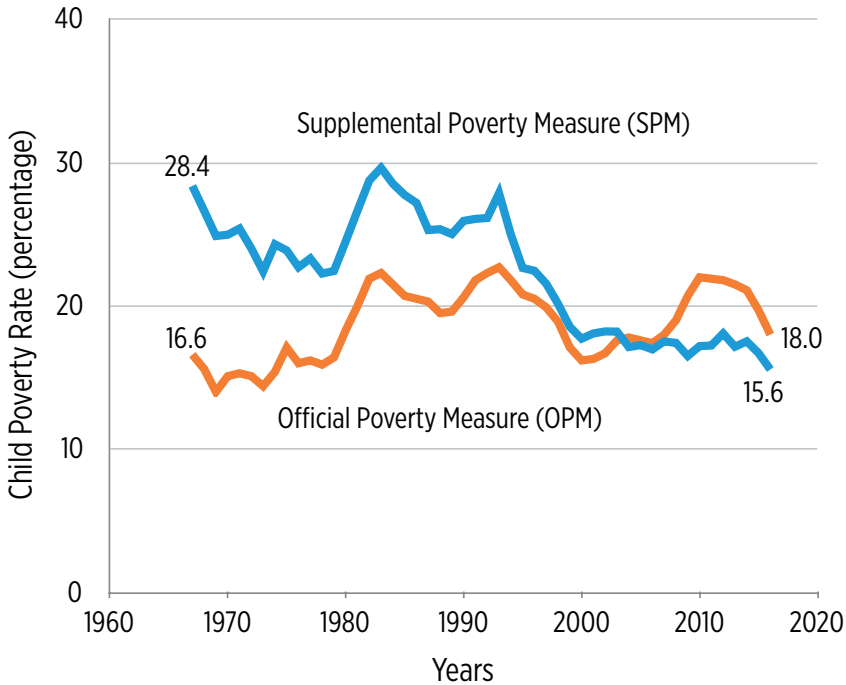

FIGURE 2-11 OPM and SPM child poverty rates, 1967–2016.
NOTE: The SPM poverty measure is anchored in 2012 living standards and adjusted back to 1967 using the Consumer Price Index. Income data are not adjusted for underreporting.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017, October).

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Two complications arise. First, because some TRIM3 adjustments are not available for most of the years we examined, the analyses in this section are based on Current Population Survey data that are not adjusted for income underreporting. A second complication is the difficulty of defining SPM-based poverty in a consistent way across the half century between 1967 and 2016. Recall that the SPM uses a poverty threshold based on the 33rd percentile of the distribution of core living expenses. Thus, the poverty threshold in the SPM is tied to changes in the standard of living of this low-income group. In contrast, the OPM poverty thresholds are adjusted over time only by rates of inflation.

Wimer et al. (2013) have estimated annual SPM thresholds going back in time to 1967, using available ASEC historical data. They have also constructed SPM thresholds that are anchored in current living standards and adjusted them backward in time only by inflation, as well as thresholds that are anchored in 1967 and then adjusted forward only by inflation. Though the SPM was designed to be a relative measure, whether to measure poverty in relative or absolute terms for purposes of historical analysis is an unsettled question. We use an anchored SPM (an absolute measure) here and in our analysis in Chapter 4 of the effects of changes in the labor market, family structure, and government programs on child poverty over time, because this measure allows us to abstract from changes in living standards. We anchor the measure in recent (2012) living standards to make it as comparable as possible with the TRIM3-SPM poverty estimates presented elsewhere in this report, which focuses on the current period.[16] Appendix D, 2-10 provides further discussion and illustration of child poverty trends using anchored and unanchored SPM measures.

Figure 2-11 shows both OPM- and anchored SPM-based child poverty rates from 1967 to 2016. As noted before, over this period OPM-based child poverty rates increased from 16.6 percent to 18.0 percent, while the anchored SPM indicates that child poverty actually *decreased by nearly half*—from 28.4 percent to 15.6 percent.[17] SPM poverty rates are higher than OPM poverty rates in the earlier years of the period in part because of the higher SPM threshold and (to a lesser extent) because during that

[16] These estimates were taken from a study (Wimer, 2017) commissioned by the committee for this report. Due to the relative nature of the SPM, historical changes in poverty could be at least partly due to changes in poverty thresholds (Wimer et al., 2013). Anchored measures of poverty apply current poverty thresholds to historic data by adjusting for inflation to isolate changes in family resources from changes in living standards. For more information, refer to Wimer et al. (2013).

[17] As explained in Fox et al. (2015), an SPM poverty line anchored in 1967 living standards and subsequently adjusted for inflation annually yields estimates of poverty reduction that are similar to estimates anchored in current living standards and adjusted backward for inflation, like those reported in the figures and text.

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period the tax system took more income from poor families with children than these families received from government as in-kind benefits. As we show in Chapter 4, much of the decline in SPM-based child poverty is due to increasingly generous government benefits. Because it does not count benefits from the Earned Income Tax Credit, SNAP, public housing, and housing vouchers, OPM-based child poverty rates include only cash transfers (like Supplemental Security Income [SSI] and the cash portion of TANF) and therefore fail to consider the largest portion of the social safety net. Consequently, trends in the OPM are not useful for drawing conclusions regarding changes in the well-being of children in the United States.

An alternative is to construct SPM poverty thresholds based on changes in living standards rather than inflation; this "historical SPM" also shows a substantial decrease in child poverty, but the decrease is only about half as large, or 25 percent (see Figure 2-15 in Appendix D, 2-10). The decrease in poverty is smaller because living standards at the 33rd percentile of the income distribution have increased over the last half-century by more than the cost of living. Figure 2-12 depicts historical trends in anchored SPM-based child poverty, near poverty, and deep poverty rates. As with the basic (under 100%) SPM poverty measure, shown in Figure 2-11, deep poverty rates had fallen by 2016 to nearly half of their 1967 levels. In the case of the line drawn at 150 percent of SPM, poverty rates fell by nearly 40 percent between 1967 and 2016. Strikingly, most of these three sets of declines occurred prior to the year 2000. It is also worth noting that SPM-based poverty rates declined for all three racial/ethnic groups: for Whites, Blacks, and Hispanics. (Historical trends in OPM- and SPM-based child poverty rates by race and ethnicity between 1970 and 2016 are presented in Appendix D, 2-8.)

CONCLUSION 2-5: When measured by the Official Poverty Measure, poverty rates changed very little between 1967 and 2016; by contrast, when measured by the anchored Supplemental Poverty Measure (SPM), they fell by nearly half over that period, due to the increases in government benefits. SPM-based rates of deep and near child poverty declined as well over the period, both overall and across subgroups of children defined by race and ethnicity.

CHILD POVERTY IN THE UNITED STATES AND OTHER ENGLISH-SPEAKING DEVELOPED COUNTRIES

Over the past several decades, researchers have developed the capacity to analyze child poverty across countries by using comparable microdata. The two most widely used sources of international data are the Luxembourg Income Study (LIS), which allows analysts to work with the microdata, and

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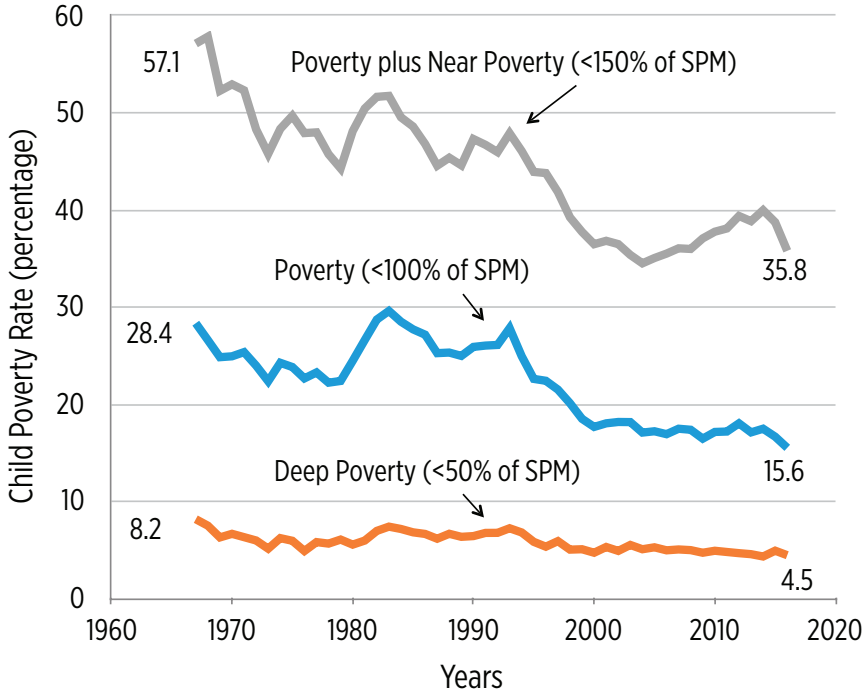

FIGURE 2-12 Trends in Supplemental Poverty Measure (SPM) rates of poverty, deep poverty, and near poverty for children, 1967–2016.
NOTE: The SPM poverty measure is anchored in 2012 living standards and adjusted back to 1967 using the Consumer Price Index. Income data are not adjusted for underreporting.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017, October).

the Organisation for Economic Co-operation and Development (OECD) poverty and income database, which is more up to date but provides only country-level statistics and relative poverty measures.

Early staff and committee discussions with the sponsors of this report revealed a particular interest in comparing child poverty rates across a subset of OECD English-speaking nations: Australia, Canada, Ireland, the United Kingdom, and the United States. These countries have income support systems that differ from those found in central and northern Europe, including Scandinavia (Esping-Anderson, 1990). Three of them are large and diverse nations (Australia, Canada, and the United States), while the other two (Ireland and the United Kingdom), though smaller in size, still exhibit some geographic and ethnic heterogeneity. We gauge

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the comparative effectiveness of anti-poverty programs across these same countries in Chapter 4.

Most published international poverty comparisons use a poverty line defined by a given fraction of each country's median income, such as 40, 50, or 60 percent.[18] This is a *relative* poverty concept because it measures the fraction of families who have income that is low relative to overall income in the country. Families in a high-income, industrialized country might all have incomes that are higher than the incomes of families in a low-income country, but relative poverty could still be high in the former if the lower-income families there were "further away" from the country's overall median income.[19]

OECD poverty statistics are typically based on a poverty line drawn at 50 percent of median income, a line we will call "OECD-50." For this measure, household resources include money income and near-cash benefits minus taxes (including tax credits). Estimates of child poverty using the OECD-50 for the United States and the four English-speaking comparison countries are shown in the top bars of Figure 2-13 (labeled "Relative Poverty (OECD-50)"). Rates of child poverty using this relative measure are much higher in the United States than in these peer countries—more than twice as high as in Ireland and nearly 5 percentage points higher than in Canada, the country with the second-highest child poverty rates.

To explore the sensitivity of cross-national child poverty rates to the specific definition of child poverty, Figure 2-13 also shows poverty rates using two other measures. The first uses LIS data to set the poverty threshold for each country at the same percentile of the country's income distribution as the SPM threshold in the U.S. income distribution. Since that point is at the 40th percentile of the income distribution, we label this measure "Relative Poverty (LIS-SPM-40)." Drawing the line at the 40th percentile lowers child poverty rates, but the country rankings are similar to those found with the OECD-50 measure of relative poverty.

The third measure is based on what is sometimes called "absolute" poverty. Absolute poverty measures the fraction of families in a country whose incomes fall below some fixed amount, regardless of how affluent the country is. For this reason, high-income countries will tend to have lower absolute poverty rates than lower-income countries. In our case, the dollar levels of the U.S. SPM poverty thresholds are translated into poverty thresholds in other countries using the purchasing power of the dollar relative

[18] As explained in Appendix D, 2-2, the income data and thresholds are also adjusted for family size.

[19] The SPM poverty measure is also relative, but it is based on the distribution of expenditures rather than income, and is set at a given (33rd) percentile of the expenditure distribution rather than at a fraction of the median.

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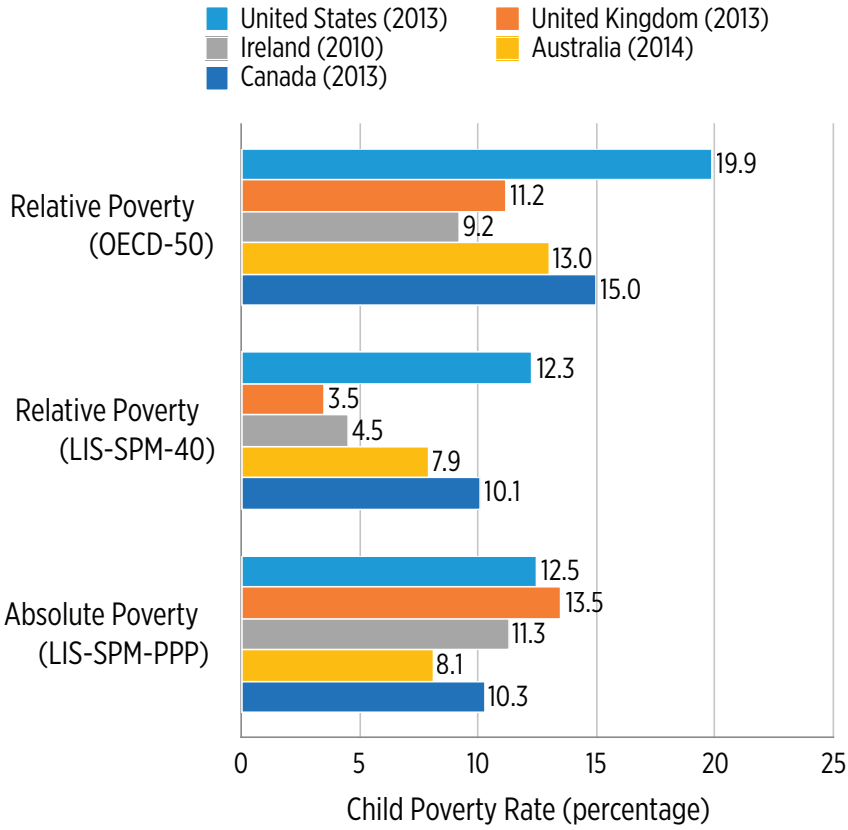

FIGURE 2-13 Child poverty in the United States and four other anglophone countries, using three alternative measures, various years.
NOTES: OECD-50 = Poverty rate defined as 50 percent below each country's median income; LIS-SPM-40 = poverty rate defined as below the 40th percentile in each country's income distribution, based on the Luxembourg Income Study (LIS); LIS-SPM-PPP = poverty rate defined following the SPM definition and adjusted for PPP (purchasing power parity). Data are not adjusted for underreporting.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

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to other countries' currencies.[20] Because the translations are based on purchasing power parity (PPP) data, we label this measure "Absolute poverty (LIS-SPM-PPP)." Appendix D, 2-11 discusses these measures in more detail.

As shown in the bottom panel of Figure 2-13, using an absolute poverty standard changes the country rankings somewhat. The United Kingdom now has the highest absolute poverty rate, followed by the United States, Ireland, Canada, and lastly Australia. The primary reason for this shift in rankings is that living standards are generally higher for U.S. children than for UK children, so a poverty line defined by U.S.-based income cuts the UK income distribution at a higher point than where it cuts the U.S. income distribution.

Finally, we compare rates of deep poverty and near poverty in the United States and these peer countries using the LIS and the absolute SPM poverty measure (see Figure 2-14). At 3.6 percent, the United States has by far the highest rate of deep child poverty, nearly twice the rate seen in the next-ranked nation (Australia, at 1.9%).[21] By contrast, the United States is in the middle of the pack where near poverty is concerned (defining near poverty as 150 percent of the absolute SPM), with a rate of 29.2 percent. This near-poverty rate is considerably lower than what is seen in the United Kingdom (46.4%) and Ireland (37.2%), where the poverty line cuts their distributions at a much higher income level (see Appendix D, Figure D2-3), but it is higher than in countries with absolute living standards most similar to those in the United States: Australia (21.6%) and Canada (27.2%).

Poverty rates for children in single-parent families, in working families (except for the United Kingdom), and in immigrant families are higher in the United States than in the other comparison nations, even using the absolute LIS-SPM-PPP poverty rates. (These rates are shown in Figure 2-13 and Appendix D, 2-11.)

CONCLUSION 2-6: How child poverty rates in the United States rank relative to those in peer English-speaking developed countries depends on how poverty is defined. The United States has much higher rates of child poverty than these peer countries using relative, within-country measures of poverty. However, when an absolute poverty measure is used, child poverty rates in the United States are more similar to rates

[20] The 2013 U.S. SPM translates into about $25,550 for two parents and two children. This amount is converted to other currencies using 2011 purchasing power parities (PPP) and national consumer price changes when years differ. The SPM poverty line income, on a household basis, ignoring health care costs and work expenses and other adjustments for COLAs and housing status, is about 40–41 percent of the U.S. median adjusted income on a comparable basis (Fox, 2017; Short, 2013; Wimer and Smeeding, 2017).

[21] These figures are not adjusted for underreporting in any nation. The comparisons by level and composition of poverty are shown in Figures D2-3 and D2-4.

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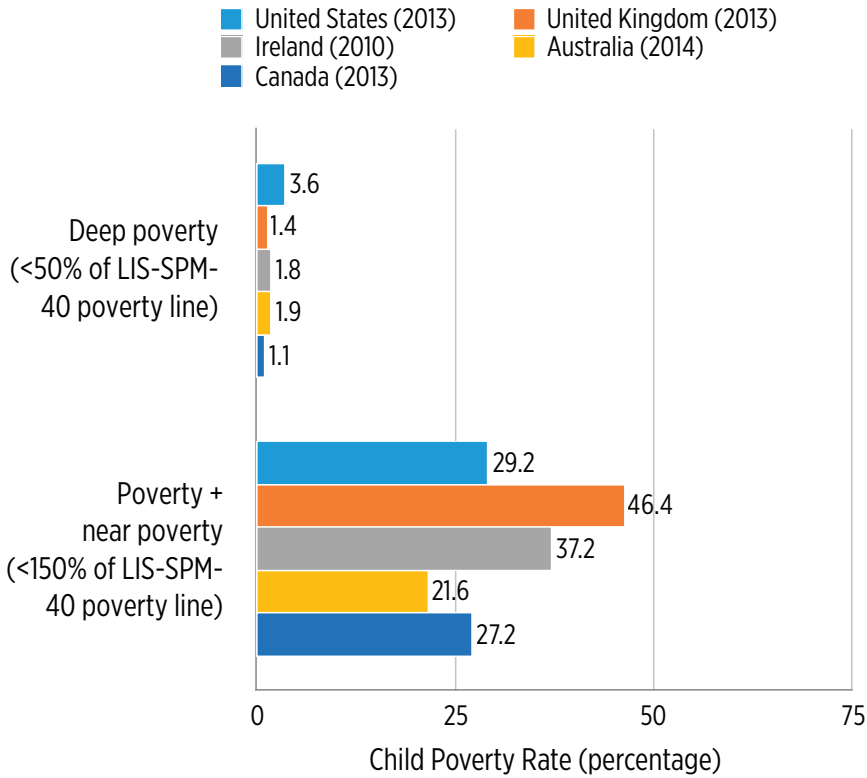

FIGURE 2-14 Deep and near child poverty in the United States and four other anglophone countries, LIS-SPM-40, various years.
NOTES: Poverty lines are absolute and based on the LIS-SPM converted to other countries using purchasing power parities (PPPs). LIS-SPM-40 = poverty rate defined as below the 40th percentile in each country's income distribution, based on the Luxembourg Income Study (LIS). Data are not adjusted for underreporting.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

in peer countries. Rates of deep poverty, by contrast, are considerably higher for children in the United States than for children in these peer countries, whether absolute or relative measures are used.

REFERENCES

Bollinger, C., Hokayem, C., Hirsch, B., and Ziliak, J. (2018). Trouble in the tails? What we know about earnings nonresponse thirty years after Lillard, Smith, and Welch. *Journal of Political Economy,* December. doi: 10.1086/701807.

Copyright National Academy of Sciences. All rights reserved.

Capps, R., Fix, M., and Zong, J. (2016). *A Profile of U.S. Children with Unauthorized Immigrant Parents*. Washington, DC: Migration Policy Institute.

Child Trends Data Bank. (2016). *Educational Attainment: Indicators of Child and Youth Well-Being*. Bethesda, MD: Child Trends. Available: https://www.childtrends.org/wp-content/uploads/2016/12/06_Educational_Attainment.pdf.

Council of Economic Advisors. (2018). *Expanding Work Requirements in Cash Welfare Programs*. Washington, DC: The White House. Available: https://www.whitehouse.gov/wp-content/uploads/2018/07/Expanding-Work-Requirements-in-Non-Cash-Welfare-Programs.pdf.

Eggebeen, D.J., and Lichter, D.T. (1991). Race, family structure, and changing poverty among American children. *American Sociological Review*, 56(6), 801–817.

Esping-Andersen, G. (1990). *The Three Worlds of Welfare Capitalism*. Hoboken, NJ: John Wiley & Sons.

Fox, L. (2017). *The Supplemental Poverty Measure: 2016*. Current Population Reports P60-261. Available: https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf.

Fox, L. (2018). *The Supplemental Poverty Measure: 2017*. Current Population Reports P60-265. Available: https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-265.pdf.

Fox, L., Wimer, C., Garfinkel, I., Kaushal, N., and Waldfogel, J. (2015). Waging war on poverty: Poverty trends using a historical supplemental poverty measure. *Journal of Policy Analysis and Management, 34*(3), 567–592.

Furstenberg, F.F. (2014). Fifty years of family change: From consensus to complexity. *The ANNALS of the American Academy of Political and Social Science, 654*(1), 12–30. Available: https://doi.org/10.1177/0002716214524521.

Hardy, B., Smeeding, T., and Ziliak, J.P. (2018). The changing safety net for low-income parents and their children: Structural or cyclical changes in income support policy? *Demography*, 55(1), 189–221.

Hill, H.D. (2018). Chapter 6: Trends and divergences in childhood income dynamics, 1970–2010. In J.B. Benson (Ed.), *Advances in Child Development and Behavior* (vol. 54, pp. 179–213). Greenwich, CT: JAI Press.

Hokayem, C., Bollinger, C., and Ziliak, J. (2015). The role of CPS nonresponse in the measurement of poverty. *Journal of the American Statistical Association 110* (511), 935–945.

Institute of Medicine and National Research Council. (2012). *Medical Care Economic Risk: Measuring Financial Vulnerability from Spending on Medical Care*. Washington, DC: The National Academies Press. https://doi.org/10.17226/13525.

Kennedy, S., and Bumpass, L. (2008). Cohabitation and children's living arrangements: New estimates from the United States. *Demographic Research*, *19*, 1663.

Korenman, S., Remler, D.K., and Hyson, R. (2017). *Accounting for the Impact of Medicaid on Child Poverty.* Background Paper for the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years, Board of Children, Youth and Families of the National Academies of Sciences, Engineering, and Medicine. Available: https://www.nap.edu/resource/25246/Korenman%20Remler%20and%20Hyson.pdf.

Lichter, D., Qian, Z., and Crowley, M. (2008). Poverty and economic polarization among children in racial minority and immigrant families. In D.R. Crane and T. Heaton (Eds.), *Handbook of Families & Poverty*. Thousand Oaks, CA: SAGE.

Manning, W., Brown, S., and Stykes, B. (2014). Family complexity among children in the United States. *The ANNALS of the American Academy of Political and Social Science*, *654*(1), 48–65.

Martin, J.A., Hamilton, B.E., and Osterman, M.J. (2017). *Births in the United States, 2016*. Available: https://www.cdc.gov/nchs/products/databriefs/db287.htm.

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A Roadmap to Reducing Child Poverty

Martin, J.A., Hamilton, B.E., Osterman, M.J., Driscoll, A.K., and Drake, P. (2018). *Births: Final Data for 2016*. Available: https://www.cdc.gov/nchs/products/databriefs/db287.htm.

Mather, M. (2010). *U.S. Children in Single-Mother Families*. Washington, DC: Population Reference Bureau.

Mathews, T.J., and Hamilton, B.E. (2016). *Mean Age of Mothers Is on the Rise: United States, 2000-2014*. Hyattsville, MD: National Center for Health Statistics.

McLanahan, S., and Jencks, C. (2015). Was Moynihan right? What happens to children of unmarried mothers? *Education Next, 15*(2).

Meyer, B.D., and Sullivan, J.X. (2017). *Consumption and Income Inequality in the U.S. Since the 1960s*. NBER Working Paper No. 23655. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w23655.

Meyer, B.D., Mok, W.K.C., and Sullivan, J.X. (2009). *The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences*. NBER Working Paper No. 15181. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w15181.

Migration Policy Institute. (2017). *Children in U.S. Immigrant Families: Number and Share of the Total U.S. Child Population, by Age Group and State*. Washington, DC: Migration Policy Institute. Available: https://www.migrationpolicy.org/programs/data-hub/charts/children-immigrant-families.

Moffitt, R.A., and Scholz, J.K. (2009, November). *Trends in the Level and Distribution of Income Support*. NBER Working Paper No. 15488. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w15488.

National Academies of Sciences, Engineering, and Medicine. (2017). *Promoting the Educational Success of Children and Youth Learning English: Promising Futures*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/24677.

National Center for Education Statistics. (2018). *The Condition of Education: Characteristics of Children's Families*. Washington, DC: Institute of Education Sciences. Available: https://nces.ed.gov/programs/coe/indicator_cce.asp.

National Research Council. (1995). *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.

Pew Research Center. (2016). *It's Official: Minority Babies Are the Majority among the Nation's Infants, but Only Just*. Available: http://www.pewresearch.org/fact-tank/2016/06/23/its-official-minority-babies-are-the-majority-among-the-nations-infants-but-only-just.

Remler, D.K., Korenman, S.D., and Hyson, R.T. (2017). Estimating the effects of health insurance and other social programs on poverty under the Affordable Care Act. *Health Affairs*, *36*(10), 1828–1837.

Renwick, T. (2015). *Using the American Community Survey (ACS) to Implement a Supplemental Poverty Measure (SPM)*. Working Paper # 2015-09. Washington, DC: U.S. Census Bureau, Social, Economic and Housing Statistics Division.

Semega, J.L., Fontenot, K.R., and Kollar, M.A. (2017). *Income and Poverty in the United States: 2016*. Current Population Reports, P60-259. Available: https://www.census.gov/content/dam/Census/library/publications/2017/demo/P60-259.pdf.

Short, K. (2013). *The Supplemental Poverty Measure: Examining the Incidence and Depth of Poverty in the U.S. Taking Account of Taxes and Transfers in 2012*. Discussion paper. Washington, DC: U.S. Census Bureau.

Short, K., and Smeeding, T. (2012). *Understanding Income-to-Threshold Ratios Using the Supplemental Poverty Measure: People with Moderate Income*. SEHSD Working Paper No. 2012-18. Washington, DC: U.S. Census Bureau.

Summers, B.D., and Oellerich, D. (2013). The poverty-reducing effect of Medicaid. *Journal of Health Economics, 32*, 816–832.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

U.S. Census Bureau. (2018). *Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States: April 1, 2010 to July 1, 2017*. Washington, DC: U.S. Census Bureau.

Wheaton, L. (2008). *Underreporting of Means-Tested Transfer Programs in the CPS and SIPP*. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/underreporting-means-tested-transfer-programs-cps-and-sipp.

Wimer, C. (2017). *Child Poverty in the United States: Long-term Trends and the Role of Antipoverty Programs Using the Anchored Supplemental Poverty Measure*. Commissioned by the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years. The National Academies of Sciences, Engineering, and Medicine, Washington, DC.

Wimer, C., and Smeeding, T. (2017). USA child poverty: The impact of the great recession. In Y.C.B. Cantillon, S. Handa, and B. Nolan (Eds.), *Children of Austerity: The Impact of the Great Recession on Child Poverty in Rich Countries* (pp. 297–331). Oxford: Oxford University Press.

Wimer, C., Fox, L., Garfinkel, I., Kaushal, N., and Waldfogel, J. (2013). *Trends in Poverty with an Anchored Supplemental Poverty Measure*. Columbia University Academic Commons. Available: https://doi.org/10.7916/D8RN3853.

Winship, S. (2016). *Poverty after Welfare Reform*. New York, NY: Manhattan Institute.

Wood, D. (2003). Effect of child and family poverty on child health in the United States. *Pediatrics*, *112* (Suppl. 3), 707–711.

Woods, T., and Hanson, D. (2016). *Demographic Trends of Children of Immigrants*. Washington, DC: The Urban Institute.

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3

Consequences of Child Poverty

In response to the first element of the committee's statement of task, this chapter summarizes lessons from research on the linkages between children's poverty and their childhood health and education as well as their later employment, criminal involvement, and health as adults. It also provides a brief review of research on the macroeconomic costs of child poverty. Because this research literature is vast, the committee focused its review on the most methodologically sound and prominent studies in key fields, primarily in developmental psychology, medicine, sociology, and economics. All else equal, we also selected more recent studies.

We find overwhelming evidence from this literature that, on average, a child growing up in a family whose income is below the poverty line experiences worse outcomes than a child from a wealthier family in virtually every dimension, from physical and mental health, to educational attainment and labor market success, to risky behaviors and delinquency.

This finding needs to be qualified in two important ways. First, although average differences in the attainments and health of poor and nonpoor children are stark, a proportion of poor children do beat the odds and live very healthy and productive lives (Abelev, 2009; Ratcliffe and Kalish, 2017).

Second, and vital to the committee's charge, is the issue of correlation versus causation. Income-based childhood poverty is associated with a cluster of other disadvantages that may be harmful to children, including low levels of parental education and living with a single parent (Currie et al., 2013). Are the differences between the life chances of poor and nonpoor children a product of differences in childhood economic resources *per se*, or do they stem from these other, correlated conditions? Evidence both on

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the *causal* (as distinct from correlational) impact of childhood poverty and on which pathways lead to better outcomes is most useful in determining whether child well-being would be best promoted by policies that specifically reduce childhood poverty. If it turns out that associations between poverty and negative child outcomes are caused by factors other than income, then the root causes of negative child outcomes must be addressed by policies other than the kinds of income-focused anti-poverty proposals presented in this report.

That said, most of the scholarly work on poverty and the impacts of anti-poverty programs and policies on child well-being is correlational rather than causal. There is much to be learned from these studies, nevertheless, and it is often the case that evidence derived from experimental designs and that derived from correlational designs lead to similar conclusions. To maintain clarity in our reviews of these two strands in the literature, we have opted to focus this chapter's main text on the results found in the causal literature, while we review the correlational literature in the Chapter 3 portion of Appendix D.

We begin with a brief summary of the mechanisms by which childhood poverty may cause worse childhood outcomes, along with lessons from the vast correlational literature, which is reviewed in depth in this chapter's appendix. We then turn to a review of the causal impacts of policies—income policies as well as anti-poverty policies—on child well-being, derived from both experimental and quasi-experimental (natural experiment) studies. The chapter concludes with a brief review of some of the limited literature on the macroeconomic costs of poverty to society.

Note that virtually all of the available evidence focuses on child poverty as measured by the Official Poverty Measure (OPM) rather than the Supplemental Poverty Measure (SPM) that is used in other chapters of this report. Given the considerable overlap in terms of who is considered poor by both measures, we would expect that the bulk of the lessons from OPM-based studies would carry over to the SPM.

WHY CHILDHOOD POVERTY CAN MATTER FOR CHILD OUTCOMES

Economists, sociologists, developmental psychologists, and neuroscientists each emphasize different ways poverty may influence children's development. Two main mechanisms have been theorized to describe these processes (see Figure 3-1). One emphasizes what money can buy—in other words, how poverty undermines parents' ability to procure the goods and services that enhance children's development. An alternative mechanism emphasizes the detrimental impact on families of exposure to

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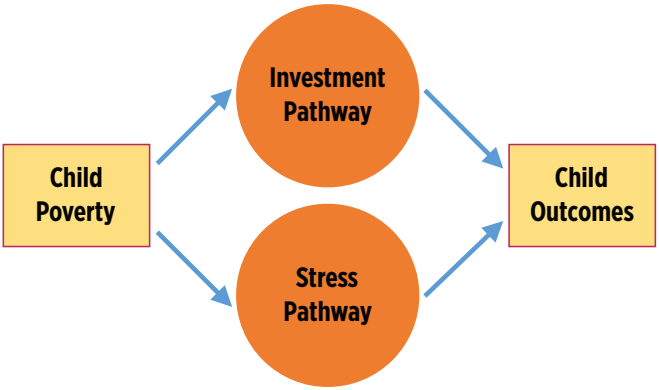

FIGURE 3-1 Hypothesized pathways by which child poverty affects child outcomes.

environmental stressors as a key pathway by which poverty compromises children's development.

As detailed in Chapter 8 and in the appendix to this chapter, low-income parents face steep challenges in meeting basic financial needs. Many poor families are not only cash-constrained but they also have little to no savings and lack access to low-cost sources of credit (Halpern-Meekin et al., 2015; Yeung and Conley, 2008; Zahn, 2006). When faced with income shortfalls, they are often forced to cut back on expenditures, even for essential goods such as food and housing, and to pay high interest rates on loans (McKernan, Ratcliffe, and Quakenbush, 2014). As a result, poverty is linked to material hardship, including inadequate shelter and medical care, food insecurity, and a lack of other essentials (Ouellette et al., 2004).

An "investment" perspective may be adopted in addressing the challenge of poverty reduction by building on an analysis of the foregoing problems, emphasizing that higher income may support children's development and well-being by enabling poor parents to meet such basic needs. As examples, higher incomes may enable parents to invest in cognitively stimulating items in the home (e.g., books, computers), in providing more parental time (by adjusting work hours), in obtaining higher-quality non-parental child care, and in securing learning opportunities outside the home (Bornstein and Bradley, 2003; Fox et al., 2013; Raver, Gershoff, and Aber, 2007). Children may also benefit from better housing or a move to a better neighborhood. Studies of some poverty alleviation programs find that these programs can reduce material hardship and improve children's learning environments (Huston et al., 2001; Morris, Gennetian, and Duncan, 2005).

The alternative, "stress" perspective on poverty reduction focuses on the fact that economic hardship can increase psychological distress in

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parents and decrease their emotional well-being. Psychological distress can spill over into marriages and parenting. As couples struggle to make ends meet, their interactions may become more conflicted (Brody et al., 1994; Conger et al., 1994). Parents' psychological distress and conflict have in fact been linked with harsh, inconsistent, and detached parenting. Such lower-quality parenting may harm children's cognitive and socioemotional development (Conger et al., 2002; McLoyd, 1990). All of this suggests that higher income may improve child well-being by reducing family stress.

Investing in children and relieving parental stress are two different mechanisms, but they overlap and reinforce each other. For example, both increased economic resources and improved parental mental health and family routines may result in higher-quality child care, more cognitively enriching in-home and out-of-home activities, and more visits for preventive medical or dental care. Better child development, in turn, can encourage more investment and better parenting; for example, more talkative children may trigger more verbal interaction and book reading from their parents, especially if parents can afford to spend the necessary time.

We have focused on parental stress, because reducing poverty may ameliorate this stress and improve parenting, including emotional support for and interactions with children. In addition, a major portion of existing research has focused on this pathway. We recognize that child stress is an important factor leading to negative child outcomes, including effects on early brain development (Blair and Raver, 2016, Shonkoff et al., 2012). We have not included it in the model (refer to Figure 3-1) because it is a more indirect mediator of the effects of other factors of poverty on child outcomes. These other factors include parenting stress, other adverse child experiences, and the negative impacts of underresourced schools and environments in poor neighborhoods. For a more extensive review of both parental and child stress, please see the appendix to this chapter (Appendix D, 3-1).

CONCLUSION 3-1: Poverty alleviation can promote children's development, both because of the goods and services that parents can buy for their children and because it may promote a more responsive, less stressful environment in which more positive parent-child interactions can take place.

The foregoing brief discussion is intended only to provide a framework in which the correlational and causal studies of the impacts of poverty can be understood. We provide a more complete review of the literature about some of these pathways in Chapter 8 and in the appendix to this chapter.

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CORRELATIONAL STUDIES

Many studies document that, on average, children growing up in poor families fare worse than children in more affluent families. A study by Duncan, Ziol-Guest, and Kalil (2010) is one striking example (see Figure 3-2). Their study uses data from a national sample of U.S. children who were followed from birth into their 30s and examines how poverty in the first 6 years of life is related to adult outcomes. What they find is that compared with children whose families had incomes above twice the poverty line during their early childhood, children with family incomes below the poverty line during this period completed 2 fewer years of schooling and, as adults, worked 451 fewer hours per year, earned less than one-half as much, received more in food stamps, and were more than twice as likely to report poor overall health or high levels of psychological distress (some of these differences are shown in Figure 3-2). Men who grew up in poverty, they find, were twice as likely as adults to have been arrested, and among women early childhood poverty was associated with a six-fold increase in the likelihood of bearing a child out of wedlock prior to age 21. Reinforcing the need to treat correlations cautiously, Duncan, Ziol-Guest, and Kalil (2010) also find that some, but not all, of these differences between poor and nonpoor children disappeared when they adjusted statistically for

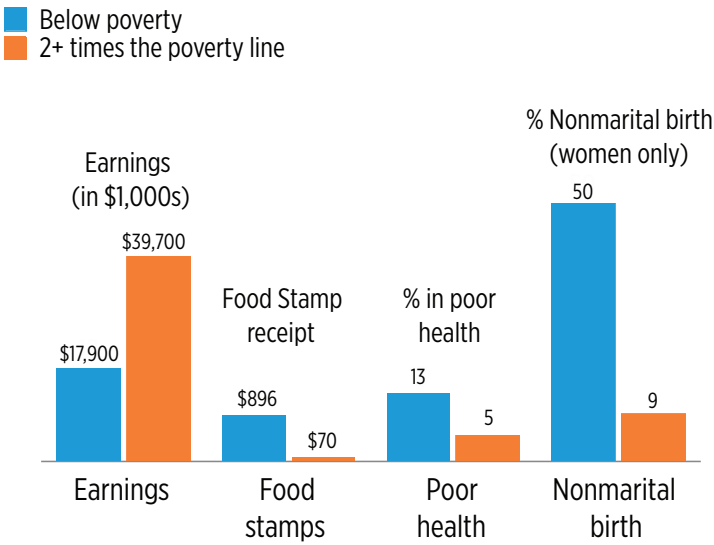

FIGURE 3-2 Adult outcomes for children with lower and higher levels of early childhood income.
SOURCE: Adapted from Duncan, Ziol-Guest, and Kalil (2010).

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differences in factors such as parental education that were associated with low childhood incomes.

Neuroscientists have produced striking evidence of the effect of early-life economic circumstances on brain development. Drawing from Hanson et al. (2013), Figure 3-3 illustrates differences in the total volume of gray matter between three groups of children: those whose family incomes were no more than twice the poverty line (labeled "Low SES" in the figure); those whose family incomes were between two and four times the poverty line ("Mid SES"); and those whose family incomes were more than four times the poverty line ("High SES"). Gray matter is particularly important for children's information processing and ability to regulate their behavior. The figure shows no notable differences in gray matter during the first 9 or so months of life, but differences favoring children raised in high-income families emerge soon after that. Notably, the study found no differences in the total brain sizes across these groups—only in the amount of gray matter. However, the existence of these emerging differences does not prove that poverty causes them. This study adjusted for age and birth weight, but not for other indicators of family socioeconomic status that might have been the actual cause of these observed differences in gray matter for children with different family incomes.

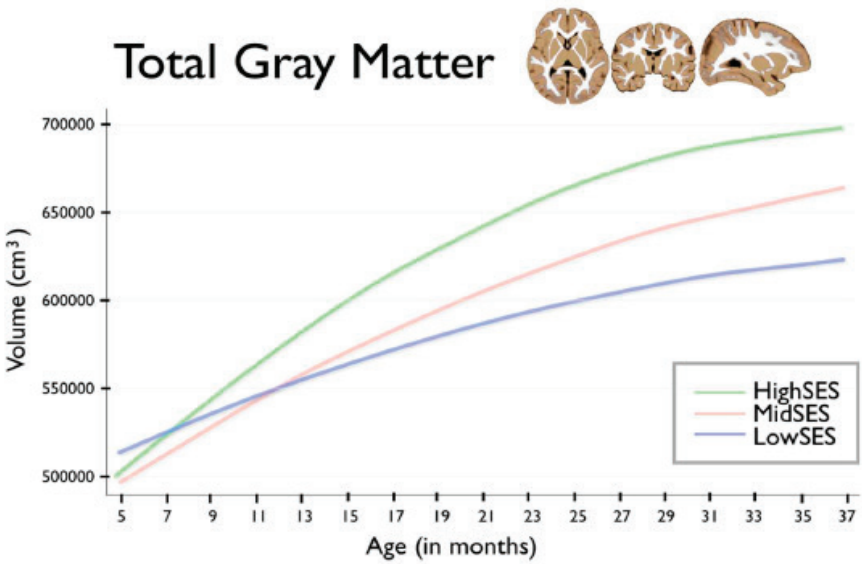

FIGURE 3-3 Total gray matter volume in early life, by socioeconomic group. SOURCE: Hanson et al. (2013).

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Two themes from these two studies characterize much of the child poverty literature: (1) consistent correlations between a child's poverty status and later outcomes and (2) particularly strong associations when poverty status is measured early in childhood. Our review of this correlational literature, which is provided in this chapter's appendix, is organized into the following sections: family functioning, child maltreatment, domestic violence, and adverse childhood experiences; material hardship; physical health; fetal health and health at birth; brain development; mental health; educational attainment; and risky behaviors, crime, and delinquency. Each section discusses the observed relationships between poverty and the outcomes in question. Collectively, they paint a consistent picture, which may be summarized in the following conclusion.

CONCLUSION 3-2: Some children are resilient to a number of the adverse impacts of poverty, but many studies show significant associations between poverty and child maltreatment, adverse childhood experiences, increased material hardship, worse physical health, low birth weight, structural changes in brain development, mental health problems, decreased educational attainment, and increased risky behaviors, delinquency, and criminal behavior in adolescence and adulthood. As for the timing and severity of poverty, the literature documents that poverty in early childhood, prolonged poverty, and deep poverty are all associated with worse child and adult outcomes.

THE IMPACT OF CHILD POVERTY

Policies designed to reduce poverty will promote positive child outcomes to the extent that poverty reduction causes these child outcomes to improve. This section discusses the causal evidence linking poverty and child outcomes. It includes studies that the committee judged to have the strongest research designs, whether purposely experimental or based on natural experiments that can support the estimation of causal linkages.

In experimental approaches to understanding the impacts of poverty reduction, the policy researcher attempts to vary income while holding constant other potentially causative factors. Randomly assigning subjects to large treatment and control groups helps to ensure that the distribution of these other causative factors (e.g., parental education and motivation) will be similar across the two groups. In this case, a poverty reduction "treatment" might be income payments to families for a number of years, with no such payments made to control group families. Comparing the subsequent well-being of children in the two groups would provide strong evidence about the causal impact of poverty reduction on child well-being.

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If experimental methods are not feasible, then some nonexperimental methods, in particular "natural experiments," are able to mimic random-assignment experiments. Much of the literature using these kinds of nonexperimental designs relies on policy changes or some other unanticipated event that causes family income to change more for one group of children than for another similar group. Our literature review on the causal impacts of poverty reduction on child well-being draws from both experimental methods that use random assignment and natural experiments.

Studies of Increases in Cash Incomes

Family economic resources can be changed in a variety of ways, so researchers have cast a wide net to find circumstances in which families' incomes vary in ways that are beyond their control, which provide an opportunity to relate income changes to changes in child well-being. Examples in which family cash incomes were increased or decreased by policy changes comprise the first part of our review of causal studies. Notably absent from this section are impacts on children of family income changes resulting from legislated changes in the minimum wage; we found no such studies in our review of the literature.

We also do not report on conditional cash transfer programs (CCTs), which condition income on behaviors such as well-baby visits and school attendance. CCTs are prevalent in low- and middle-income countries. These programs, which intend to reduce family economic hardship and stress, typically require families to invest more in their children, especially in their education and health. In the United States, two randomized clinical trials have been conducted of CCTs (Family Rewards 1.0 and 2.0). Both trials found that income increased due to the cash transfers, but that these increases faded after the program ended. Results showed only minimal improvements in children's health and educational outcomes and no impacts on the verified employment or earnings of parents (Aber et al., 2016; Miller et al., 2016; Riccio and Miller, 2016; Riccio et al., 2013).

Negative Income Tax Experiments

The negative income tax experiments initiated under the Nixon administration provided the first random-assignment evidence of income effects on children. A negative income tax is based on a minimum income, or floor, under the tax system; people with incomes above the floor pay taxes, while those with incomes below the floor receive a transfer payment—a kind of negative tax that brings their family incomes up to the floor. The negative tax payment is largest for families with the least income, becoming smaller and smaller as other sources of family income increase.

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Large-scale experimental trials of a negative income tax were conducted in seven states between 1968 and 1982. Treatment families, randomly chosen, received payment amounts equivalent to one-third or two-thirds of the federal poverty line. After adjusting for inflation, the largest payments were quite substantial, more than twice the size of current average payments made under the Earned Income Tax Credit (EITC) Program. That these experiments were conducted decades ago limits the value of the lessons they might provide for today's policy discussions. That said, the large negative income tax payments reduced poverty and improved children's birth outcomes and nutrition, but had mixed effects on child outcomes such as school performance (Kehrer and Wolin, 1979; Salkind and Haskins, 1982).

Two of the three experimental sites that measured achievement gains for children in elementary school found significant improvements in treatment-group children relative to control-group children (Maynard, 1977; Maynard and Murnane, 1979). In contrast, the achievement of adolescents in families receiving this income supplement did not differ from the achievement of adolescents in control-group families. Impacts on school enrollment and attainment for youth were more uniformly positive, with both of the sites at which these outcomes were measured producing increases in school enrollment, high school graduation rates, and/or years of completed schooling (Maynard, 1977; Maynard and Murnane, 1979; Venti, 1984).

The Earned Income Tax Credit

The EITC is a refundable federal tax credit for low- and moderate–income working people. A worker's EITC credit grows with each additional dollar of earnings until it reaches a maximum value, and then it flattens out and is gradually reduced as income continues to rise. The dollar value of the EITC payment to a family depends on the recipient's income, marital status, and number of children. As of 2017, 29 states and the District of Columbia had their own EITC programs (Waxman, 2017), supplementing the tax benefits provided by the federal EITC.

Natural-experiment studies of EITC's impact on child outcomes take advantage of the fact that federal EITC benefit levels increased substantially on a number of occasions between the late 1980s and the 2000s. For example, legislation passed in 1993 increased the maximum credit for families with two or more children by $2,160 (in 1999 dollars) compared with an increase in the maximum credit for families with one child of $725 (Hoynes, Miller, and Simon, 2015). Several researchers have used these kinds of expansions, as well as EITC introduction and expansions at the state level, to assess whether child outcomes improved the most for children whose families stood to gain the most from the increased EITC generosity. It is important to bear in mind that the EITC affects family income through

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the tax credit payment, increases in parental work effort, and, for some families, reductions in other income sources (Hoynes and Patel, 2017). This makes it difficult to separate income effects from the effects of changes in parental employment.

Most of the research on the effects of the EITC focuses on children's school achievement and consistently suggests that boosts in EITC have had positive effects. For example, Dahl and Lochner (2012) link EITC changes to national data tracking children's achievement test scores over time and find that a $1,000 increase in family income raised math and reading achievement test scores by 6 percent of a standard deviation. Chetty, Friedman, and Rockoff (2011) find a similarly sized effect when they look at the test scores of children attending schools in a large urban school district. In the state they study, state and local match rates for the federal EITC increased during the late 1990s and up until 2006. Gains in the children's test scores in math and language arts closely tracked these policy changes. The estimated impact was about 4 percent of a standard deviation in 2003, increasing to about 10 percent of a standard deviation in 2006 and leveling off thereafter. Drawing from the literature estimating the longer-run effects of test scores, they calculate that a typical student would gain more than $40,000 in lifetime income from the initial increase in EITC and its resulting increase in test scores.

Maxfield (2013) uses the same child data as Dahl and Lochner (2012) and finds that an increase in the maximum EITC of $1,000 boosted the probability of a child's graduating high school or receiving a GED by age 19 by about 2 percentage points and increased the probability of completing one or more years of college by age 19 by about 1.4 percentage points. Additionally, Manoli and Turner (2014), using U.S. tax data and variations due to the shape of the EITC schedule, find that a larger EITC leads to an increase in college attendance among low-income families.

A few studies have also examined the effect of EITC increases on infant health. Strully, Rehkopf, and Xuan (2010) find that increases in state EITCs during the prenatal period increased birth weights, partly by reducing maternal smoking during pregnancy. This is consistent with evidence that when an expectant mother receives a larger EITC during pregnancy, this reduces the likelihood that her baby will have low birth weight by 2 to 3 percent (Baker, 2008; Hoynes, Miller, and Simon, 2015). Like Strully, Rehkopf, and Xuan (2010), Hoynes, Miller, and Simon (2015) suggest that a reduction in smoking is partly responsible, but they also find increases in the use of prenatal care by mothers eligible for the higher EITC payments, which in turn might also lead to a reduction in the incidence of infants' low birth weight.

Evans and Garthwaite (2010) find support for a stress and mental health pathway operating in EITC expansions. They use data from the

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National Health Examination and Nutrition Survey to estimate whether increased EITC payments were associated with improvements in low-income mothers' health. They find that mothers most likely to receive the increased payments experienced the largest improvements in self-reported mental health as well as reductions in stress-related biomarkers.[1]

Taken together, the robust literature on the impacts of EITC-based increases in family income suggests beneficial impacts on children.

CONCLUSION 3-3: Periodic increases in the generosity of the Earned Income Tax Credit Program have improved children's educational and health outcomes.

Welfare-to-Work Experiments

In the early 1990s, a number of states were granted waivers to experiment with the rules governing welfare payments under the old Aid to Families with Dependent Children (AFDC) Program. A condition for receiving the waiver, for most states, was the use of random assignment to evaluate the effects of changing from "business as usual" AFDC rules to their new programs (Gennetian and Morris, 2003; Morris et al., 2001). Some states implemented welfare reform programs that offered earnings supplements, either by providing working families cash benefits or by increasing the amount of earnings that were not counted as income when calculating the family's welfare benefit. Other state programs provided only mandatory employment services (e.g., education, training, or immediate job search) or put time limits on families' eligibility for welfare benefits and offered no increased income. All of the new programs had the effect of increasing parent employment, relative to the old AFDC programs, but only some of the programs increased family income as well. Because a number of evaluations included measures of child outcomes, these diverse state experiments provided an opportunity to assess the effects of combinations of increased income and parental employment on child and adolescent well-being.

Morris et al. (2001) and Morris, Gennetian, and Knox (2002) examine the effects of these programs on preschool-age and elementary school-age children. Specifically, children were assessed 2 to 4 years after random assignment, and ranged in age from 5 to 12 years old at the time of assessment. The authors find that earnings supplement programs that increased both parental employment and family income produced positive but modest improvements across a range of child behaviors. All the programs had

[1] These include measures of inflammation, such as albumin; cardiovascular conditions (e.g., systolic blood pressure); measures of metabolic conditions such as total cholesterol; and other risks (Evans and Garthwaite, 2010).

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positive effects on children's school test scores, with impacts ranging from one-tenth to one-quarter of a standard deviation, and some programs also reduced behavior problems, increased positive social behavior, and/or improved children's overall health. In contrast, programs with work requirements that increased employment but not family income (because participants lost welfare benefits as their earnings increased) showed a mix of positive and negative, but mostly null, effects on child outcomes.

Gennetian et al. (2004) focus on adolescents, ages 12 to 18 years at the time of follow-up surveys. These children had been 10 to 16 years old when their parents entered the experimental programs. In contrast to the positive effects that Morris and colleagues find for younger children's school achievement, Gennetian and colleagues find a number of negative impacts on school performance and school progress, irrespective of the type of policy or program that was tested. Some parents in the experimental group reported worse school performance for their children, a higher rate of grade retention, and more use of special education services among their adolescent children than did parents in the control group. However, overall the sizes of these worrisome negative effects were small, and many of the programs did not produce statistically significant effects.

Why did welfare-to-work programs, particularly those that increase family income, have positive effects on younger children but null or even negative effects on adolescents? Duncan, Gennetian, and Morris (2009) study this question by focusing on children who were ages 2 to 5 when their parents entered the program. Their analysis finds that increased income and the use of center-based child care were key pathways through which programs improved young children's school achievement. These findings are consistent with correlational research linking formal child care to better academic skills among low-income children (National Institute of Child Health and Human Development Early Child Care Research Network and Duncan, 2003). Duncan, Morris, and Rodrigues (2011) conduct a similar analysis using this same set of studies to estimate the causal effect of increases in income on the children's school achievement and standardized test scores 2 to 5 years after baseline. They find modest but policy-relevant effects that began during the preschool years on young children's later achievement. Their estimates suggest that each $1,000 increase in annual income, sustained across an average of 2 to 5 years of follow up, boosts young children's achievement by 5 to 6 percent of a standard deviation.

In contrast, the pattern of negative impacts on adolescents may have been generated by the fact that all of the programs tested increased the amount of parental employment, which in turn led to increases in adolescents' responsibilities for household and sibling care and reduced supervision by adults when parents were working. Those inferences are tentative,

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however, because several studies lacked the data necessary to explore potential pathways.

CONCLUSION 3-4: Welfare-to-work programs that increased family income also improved educational and behavioral outcomes for young children but not for adolescents. Working parents have less time to supervise their children, which may place more burdens on adolescents in the family.

Pre-AFDC Cash Welfare

Estimating the impacts in adulthood of program benefits received during childhood requires the use of data on children spanning several decades, and consequently it includes children born into general social and economic conditions that often were far worse than conditions prevailing today. One study of a cash assistance program focused on the Mother's Pension Program, which pre-dated the 1935 introduction of the AFDC program and was provided by some states to poor women with children. Aizer et al. (2016) evaluate the long-run effects of this program by comparing the children of women who were granted the pension to those who were rejected. Using data from state censuses, death records, and World War II enlistment records, they find that receiving the pension as a child led to a 1.5 year increase in life expectancy, a 50 percent reduction in the probability of being underweight, a 0.4 year increase in educational attainment, and a 14 percent increase in income in early adulthood. However, these local programs were introduced at a time when few other resources existed for lone mothers, so it may represent an upper bound on what one could expect from cash welfare programs today.

Supplemental Security Income

The Supplemental Security Income (SSI) Program is designed to increase the incomes of low-income families that have adults or children with disabilities. The rationale for assisting families with a severely disabled child is that they face additional expenses, and caregivers may have to reduce their own work hours to care for the child. A family qualifies for full benefits under SSI if its members earn less than about 100 percent of the federal poverty threshold. Benefits phase out altogether for families with incomes above about 200 percent of that threshold. In addition to meeting the income thresholds, eligible children must have a severe, medically documented disability. Currently, SSI benefits cover almost 2 percent of all children, with benefit amounts that average $650 a month, and they raise about one-half of recipient families above the poverty line (Romig, 2017).

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Children on SSI are also automatically eligible for public health insurance coverage under the Medicaid program.

There has been relatively little research on the effects of these income supports on child outcomes, in part because benefit levels have not changed as much or as differentially as benefit levels in programs such as the Earned Income Tax Credit. But one SSI program provision provides a natural experiment for estimating the possible benefit of SSI income on child outcomes: babies weighing less than 1,200 grams at birth are eligible for SSI, while babies weighing just over 1,200 grams are not.[2] This eligibility cutoff provides researchers with opportunities to compare the developmental trajectories of children on either side of the cutoff. Guldi et al. (2017) do this, and find that mothers of qualifying children work less but, perhaps as a result, show more positive parenting behaviors than mothers of children whose birth weights placed them just above the cutoff. Most importantly for this chapter, the motor skills of babies with birth weights just below the cutoff improved more rapidly than the motor skills of slightly heavier babies whose parents did not qualify for SSI. Since lower birth weight infants should, all else equal, have more delayed motor skills than infants with higher birth weights, these results are especially consequential.

Levere (2015) takes advantage of a second source of quasi-experimental variation in SSI coverage, in this case occasioned by the 1990 *Sullivan* v. *Zebley* Supreme Court decision, which broadened SSI coverage for children with mental disabilities. Children with mental health conditions who were younger when *Zebley* was handed down became eligible for more years of SSI support than older children. In contrast to the picture of generally positive income effects on children, Levere finds that children who were eligible for more years of SSI support were less likely to work and had lower earnings as adults. This finding is hard to interpret. The negative impact may have to do with more severe mental health problems in those identified in early childhood or factors associated with more prolonged eligibility for SSI that did not help and may have harmed their adult employment prospects.

Supplemental Income Provided by a Tribal Government

In some cases, opportunities to study the causal impacts of income increases on child well-being come from unexpected sources. The Great Smoky Mountains Study of Youth was designed to assess the need for mental health services among Eastern Cherokee and non-Indian, mostly

[2] A specific description of disability evaluation under Social Security is available at https://www.ssa.gov/disability/professionals/bluebook/ChildhoodListings.htm. Guldi et al. (2017) note that Social Security Administration low birth weight criteria are more limiting than the medical community's criteria in order to target infants at risk of long-term disability.

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White, children living in Appalachia (Costello et al., 2003). When the study began in 1993, children in the study were 9 to 13 years old, and they and their families were then interviewed periodically over the next 13 years. In the midst of the study, a gambling casino owned by the Eastern Cherokee tribal government opened on the tribe's reservation. Starting in 1996, all members of the Eastern Cherokee tribe received an income supplement that grew to an average of approximately $9,000 by 2006 (Costello et al., 2010). Over the study period, payments produced roughly a 20 percent increase in income for households with at least one adult tribal member, excluding the children's cash transfers, which were not available to the families until the child reached maturity (Akee et al., 2010). The fact that incomes increased for families with tribal members relative to families with no tribal members provided researchers with an opportunity to assess whether developmental trajectories were more positive for tribal children than for nontribal children.

The income supplements produced a variety of benefits for children in qualifying families. There were fewer behavioral problems such as conduct disorders, perhaps due to increased parental supervision (Costello et al., 2003). At age 21, the children whose families had received payments for the longest period of time were significantly less likely to have a psychiatric disorder, to abuse alcohol or cannabis, or to engage in crime (Akee et al., 2010; Costello et al., 2010). Reductions in crime were substantial: Four more years of the income supplement decreased the probability of an arrest for any crime at ages 16 to 17 by almost 22 percent and reduced the probability of having ever been arrested for a minor crime by age 21 by almost 18 percent.

Beneficial impacts on educational attainment were also found. Having 4 more years of this income supplement increased a Cherokee youth's probability of finishing high school by age 19 by almost 15 percent. Akee and colleagues (2010) found that annual payments equaling approximately $4,000 often resulted in 1 year of additional schooling for American Indian adolescents living in some of the poorest households. Additionally, Akee et al. (2018) find that the income supplements led to large beneficial changes in children's emotional and behavioral health.

In sum, studies of casino payments provide opportunities to estimate causal impacts of income on adolescent and young adult outcomes. They show strong positive impacts on emotional, behavioral, and educational outcomes, and reduced drug and alcohol use and criminal behavior. As with other studies, younger children and children with longer exposures to higher income had better outcomes.

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Cash Payments: International Evidence from Canada

Although many countries have experimented with cash payments to low-income families (Fiszbein et al., 2009), few share the living standards that prevail in the United States. Canada, on the other hand, shares many characteristics with the United States and provides several examples of policy studies of income effects. For example, Milligan and Stabile (2011) take advantage of the fact that the benefit amounts of child benefits in Canada changed in different provinces at different times to investigate whether benefit increases were associated with improvements in child well-being. They find that higher benefits do improve measures of both child and maternal mental health, and also that they increase child math and vocabulary test scores. The effect size is similar to that found in Dahl and Lochner's (2012) EITC study. Among the low-income families most likely to receive the benefits, Milligan and Stabile (2011) also find declining rates of hunger and obesity, an increase in height among boys, and a decrease in physical aggression among girls.

"Near-Cash" Benefits: Supplemental Nutrition Assistance Program (SNAP) and Housing Subsidies

In addition to work on cash transfers of various kinds, there has been a great deal of research into the causal effects of what are sometimes called "near-cash" programs, especially those offering nutrition assistance and housing subsidies. These programs are referred to as near cash because while their benefits must be spent on food or housing, they free up a household's money that would otherwise have been spent on food and housing. The freed-up money can then be spent on other goods or services and may also decrease parental stress. Health insurance has not traditionally been viewed as one of these near-cash programs because of difficulties in assigning a dollar value to health coverage. However, see the appendix to this chapter (Appendix D, 3-1) for a discussion of the effects on child and adult outcomes stemming from expansions of public health insurance for poor pregnant women and children.

Supplemental Nutrition Assistance Program (SNAP)

Serving more than 44 million Americans at a cost of $70.9 billion (in fiscal 2016), the SNAP program (formerly known as the Food Stamp Program) is by far the nation's largest near-cash program (Food and Nutrition Service, 2018a). To be eligible, households must have a gross monthly income of less than 130 percent of the poverty line, net income (after deductions) of less than the poverty line, and assets of less than an asset

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limit (Food and Nutrition Service, 2018b). Benefits can be used to purchase most foods available in grocery stores, with exceptions such as vitamins and hot foods for immediate consumption. Benefits are delivered in the form of an Electronic Benefit Transfer card that functions much like a debit card.

Given the substitution possibilities between income from SNAP and other sources, it is not surprising that research studies estimate that with a $100 increase in SNAP benefits, households increase their food consumption by quite a bit less than $100. The review of Hoynes and Schanzenbach, (2015) places the increase in food consumption at around $30 per $100 in benefits. While these families do spend all their SNAP benefits on food, the benefits allow them to spend less of their own income on food. The review by Hoynes and Schanzenbach finds that for every $100 in SNAP benefits, households have $70 of their own income that they no longer need to spend on food. Families can then use these household funds for additional resources for their children.

Hoynes and Schanzenbach (2015) also provide a summary of the literature examining causal links between SNAP participation and the nutrition and health outcomes of infants, children, and adults. Many (but not all) of the methodologically strongest studies show SNAP benefits having positive impacts on health. Given the interest in the longer-run impacts of poverty reduction on child health and attainment, in the following we provide more details about two studies that took advantage of the fact that the SNAP (then known as food stamps) program rolled out gradually between the late 1960s and mid-1970s. Notably, the rollout occurred on a county by county basis, which resulted in many instances in which the families of children born in the same state at the same time may have had different access to program benefits.[3]

This slow rollout enabled Almond, Hoynes, and Schanzenbach (2011) to estimate causal effects of participation during pregnancy on infant health and, in a later study (Hoynes, Schanzenbach, and Almond, 2016) to investigate the effects on adult health of the availability of food stamps at different points in childhood. The infant health study found that food stamp availability reduced the incidence of low birth weight—a result similar to one found in a more recent study of birth weight surrounding changes in rules for immigrant eligibility for food stamps beginning in the mid-1990s (East, 2016). In a related paper using the same policy variation, East (2018) finds that more exposure to SNAP at ages 0 to 4 leads to a reduction in poor health and school absences in later childhood. Using variations in the

[3] A look at the long-term impact of program participation in childhood on adult health requires that the affected cohorts be followed for decades. A caveat with any such study is that conditions facing children today may be different from those decades ago, hence the effect of program participation may also differ.

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price of food across areas of the United States, Bronchetti, Christensen, and Hoynes (2018) find that increases in the purchasing power of SNAP lead to improvements in child school attendance and compliance with physician checkups.

In their 2016 study of possible long-term effects of food stamp coverage in early childhood on health outcomes in adulthood, Hoynes, Schanzenbach, and Almond focus on the presence or absence of a cluster of adverse health conditions known as metabolic syndrome. In the study, metabolic syndrome was measured by indicators for adult obesity, high blood pressure, diabetes, and heart disease. Scores on these indicators of emerging cardiovascular health problems increased (grew worse) as the timing of the introduction of food stamps shifted to later and later in childhood (see Figure 3-4). The best adult health was observed among individuals in counties where food stamps were already available when these individuals were conceived. Scores on the index of metabolic syndrome increase steadily until around the age of 5.

It is impossible to determine the extent to which the adult health benefits of food stamp availability in very early childhood were generated by the nutritional advantages of the extra spending on food or by the more general

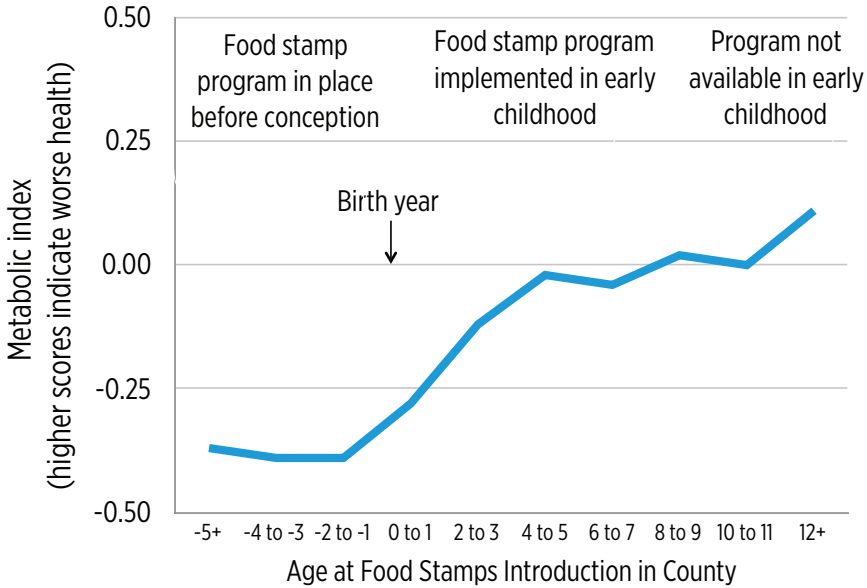

FIGURE 3-4 Impact of food stamp exposure on metabolic syndrome index at age 25 and above.
SOURCE: Adapted from Hoynes, Schanzenbach, and Almond (2016).

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increase in economic resources freed up for spending on other family needs. And while these studies of the food stamp rollout offer the best available evidence of the long-term effects of food benefits, the food landscape facing Americans has arguably changed a great deal since that period.

Another possible cause of health benefits is the fact that SNAP benefits appear to cushion unexpected changes in household income: Both Blundell and Pistaferri (2003) and Gundersen and Ziliak (2003) show that the SNAP program substantially reduces the volatility of income.

CONCLUSION 3-5: The Supplemental Nutrition Assistance Program has been shown to improve birth outcomes as well as many important child and adult health outcomes.

Housing Subsidies

By reducing housing costs, housing subsidy programs can provide a substantial transfer of economic resources to recipient households. The main types of assistance available are public housing, voucher-based rental assistance under the Housing Choice Voucher (formerly called Section 8) Program, and subsidized privately owned housing, including the Low Income Housing Tax Credit (Olsen, 2008). All three programs aim to limit the housing expenses of low-income households to 30 percent of their income.

Given their large size and the length of time they have been operating, it is surprising that relatively little research has been conducted concerning the impacts on children of the in-kind resources these programs provide (Collinson, Ellen, and Ludwig, 2015). Some of the best-known studies of housing vouchers—the Moving to Opportunity demonstration is the best known example—involve offering housing vouchers to families that are already living in subsidized public housing. And even when studies compare households receiving housing subsidies with those receiving no housing assistance, it is difficult to separate the benefits to children that stem from improved housing quality occasioned by program benefits from the benefits they experience due to the freeing up of their families' economic resources for spending on other needs.

Nevertheless, whether the resource-enhancing benefits of housing subsidies improve the well-being of children is best seen in studies that contrast children in families that do and do not receive housing subsidies. Jacob, Kapustin, and Ludwig (2015) compare children in families that won the lottery allocating Section 8 housing vouchers in Chicago with children in families that lost that lottery. Examining a 14-year period following the lottery, they find virtually no differences across a range of outcomes in educational attainment, criminal involvement, and health care utilization. On

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the other hand, Carlson et al. (2012a, 2012b) study a large group of Section 8 recipients in Wisconsin and find small positive effects on the earnings and employment of older children.

A second type of comparison is between children in families that do and do not receive subsidized public housing units. Currie and Yelowitz (2000) take advantage of the fact that two-child families with children of different genders are entitled to larger units and are therefore more likely to "take up" the program and live in public housing. They find that living in public housing reduced the probability that boys would be held back in school and, as well, improved the family's housing quality.

In the case of public housing demolitions, children whose families were displaced from soon-to-be demolished public housing and given housing vouchers may be compared with children living in the same housing projects whose units were not demolished. Since both groups received housing subsidies, the contrast does not involve large differences in economic resources provided by housing subsidies. Jacob (2004) finds no differences in the school achievement of the two groups. Using longer-run data, Chyn (2018) finds improvements in the affected children's labor-market outcomes, namely that young adults who were relocated to less disadvantaged neighborhoods were more likely to be employed than those who lived in the public housing that was not demolished.

The housing policy research that has received much interest focuses on the evaluation of the Moving to Opportunity Program. Moving to Opportunity was a large-scale randomized experiment that provided residents of public housing projects with either "regular" Section 8 housing vouchers or with vouchers that could only be used in a neighborhood with a poverty rate of less than 10 percent (Orr et al., 2003). Those in the latter group also received assistance to find a new residence. In addition to the two treatment groups, a control group of public housing residents remained eligible to stay in their existing public housing. In this experiment, all three groups received housing subsidies, but most families in the two treatment groups moved away from public housing while many in the control group remained.

Focusing first on the comparison between control-group children and children in families receiving the conventional housing vouchers (which were renamed Housing Choice Vouchers during the intervening period), Gennetian and colleagues (2012) find no differences across a range of schooling, health, and behavioral outcomes measured 10 to 15 years after the study began. The longer-run examination of college and labor market outcomes by Chetty, Hendren, and Katz (2015) also failed to find statistically significant outcomes, even for those children who were younger (under age 13) when they entered the study. These results, when combined with those reported in Jacob, Kapustin, and Ludwig (2015), suggest that these programs may reduce child poverty but provide little reason to expect that

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expanding the existing Housing Choice Voucher Program would lead to better child and youth outcomes.

However, some children in Moving to Opportunity families who received vouchers that could only be used if they moved to low-poverty neighborhoods did have better outcomes. When compared with their control-group counterparts, female (but not male) youth experienced better mental health outcomes (Gennetian et al., 2012). Chetty, Hendren, and Katz (2015) focus on children who were younger than age 13 when their families moved to lower-poverty neighborhoods and find that children who moved to lower-poverty neighborhoods through Moving to Opportunity acquired more education and, as adults, earned more and were less likely to be receiving disability or welfare payments. No such benefits were found for older youth, a result also found in Oreopoulos's (2003) study of families moving into public housing in more advantaged and less advantaged parts of Toronto.

CONCLUSION 3-6: Evidence on the effects of housing assistance is mixed. Children who were young when their families received housing benefits enabling them to move to low-poverty neighborhoods had improved educational attainment and better adult outcomes.

Medicaid

Controversy over the Medicaid expansions included in the Affordable Care Act has obscured public understanding of the sheer scale of the earlier expansions of public health insurance for pregnant women, infants, and children. In 2009, 45 percent of all births in the United States were covered by public health insurance (Markus et al., 2013). Between 1986 and 2005, the share of children eligible for Medicaid/Children's Health Insurance Program (CHIP)[4] increased from a range of 15 to 20 percent of children (depending on the age group) to a range of 40 to 50 percent of children (Currie, Decker, and Lin, 2008). Because the Medicaid expansions were phased in in a staggered way, they have created natural experiments in the value of health insurance for low-income people.

Currie and Gruber (1996a) show that the 30 percent increase in the eligibility of pregnant women during the 1980s and early 1990s was associated with a 7 percent decline in the infant mortality rate. The roughly 15 percent increase in Medicaid eligibility for children that occurred over the same period reduced the probability that a child went without any doctor visits during the year by 9.6 percent (Currie and Gruber, 1996b). Aizer (2007)

[4] CHIP was signed into law in 1997. See https://www.medicaid.gov/about-us/program-history/index.html for more information about its history.

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and Dafny and Gruber (2005) find that increases in eligibility for Medicaid as well as in Medicaid enrollments reduced preventable hospitalizations among children, also indicating that those children gained access to necessary preventive care. Collectively, these results suggest that as many as 6 million children gained access to basic preventive care as a result of the Medicaid expansions. (See Howell and Kenney, 2012, for a review of research studies.)

Several recent papers look at the long-term effects of the expansions of child Medicaid coverage (Brown, Kowalski, and Lurie, 2015; Cohodes et al., 2016; Currie, Decker, and Lin, 2008; Miller and Wherry, 2018; Wherry and Meyer, 2015; Wherry et al., 2015). These studies all show that cohorts who received Medicaid coverage in early childhood are more likely to work, to have higher earnings, to have more education, and to be in better health in adulthood (using self-reported health, mortality, and hospitalization rates as outcomes) than cohorts who were not covered by the Medicaid/CHIP expansions.

For example, Miller and Wherry (2018) show that early-life access to Medicaid stemming from these expansions is associated with lower rates of obesity and fewer preventable hospitalizations in adulthood. Levine and Schanzenbach (2009) find long-run effects of Medicaid on child educational attainment. Examining the performance of different cohorts of children on the National Assessment of Educational Progress, a nationally representative assessment of U.S. students' knowledge and ability in various subject areas, they find higher scores in states and cohorts where larger numbers of children were covered at birth. East and colleagues (2017) find that women who were covered by Medicaid as infants because of the expansions in the late 1980s and early 1990s have grown into mothers who give birth to healthier children today.

A few studies use historical data about the staggered rollout of Medicaid across the states in the late 1960s to measure its long-term effects. Goodman-Bacon (2018) notes that regulations mandating Medicaid coverage of all cash-welfare recipients led to substantial variations across states in the share of children who became eligible for Medicaid. He finds that after the introduction of Medicaid, mortality fell more rapidly among infants and children in states with bigger Medicaid expansions. Among non-White children, mortality fell by 20 percent. Goodman-Bacon (2016) also looks at the longer-term effects of these increases in coverage and finds that eligibility in early childhood reduced adult disability and increased labor supply up to 50 years later. Boudreaux, Golberstein, and McAlpine (2016) also find that access to Medicaid in early childhood is associated with long-term improvement in adult health, as measured by an index that combines information on high blood pressure, diabetes, heart disease, and obesity.

Currie and Schwandt (2016) argue that the expansions in public health insurance for children have dramatically reduced mortality among poor

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children, and especially among poor Black children. The result is that socioeconomic inequality in mortality has been falling among children since 1990, even while it has increased for adults. Baker, Currie, and Schwandt (2017) provide comparisons to Canada and show that while mortality remains lower in Canada than in the United States at all ages, the child mortality rate in the United States converged toward the Canadian rate between 1990 and 2010 following the rollout of public health insurance for all poor U.S. children.

CONCLUSION 3-7: Expansions of public health insurance for pregnant women, infants, and children have generated large improvements in child and adult health and in educational attainment, employment, and earnings.

Summary of Studies on the Causal Impact of Poverty

Causal studies of the effect of poverty on later child well-being often (but not always) find negative impacts, while causal studies of the impact of anti-poverty programs on child well-being consistently find positive impacts. The general pattern may be summed up by this conclusion:

CONCLUSION 3-8: The weight of the causal evidence indicates that income poverty itself causes negative child outcomes, especially when it begins in early childhood and/or persists throughout a large share of a child's life. Many programs that alleviate poverty either directly, by providing income transfers, or indirectly, by providing food, housing, or medical care, have been shown to improve child well-being.

MACROECONOMIC COSTS OF CHILD POVERTY TO SOCIETY

The first element of the committee's Statement of Task also calls for a review of evidence on the macroeconomic costs of child poverty in the United States. Procedures for estimating these costs are very different from the experimental and quasi-experimental methods adopted in studies of the microeconomic costs of poverty, reviewed above. Holzer et al. (2008) base their cost estimates on the correlations between childhood poverty (or low family income) and outcomes across the life course, such as adult earnings, participation in crime, and poor health. These correlations come from the kinds of studies reviewed in this chapter's appendix (Appendix D, 3-1). Their estimates represent the average decreases in earnings, costs associated with participation in crime (e.g. property loss, injuries, and the justice system), and costs associated with poor health (additional expenditures

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on health care and the value of lost quantity and quality of life associated with early mortality and morbidity) among adults who grew up in poverty.

Holzer and colleagues (2008) reason that these outcomes are costly to the economy because the overall volume of economic activity is lower than it would have been in the absence of policies that reduced or eliminated poverty. Their procedures lead to a very broad interpretation of the causal effects of childhood poverty—the impacts not only of low parental incomes but also of the entire range of environmental factors associated with poverty in the United States and all of the personal characteristics imparted by parents, schools, and neighborhoods to children affected by them.

At the same time, Holzer and colleagues (2008) make a number of very conservative assumptions in their estimates of earnings and the costs of crime and poor health. For all three, they subtract from their estimates the potential "genetic" (as opposed to environmental) component of the cost.[5] When making calculations, they use those at the lower end of credible estimates in published studies. The earnings data include only those workers who are at least marginally in the labor force; data from families whose household heads are not in the workforce because of incarceration or disability or for other reasons are not captured, nor are government expenditures related to disability included. Additionally, the authors' estimates of the cost of crime include only "street crime" and not other crimes, such as fraud, and they assume that the cost of police, prisons, and private security is unchanged as a result of increases in crime due to child poverty. Finally, they only measure costs related to earnings, crime, and health; there are probably other societal costs that are not measured. All of these analytic choices make it likely that these estimates are a lower bound that understates the true costs of child poverty to the U.S. economy.

The bottom line of the Holzer and colleagues (2008) estimates is that the aggregate cost of conditions related to child poverty in the United States amounts to $500 billion per year, or about 4 percent of the Gross Domestic Product (GDP). The authors estimate that childhood poverty reduces productivity and economic output in the United States by $170 billion per year, or by 1.3 percent of GDP; increases the victimization costs of crime by another $170 billion per year, or by 1.3 percent of the GDP; and increases health expenditures, while decreasing the economic value of health, by $163 billion per year, or by 1.2 percent of GDP.

McLaughlin and Rank (2018) build on the work of Holzer and colleagues (2008) by updating their estimates in 2015 dollars and adding other categories of the impact of childhood poverty on society. They include

[5] Holzer et al. (2008) refer to this as the "possible genetic contributions to the intergenerational transmission of disadvantage" (p. 45). For example, the authors recognize that genes can have an important effect on a person's height, weight, and physical and mental health.

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increased corrections and crime deterrence costs, increased social costs of incarceration, costs associated with child homelessness (such as the shelter system), and costs associated with increased childhood maltreatment in poor families (such as the costs of the foster care and child welfare systems). Their estimate of the total cost of childhood poverty to society is over $1 trillion, or about 5.4 percent of GDP. This compares to the approximately 1 percent of GDP constituted by direct federal expenditures on children (Isaacs et al., 2018).

These calculations do not reveal which anti-poverty programs are likely to be most effective, nor whether it is sensible to try to reduce poverty in 10 years rather than adopting programs that improve childhood outcomes over a longer time period. They do make it clear that there is considerable uncertainty about the exact size of the costs of child poverty. Nevertheless, whether these costs to the nation amount to 4.0 or 5.4 percent of GDP—roughly between $800 billion and $1.1 trillion annually in terms of the size of the U.S. economy in 2018[6]—it is likely that significant investment in reducing child poverty will be very cost-effective over time.

REFERENCES

Abelev, M.S. (2009). Advancing out of poverty: Social class worldview and its relation to resilience. *Journal of Adolescent Research*, *24*(1), 114–141. doi: https://doi.org/10.1177/074355840832844.

Aber, J.L., Morris, P.A., Wolf, S., and Berg, J. (2016). The impact of a holistic conditional cash transfer program in New York City on parental financial investment, student time use and educational processes and outcomes. *Journal of Research on Educational Effectiveness, 9*(3), 335–363. Available: http://dx.doi.org/10.1080/19345747.2015.1107925.

Aizer, A. (2007). Public health insurance, program take-up, and child health. *Review of Economics and Statistics, 89*(3), 400–415.

Aizer, A., Eli, S., Ferrie, J., and Lleras-Muney, A. (2016). The long-run impact of cash transfers to poor families. *American Economic Review, 106*(4), 935–971.

Akee, R.K., Copeland, W.E., Keeler, G., Angold, A., and Costello, E.J. (2010). Parents' incomes and children's outcomes: A quasi-experiment. *American Economic Journal: Applied Economics*, *2*(1), 86–115.

Akee, R., Copeland, W., Costello, E.J., and Simeonova, E. (2018). How does household income affect child personality traits and behaviors? *American Economic Review, 108*(3), 775–827.

Almond, D., Hoynes, H.W., and Schanzenbach, D. (2011). Inside the war on poverty: The impact of food stamps on birth outcomes. *Review of Economics and Statistics, 93*(2), 387–403.

Baker, K. (2008). *Do Cash Transfer Programs Improve Infant Health: Evidence from the 1993 Expansion of the Earned Income Tax Credit.* Notre Dame, IN: University of Notre Dame. Available: https://pdfs.semanticscholar.org/a664/5edfe78e6156914ff49a9bd36b975d735c6b.pdf.

[6] This is based on a GDP of $20,412 trillion in the second quarter of 2018. See Table 3, https://www.bea.gov/system/files/2018-09/gdp2q18_3rd_3.pdf.

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A Roadmap to Reducing Child Poverty

Baker, M., Currie, J., and Schwandt, H. (2017). *Mortality Inequality in Canada and the U.S.: Divergent or Convergent Trends?* Cambridge, MA: National Bureau of Economic Research.

Blair, C., and Raver, C.C. (2016). Poverty, stress, and brain development: New directions for prevention and intervention. *Academic Pediatrics, 16*(3 Suppl), S30–S36.

Blundell, R., and Pistaferri, L. (2003). Income volatility and household consumption—The impact of food assistance programs. *Journal of Human Resources, 38*, 1032–1050.

Bornstein, M.H., and Bradley, R.H. (Eds.). (2003). *Socioeconomic Status, Parenting, and Child Development*. Mahwah, NJ: Lawrence Erlbaum Associates.

Boudreaux, M.H., Golberstein, E., and McAlpine, D.D. (2016). The long-term impacts of Medicaid exposure in early childhood: Evidence from the program's origin. *Journal of Health Economics, 45*, 161–175.

Brody, G.H., Stoneman, Z., Flor, D., McCrary, C., Hastings, L., and Conyers, O. (1994). Financial resources, parent psychological functioning, parent co-caregiving, and early adolescent competence in rural two-parent African-American families. *Child Development, 65*(2 Spec No), 590–605.

Bronchetti, E., Christensen, G., and Hoynes, H. (2018). *Local Food Prices, SNAP Purchasing Power, and Child Health*. NBER Working Paper No. 24762. Cambridge, MA: National Bureau of Economic Research.

Brown, D., Kowalski, A., and Lurie, I. (2015). *Medicaid as an Investment in Children: What Is the Long-term Impact on Tax Receipts?* Cambridge, MA: National Bureau of Economic Research.

Carlson, D., Haveman, R., Kaplan, T., and Wolfe, B. (2012a). Long-term earnings and employment effects of housing voucher receipt. *Journal of Urban Economics, 71*(1), 128–150.

_____ (2012b). Long-term effects of public low-income housing vouchers on neighborhood quality and household composition. *Journal of Housing Economics, 21*(2), 101–120.

Chetty, R., Friedman, J.N., and Rockoff, J. (2011, November). *New Evidence on the Long-Term Impacts of Tax Credits*. Cambridge, MA: National Bureau of Economic Research.

Chetty, R., Hendren, N., and Katz, L. (2015). *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*. Cambridge, MA: National Bureau of Economic Research.

Chyn, E. (2018). Moved to opportunity: The long-run effect of public housing demolition on children. *American Economic Review, 108*(10), 3028–3056.

Cohodes, S.R., Grossman, D.S., Kleiner, S.A., and Lovenheim, M.F. (2016). The effect of child health insurance access on schooling: Evidence from public insurance expansions. *Journal of Human Resources, 51*(3), 727–759.

Collinson, R., Ellen, I.G., and Ludwig, J. (2015). *Low-income Housing Policy*. Cambridge, MA: National Bureau of Economic Research.

Conger, R.D., Ge, X., Elder, G.H., Jr., Lorenz, F.O., and Simons, R.L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development, 65*(2 Spec No), 541–561.

Conger, R.D., Wallace, L.E., Sun, Y., Simons, R.L., McLoyd, V.C., and Brody, G.H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology, 38*(2), 179–193.

Costello, E.J., Compton, S.N., Keeler, G., and Angold, A. (2003). Relationships between poverty and psychopathology: A natural experiment. *Journal of the American Medical Association, 290*(15), 2023–2029.

Costello, E.J., Erkanli, A., Copeland, W., and Angold, A. (2010). Association of family income supplements in adolescence with development of psychiatric and substance use disorders in adulthood among an American Indian population. *Journal of the American Medical Association, 303*(19), 1954–1960.

Copyright National Academy of Sciences. All rights reserved.

Currie, J., and Gruber, J. (1996a). Saving babies: The efficacy and cost of recent changes in the Medicaid eligibility of pregnant women. *Journal of Political Economy, 104*(6), 1263-1296.

_____. (1996b). Health insurance eligibility, utilization of medical care, and child health. *Quarterly Journal of Economics, 111*(2), 431–466.

Currie, J., and Schwandt, H. (2016). Inequality in mortality decreased among the young while increasing for older adults, 1990–2010. *Science, 352*(6286), 708–712.

Currie, J., and Yelowitz, A. (2000). Are public housing projects good for kids? *Journal of Public Economics, 75*(1), 99–124.

Currie, J., Decker, S., and Lin, W. (2008). *Has Public Health Insurance for Older Children Reduced Disparities in Access to Care and Health Outcomes?* Cambridge, MA: National Bureau of Economic Research.

Currie, J., Zivin, J.S.G., Meckel, K., Neidell, M., and Schlenker, W. (2013). *Something in the Water: Contaminated Drinking Water and Infant Health*. Cambridge, MA: National Bureau of Economic Research.

Dafny, L., and Gruber, J. (2005). Public insurance and child hospitalizations: Access and efficiency effects. *Journal of Public Economics, 89*(1), 109–129.

Dahl, G.B., and Lochner, L. (2012). The impact of family income on child achievement: Evidence from the Earned Income Tax Credit. *American Economic Review, 102*(5), 1927–1956.

Duncan, G., Gennetian, L., and Morris, P. (2009). Parental pathways to self-sufficiency and the well-being of younger children. In C.J. Heinrich and J.K. Scholz (Eds.), *Making the Work-Based Safety Net Work Better: Forward-looking Policies to Help Low-Income Families*. New York: Russell Sage Foundation.

Duncan, G.J., Morris, P.A., and Rodrigues, C. (2011). Does money really matter? Estimating impacts of family income on young children's achievement with data from random-assignment experiments. *Developmental Psychology, 47*(5), 1263–1279.

Duncan, G.J., Ziol-Guest, K.M., and Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development, 81*(1), 306–325.

East, C.N. (2016). *The Effect of Food Stamps on Children's Health: Evidence from Immigrants' Changing Eligibility.* University of Colorado Denver. Available: http://cneast.weebly.com/uploads/8/9/9/7/8997263/east_jmp.pdf.

East, C.N. (2018). The effect of food stamps on children's health: Evidence from immigrants' changing eligibility. *Journal of Human Resources*. Available: https://www.chloeneast.com/uploads/8/9/9/7/8997263/east_fskids_r_r2.pdf.

East, C., Miller, S., Page, M., and Wherry, L. (2017). *Multi-generational Impacts of Childhood Access to the Safety Net: Early Life Exposure of Medicaid and the Next Generation's Health*. Cambridge, MA: National Bureau of Economic Research.

Evans, W., and Garthwaite, C. (2010). *Giving Mom a Break: The Impact of Higher EITC Payments on Maternal Health*. Cambridge, MA: National Bureau of Economic Research.

Fiszbein, A., Schady, N., Ferreira, F.H.G., Grosh, M., Keleher, N., Olinto, P., and Skoufias, E. (2009). *Conditional Cash Transfers: Reducing Present and Future Poverty.* World Bank Policy Research Report. Washington, DC: World Bank. Available: https://openknowledge.worldbank.org/bitstream/handle/10986/2597/476030PUB0Cond101Official-0Use0Only1.pdf?sequence=1&isAllowed=y.

Food and Nutrition Service. (2018a). *SNAP Annual Participation Rates*. Washington, DC: U.S. Department of Agriculture. Available: https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap.

_____. (2018b). *Income Eligibility Standards*. Washington, DC: U.S. Department of Agriculture. Available: https://www.fns.usda.gov/snap/income-eligibility-standards.

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A Roadmap to Reducing Child Poverty

Fox, L., Han, W.J., Ruhm, C., and Waldfogel, J. (2013). Time for children: Trends in the employment patterns of parents, 1967–2009. *Demography, 50*(1), 25–49.

Gennetian, L.A., and Morris, P.A. (2003). The effects of time limits and make-work-pay strategies on the well-being of children: Experimental evidence from two welfare reform programs. *Children and Youth Services Review, 25*(1-2), 17–54.

Gennetian, L.A., Duncan, G., Knox, V., Vargas, W., Clark-Kauffman, E., and London, A.S. (2004). How welfare policies affect adolescents' school outcomes: A synthesis of evidence from experimental studies. *Journal of Research on Adolescence, 14*(4), 399–423.

Gennetian, L.A., Sanbonmatsu, L., Katz, L.F., Kling, J.R., Sciandra, M., Ludwig, J., Duncan, G.J., and Kessler, R.C. (2012). The long-term effects of Moving to Opportunity on youth outcomes. *Cityscape*, *14*(2), 137–167.

Goodman-Bacon, A. (2016). *The Long-Run Effects of Childhood Insurance Coverage: Medicaid Implementation, Adult Health, and Labor Market Outcomes*. Cambridge, MA: National Bureau of Economic Research.

_____. (2018). Public insurance and mortality: Evidence from Medicaid implementation. *Journal of Political Economy, 126*(1), 216–262.

Guldi, M., Hawkins, A., Hemmeter, J., and Schmidt, L. (2017). *Supplemental Security Income and Child Outcomes: Evidence from Birth Weight Eligibility Cutoffs*. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w24913.

Gundersen, C., and Ziliak, J.P. (2003). The role of food stamps in consumption stabilization. *Journal of Human Resources, 38*, 1051–1079.

Halpern-Meekin, S., Edin, K., Tach, L., and Sykes, J. (2015). *It's Not Like I'm Poor: How Working Families Make Ends Meet in a Post-Welfare World* (first edition). Oakland, CA: University of California Press.

Hanson, J.L., Hair, N., Shen, D.G., Shi, F., Gilmore, J.H., Wolfe, B.L., and Pollak, S.D. (2013). Family poverty affects the rate of human infant brain growth. *PLoS ONE, 8*(12), e80954.

Holzer, H.J., Schanzenbach, D.W., Duncan, G.J., and Ludwig, J. (2008). The economic costs of childhood poverty in the United States. *Journal of Children and Poverty, 14*(1), 41–61.

Howell, E.M., and Kenney, G.M. (2012). The impact of the Medicaid/CHIP expansions on children: A synthesis of the evidence. *Medical Care Research Review, 69*(4), 372–396.

Hoynes, H.W., and Patel, A.J. (2017). Effective policy for reducing poverty and inequality? The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources*, *53*(4), 859–890.

Hoynes, H., and Schanzenbach, D.W. (2015). *U.S. Food and Nutrition Programs*. Cambridge, MA: National Bureau of Economic Research.

Hoynes, H., Miller, D., and Simon, D. (2015). Income, the Earned Income Tax Credit, and infant health. *American Economic Journal-Economic Policy, 7*(1), 172–211.

Hoynes, H., Schanzenbach, D.W., and Almond, D. (2016). Long run impacts of childhood access to the safety net. *American Economic Review 106*(4), 903–934. Available: http://dx.doi.org/10.1257/aer.20130375.

Huston, A.C., Duncan, G.J., Granger, R., Bos, J., McLoyd, V., Mistry, R., Crosby, D., Gibson, C., Magnuson, K., Romich, J., and Ventura, A. (2001). Work-based antipoverty programs for parents can enhance the school performance and social behavior of children. *Child Development, 72*(1), 318–336.

Isaacs, J.B., Lou, C., Hong, A., Quakenbush, C., and Steuerle, C.E. (2018). *Kids' Share 2018: Report on Federal Expenditures on Children through 2017 and Future Projections*. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/kids-share-2018-report-federal-expenditures-children-through-2017-and-future-projections.

Jacob, B.A. (2004). Public housing, housing vouchers, and student achievement: Evidence from public housing demolitions in Chicago. *American Economic Review*, *94*(1), 233–258.

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Jacob, B.A., Kapustin, M., and Ludwig, J. (2015). The impact of housing assistance on child outcomes: Evidence from a randomized housing lottery. *Quarterly Journal of Economics, 130*(1), 465–506.

Kehrer, B.H., and Wolin, C.M. (1979). Impact of income maintenance on low birth weight: Evidence from the Gary experiment. *Journal of Human Resources, 14*(4), 434–462.

Levere, M. (2015). *The Labor Market Consequences of Receiving Disability Benefits During Childhood*. Princeton, NJ: Mathematica Policy Research.

Levine, P.B., and Schanzenbach, D. (2009). The impact of children's public health insurance expansions on educational outcomes. *Forum for Health Economics & Policy, 12*(1).

Manoli, D., and Turner, N. (2014). *Cash-on-Hand & College Enrollment: Evidence From Population Tax Data and Policy Nonlinearities*. Cambridge, MA: National Bureau of Economic Research.

Markus, A.R., Andres, E., West, K.D., Garro, N., and Pellegrini, C. (2013). Medicaid covered births, 2008 through 2010, in the context of the implementation of health reform. *Women's Health Issues, 23*(5), e273–e280.

Maxfield, M. (2013). *The Effects of the Earned Income Tax Credit on Child Achievement and Long-Term Educational Attainment*. Job Market Paper, Michigan State University, East Lansing, MI. Available: https://msu.edu/~maxfiel7/20131114%20Maxfield%20EITC%20Child%20Education.pdf.

Maynard, R.A. (1977). The effects of the rural income maintenance experiment on the school performance of children. *The American Economic Review, 67*(1), 370–375.

Maynard, R.A., and Murnane, R.J. (1979). The effects of a negative income tax on school performance: Results of an experiment. *The Journal of Human Resources, 14*(4), 463.

McKernan, S.-M., Ratcliffe, C.E., and Quakenbush, C. (2014). *Small-Dollar Credit: Consumer Needs and Industry Challenges*. Washington, DC: Urban Institute. Available: https://www.urban.org/sites/default/files/publication/33716/413278-Small-Dollar-Credit-Consumer-Needs-and-Industry-Challenges.PDF.

McLaughlin, M., and Rank, M.R. (2018). Estimating the economic cost of childhood poverty in the United States. *Social Work Research*, *42*(2), 73–83.

McLoyd, V.C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development, 61*(2), 311–346.

Miller, C., Miller, R., Verma, N., Dechausay, N., Yang, E., Rudd, T., Rodriguez, J., and Honig, S. (2016). *Effect of a Modified Conditional Cash Transfer Program in Two American Cities*. New York: MDRC. https://www.mdrc.org/publication/effects-modified-conditional-cash-transfer-program-two-american-cities.

Miller, S.M., and Wherry, L.R. (2018). The long-term health effects of early life Medicaid coverage. *The Journal of Human Resources*. doi:10.3368/jhr.54.3.0816.8173R1.

Milligan, K., and Stabile, M. (2011). Do child tax benefits affect the well-being of children? Evidence from Canadian child benefit expansions. *American Economic Journal: Economic Policy*, *3*(3), 175–205.

Morris, P., Gennetian, L., and Duncan, G. (2005). Long-term effects of welfare and work policies on children's school achievement: A synthesis from policy experiments conducted in the 1990s. *Social Policy Report, 19*(2), 3–17.

Morris, P., Gennetian, L.A., and Knox, V. (2002). *Welfare Policies Matter for Children and Youth: Lessons for TANF Reauthorization*. New York: MDRC.

Morris, P.A., Huston, A.C., Duncan, G.J., Crosby, D.A., and Bos, J.M. (2001). *How Welfare and Work Policies Affect Children: A Synthesis of Research*. New York: MDRC. Available: http://dev.mdrc.org/sites/default/files/full_392.pdf.

National Institute of Child Health and Human Development Early Child Care Research Network and Duncan, G.J. (2003). Modeling the impacts of child care quality on children's preschool cognitive development. *Child Development, 74*(5), 1454–1475.

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Olsen, E.O. (2008). *Getting More from Low-Income Housing Assistance*. Washington, DC: Brookings Institution.

Oreopoulos, P. (2003). The long-run consequences of living in a poor neighborhood. *Quarterly Journal of Economics, 118*(4), 1533–1575.

Orr, L., Feins, J., Jacob, R., Beecroft, E., Sanbonmatsu, L., Katz, L.F., Liebman, J.B., and Kling, J.R. (2003). *Moving to Opportunity: Interim Impacts Evaluation*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research. Available: https://scholar.harvard.edu/files/lkatz/files/moving_to_opportunity_interim_impacts_evaluation.pdf.

Ouellette, T., Burstein, N., Long, D., and Beecroft, E. (2004). *Measures of Material Hardship: Final Report*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.

Ratcliffe, C., and Kalish, E. (2017). *Escaping Poverty: Predictors of Persistently Poor Children's Economic Success*. U.S. Partnership on Mobility from Poverty. Washington, DC: Urban Institute. Available: https://www.mobilitypartnership.org/publications/escaping-poverty.

Raver, C.C., Gershoff, E.T., and Aber, J.L. (2007). Testing equivalence of mediating models of income, parenting, and school readiness for White, Black, and Hispanic children in a national sample. *Child Development, 78*(1), 96–115.

Riccio, J.A., and Miller, C.A. (2016). *Conditional Cash Transfers in NYC: What Worked and Didn't Work*. New York: MDRC. Available: https://www.mdrc.org/publication/new-york-city-s-first-conditional-cash-transfer-program.

Riccio, J.A., Dechausay, N., Miller, C., Nuñez, S., Verma, N., and Yang, E. (2013). *Conditional Cash Transfers in New York City: The Continuing Story of the Opportunity NYC–Family Rewards Demonstration*. New York: MDRC. Available: https://www.mdrc.org/publication/conditional-cash-transfers-new-york-city.

Romig, K. (2017). *SSI: A Lifeline for Children with Disabilities*. Washington, DC: Center on Budget and Policy Priorities.

Salkind, N.J., and Haskins, R. (1982). Negative income tax—The impact on children from low-income families. *Journal of Family Issues, 3*(2), 165–180.

Shonkoff, J.P., Garner, A.S., Siegel, B.S., Dobbins, M.I., Earls, M.F., Garner, A.S., McGuinn, L., Pascoe, K., Wood, D.L., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption, and Dependent Care, and Section on Developmental and Behavioral Pediatrics. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*(1), e232–e246.

Strully, K.W., Rehkopf, D.H., and Xuan, Z. (2010). Effects of prenatal poverty on infant health: State Earned Income Tax Credits and birth weight. *American Sociological Review, 75*(4), 534–562.

Venti, S.F. (1984). The effects of income maintenance on work, schooling, and non-market activities of youth. *The Review of Economics and Statistics, 66*(1), 16–25.

Waxman, S. (2017). *State EITC Wins Help Spread Prosperity*. Available: https://www.cbpp.org/blog/state-eitc-wins-help-spread-prosperity.

Wherry, L.R., and Meyer, B.D. (2015). Saving teens: Using a policy discontinuity to estimate the effects of Medicaid eligibility. *Journal of Human Resources, 51*(3), 556–588.

Wherry, L.R., Miller, S., Kaestner, R., and Meyer, B.D. (2015). Childhood Medicaid coverage and later life health care utilization. *Review of Economics and Statistics, 100*(2), 287–302.

Yeung, W.J., and Conley, D. (2008). Black-white achievement gap and family wealth. *Child Development, 79*(2), 303–324.

Zhan, M. (2006). Assets, parental expectations and involvement, and children's educational performance. *Children and Youth Services Review, 28*(8), 961–975.

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4

How the Labor Market, Family Structure, and Government Programs Affect Child Poverty

In response to the second element of the committee's statement of task and to provide guidance for the committee's deliberations on new initiatives that can reduce child poverty, in this chapter, we discuss how demographic factors, the labor market and economy, and major government assistance programs affect all child poverty in the United States. We begin with a brief review of the role that demographic factors, particularly single-parent family structure, play in child poverty, followed by an analysis of employment-related factors. We then focus on a key element of our statement of task: the structure and role of current federal government assistance programs as they affect child poverty. We close the chapter with a comparison of the poverty-reducing impact of assistance programs in the United States and in the four English-speaking countries whose selection was discussed in Chapter 2: Australia, Canada, Ireland, and the United Kingdom.

FORCES THAT SHAPE CHILD POVERTY

Three broad sets of forces affect child poverty: demographics, the economy and its labor markets, and government policy. Demographic factors include parental age, education, race, and ethnicity; number of children in the family; and family structure, such as single or married parent. For example, older and more educated parents generally command higher wages, leading to lower levels of family poverty. The presence of two parents in the household would be expected to reduce poverty because of higher earnings and the possibility of specialization as one partner focuses

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on work and the other on family responsibilities (Becker, 1981). Additionally, whether it is headed by two parents or one, a household with fewer children is likely to experience less poverty because of the higher ratio of potential adult earners to children as well as the fact that the poverty line is lower for a smaller family. The patterns of child poverty across demographic groups shown in Chapter 2 are consistent with these expectations.

Labor market factors include the amount of parental work and the wages earned for every hour worked. Employment and earnings are influenced by secular forces such as macroeconomic growth, labor market forces such as technological change and globalization, and labor market factors such as minimum wage levels and unionization, as well as by cyclical forces such as unemployment.

The third factor is the primary focus of this chapter: government policies, such as tax and transfer programs. These three broad sets of factors are not independent of one another. A change in tax or transfer policy, for example, can affect work patterns and decisions about family structure.

To frame the discussion of the role of these three broad factors, Figure 4-1 illustrates how child poverty rates have evolved over the last five decades (1967 to 2016). The lower line in the figure reproduces the Supplemental Poverty Measure (SPM)-based poverty trend data shown in Figure 2-8. Periods of economic downturn are shown as shaded columns.[1] As discussed in Chapter 2, because some Transfer Income Model, Version 3 (TRIM3) adjustments are unavailable for this entire historical period, the SPM trend in Figure 4-1 (and throughout this chapter) is not adjusted for underreporting of government programs.[2]

The upper trend line in Figure 4-1 illustrates what SPM-based child poverty *would have* been if market income (but no other source of income) were counted as family resources.[3] Market income includes only earnings and income from savings and investments; it does not include any of the government tax and transfers that are included in the SPM resource measure. Importantly, these are "all else equal" poverty rate estimates; these

[1] Recession dates are from the National Bureau of Economic Research at http://www.nber.org/cycles.html.

[2] Consistent underreporting adjustments are not possible because TRIM3 data are available only for years 2012, 2014, and 2015. Consequently, the rates reported here are somewhat higher than they would be after such adjustments. The figures are drawn from original analyses commissioned by the committee and conducted by Christopher Wimer (2017, October). The SPM threshold is anchored in 2012 living standards and adjusted back to 1967 using the Consumer Price Index. The Census SPM threshold is not available for years prior to 2009.

[3] Market income was calculated by taking total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veterans' assistance. For more on definitions of income, see Gornick and Smeeding (2018).

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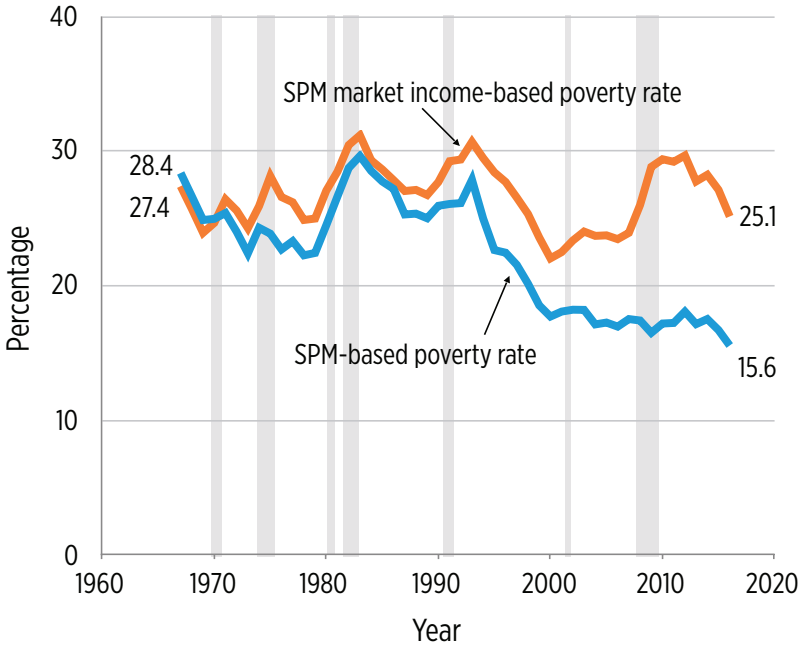

FIGURE 4-1 Child poverty rates, before and after taxes and transfers, 1967–2016.
NOTES: The SPM poverty measure is anchored in 2012 living standards, adjusted back to 1967 using the CPI, and does not adjust for underreporting. Shaded areas indicate recession periods as determined by the NBER Business Cycles Dating Committee. SPM market income-based poverty rate includes labor market income but no other sources of income in its measure of family resources. SPM = Supplemental Poverty Measure, CPI = Consumer Price Index, NBER = National Bureau of Economic Research.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017).

data assume no change in market income (e.g., no change in labor market behavior) in response to the unavailability of tax and transfer income. As we discuss in greater detail below, eliminating pro-work government policies such as the Earned Income Tax Credit (EITC) could reduce market income and thereby increase market-based income poverty, while eliminating means-tested transfers such as food stamps (SNAP) could have the opposite effect.

Figure 4-1 shows that poverty is strongly related to the economy and business cycles, falling during periods of economic growth and rising during recessions and often for another year or two after the official end of a downturn. Many studies document this inverse relationship between

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unemployment rates and poverty.[4] It is clear from the trends shown in Figure 4-1 that market-income poverty is more cyclical than SPM poverty.[5] Indeed, Figure 4-1 reveals that the Great Recession led to a 3.4 percentage point increase in market-income poverty (between 2008 and 2010), while SPM poverty fell slightly (by 0.2 percentage points). As discussed later in this chapter, this suggests that the tax and transfer programs included in SPM calculations were very successful at mitigating the negative impacts of the economic cycle on child poverty (Bitler and Hoynes, 2010; Bitler, Hoynes and Kuka, 2017; Blank, 1989; Blank and Blinder, 1986; Cutler and Katz, 1991; Freeman, 2001; Gunderson and Ziliak, 2004; Hoynes, Page, and Stevens, 2006; Meyer and Sullivan, 2011).

More generally, Figure 4-1 shows that there is no clear secular, long-term trend in market-income-based child poverty: Child poverty rates based solely on market income have improved only slightly over the 50-year period, falling from 27.4 percent in 1967 to 25.1 percent in 2016. This lack of improvement is particularly notable given that general living standards, as indicated by per-capita Gross Domestic Produce (GDP), more than doubled between the late 1960s and today.[6] Holding other factors constant, market-income-based poverty rates should have fallen substantially if the improved economy had indeed boosted the financial situation of people living in poverty.

The lack of long-term declines in market-based poverty also implies that policy changes since the 1990s that were aimed at reducing poverty by increasing work and earnings—including the welfare reform of the 1990s, the EITC, and expanded access to child care, to name three changes—have not reduced child poverty rates, on net and in combination with changes in the economy. Disentangling the effects of these policy changes from changes in the economy over the period is difficult. To take one of these policy changes as an example, what evidence we have on 1990s welfare reform shows that it did have some short-term effects in reducing poverty rates and thus made a contribution to the decline in market-based poverty in the second half of the 1990s, as shown in Figure 4-1 (see Chapter 7 for a discussion of this evidence). However, the lower SPM child poverty rate in 2015 compared to that in 1996, for example, is almost entirely due to an increase in tax credits and transfers, not due to an increase in work and earnings.

[4] Bitler and Hoynes (2010, 2015); Bitler, Hoynes, and Kuka (2017); Blank (1989, 1993); Blank and Blinder (1986); Blank and Card (1993); Cutler and Katz (1991); Freeman (2001); Gunderson and Ziliak (2004); Hoynes, Page, and Stevens (2006); Meyer and Sullivan (2011).

[5] Recent work by Bitler, Hoynes, and Kuka (2017) documents this using data from 2000 to 2014.

[6] See data provided by the Federal Reserve Bank of St. Louis, at https://fred.stlouisfed.org/tags/series?t=gdp%3Bper+capita.

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CONCLUSION 4-1: Despite economic growth over the past half century, child poverty rates calculated using only labor market income have remained high—ranging between 22 and 32 percent.

Many aspects of children's demographic circumstances have undergone dramatic changes in the past four or five decades (Social Capital Project, 2017). For example, among children whose mothers had lower levels of education, the share of those living with a married parent has declined sharply (see Figure 4-2). Trends in women's educational attainment (Appendix D, Figure D4-2) and fertility (Appendix D, Figure D4-3) show that there has been a steady increase in attainment since 1962 as well as a steady decrease in fertility among women overall since 1976. Linking some of these demographic changes to child poverty, we would expect the increasing incidence of single parenthood to push up rates of child poverty,

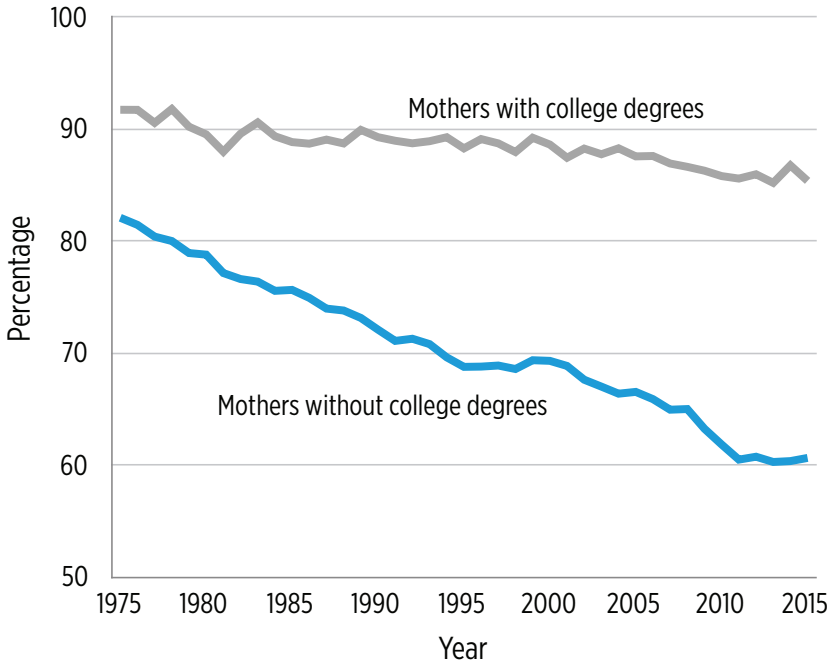

FIGURE 4-2 Share of children with married parents, 1975–2015.
NOTES: Calculations based on Current Population Survey Annual Social and Economic Supplement 1976–2016. Data are restricted to mothers ages 25–54.
SOURCE: Adapted from Hoynes and Schanzenbach (2018).

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while the increase in maternal education and the reduction in the number of children should lower them.[7]

There have also been important changes in the parental connections to the labor market. Large numbers of both single and married mothers have joined the workforce since 1975 (see Figure 4-3). The increase in employment among single mothers was particularly dramatic in the 1990s, and was accompanied by a rise in the amount of the EITC and in other work supports in the wake of welfare reform.[8] Male employment, on the other hand, trended downward over this period (Appendix D, Figure D4-1). The increase in employment among single parents, particularly between the early 1990s and 2000, would also be expected to reduce child poverty over that period.

A number of studies have used a "what-if" approach to distinguish between the roles of demographic factors and the labor market in explaining trends in the Official Poverty Measure (OPM). Using poverty rates across different subgroups, such as married/single-parent families or working/nonworking parents, these decomposition studies calculate how overall child poverty rates would have changed if each group had experienced the observed poverty trend but the overall composition of the population (e.g., the share of children living with a single parent) had not changed. This approach is distinct from asking "does family structure matter" at any given point in time, and instead seeks to understand which factors explain *changes* in poverty over time.

Decomposition studies based on data from before the mid-1990s generally find that changes in family structure, most notably the increase in single parenthood, explain a large share of the observed increase in child (official) poverty between the 1970s and the mid-1990s (Danziger and Gottschalk, 1995; Lerman, 1996). After the employment of single mothers began to rise in the early 1990s, however, their families' exposure to labor market fluctuations began to increase. The decomposition studies applied to poverty trends beginning in the 1990s have found that changes in employment, rather than in family structure, are the most important factor in explaining recent (official) poverty trends (Cancian and Reed, 2009; Chen and Corak, 2008; Lichter and Crowley, 2004; Nichols, 2013). This does not mean that family structure has no influence on child poverty, but rather that changes in family structure do not explain changes in child poverty during this later time period.

The shifting influence of family structure versus employment is evident in Nichols' (2013) analyses of data spanning the period from 1975

[7] Because of rising educational attainment among women (Appendix D, Figure 4-2) the composition of women in lower-education groups is changing over time. This should be kept in mind when examining trends for various low-education groups over time as in Figure 4-2.

[8] Since 2000, the labor force participation of single mothers has been nearly identical to that of childless women (Black, Schanzenbach, and Breitwieser, 2017; not shown in Figure 4-3).

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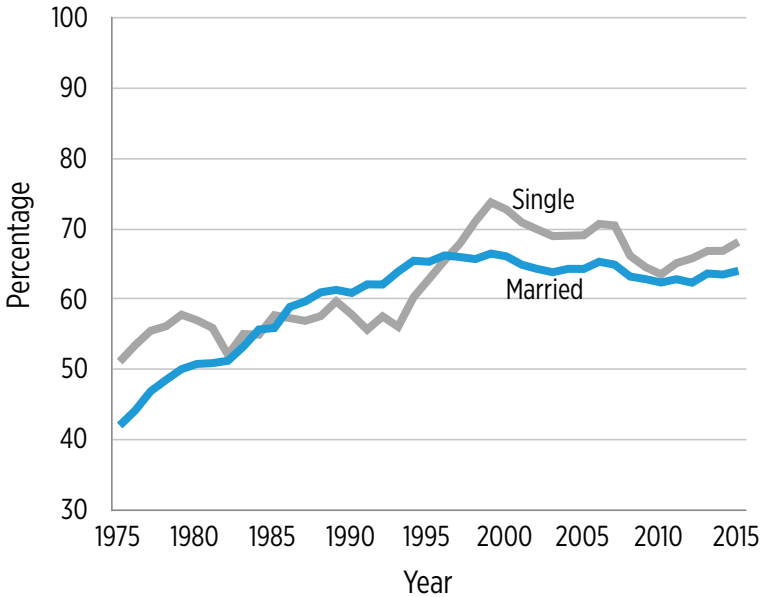

FIGURE 4-3 Share of children with a working mother, 1975–2015.
NOTES: Calculations based on the Current Population Survey Annual Social and Economic Supplement 1976-2016. Data are restricted to mothers ages 25 to 54.
SOURCE: Adapted from Hoynes and Schanzenbach (2018).

to 2011. Nichols (2013) finds that a large fraction of the trend in child (official) poverty between 1975 and 1993 is explained by changes in family structure (single parenthood, number of family members, multigenerational households) and age, while trends in child poverty between 1993 and 2011 are largely explained by increases in employment. This finding holds true for different subgroups of children, including White, Black, and Hispanic children (Appendix D, Figure D4-4). For example, Nichols (2013) shows that for White children, changes in family structure (and age of children) account for 85 percent of the actual change in child poverty between 1975 and 1993, and that changes in employment account for over 70 percent of the change between 1993 and 2011. Among Black children, the role of family structure was particularly important in the early period, explaining more than all of the actual increase in child poverty between 1975 and 1993.[9]

[9] Baker (2015) reaches a similar conclusion using a different approach, one that focuses on the changing associations between work, marriage, and poverty over time. Her work shows that the magnitude of the negative association between marriage and child poverty has declined, while the positive association between work and child poverty has increased.

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CONCLUSION 4-2: The decline in two-parent family structure is the single biggest factor associated with the increase in child (official) poverty between the mid-1970s and the early 1990s. However, child poverty has fallen since the early 1990s, despite continuing increases in single parenthood. This more recent decline in child poverty is most strongly associated with increases in maternal employment.

To further explore the role of the labor market, the economy, and employment in explaining trends in poverty, Chen and Corak (2008) undertake a decomposition to examine the comparative roles of employment and earnings. They find that between 1991 and 2000, labor market factors reduced poverty. More than one-half of that reduction stemmed from the mother's annual earnings (conditional on work), with the remainder of the effect split between the employment status of the father (20%), the employment status of the mother (17%), and the annual earnings of the father (less than 10%). That is, almost 70 percent of the reduction in poverty owing to labor market effects during the 1991–2000 period resulted from the increased employment and earnings of mothers.

Figure 4-4 provides a summary of the broader trends in earnings, plotting real median weekly wages between 1963 and 2012 for women working full time throughout the year, by education level (Autor, 2014). The 1963 earnings of each group serve as the baseline as the graph tracks the ratio of earnings in a given year relative to 1963 earnings. Women with no more than a high school education experienced much slower wage growth than women with more schooling. (The inflation-adjusted earnings of men with low levels of schooling, as shown in Appendix D, Figure D4-5, were actually *lower* at the end of the period than at the beginning.)

Beginning in the early 1980s, the wage patterns fan out and reflect increasing wage inequality across education levels.[10] In the 5 years following 2012 (after the end of the series in Figure 4-4), inflation-adjusted wages started to increase, showing real gains for the lowest quintile of workers. This growth resulted from both continued recovery from the recession and increases in state minimum wages (Shambaugh et al., 2017). The main forces in the economy that have contributed to wage stagnation for low-skilled workers and higher wages as skills increase include skill-biased technological change (Juhn, Murphy, and Pierce, 1993; Katz and Murphy, 1992), globalization (Autor, Dorn, and Hanson, 2013), the decline in

[10] This fanning out is even more dramatic if we include weekly wages for those with education beyond a college degree (Autor, 2014). Note, however, that the share of workers with a high school degree or less has declined over this time period, which may affect the composition of the group with low levels of education over time.

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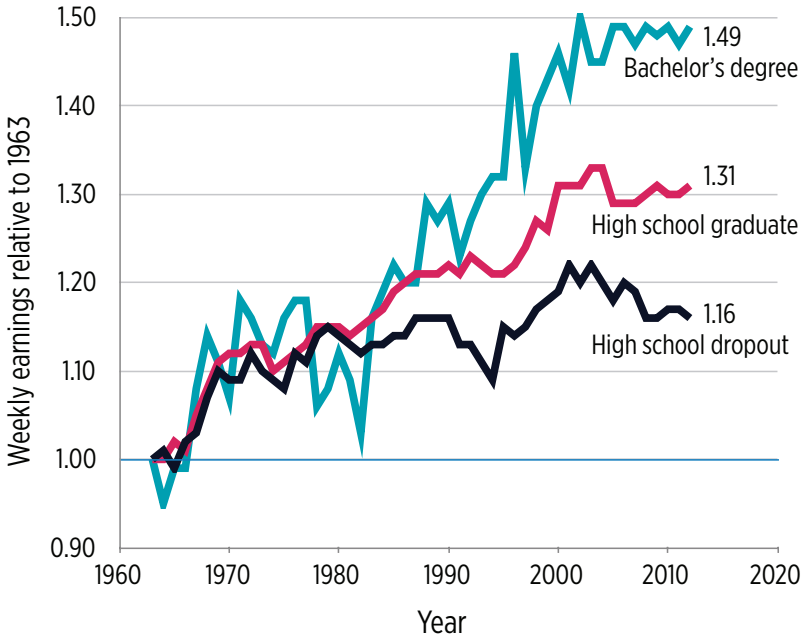

FIGURE 4-4 Changes in median weekly earnings of full-time, full-year female workers, 1963–2012.
NOTES: Data for other education levels and for men are contained in the chapter appendix. Conversion to real 2012 dollars using CPI-U-Research Series.
SOURCE: Autor (2014).

unions (Farber et al., 2018), and the decline in the real value of the federal minimum wage (Autor, Manning, and Smith, 2016).

CONCLUSION 4-3: The earnings of more highly skilled workers have grown substantially in the past 50 years. By contrast, the earnings of men with a high school education or less have stagnated or declined since the early 1970s, and the earnings of women with a high school education or less have stagnated since 2000. Because the large majority of poor parents have completed less schooling than higher-income parents, this stagnation has meant that market income has not reduced child poverty over this period as much as it might otherwise have. Moreover, the stagnation of annual earnings for lower-skilled mothers has been among the most important factors in slowing the decline in market-based child poverty over the last two decades.

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THE CHANGING ROLE OF GOVERNMENT TAXES AND TRANSFERS

The divergence between the 50-year child poverty trend based on a market-income measure and that based on the SPM measure, which is illustrated in Figure 4-1, underscores the increasing importance of government taxes and transfers in reducing child poverty. In this section, we detail the changing role of such taxes and transfers in reducing poverty. The section begins with a brief description of trends in federal spending on children and a review of major changes in policy during this period. This is followed by an analysis of the effects of government tax and transfer policy, based on an examination of the difference between trends in market-income child poverty rates and SPM child poverty rates.

Drawing on Isaacs et al. (2018), Figure 4-5 shows the trend between 1960 and 2017 in inflation-adjusted federal spending on programs that benefit children, most of which are counted as income in the SPM-based poverty measure (see also Appendix D, Table 4-1).[11] The eight-fold growth in real spending between 1960 and 2010 is striking, and it is many times larger than the 15 percent increase in the number of children in the population.

It is little wonder that the trend in child SPM poverty, which is based on a conception of resources that subtracts taxes paid, adds tax credits such as the EITC and includes income from transfer programs such as the Supplemental Nutrition Assistance Program (SNAP) depicted in Figure 4-1, diverges steadily from the market-income-only poverty trend, especially after 1980. In 1960, spending was largely limited to cash assistance from the Aid to Families with Dependent Children (AFDC) and Social Security programs. The next five decades saw the introduction or expansion of major programs benefiting children. Food stamps (now called SNAP) and Medicaid—two major in-kind benefit programs serving children in low-income families—were rolled out in the 1960s and 1970s. Supplemental Security Income (SSI) was also introduced during this period; originally, the program provided cash benefits for low-income disabled and elderly individuals. Now the program also serves children meeting disability requirements.

Transfer programs changed markedly in the 1990s with the expansion of the EITC as well as federal welfare reform (in 1996), which eliminated the entitlement of cash welfare. The Child Tax Credit was introduced in

[11] This includes cash transfers, nutrition programs (SNAP, WIC, and child nutrition programs), public housing benefits, tax credits, and other child-related tax benefits. Medicaid spending on children is also included in Figure 4-5 but is not counted in calculating SPM-based poverty.

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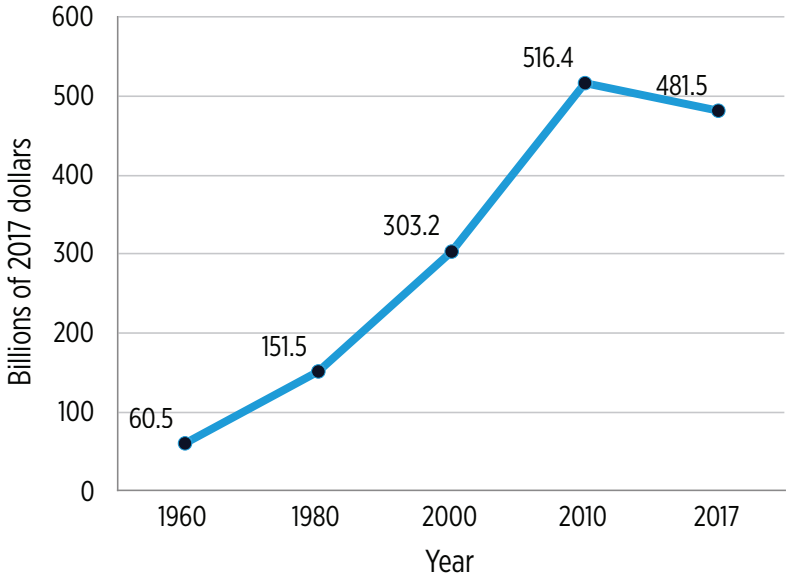

FIGURE 4-5 Total federal expenditures on children, 1960–2017.
NOTE: In billions of 2017 dollars.
SOURCE: Isaacs et al. (2018, Table 3).

1997 and then expanded in the first decade of the 2000s.[12] The spending decline between 2010 and 2016 was largely due to the decrease in transfers during the economic recovery that followed the Great Recession, coupled with the fact that no major new program initiatives directed at children were introduced or expanded during this period.

A comparison of Figure 4-1 and Figure 4-5 reveals that secular SPM poverty trends track expenditure patterns quite closely. In the late 1960s, the net effect of government transfers and the tax system was to *increase* poverty—on balance, the poor paid more in taxes than they received in benefits. In later decades, however, the benefits paid through the tax system have continued to grow; for example, between 1980 and 2000 there was a 10-fold increase in the inflation-adjusted value of refundable tax credits (see Appendix D, Table 4-1). Those benefits, combined with benefits received

[12] Spending on Medicaid (for children) and the State Child Health Insurance Program expanded dramatically between 1980 and 2000 as a result of federal and state legislation (Gruber, 2003). But these expansions affect SPM poverty only through their effects on out-of-pocket medical expenses. In Chapter 7 we discuss possible changes to the SPM to better capture the resources provided through public insurance.

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through income-tested programs, have been the major factor driving rates of SPM-based poverty as low as they are today.

While market-income poverty rates fell by 8 percentage points between 1993 and 2000, it is also apparent that the booming economy during that period played a substantial role in the 10-percentage point decline in SPM poverty rates over this period. But government policy changes during this period, which included the expansion of the EITC (1994–1996) and federal welfare reform (passed in 1996), also mattered. Indeed, it is the combination of the EITC expansion, welfare reform, and a strong labor market that contributed to a dramatic increase in employment for single mothers (Blank, 2006; Blank and Haskins, 2001; Grogger, 2003; Meyer and Rosenbaum, 2001; refer to Figure 4-3) and a consequent reduction in market-income and SPM poverty.

The role of policy in reducing poverty over and above labor-market earnings began to grow again in 2000, owing mainly to the introduction and expansion of the Child Tax Credit (Hoynes and Rothstein, 2017) and the expansion in eligibility for SNAP (Ganong and Liebman, 2013). Figure 4-1 also shows that government benefits effectively cushioned families from the effects of the Great Recession, since market-income-based poverty rates increased sharply between 2008 and 2010 but SPM-based poverty, which includes transfers, actually fell slightly. SNAP figured prominently as a source of countercyclical income protection during this period, as did temporary measures contained in the 2008 and 2009 stimulus packages (Bitler and Hoynes, 2016; Bitler, Hoynes, and Kuka, 2017).

In the final stage of this historical period—from 2011 to 2016—the combination of expanding employment and added work hours for those already employed pushed market-income-based poverty down sharply for families with children. The effects of refundable tax credits and SNAP were also substantial; for most low-income families with children, work alone was not enough to lift them out of poverty (Hardy, Smeeding, and Ziliak, 2018).

Children in all three of the largest racial/ethnic groups (Whites, Blacks, and Hispanics) have experienced declines in market-income poverty rates over the past 50 years.[13] This is evident in Appendix D, Figures D4-6, D4-7, and D4-8, taken from Wimer (2017), which show market-income and SPM-income child poverty rates from 1967 to 2016. Children in all three groups have also experienced larger declines in SPM poverty rates than

[13] These declines are larger than the overall decline in market child poverty rates shown in Figure 4-1 because the demographic composition of American children has changed; the share of White children has decreased and the share of those at greater risk for poverty has grown. Put another way, the changing racial/ethnic composition of American children obscures long-term progress within all three racial/ethnic groups.

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in market-income poverty rates, and this difference has become especially large in the past 15 years.

Similarly, poverty rates have declined over this period for children regardless of family composition. Appendix D, in Figures D4-9, D4-10, and D4-11, also taken from Wimer (2017), shows market-income and SPM child poverty rates from 1967 to 2016, separately for single, cohabiting, and married parents. Although both market-income and SPM poverty rates are quite different for these three groups—highest for single parents and lowest for married parents—all three groups show similar trends, with a particularly large decline in SPM poverty for single-parent families. In short, from 1993 onwards the tax and transfer system was increasingly effective at reducing child poverty rates for all racial/ethnic groups and all family types, with especially large effects during the 2000–2016 period.

CONCLUSION 4-4: Government tax and transfer programs reduced the child poverty rate, defined by the Supplemental Poverty Measure (SPM), modestly between 1967 and 1993, but became increasingly important after 1993 because of increases in government benefits targeted at the poor and near poor. Between 1993 and 2016, SPM poverty fell by 12.3 percentage points, from 27.9 to 15.6 percent, more than twice as much as market-income-based poverty.

Figure 4-6 depicts the trends in deep child poverty (below 50 percent of the poverty line) based on market-income poverty and on SPM poverty. Like market-income poverty drawn at the 100 percent SPM line, market-income-based deep poverty is cyclical, rising in economic downturns and falling when the economy expands. Although there was a dramatic decline in SPM poverty (refer to Figure 4-1), less progress was made in reducing SPM deep poverty over this period.[14] In 1967, 8.2 percent of children were in deep SPM poverty, compared with 4.5 percent in 2016.[15] A large reduction was observed between 1967 and 1974, when AFDC benefits were increased and the Food Stamp Program was introduced, and again in the late 1990s because of a strong labor market, welfare reform, and the expansion of the EITC. There has been almost no net change in the deep poverty rate since that time. The impact of government programs on deep poverty (as measured by the difference between market-income deep poverty and SPM deep poverty) declined substantially in the 1990s,

[14] Some of this lack of progress fighting SPM poverty may reflect the rising rates of underreporting in the Current Population Survey (Meyer and Mittag, 2015; Meyer, Mok, and Sullivan 2009).

[15] The 5.0 percent rate of deep poverty differs from the 2.9 percent rate presented in Chapter 2 because it does not reflect adjustments for underreporting. It has proved impossible to make a consistent set of underreporting adjustments across the entire 1967–2016 period.

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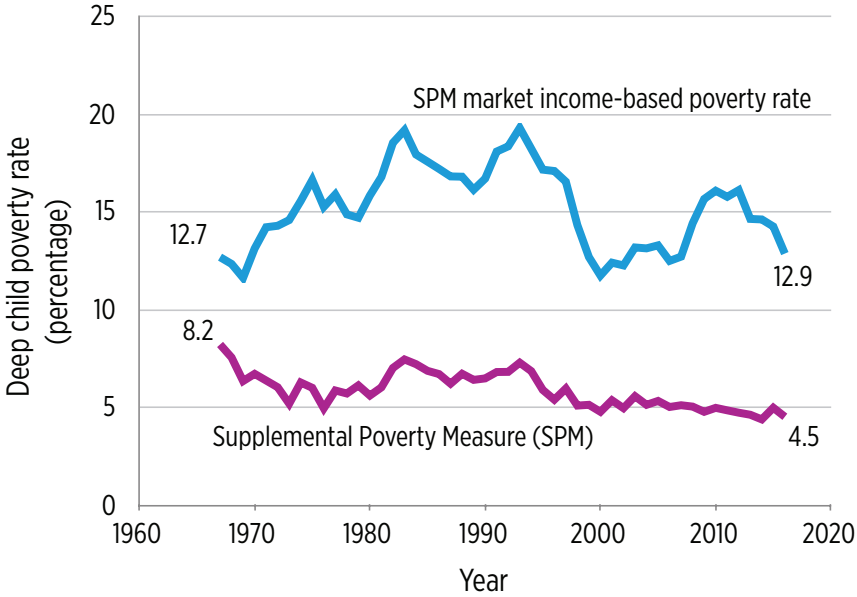

FIGURE 4-6 Rates of deep child poverty (< 50% SPM) before and after taxes and transfers, 1967–2016.
NOTE: The SPM poverty measure is anchored in 2012 living standards, adjusted back to 1967 using the Consumer Price Index, and does not adjust for underreporting. SPM market income-based poverty rate includes labor market income but no other sources of income in its measure of family resources.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017).

following welfare reform and the drop in cash assistance. In 1993, the tax and transfer system reduced deep poverty by 12 percentage points (from 19% for market-income deep poverty to 7% after taxes and benefits), and in 2000 it lowered deep poverty rates by only 7 percentage points. During the Great Recession, market-income deep child poverty rose sharply, but the safety net fully offset that increase.

A major shift occurred in the 1990s, as cash assistance declined (because of welfare reform) and work-dependent assistance (the EITC and, later, the Child Tax Credit) increased. Since about 2000, federal spending on the nonworking poor and the deep poor has remained stable or increased modestly; in contrast, spending on the working poor and those above the level of deep poverty has increased more substantially. Overall, then, spending has shifted away from the nonworking/deep poor and toward the working poor (Hoynes and Schanzenbach, 2018; Moffitt, 2015; Moffitt and Pauley, 2018).

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Moreover, since the Great Recession the poorest individuals have experienced a sharp drop in support as temporary expansions of programs like SNAP expired, returning almost to pre-recession levels. The trend toward spending more on the working poor and proportionately less on the non-working/deep poor has therefore continued to widen since the Great Recession (Moffitt and Pauley, 2018).

An examination of near poverty among children—drawing the poverty line at 150 percent of the SPM poverty line—shows a remarkable decline in SPM near poverty over the period in question. As shown in Figure 4-7, SPM near poverty fell from nearly 60 percent in 1967 to 36 percent in 2016. However, a comparison of market-income near poverty and SPM near poverty reveals a very different picture of the impacts of the tax and transfer system. Taxes (net of transfers) on the near poor exceeded government benefits during most of the past 50 years, and this pushed the rates of SPM-based near poverty for children *above* the near-poverty rates

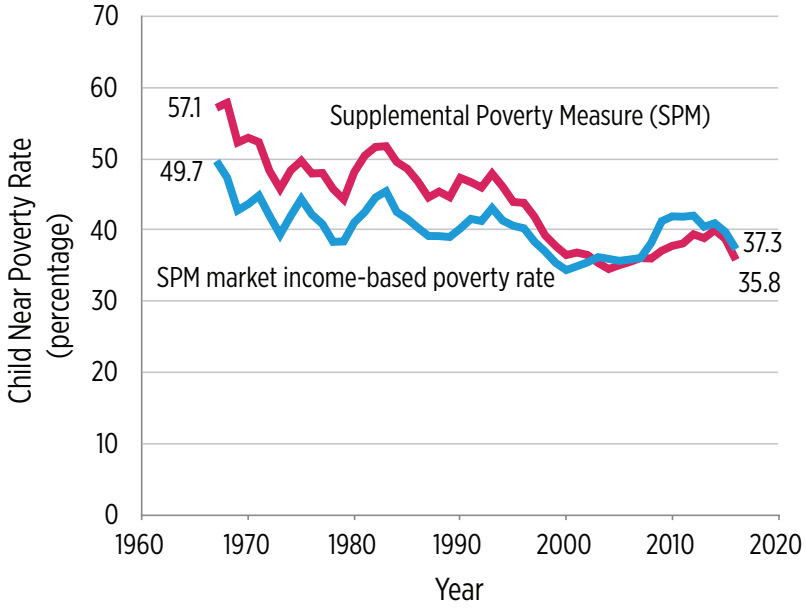

FIGURE 4-7 Rates of child near poverty (< 150% SPM) before and after taxes and transfers, 1967–2016.
NOTE: The SPM poverty measure is anchored in 2012 living standards, adjusted back to 1967 using the Consumer Price Index, and does not adjust for underreporting. SPM market income-based poverty rate includes labor market income but no other sources of income in its measure of family resources.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017, October).

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based solely on market income. The gap between the two rates narrows in the mid-1990s with the expansion of the EITC, and again in 1997 and 2000 with the introduction and expansion of the Child Tax Credit. During the Great Recession, market-income near poverty increased sharply, and the safety net partially offset this increase. By the end of the period, the fraction of children with total family resources below 150 percent of SPM poverty was nearly identical to rates based solely on market income, which suggests that, on balance, taxes and transfers had little net impact on the near-poverty thresholds among children.

CONCLUSION 4-5: Increasingly, anti-poverty programs have been geared toward working families. Increased government benefits have been less effective at reducing deep poverty (below 50% of the Supplemental Poverty Measure [SPM]) than at reducing poverty (100% of SPM), because fewer employment-based program benefits reach very low-income families with children. In the case of near poverty (income less than 150% of SPM), the net impact of government taxes and transfers on market income is now neutral, rather than negative, thanks to the expansion of work-based benefits for families above the 100 percent poverty line.

CHILD-RELATED INCOME TRANSFERS AND TAX BENEFITS

In this section, the committee addresses a key element of the statement of task: to provide an analysis of the poverty-reducing effects of the current set of major assistance programs directed at children and families in the United States. We begin with an overview of these programs and then analyze how child poverty rates in 2015 would have changed in the absence of each of these programs.

Although programs like SNAP and Temporary Assistance to Needy Families (TANF) may be among the most visible federal programs for children in low-income families, they are not the largest child-focused programs. The most comprehensive recent accounting of federal expenditures on all children is provided by Isaacs et al. (2018) and summarized in Figure 4-8 for 2017.[16] It includes programs supported by federal budget expenditures as well as "spending" programs that take the form of tax reductions benefiting families with children. Some of the programs, most notably the dependent tax exemption, the deduction for employer-sponsored health

[16] Only benefits or services provided either entirely or in some portion directly to children were counted. For benefits such as Medicaid and SSI that serve different age groups, the authors calculated the percentage of expenditures that goes to children (Isaacs et al., 2018).

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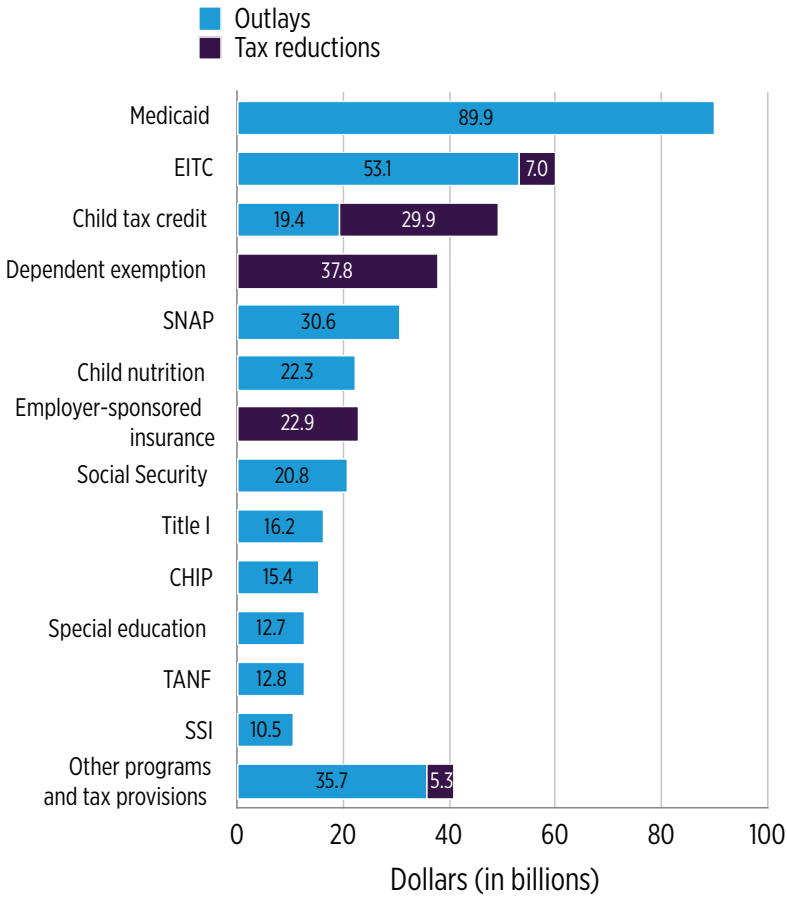

FIGURE 4-8 Value of federal spending outlays and tax reductions with the highest expenditures on children, 2017 (in billions of dollars).
NOTES: Amounts in 2017 dollars. EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program, CHIP = Children's Health Insurance Program, TANF = Temporary Assistance for Needy Families, SSI = Supplemental Security Income.
SOURCE: Isaacs et al. (2018).

insurance, and (to a lesser extent) the Child Tax Credit, provide considerably more benefits to middle- and high-income families with children than to poor families. Accordingly, they are less likely than benefits targeted toward the low-income population to reduce child poverty. Indeed, Isaacs et al. (2018) estimates that more than one-third (37%) of federal expenditures directed at children go to programs such as the Child Tax Credit

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and income tax exemption for children, which do not restrict benefits to families with low incomes.

The Medicaid program, with expenditures of nearly $90 billion directed at children, is the federal program that spends the most on children. In 2017, low-income children received not only $90 billion in federal Medicaid payments, but also $15 billion from the government through the Children's Health Insurance Program (CHIP), which provides health insurance to children through Medicaid as well as separate programs negotiated by states with the federal government. Total federal spending for health insurance for all children (including the $23 billion in tax expenditures for the deductibility of employer-provided health insurance, most of which benefits children in middle- and higher-income families) amounts to $128 billion. This amount represents 23 percent of all federal expenditures on children. Despite the crucial importance of health care spending for the future development of poor children, this spending has virtually no impact on SPM-based poverty because of the ways in which SPM-based poverty is defined (see Chapters 2 and 7).[17]

The second-, third-, and fourth-largest expenditures on children relate to provisions in the federal income tax: the EITC, the Child Tax Credit, and tax exemptions for dependent children living in a household (Isaacs et al., 2018). At $60 billion, the EITC is the largest of the three. Although available only to families with earned income, the EITC is refundable, so when a family's income is too low to generate tax obligations, the family receives a refund from the IRS. In 2017, a single mother with two children who earned between $14,040 and $18,340 (a range that includes the earnings of a full-time, full-year minimum wage worker) would receive the maximum credit of $5,616.[18] For the 2016 tax year, the average EITC for a family with children was $3,176.[19] The EITC is not without flaws, however; Box 4-1 describes issues pertaining to noncompliance and overpayments.

The Child Tax Credit ($49 billion; refer to Figure 4-8) is a partially refundable tax credit for each child a working family is allowed to claim. Prior to the 2018 tax reform, the credit amounted to $1,000 per child; the 2018 reforms doubled that amount.[20] The Child Tax Credit provides important benefits to some low-income families with children, but a substantial share of its federal funding goes to families much higher in the

[17] See Chapter 9 for recommendations for incorporating public health insurance expenditures into the poverty measure.

[18] See https://www.irs.gov/credits-deductions/individuals/earned-income-tax-credit/eitc-income-limits-maximum-credit-amounts for 2017 EITC limits.

[19] See https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit.

[20] For more information about the 2018 reforms, see https://www.irs.gov/newsroom/whats-new-with-the-child-tax-credit-after-tax-reform.

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BOX 4-1
The Earned Income Tax Credit (EITC): Reducing Noncompliance and Overpayments

Administered through the tax system, the EITC provides low- and moderate-income workers with a cash benefit designed to incentivize work, increase income, and reduce poverty. Despite its success and low administrative cost, there are ongoing problems with compliance and enforcement, which stem from overclaiming for the benefit.

Based on audited tax returns from the 2006–2008 period, a recent Internal Revenue Service (IRS) study found that between 43 and 50 percent of tax returns with an EITC claim and between 28.4 and 39.1 percent of all claimed EITC dollars were overclaims (Internal Revenue Service, 2014). This form of noncompliance generally falls into two categories: misclaiming children and misreporting income on tax returns.

Opinions vary as to why noncompliance occurs and whether it is a matter of taxpayer error or fraud. The rules governing the EITC are complicated, particularly with regard to its residency requirement. In light of the complexity of family living situations (divorced or separated parents, multigenerational families living in the same household, moves from one home to another, etc.), there can be confusion as to who has the right to claim a child and misreporting of qualifying children (Greenstein, Warwick, and Marr, 2017; Hoynes and Rothstein, 2017).

Misreporting of income—although it is more common than the misclaiming of children—accounts for a smaller share of overpayment dollars. Most incorrect income reporting can be traced to self-employed taxpayers, suggesting that some filers may be reporting higher incomes than they actually earned in order to maximize the credit (Chetty, Friedman, and Saez, 2013; Rector, 2016; Saez, 2010).

The IRS lacks enforcement authority to address most of the noncompliance and overpayment problems. While it has the authority to audit the EITC, since the benefit is refundable the IRS pays out millions of dollars each year before it has a chance to verify the accuracy of the income reported on returns with EITC claims (Rector, 2016). And despite efforts to equip the IRS with more tools to reduce EITC overpayment, its limited authority to correct erroneous claims when tax returns are processed remains a major barrier to reducing improper payments. Owing to limited resources, the IRS is also unable to address erroneous claims despite having devised methods for reducing overpayments (Greenstein, Warwick, and Marr, 2017).

income distribution.[21] In the case of the tax exemption for dependent

[21] The refundable portion of the Child Tax Credit (CTC), known as the Additional Child Tax Credit (ACTC), is limited to 15 percent of earned income above $3,000. Here we refer to the combined CTC and ACTC simply as the CTC. In 2017, the $1,000 credit was phased out, starting at incomes of about $80,000 and $120,000 for single- and married-couple families, respectively. The credit was fully phased out at incomes of about $100,000 ($130,000) for single-parent (married-couple) families. Hoynes and Schanzenbach (2018) estimate that as of 2017, 40 percent of CTC spending goes to families with incomes above 200 percent of poverty.

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children, little of the $38 billion in benefits from the dependent exemption goes to the families of poor children because of their low levels of taxable income. As shown below, both the EITC and Child Tax Credit target low-income families and play an important role in reducing child poverty.

Spending on nutrition-related programs (SNAP, school breakfast and lunch, food for children attending child care) totaled $58 billion in 2017 (Isaacs et al., 2018). Eligibility for SNAP ($31 billion; Isaacs et al., 2018), which provides vouchers for food assistance, is generally limited to those with gross monthly incomes below 130 percent of the federal poverty line. In 2018, the average monthly SNAP benefit was $125 per person.[22]

Social insurance spending, consisting of Survivors Insurance (part of Social Security) and benefits for child dependents of Disability Insurance beneficiaries, was next in size, at $21 billion (Isaacs et al., 2018). Neither is explicitly targeted at the poor or low-income families, but both benefit children who suffer the loss of a wage earner, thereby reducing the economic insecurity of children from all income classes. Because disability and death are more common among families in the bottom half than in the top half of the income distribution, however, these two forms of social insurance prevent a substantial number of children from falling into poverty.

Expenditures on each of the other programs listed in Figure 4-8 amounted to less than $17 billion. It is noteworthy that federal spending on the key cash assistance program that emerged from the 1996 welfare reforms (the TANF program) totaled only $13 billion in 2017 (Isaacs et al., 2018). SSI is a federal cash assistance program that provides benefits to low-income disabled and elderly persons. Following a court decision in 1990, the definition of disability was expanded to allow more children to receive SSI (Duggan, Kearney, and Rennane, 2016); in 2017 those expenditures totaled $11 billion.

EFFECTS OF INCOME TRANSFERS AND TAX BENEFITS ON CHILD POVERTY IN 2015

The degree to which federal programs reduce child poverty is a function of whether program benefits are counted as resources in the SPM poverty measure and, if they are counted, their overall size and the extent to which their benefits are targeted at the families of poor children.[23] We use the TRIM3 microsimulation model to estimate how much rates of child

[22] See https://fns-prod.azureedge.net/sites/default/files/pd/SNAPsummary.pdf.

[23] The largest transfer program omitted from SPM resources is Medicaid, which as we saw above is the child program with the highest federal expenditures. Given the expansions to Medicaid in recent decades, the reductions in SPM poverty shown below would be greater if Medicaid were included. See Chapter 7 for a discussion of incorporating public health insurance expenditures into the poverty measure.

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poverty (at 100%, 50%, and 150% of the TRIM3 SPM poverty line) would increase if benefits from each major support program were eliminated. As with the poverty estimates discussed in Chapter 2, these TRIM3 estimates adjust for the underreporting of transfers and apply to 2015.

Importantly, though, our estimates of the poverty-reducing impact of current programs do not account for the extent to which eliminating a given program might also affect work and other decisions that would in turn affect a family's market incomes. As discussed in Chapter 5, these behavioral effects could either push the estimates of child poverty rates up (if the elimination of the EITC and its work incentives caused earnings to fall) or down (if the elimination of an important income source, such as SNAP, led to more work and earnings).

The two refundable tax credits—the EITC and the refundable portion of the Child Tax Credit—are the most successful at alleviating poverty, as shown in Figure 4-9.[24] Starting from the 13.0 percent TRIM3 SPM child poverty rate in 2015, we estimate that the elimination of these tax credits would raise SPM child poverty to 18.9 percent, an increase of 5.9 percentage points, or 4.4 million children. Benefits from SNAP are next largest: In the absence of SNAP benefits, the SPM poverty rate is estimated to rise to 18.2 percent. Without the SSI program, it would rise from 13.0 to 14.8 percent. In the absence of Social Security, it is estimated to rise to 15.3 percent. The importance of Social Security in lowering child poverty stems mainly from the numbers of low-income children living in households with retired or disabled members.

An examination of the effects of program elimination on deep poverty reveals a different pattern of effects (see Figure 4-10). In contrast to their effects on 100 percent SPM poverty, tax credits play only a minor role in reducing deep poverty. This is consistent with the fact that families with incomes below 50 percent of the poverty line lack substantial earned income. SNAP is by far the single most important tax and transfer program for reducing deep poverty; our simulations indicate that eliminating SNAP would nearly double the fraction of children in deep SPM poverty (from 2.9 to 5.7%). Social Security has the next largest effect in reducing deep poverty; eliminating it would increase deep poverty from 2.9 to 4.3 percent.

Finally, an analysis of near poverty (150% of the SPM) shows that tax credits are by far the most important component in reducing near poverty among children (see Figure 4-11).

The most disadvantaged demographic groups—Blacks and Hispanics, single parents, and young and poorly educated parents—benefit disproportionately from both SNAP (Appendix D, Figure D4-12) and tax benefit programs (Appendix D, Figure D4-13). However, children who are not

[24] See Appendix D, Table 4-2 for more information.

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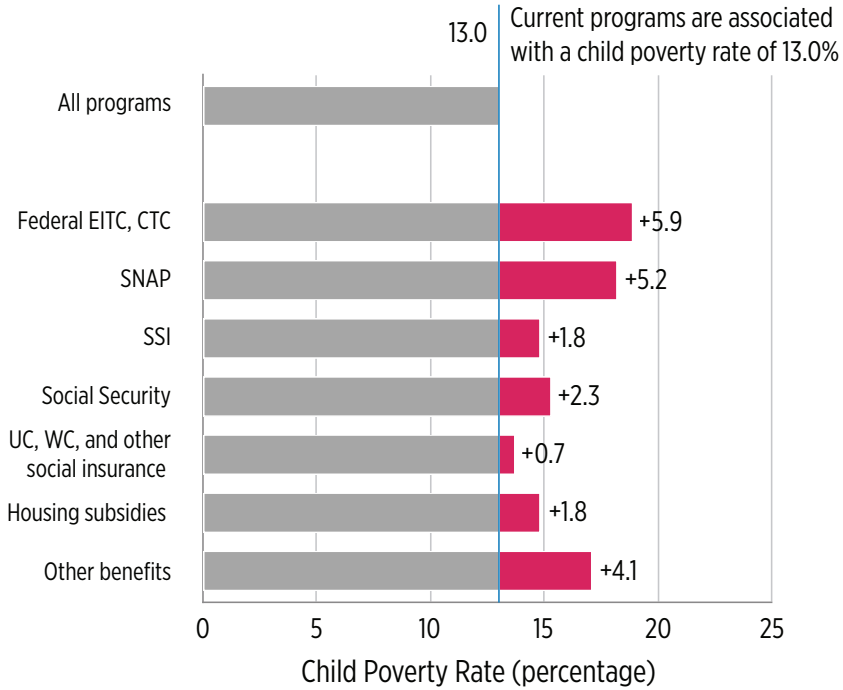

FIGURE 4-9 "What-if" child poverty rates with the elimination of selected federal programs.
NOTES: Poverty defined as below 100 percent of the TRIM3 SPM poverty line. Estimates are for 2015 and adjust for underreporting but not for behavioral effects. Other benefits include Temporary Assistance for Needy Families, solely state-funded assistance, means-tested veterans benefits, means-tested education assistance, the Low Income Home Energy Assistance Program, the National School Lunch Program, and the Special Supplemental Nutrition Program for Women, Infants, and Children. EITC = Earned Income Tax Credit, CTC = Child Tax Credit, SNAP = Supplemental Nutrition Assistance Program, SSI = Supplemental Security Income, UC = Unemployment Compensation, WC = Workers' Compensation.
SOURCE: Estimates from TRIM3 commissioned by the committee.

citizens benefit less from both programs, and children who live in families with no workers do not benefit at all from tax-related benefit programs.

CONCLUSION 4-6: The Earned Income Tax Credit, the Child Tax Credit, the Supplemental Nutrition Assistance Program (SNAP), and to a lesser extent Social Security are the most important programs for reducing Supplemental Poverty Measure (SPM)-based child poverty.

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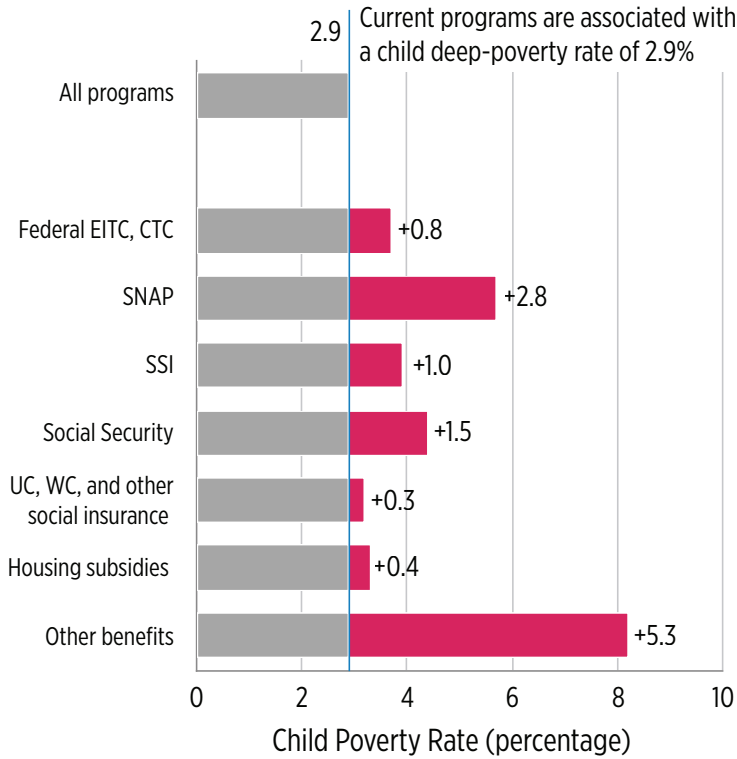

FIGURE 4-10 "What-if" child deep poverty rates with the elimination of selected federal programs.
NOTES: Deep poverty defined as below 50% of the TRIM3 SPM poverty line. Estimates are for 2015 and adjust for underreporting but not for behavioral effects. Other benefits: See note to Figure 4-9. EITC = Earned Income Tax Credit, CTC = Child Tax Credit, SNAP = Supplemental Nutrition Assistance Program, SSI = Supplemental Security Income, UC = Unemployment Compensation, WC = Workers' Compensation.
SOURCE: Estimates from TRIM3 commissioned by the committee.

SNAP and Social Security are the most important programs for reducing deep poverty among children. Tax credits are the most important means of keeping children above near poverty (150% of SPM poverty). Health care programs account for more than one-third of total federal expenditures on children but are not properly accounted for in the SPM poverty measure.

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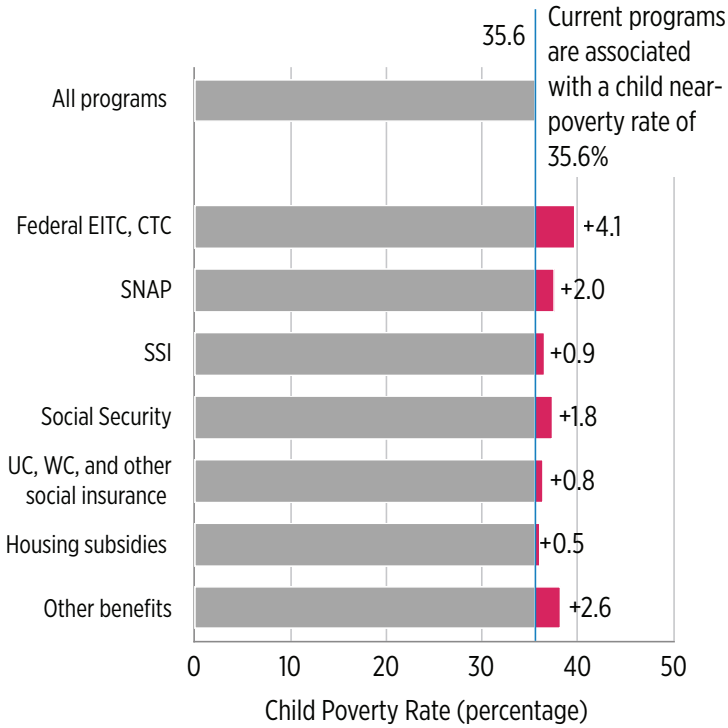

FIGURE 4-11 "What-if" child near-poverty rates with the elimination of selected federal programs.
NOTES: Near poverty is defined as below 150% of the TRIM3 SPM poverty line. Estimates are for 2015 and adjust for underreporting but not for behavioral effects. Other benefits: See note to Figure 4-9. EITC = Earned Income Tax Credit, CTC = Child Tax Credit, SNAP = Supplemental Nutrition Assistance Program, SSI = Supplemental Security Income, UC = Unemployment Compensation, WC = Workers' Compensation.
SOURCE: Estimates from TRIM3 commissioned by the committee.

EFFECTS OF GOVERNMENT BENEFITS ON CHILD POVERTY IN THE UNITED STATES AND OTHER ENGLISH-SPEAKING COUNTRIES

All nations allocate a portion of their budgets to programs that benefit children. Total family-related spending on financial supports, expressed as a percentage of a country's Gross Domestic Product (GDP), is plotted in Figure 4-12 for Australia, Canada, Ireland, the United Kingdom, and the

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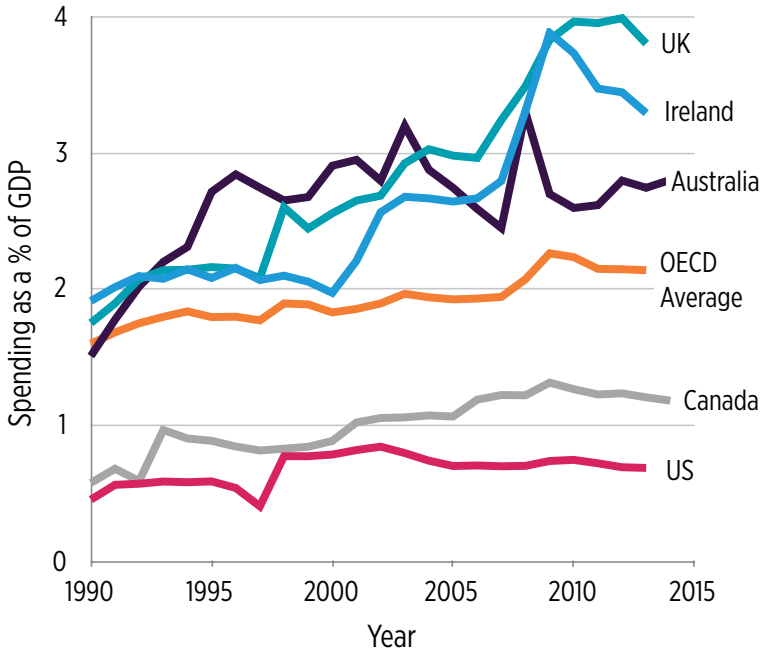

FIGURE 4-12 Public spending on families and children as a percentage of Gross Domestic Product, United States, OECD average, and four peer anglophone countries, 1990–2015.
SOURCE: OECD, Social Expenditure database (see https://data.oecd.org/socialexp/family-benefits-public-spending.htm); and OECD (2017).

United States annually from 1990 through 2015.[25] Although government spending on health and housing also assists families, it is not included in the figure. And while some state and even local governments in the United States spend significant amounts on child-specific programs, these amounts, too, are not included in the following figures.

Peer anglophone nations can be divided into those that spend relatively larger fractions of their national incomes on these family-related programs (Australia, Ireland, and the United Kingdom) and those that spend smaller fractions (Canada and the United States). Increases in spending over the 25-year period show a similar pattern: Spending rose from less than

[25] These data come from OECD (2017) and use a spending measure based on the aggregate category of "public spending on family benefits, including financial support that is exclusively for families and children" used by OECD. See Appendix D, 4-1 for an explanation of how the OECD defines its spending categories.

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2 percent of GDP in all countries to nearly 3 percent in Australia and more than 3 percent in Ireland and the United Kingdom. In contrast, spending on families never exceeded 1 percent of GDP in the United States over this period, and it rose to slightly over 1 percent in Canada. Although Canada and the United States have always remained below the OECD average, Canada planned to increase the share of its expenditures on families with children that is targeted specifically to children to 1.25 percent of GDP over the following 2 years (in 2017 and 2018), following the passage of its new Child Benefit[26] (see Box 4-2).

The United Kingdom's dramatic increase in spending beginning in the late 1990s was the result of its "War on Poverty" (see Box 4-3). The United Kingdom managed to fight child poverty effectively and consistently and was able to cut its poverty rate by one-half under an umbrella of policies designed both to promote work (with high-quality "sure start" child care readily available) and to make work more attractive than the cash welfare system. The cash welfare system remains available, and its scope was not reduced as much as the TANF system in the United States. However, since 2010 the United Kingdom has been retrenching and implementing cuts in benefits, capping the amount of benefits nonworking families could receive and cutting other benefits (United Kingdom, Department for Work and Pensions, 2015).

Government Spending and Its Effect on Child Poverty Rates

How has this public spending affected child poverty rates in peer English-speaking countries? To find out, we use an SPM line converted to other currencies using purchasing power parities (PPP). Figure 4-13 shows the effects of the tax and transfer system on child poverty based on the latest Luxembourg Income Study (LIS) data and defined in the same way as the absolute poverty (LIS-SPM-PPP) measure used in Chapter 2.

The far-right ends of the bars in Figure 4-13 show that the extent to which families' market income alone is sufficient to raise a child above this poverty threshold varies widely across the five English-speaking OECD nations. With a 23.0 percent child poverty rate based on market income only, the United States is in the middle of the pack—with a poverty rate higher than that in Canada and Australia but much lower than that in the United Kingdom and Ireland.

As explained below, the types of transfers used for Figure 4-13 are broken down into two types: *social insurance* benefits, such as unemployment and Social Security benefits, along with universal benefits such

[26] Authors' calculations are based on https://www.fin.gc.ca/afr-rfa/2017/report-rapport-eng.asp#_Toc492557458.

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BOX 4-2
The Canada Child Benefit:
A Cash Benefit to Families with Children

Nearly three decades after the Canadian House of Commons passed an all-party resolution committing the federal government to "seek to eliminate child poverty by the year 2000,"[a] the government took a major step toward achieving this goal by introducing the Canada Child Benefit in its 2016 budget. This program took effect in July 2016 and represents a major revamping of cash support to families with children. According to government projections, the Canada Child Benefit—after just 1 full year of implementation—will reduce the number of Canadian children living in poverty by nearly half (Corak, 2017; Sherman, 2018).[b,c]

The new Child Benefit represents an increase in benefits over the three programs that it replaces—the Universal Child Care Benefit, the Canada Child Tax Benefit, and the National Child Benefit Supplement. Eligibility for the benefit, which is distributed monthly and tax free, is determined on the basis of annually reported family income, making annual income tax filing its only eligibility requirement.[d] The amount of the benefit distributed to families is determined both by the age of the child/children and net family income. Families earning less than $30,000 per year receive $6,400 per year per child ages 0 to 6 and $5,400 per year per child ages 6 to 17. For families above the $30,000 threshold, the amount of the benefit is phased out at a relatively moderate rate. The Canada Child Benefit is expected to increase cash support to families by $4.3 billion in its first full fiscal year of implementation, but that amount will decline to $2.5 billion by 2020 and to current levels of support by 2024—and below current levels thereafter—since it is not indexed to inflation[e] (Canada, Office of the Parliamentary Budget Officer, 2016). However, indexing is expected to begin in 2020 (Corak, 2017).

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[a] Government of Canada, Hansard, November 24, 1989.

[b] Based on 2013 reported poverty levels, which were the most recently available data at the time of the announcement. The government estimates that there were 755,000 children in poverty during 2013, and it was suggested that the Canada Child Benefit would lower this to 471,000 in 2017.

[c] In addition to the efforts of the federal government, 8 out of Canada's 10 provinces have adopted their own poverty-reduction strategies, which include reforms to existing income support programs as well as significant advances in the delivery of cash and non-cash benefits.

[d] This eligibility requirement may be of concern to some First Nations populations, where rates of income tax filing are below the national average and where the need for income supports may be greater.

[e] All dollar figures in this box are in Canadian dollars.

as child allowances that are not means tested; and targeted *means-tested* tax and transfer programs. The combined reduction in poverty they bring about is shown by the gray and blue bars. Poverty rates after accounting for taxes and transfers are represented by the white portion of the bars. After accounting for the tax and transfer system, and as already seen in

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BOX 4-3
The United Kingdom's War on Poverty

In March 1999, Prime Minister Tony Blair pledged to end child poverty in a generation and to halve child poverty in 10 years (Waldfogel, 2010). When Prime Minister Blair called for this war on child poverty, one in four UK children was living in poverty. Between 2000–2001 and 2007–2008, absolute poverty[a] fell by 50 percent. In 2000–2001, the early years of the policy, absolute child poverty rates were about the same in the United Kingdom and the United States. But while child poverty in the United Kingdom then dropped by one-half, in the United States the official measure of child poverty rose (Smeeding and Waldfogel, 2010).

Some of the policies introduced in the United Kingdom were similar to those that the United States implemented, including an emphasis on employment and making work pay; employment-focused welfare reforms; a national minimum wage; and a tax credit for working families that was similar to the EITC but paid throughout the year (Smeeding and Waldfogel, 2010). However, the United Kingdom's reforms also included policies that were not part of the U.S. reforms, including raising income for families with children regardless of the parents' work status (Waldfogel, 2010). The United States made such income support dependent on parental employment, while Britain's reforms provided for a universal Child Benefit. This benefit is paid to the mother on a regular basis, is intended to help families cover the costs of raising children, and provides extra amounts for younger children (Waldfogel, 2010). While spending on these anti-poverty initiatives for children increased over the 10 years of 1999–2009, spending on working-age adults without children did not. Thus, social spending for children in Britain was prioritized. Over time, some spending was shifted to public services for the middle class, but new investments in children increased by 1 percent of GDP by 2009 (Waldfogel, 2010).

[a] Absolute poverty is most comparable to the U.S. SPM measure, as it is based on after-tax and transfer income, but without adjustments for work-related costs or medical expenses, and uses an anchored poverty line that is adjusted for price changes over time (see Chapter 2 and Smeeding and Waldfogel, 2010).

Figure 2-12, the United States has the second-highest child poverty rate (12.5%), which is one percentage point below the UK rate of 13.5 percent, a little over a percentage point above Ireland's rate, and much higher than the rates in Australia and Canada.

As a comparison of the combined widths of the gray and blue bars in Figure 4-13 shows, the United States is notable in that its government tax and transfer policies are the least successful at reducing poverty. Canada ranks next lowest in this regard, although its new Child Benefit (refer to Box 4-2) is expected to substantially reduce its child poverty rate; according to one estimate, it will cut child poverty by one-half (Corak, 2017). If Canada's Child Benefit program meets expectations, the country's child

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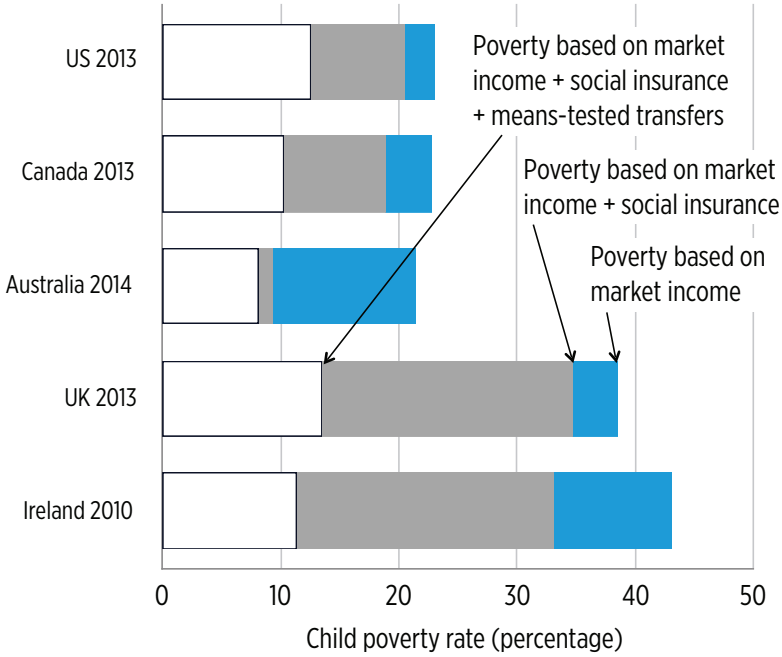

FIGURE 4-13 Alternative rates of child poverty, depending on the inclusion of social insurance and means-tested transfers, United States and four peer anglophone countries, 2013–2014.
NOTES: The blue portion represents reductions in child poverty from social insurance and universal programs. Additional reductions from means-tested transfers, minus direct taxes (including refundable tax credits) are represented by the gray portion. Data are not adjusted for underreporting.
SOURCE: Original Luxembourg Income Study (LIS) analyses commissioned by the committee from the LIS Cross-National Data Center.

poverty rate will fall to the neighborhood of 5 to 6 percent, among the lowest rates in the entire OECD and the lowest among the anglophone nations shown in Figure 4-13. Moreover, it has been estimated that, if the Canadian Child Benefit were implemented in the United States as a replacement for the Child Tax Credit, U.S. child poverty would fall by more than one-half (Sherman, 2018). According to estimates from the TRIM3 model, a similar Child Benefit in the United States would reduce U.S. (SPM-based) child poverty by more than one-half and deep poverty (<50 percent SPM poverty) by more than two-thirds.

Australia has succeeded in reducing poverty more than Canada and the United States, while the United Kingdom and Ireland have achieved the

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highest level of poverty reduction. Not surprisingly, the poverty-reduction rankings are similar to the spending rankings displayed in the previous figure.

Looking now at the relative importance of social insurance and universal benefits plus income-tested programs in Figure 4-13, it is evident that both types of programs have significant poverty-reducing effects in all countries. Most notable is the uniquely small role of social insurance programs (shown in blue) in the U.S. anti-poverty package. Social insurance programs in the United States reduce child poverty by only 2.5 percentage points, about one-quarter of the total reduction in U.S. poverty. Australia is at the other end of the continuum; in that country virtually all poverty reduction can be attributed to universal (social insurance) programs. In contrast, the United Kingdom and Ireland rely on both types of programs, and especially on income-tested programs, to reduce poverty in the years observed in this figure.

Figure 4-14 is constructed in the same fashion as Figure 4-13 but shows the effects of the safety net on deep child poverty and near child poverty in these same countries, using 50 percent of the same absolute SPM poverty line. Market incomes sufficient to raise family income out of deep poverty are more common in the United States than in other countries. In the United States, the 11.5 percent deep-poverty rate based on market income is somewhat lower than the corresponding rates in Canada and Australia and substantially lower than those in Ireland and the United Kingdom. But in the United States, the small relative amount of means-tested and, especially, social insurance transfers that go to children with very low family incomes translate into the highest rate of children in deep poverty (3.6%). After accounting for targeted benefits as well, all other nations have deep poverty rates that are under 2 percent. The U.S. finding is consistent with recent research showing that the U.S. safety net is increasingly likely to help the working poor while it excludes or minimizes spending on the deeply poor (Hoynes and Schanzenbach, 2018; Moffitt and Pauley, 2018).

Finally, Australia and Ireland are the only countries whose safety nets have an impact on near poverty (see Figure 4-15). The U.S. near-poverty line is very high relative to the income distributions in the United Kingdom and Ireland but fixed at about the same fraction of median income as in Canada and Australia. At these income levels, taxes paid tend to increase and targeted benefits tend to phase out. In Ireland and Australia, however, social insurance and universal transfers are strong enough to make a substantial impact.

CONCLUSION 4-7: The United States spends a somewhat smaller proportion of its Gross Domestic Product on child and family tax and transfer benefits than Canada does, and a much smaller proportion

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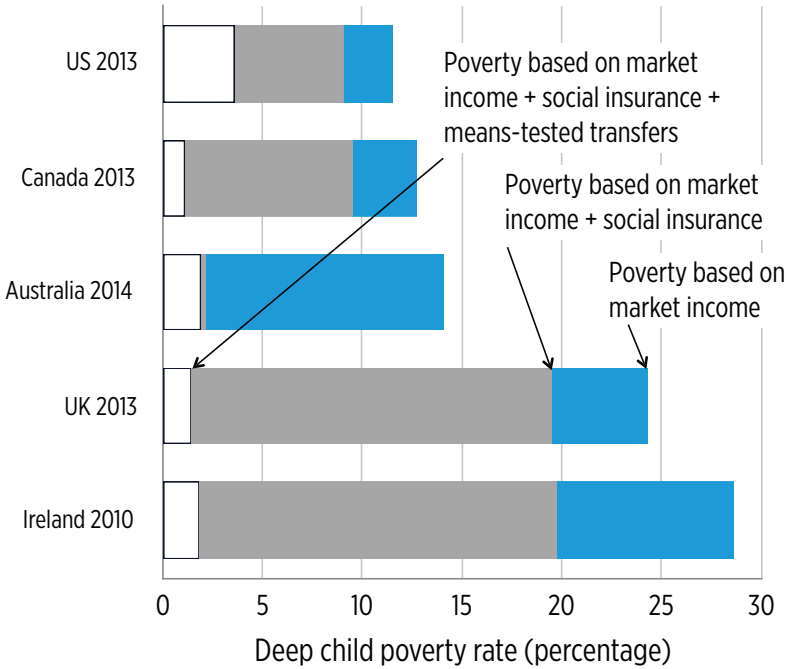

FIGURE 4-14 Alternative rates of child deep poverty depending on inclusion of social insurance and means-test transfers, United States and four peer anglophone countries, 2013–2014.
NOTES: Deep poverty defined as below 50 percent of poverty. The blue portion represents reductions in child poverty from social insurance and universal programs. Additional reductions from means-tested transfers, minus direct taxes (including refundable tax credits), are represented by the gray portion. Data are not adjusted for underreporting.
SOURCE: Original Luxembourg Income Study (LIS) analyses commissioned by the committee from the LIS Cross-National Data Center.

than Australia, Ireland, and the United Kingdom do. Consequently, government transfers do less to reduce poverty in the United States than in Canada and much less than in Australia, Ireland, and the United Kingdom. While U.S. benefits targeted at the poor and near poor reduce child poverty substantially, the United States does the least for children through the use of universal benefits like child allowances and social insurance programs such as Unemployment Compensation and Social Security survivors benefits. Such benefits have much bigger effects on child poverty in Australia, Ireland, and (with its new Child Benefit) Canada.

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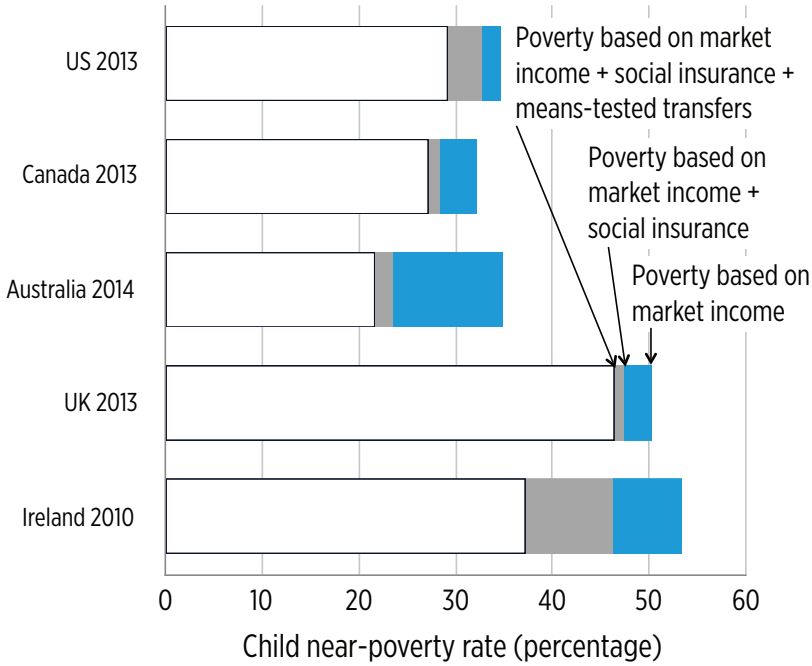

FIGURE 4-15 Alternative rates of child near poverty depending on inclusion of social insurance and means-test transfers, United States and four peer anglophone countries, 2013–2014.
NOTES: Near-poverty is defined as below 150 percent of poverty. The blue portion represents reductions in child poverty from social insurance and universal programs. Additional reductions from means-tested transfers, minus direct taxes (including refundable tax credits) are represented by the gray portion. Data are not adjusted for underreporting.
SOURCE: Original Luxembourg Income Study (LIS) analyses commissioned by the committee from the LIS Cross-National Data Center.

REFERENCES

Autor, D.H. (2014). Skills, education, and the rise of earnings inequality among the "other 99 percent." *Science, 344*(6186), 843–851.

Autor, D., Dorn, D., and Hanson, G. (2013). The China syndrome: Local labor effects of import competition in the United States. *American Economic Review, 103*(6), 2121–2168.

Autor, D., Manning, A., and Smith, C.L. (2016). The contribution of the minimum wage to U.S. wage inequality over three decades: A reassessment. *American Economic Journal: Applied Economics*, *8*(1), 58–99.

Baker, R.S. (2015). The changing association among marriage, work, and child poverty in the United States, 1974–2010. *Journal of Marriage and Family, 77*(5), 1166–1178.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

Becker, G.S. (1981). Altruism in the family and selfishness in the market place. *Economica*, New Series, *48*(189), 1–15. Available: https://www.jstor.org/stable/pdf/2552939.pdf.

Bitler, M., and Hoynes, H. (2010). The state of the safety net in the post-welfare reform era. *Brookings Papers on Economic Activity, 2*(Fall), 71–127.

_____. (2015). Heterogeneity in the impact of economic cycles and the great recession: Effects within and across the income distribution. *American Economic Review Papers and Proceedings, 105*(5), 154–160.

_____. (2016). The more things change, the more they stay the same? The safety net and poverty in the Great Recession. *Journal of Labor Economics*, *34*(S1, Part 2).

Bitler, M., Hoynes, H., and Kuka, E. (2017). The Great Recession and child poverty. *Journal of Policy Analysis and Management*, *36*(2), 358–389.

Black, S.E., Schanzenbach, D.W., and Breitwieser, A. (2017). The recent decline in women's labor force participation. In D.W. Schanzenbach and R. Nunn (Eds.), *The 51%: Driving Growth Through Women's Economic Participation* (pp. 5-18). Washington, DC: The Brookings Institution. Available: https://www.brookings.edu/wp-content/uploads/2017/10/es_10192017_the51percent_ebook.pdf#page=10.

Blank, R. (1989). Disaggregating the effect of the business cycle on the distribution of income. *Economica*, *56*(2), 141–163.

_____. (1993). Why were poverty rates so high in the 1980s? In D. Papadimitriou and E. Wolff (Eds.), *Poverty and Prosperity in the Late Twentieth Century* (pp. 21–55). New York: St. Martin's Press.

_____. (2006). Was welfare reform successful? *The Economists' Voice*, *3*(4), Article 2. Available: https://www.usi.edu/BUSINESS/cashel/331/welfare%20reform.pdf.

Blank, R., and Blinder, A. (1986). Macroeconomics, income distribution, and poverty. In S. Danziger and D. Weinberg (Eds.), *Fighting Poverty: What Works and What Doesn't* (pp. 180–208). Cambridge, MA: Harvard University Press.

Blank, R., and Card, D. (1993). Poverty, income distribution and growth: Are they still related? *Brookings Papers on Economic Activity*, 2. Washington, DC: Brookings Institution.

Blank, R., and Haskins, R. (Eds.). (2001). *The New World of Welfare*. Washington, DC: Brookings Institution.

Canada, Office of the Parliamentary Budget Officer. (2016). *Fiscal Analysis of Federal Children's Benefits, September 1*. Ottawa, ON: Office of the Parliamentary Budget Officer.

Cancian, M., and Reed, D. (2009). Family structure, childbearing, and parental employment: Implications for the level and trend in poverty. In M. Cancian and S. Danziger (Eds.), *Changing Poverty, Changing Policies*. New York: Russell Sage Foundation.

Chen, W.-H., and Corak, M. (2008). Child poverty and changes in child poverty. *Demography*, *45*(3), 537–553.

Chetty, R., Friedman, J., and Saez, E. (2013). Using differences in knowledge across neighborhoods to uncover the impacts of the EITC on earnings. *American Economic Review, 103*(7), 2683–2720.

Corak, M. (2017). *Innovation in Cash Benefits to Families with Children: The Canada Child Benefit*. Memo prepared for the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years.

Cutler, D., and Katz, L. (1991). *Macroeconomic Performance and the Disadvantaged*. Brookings Papers on Economic Activity, 1. Washington, DC: Brookings Institution.

Danziger, S., and Gottschalk, P. (1995). *Unequal America*. New York: Russell Sage Foundation.

Duggan, M., Kearney, M.S., and Rennane, S. (2016). The Supplemental Security Income program. In R. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume 2*. Chicago: University of Chicago Press.

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A Roadmap to Reducing Child Poverty

Farber, H.S., Herbst, D., Kuziemko, I., and Naidu, S. (2018). *Unions and Inequality over the Twentieth Century: New Evidence from Survey Data*. NBER Working Paper No. 24587. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w24587.

Freeman, R. (2001). The rising tide lifts . . .? In S. Danziger and R. Haveman (Eds.), *Understanding Poverty*. Cambridge, MA: Harvard University Press.

Ganong, P., and Liebman, J.B. (2013). *The Decline, Rebound, and Further Rise in SNAP Enrollment: Disentangling Business Cycle Fluctuations and Policy Changes*. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w19363.

Gornick, J., and Smeeding, T.M. (2018). Redistributional policy in rich countries: Institutions and impacts in non-elderly households. *Annual Review of Sociology*, *43*.

Greenstein, R., Warwick, J., and Marr, C. (2017). *Reducing Overpayments in the Earned Income Tax Credit*. Washington, DC: Center on Budget and Policy Priorities. Available: https://www.cbpp.org/research/federal-tax/reducing-overpayments-in-the-earned-income-tax-credit.

Grogger, J. (2003). The effects of time limits, the EITC, and other policy changes on welfare use, work, and income among female-headed families. *Review of Economics and Statistics, 85*(2), 394–408.

Gruber, J. (2003). Medicaid. In R. Moffitt, (Ed.), *Means-Tested Transfer Programs in the United States* (pp. 15–78). Chicago: University of Chicago Press.

Gundersen, C., and Ziliak, J. 2004. Poverty and macroeconomic performance across space, race, and family structure. *Demography, 41*(1), 61–86.

Hardy, B., Smeeding, T., and Ziliak, J. (2018). The changing safety net for low-income parents and their children: Structural or cyclical changes in income support policy? *Demography 55*(1), 189–221.

Hoynes, H., and Rothstein J. (2017). Tax policy toward low-income families. In A.J. Auerbach and K. Smetters (Eds.), *The Economics of Tax Policy*. Oxford: Oxford University Press.

Hoynes, H., and Schanzenbach, D. (2018). *Safety Net Investments in Children. Brookings Papers on Economic Activity, Conference Draft*. Washington, DC: Brookings Institution. Available: https://www.brookings.edu/bpea-articles/safety-net-investments-in-children.

Hoynes, H., Page, M.E., and Stevens, A.H. 2006. Poverty in America: Trends and explanations. *Journal of Economic Perspectives, 20*(1), 47–68.

Internal Revenue Service. (2014). *Compliance Estimates for the Earned Income Tax Credit Claimed on 2006–2008 Returns*. Research, Analysis & Statistics Report Publication 5162. Washington, DC: Internal Revenue Service. Available: https://www.irs.gov/pub/irs-soi/EITCComplianceStudyTY2006-2008.pdf.

Isaacs, J.B., Lou, C., Hahn, H., Ovalle, J., and Steuerle, C.E. (2018). *Kids' Share 2018: Report on Federal Expenditures on Children Through 2017 and Future Projections*. Washington, DC: Urban Institute. Available: https://www.urban.org/sites/default/files/publication/98725/kids_share_2018_0.pdf.

Juhn, C., Murphy, K.M., and Pierce, B. (1993). Wage inequality and the rise in returns to skill. *Journal of Political Economy*, *101*, 410–442.

Katz, L., and Murphy, K.M. (1992). Changes in relative wages, 1963–1987: Supply and demand factors. *Quarterly Journal of Economics*, *107*, 35–78.

Lerman, R.I. (1996). The impact of the changing US family structure on child poverty and income inequality. *Economics*, New Series, *63*(250), S119-S139. Available: https://www.jstor.org/stable/pdf/2554812.pdf.

Lichter, D.T., and Crowley, M.L. (2004). Welfare reform and child poverty: Effects of maternal employment, marriage, and cohabitation. *Social Science Research*, *33*, 385–408.

Meyer, B.D., and Mittag, N. (2015). *Using Linked Survey and Administrative Data to Better Measure Income: Implications for Poverty, Program Effectiveness, and Holes in the Safety Net*. NBER Working Paper No. 21676. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w21676.

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Meyer, B.D., and Rosenbaum, D.T. (2001). Welfare, the Earned Income Tax Credit, and the labor supply of single mothers. *Quarterly Journal of Economics*, *116*(3), 1063–1114.

Meyer, B.D., and Sullivan, J. (2011). Consumption and income poverty over the business cycle. *Research in Labor Economics, 32*, 51–82.

Meyer, B.D., Mok, W.K.C., and Sullivan, J.X. (2009). *The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences*. NBER Working Paper No. 1581. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w15181.

Moffitt, R. (2015). The deserving poor, the family, and the U.S. welfare system. *Demography*, *52*(3), 729–749.

Moffitt, R.A., and Pauley, G. (2018). *Trends in the Distribution of Social Safety Net Support after the Great Recession*. Palo Alto, CA: Stanford Center on Poverty and Inequality.

Nichols, A. (2013). *Explaining Changes in Child Poverty Over the Past Four Decades: Low-Income Working Families*. Discussion Paper No. 2. Washington, DC: Urban Institute. Available: http://webarchive.urban.org/UploadedPDF/412897-Explaining-Changes-in-Child-Poverty-Over-the-Past-Four-Decades.pdf.

Organisation for Economic Co-operation and Development. (OECD). (2017). *Basic Income as a Policy Option: Can It Add Up?* Policy Brief on the Future of Work. Paris: OECD Publishing.

Rector, R. (2016). *Reforming the Earned Income Tax Credit and Additional Child Tax Credit to End Waste, Fraud, and Abuse and Strengthen Marriage*. Available: https://www.heritage.org/welfare/report/reforming-the-earned-income-tax-credit-and-additional-child-tax-credit-end-waste.

Saez, E. (2010). Do taxpayers bunch at kink points? *American Economic Journal: Economic Policy 2,* 180–212. Available: https://eml.berkeley.edu//~saez/course/SaezAEJ.pdf.

Shambaugh, J., Nunn, R., Liu, P., and Nantz, G. (2017). *Thirteen Facts About Wage Growth*. Washington, DC: The Hamilton Project, Brookings Institution. Available: https://www.brookings.edu/wp-content/uploads/2017/09/thp_20170926_thirteen_facts_wage_growth.pdf.

Sherman, A. (2018). *Canadian-style Child Benefit Would Cut U.S. Child Poverty by More Than Half*. Washington, DC: Center for Budget and Policy Priorities. Available: https://www.cbpp.org/blog/canadian-style-child-benefit-would-cut-us-child-poverty-by-more-than-half.

Smeeding, T.A., and Waldfogel, J. (2010). Fighting poverty: Attentive policy can make a huge difference. *Journal of Policy Analysis and Management, 29*(2), 401–407.

Social Capital Project. (2017). *Love, Marriage and the Baby Carriage: The Rise in Unwed Childbearing*. SCP Report No. 3-17. Available: https://www.lee.senate.gov/public/index.cfm/2017/12/love-marriage-and-the-baby-carriage https://www.lee.senate.gov/public/index.cfm/2017/12/love-marriage-and-the-baby-carriage.

United Kingdom Department for Work and Pensions. (2015, May). *Policy Paper: 2010 to 2015 Government Policy: Welfare Reform*. Available: https://www.gov.uk/government/publications/2010-to-2015-government-policy-welfare-reform/2010-to-2015-government-policy-welfare-reform.

Waldfogel, J. (2010). *Britain's War on Poverty*. New York: Russell Sage Foundation.

Wimer, C. (2017). *Child Poverty in the United States: Long-term Trends and the Role of Anti-poverty Programs Using the Anchored Supplemental Poverty Measure*. Commissioned by the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years, The National Academies of Sciences, Engineering, and Medicine, Washington, DC.

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5

Ten Policy and Program Approaches to Reducing Child Poverty

The core of the committee's congressional charge is to "identify policies and programs with the potential to help reduce child poverty and deep poverty (measured using the Supplemental Poverty Measure or SPM) by 50 percent within 10 years of the implementation of the policy approach." Our analyses and conclusions regarding these policy and program proposals are presented in the next three chapters.

The current chapter summarizes our ideas in 10 different program and policy areas, all of which could be simulated using the Transfer Income Model, Version 3 (TRIM3) microsimulation model. Chapter 6 presents four policy and program packages containing two or more of the options presented in this chapter. We find considerable merit to a "package" approach to child poverty reduction because it provides an opportunity to combine options that generate complementary impacts on poverty reduction, work incentives, and other important criteria. Chapter 7 provides a discussion of potentially meritorious policies and programs that, for various reasons, could not meet the high evidentiary standard set by the committee for its simulations.

As explained in Chapter 1, the committee identified possible policies and programs by reviewing the evaluation literature and soliciting ideas from individuals and groups representing a broad range of political orientations and experiences in communities and in state and federal government (see Appendix C for a list of memo authors). As the committee sifted through dozens of policy and program ideas, it applied five key criteria to assess each policy or program it considered: (1) the strength of the research and evaluation evidence indicating whether the policy or program would

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in fact reduce poverty; (2) the size and magnitude of any poverty reduction suggested by the evidence; (3) the policy's or program's success in reducing child poverty within high-risk subgroups; (4) its cost; and (5) its impact on work, marriage, opportunity, and social inclusion. As throughout this report, we focus on packages of policies and programs that could produce short-run reductions in child poverty, owing to the 10-year window dictated by the committee's Statement of Task. Programs such as early childhood education and child development savings accounts therefore fell outside the committee's purview.

The high evidentiary standard set by the committee played an important role in determining which program and policy ideas should be included in the current chapter and which should be relegated to Chapter 7 (which describes program areas the committee considered but did not simulate). To take a few examples, concerning marriage promotion, family planning, paid family and medical leave, block grants, and mandatory employment programs, the committee judged the evaluation evidence to be insufficient for estimating impacts on child poverty (see Chapter 7). In the case of expanding programs such as the Temporary Assistance for Needy Families (TANF) Program, evidence was lacking on the impacts of the freedom granted to states to spend their block grant funding in many different ways, and as a result we were unable to formulate options for enhancing TANF's impacts on family income and child poverty. In the case of Medicaid, the committee was constrained primarily by the difficulty of incorporating health insurance into poverty measurement (see Chapter 7).

The scope of the current policy evaluation literature also limited our choice of options in the current chapter. In the case of the minimum wage, for example, there is a fairly robust research consensus concerning the impacts of modest changes to the minimum wage (U.S. Congressional Budget Office, 2014), but there is less agreement about the effects of some of the much larger increases now being implemented in a number of cities (Jardim et al., 2017). Accordingly, we identified minimum wage options that incorporated relatively small increases.

PROGRAM AND POLICY OPTIONS IN 10 AREAS

After reviewing a large number of program and policy options, the committee chose two program options in each of 10 program and policy areas. On the basis of research findings and other information on each program, the committee concluded that all 20 met at least some of its 5 criteria. All 20 could also be simulated with the TRIM3 microsimulation model.

The committee was guided by a number of considerations in setting benefit levels and other features of its programs and proposals. First, in many cases its benefit levels and other parameters had been suggested by

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outside experts. Second, as mentioned above, the committee avoided benefit levels that far exceeded the ranges examined in the behavioral effects research literature. This was done out of a concern that the estimated poverty reductions, employment responses, and budgetary costs would be unreliable. Third, the committee used expected budgetary cost as a criterion when choosing generosity levels. It should be emphasized, however, that the committee chose its generosity levels before it was informed of the poverty reductions, budgetary costs, and other results generated by the TRIM3 simulations. Finally, to gauge the sensitivity of estimated poverty reduction and other impacts to program design features, the committee developed two options within each program proposal, differentiated mostly by level of benefits and therefore by cost.

Of the 10 general program areas selected by the committee, 4 of them focus on policies tied to work, namely:

1. Modifications to the Earned Income Tax Credit (EITC)
2. Modifications to child care subsidies
3. Changes in the federal minimum wage
4. A scale-up of a promising training and employment program called WorkAdvance

Three other program and policy areas involve modifications to existing safety net programs:

5. Supplemental Nutrition Assistance Program (SNAP)
6. Housing Choice Voucher Program
7. Supplemental Security Income (SSI) Program

Two program ideas come from other countries:

8. A child allowance (which can also be thought of as an extension of the federal child tax credit)
9. A child support assurance program

Policy area (10) involves modifications to existing immigrant provisions in safety net programs. Finally, given recent interest in a Universal Basic Income policy, we also investigated two versions of this policy; these are discussed in Appendix D, 5-12.

Following our statement of task, at the heart of this chapter are estimates of the poverty-reducing impacts of these policies and programs, including impacts on the levels of 100 percent SPM poverty and 50 percent SPM poverty ("deep" poverty). We also present estimates for impacts on the level of 150 percent SPM poverty ("near poverty"). Our estimates

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account for both the resource-enhancing impact of the policies and programs themselves as well as the families' likely labor-supply responses to them (see Box 5-1).

Labor-supply responses can either magnify or lessen the poverty-reducing potential of programs and policies. An example of the former is the EITC: the policy acts as an earnings subsidy that is eventually phased out. The amount of the earnings subsidy is large—currently providing a 40 percent boost in earned income for a family with two children in the subsidy range. At the same time, the EITC's structure decreases the credit amount as earnings increase for higher-income earners in the phase-out range. For some nonworkers, the earnings subsidy makes the monetary difference between working and not working large enough to induce them to begin

BOX 5-1
What Are Behavioral Effects?

The term *behavioral effects* refers to changes in household behavior in response to a change in policy. The most common behavioral effects associated with the kinds of programs and policies considered in this report take the form of increases or decreases in employment or, in the case of employed individuals, in the number of hours worked. Most often, these effects are the result of voluntary decisions made by household members, but they may also result from hiring and layoff decisions made by firms. Behavioral responses will blunt the poverty-reducing impact of a policy change if the expansion of benefits reduces work and therefore also family earnings. Conversely, behavioral responses will reinforce poverty reduction if they increase work and earnings.

Behavioral responses also include changes in marital status and living arrangements, as well as changes in childbearing, that may result from changes in policy. The potential effects of tax and transfer programs on marriage and fertility are more complex than the effects they may have on labor market behavior. For example, the EITC, like the broader tax system, provides marriage subsidies for some recipients and marriage penalties for others. This is a result of a progressive tax system based on family income (Eissa and Hoynes, 2000). Generally, income-tested transfers based on family income lead to marriage penalties, since some families are likely to lose eligibility for the benefit when the incomes of two earners are combined.

The direction of the childbearing incentives is less ambiguous because many programs provide benefits only to families with children, and most provide higher benefits to families with more children. In theory, these incentives could lead to additional childbearing, though in practice families must weigh the large costs of having children against such potential fertility-related increases in benefits. We focus on behavioral effects on labor supply, because research finds only very small and/or statistically insignificant evidence of program effects on marriage and fertility (see Appendix D, 5-1).

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working. The research literature suggests that, on balance, the increases in work associated with the EITC are larger than the decreases (Hoynes and Rothstein, 2017; Nichols and Rothstein, 2016). The increase in earnings (along with the credit amount) therefore magnifies the poverty-reducing impact of the initial increase in income and can therefore, in some cases, bring a family over the poverty line.

On the other hand, programs like SNAP reduce benefits in response to additional earnings, which may lead some families to cut back on work hours or drop out of the labor market altogether. This response would lower families' earnings, offsetting some of the initial increase in household resources that the program provided, thereby lessening the initial poverty-reducing impact. A more general explanation of the nature of work-related behavioral responses is provided in Appendix D, 5-1, with details on the relevant behavioral assumptions made for each of the 10 policy and program areas discussed elsewhere in Appendix D and in Appendix F. Complete details on the magnitude of behavioral responses are provided in Appendix E.

For each of our 10 programs, we surveyed the existing research literature and assessed the evidence on behavioral responses and their magnitudes. We first used TRIM3 to simulate the poverty reduction, cost, and other impacts of each policy, not taking into account behavioral responses. Then, based on estimates from the literature, we repeated these simulation taking into account likely labor supply responses. Featured in this chapter are the estimated impacts on poverty, employment, and budgetary cost that account for the estimated behavioral responses generated for the 10 program areas.

MODIFICATIONS EXAMINED FOR 10 POLICY AND PROGRAM AREAS

In this section, we describe proposed changes in the 10 different policy and program areas that we investigated.

1. Modifications to the Earned Income Tax Credit (EITC)

We examined two expansions of the EITC. One modification expands the schedule for the lowest earners, while the second increases the generosity of EITC payments across the entire schedule while maintaining the current range of the phase-out region:

EITC Policy #1: Increase payments along the phase-in and flat portions of the EITC schedule.

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EITC Policy #2: Increase payments by 40 percent across the entire schedule, keeping the current range of the phase-out region.

Details on these EITC-based policy options are provided in Appendix D, 5-2.

The EITC is a refundable federal tax credit for low- and moderate-income workers. It was introduced under the Tax Reduction Act of 1975 and has since enjoyed bipartisan support, with expansions passed under each president beginning with Ronald Reagan. The EITC program has been highly successful at encouraging single parents to work[1] and at reducing poverty. Our TRIM3-based simulations in Chapter 4 show that, in the absence of behavioral responses, the child poverty rate of 13.0 percent would have been 5.9 percentage points higher if EITC and other tax credits had not been distributed to qualifying families. Additionally, as described in Chapter 3, expansions of the EITC program appear to improve the longer-term health and human capital of children in families receiving the program benefits. All told, the EITC is one of the nation's most popular and effective poverty-reduction programs.

The EITC has the potential to reduce child poverty in two ways: by supplementing the household incomes of low-earning parents and by encouraging work and thereby increasing the earned income of parents. For workers with low earnings, the value of the EITC grows with each additional dollar of earnings, which creates an incentive for people to enter employment and, for low-wage workers, to increase their work hours.

Our first option was proposed in Giannarelli et al. (2015), based on 2011 data. We adapt their proposal to our 2015 data. The revised credit would have a higher phase-in rate, reach the "plateau" region (where the credit does not increase with earned income) at an earlier point, and begin decreasing at a lower level of earnings (but at the same marginal tax rate). Our second option was chosen to gauge the poverty-reduction impacts of a substantial and uniform expansion of the credit.

2. Modifications to Child Care Subsidies

We examined two expansions of federal programs providing child care assistance, one involving the Child and Dependent Care Tax Credit

[1] A large body of research shows that the presence (or the expansion) of the EITC leads to increases in employment rates of single mothers. For example, see reviews by Eissa and Hoynes (2006), Hotz and Scholz (2003), and Nichols and Rothstein (2016) and studies by Eissa and Liebman (1996), Hoynes and Patel (2017), and Meyer and Rosenbaum (2000, 2001). For example, Meyer and Rosenbaum (2001) find that the EITC raised annual labor force participation by 7.2 percentage points for single women with children relative to single women without children.

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(CDCTC) and the other focused on the Child Care and Development Fund (CCDF):

> **Child Care Policy #1:** Convert the CDCTC to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5.
>
> **Child Care Policy #2:** Guarantee assistance from CCDF for all eligible families with incomes below 150 percent of the poverty line.

Details on these policy options are provided in Appendix D, 5-3.

Child care expenses can be an immovable barrier to employment for low-income parents, particularly when their children are too young to enroll in elementary school. In the United States, the cost of child care for children under age 5 averages about $8,600 per year (Child Care Aware of America, 2017a). This average cost masks considerable variation among states and among regions in what parents actually pay for child care (Child Care Aware of America, 2017b; NASEM, 2018). Costs also vary by age of child (infant care is more expensive than care for older children) and type of care (center-based, home-based, relative or informal care). Between 2012 and 2016, poor families with children under age 6 who paid for child care spent about 20 percent of their income on child care—more than double the national average (Mattingly, Schaefer, and Carson, 2016).

The federal government defrays the cost of child care to working families through two major programs, the CDCTC and the CCDF. The CDCTC is a nonrefundable tax credit that reimburses a portion of the qualifying child care expenses of working parents with children under age 13. Although the fraction of expenses that can be claimed with this credit declines as income increases, there is no income cap for eligibility. And because it is nonrefundable, the credit affects only tax filers with a positive precredit tax liability. In 2013, the largest average benefits of the CDCTC were received by families with annual incomes between $100,000 and $200,000 (Maag, 2013).

The federal CCDF helps to defray child care costs for approximately 1.4 million children and 823,600 families every month (Administration for Children and Families, 2016a). States have the flexibility to determine eligibility criteria, family copay, and provider payment levels, so the costs to families further vary by state. The CCDF comprised two funding sources: discretionary funding provided to states for child care assistance, most of which goes to families with parents working at low-wage jobs (the Child Care and Development Block Grant), and mandatory funding provided outside the annual appropriations process (Administration for Children and Families, 2018).

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Existing research on child care programs suggests that any expansion of child care subsidies and vouchers would reduce child poverty, both because child care assistance adds to family resources and because that assistance can make it possible for families to increase their employment and earnings. In fact, higher child care subsidy expenditures by states are associated with increases in labor force participation rates among low-income mothers (Enchautegui et al., 2016), particularly in the case of mothers with young children (Morrissey, 2017) (other references to the research literature showing positive effects of child care subsidies on employment are included in Appendix D, Chapter 5 appendixes). In choosing its levels of expansion, the committee was influenced by proposals suggested by outside experts.

3. Modifications to the Minimum Wage

The committee simulated two minimum wage policy options:

Minimum Wage Policy #1: Raise the current $7.25 per hour federal minimum wage to $10.25 (moving from the current level over the course of 3 years, 2018–2021, and indexing it to inflation after that).

Minimum Wage Policy #2: Raise the federal minimum wage to $10.25 *or* the 10th percentile of the state's hourly wage distribution, whichever is lower, and index it to inflation after that.

Details on these two policy options are provided in Appendix D, 5-4.

Increases in the minimum wage have the potential to boost the earned income of low-skilled workers, some of whom reside in families with children and below-poverty household incomes. But by raising the cost of low-skilled workers, minimum wage increases are generally predicted to reduce overall employment and thus also employment opportunities for some workers.

The federal minimum wage was set at $7.25 in 2009, but 30 states (or localities within states) now have higher minimum wages (U.S. Department of Labor, 2019). In 27 of these 30 states, the minimum wage exceeds $10 an hour (Neumark, 2017, Fig. 1). After studying the impact of raising the minimum wage to $10.10, in 2014 the Congressional Budget Office projected employment reductions, although the aggregate earnings losses from this loss of employment would be more than offset by the aggregate earnings gains of higher wages (U.S. Congressional Budget Office, 2014). Once a $10.10 federal minimum was fully implemented, the study projected that it would reduce total employment by about 500,000 workers, or 0.3 percent. But among workers whose earnings would increase to the $10.10 level, most of them—about 16.5 million workers in all—would experience

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earnings increases totaling approximately $31 billion annually by the end of 2016.

Because of the untargeted nature of current minimum wage policies, it is difficult to draw conclusions about the distribution of impacts among workers in low- and higher-income families. Several recent trends, however, suggest a relative increase in impacts for workers in lower-income families. First, the share of lower-wage workers who are in their teens has fallen and, at the same time, the average age of low-wage workers has risen, having increased by 2.6 years between 1979 and 2011 (Schmitt and Jones, 2012). In addition, as shown in Chapter 4, there has been growth in the number of unmarried parents in the labor market who are supporting children.

A higher minimum wage could also reduce the federal cost of supporting people who are poor, because higher earnings would reduce outlays on SNAP and housing programs while increasing payroll and income taxes. Conversely, a higher minimum wage could increase the cost of programs like the EITC. The impact of the minimum wage also depends on the overall state of the economy. In tight labor markets, labor shortages and immigration restrictions can push the wages of low-skilled workers above legislated minimum levels. On the other hand, raising the minimum wage too much or too quickly in areas not yet at full employment would likely increase job losses and reduce wage gains.

When determining the level of minimum wage expansion, the committee largely chose to follow the general range of increase suggested by the Congressional Budget Office (U.S. Congressional Budget Office, 2014), which argued that research shows the strongest evidence for that level of expansion. Higher minimum wages have been suggested and have, in fact, been implemented in a number of cities, but the effects of such larger increases are much more uncertain (e.g., Jardim et al., 2017). The minimum-wage levels chosen were also influenced by other factors detailed in Appendix D, Chapter 5 appendixes.

4. Scaling Up the WorkAdvance Program

WorkAdvance is perhaps the leading example of the new "sectoral" training approach, in which program staff work closely with employers to place disadvantaged individuals with moderate job skills into training programs for specific sectors that have a strong demand for local workers.[2] We examine two policy options for scaling up the WorkAdvance Program to a national level. Because the research evidence on WorkAdvance is much stronger for adult men than for adult women, our proposals and policy simulations focus on men, with the understanding that actual policy would

[2] See https://www.mdrc.org/project/workadvance#overview.

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offer the program more broadly. Specifically, our simulations apply the program to all male heads of families with children and income below 200 percent of the poverty line.

> **WorkAdvance Policy #1**: All male heads of families with children and income below 200 percent of the poverty line would be eligible for WorkAdvance programming. Training slots would be created for 10 percent of eligible men.

> **WorkAdvance Policy #2**: All male heads of families with children and income below 200 percent of the poverty line would be eligible for WorkAdvance programming. Training slots would be created for 30 percent of eligible men.

Details on these policy options are provided in Appendix D, 5-5.

As shown by the rates of "market-income poverty" discussed in Chapter 4 (refer to Figure 4-1), earnings alone are insufficient for many families to lift themselves out of poverty. While one strategy for boosting the incomes of low-income working families focuses on benefit programs such as the EITC and the Child Tax Credit, another involves training and employment programs designed to increase the job skills and employability of low-skilled workers, thereby boosting the market wages they can earn.

Aside from programs that provide work incentives in the form of benefit payments, most governmental efforts at increasing work have involved training and employment programs, some associated with the receipt of benefits from a welfare program and some not (Barnow and Smith, 2016; Lalonde, 2003). The two best known among these programs are the Workforce Investment Act (WIA; now superseded by the Workforce Innovation and Opportunity Act, WIOA) and the Job Corps Program. Evaluations have shown that many of these programs have modest but positive impacts on employment and earnings among both youth and adults, but that neither the programs nor the evaluations focus on low-income parents with children.

The Career Academies Program was developed more than 40 years ago to keep high school students engaged in school and prepare them for postsecondary education and careers.[3] Evaluations of the Career Academies Program have shown positive earnings impacts, but here again the program does not focus on the group of interest to this report—low-income families with children—and there are also doubts as to whether the Career Academies Program can be scaled up to be a national program (Schaberg, 2017).

[3] For more information about MDRC's evaluation of Career Academies, see https://www.mdrc.org/project/career-academies-exploring-college-and-career-options-ecco#overview.

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Apprenticeship programs have frequently been mentioned in recent policy debates, but virtually none of them has been evaluated in a rigorous way. Mandatory employment programs for welfare recipients have been evaluated rigorously, but only in the context of the now-defunct Aid to Families with Dependent Children Program (see Chapter 7 for a more extensive discussion).

Despite that paucity of evidence, the committee judged that for one employment program—called WorkAdvance—the evaluation evidence was sufficiently encouraging that we could feature an expansion of it as one of the program and policy options in this chapter. The outside experts consulted by the committee recommended simulating the effects of implementing WorkAdvance.

The random-assignment evaluation of WorkAdvance showed that it increased work and earnings across most of its sites (Hendra et al., 2016; Schaberg, 2017; see details in Appendix D, 5-5). The evaluations of WorkAdvance tracked the outcomes for enrolled men in all four sites, but for significant numbers of women in only one of the four sites. Moreover, the earnings impacts for men in the training site that also included women were very different from the impacts among men enrolled at the other three sites. The results for women were therefore considered too statistically unreliable to be featured in this report. We have no evidence-based reason to want to limit the chapter's program options to men, but the nature of the evidence required us to do so.

5. Modifications to the Supplemental Nutrition Assistance Program (SNAP)

We examine two alternative expansions of the current SNAP program.

SNAP Policy #1: Increase SNAP benefits by 20 percent for families with children, make adjustments for the number of children age 12 and above in the home ($360 more per teenager per year), and increase the Summer Electronic Benefit Transfer for Children (SEBTC) ($180 more per child per summer in prekindergarten through 12th grade).

SNAP Policy #2: Increase SNAP benefits by 30 percent, make adjustments for the number of children age 12 and above in the home ($360 more per teenager per year), and increase the Summer Electronic Benefit Transfer for Children (SEBTC) ($180 more per child per summer in prekindergarten through 12th grade).

Details on these two policy options are provided in Appendix D, 5-6.

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Evidence reviewed in Chapter 3 suggests that receipt of benefits from SNAP (and its predecessor program, Food Stamps) improves outcomes for children, adults, and families in their nutrition, food security, and health. Child health outcomes show improvements right away, while adult health shows improvements in the longer term. Additionally, as shown in Chapter 4, SNAP lifts more children out of deep poverty than any other program, and only the EITC (and other tax credits) lifts more children out of 100 percent poverty than SNAP. SNAP is therefore of central importance for reducing child poverty.

The committee considered three policy elements regarding SNAP: adequacy of benefits, adjustment for ages of children, and children's extra food needs in the summer months. Here we provide a brief review of these elements; a more complete literature review is provided in Appendix D, 5-6.

A growing body of evidence suggests that SNAP benefit levels are inadequate to provide most recipient families with food security. In 2017, more than one-half (58%) of families receiving SNAP reported food insecurity (Coleman-Jensen et al., 2018), and many families exhaust their SNAP benefits before the end of the month. A second rationale for increasing benefit levels is that the time required for food preparation is too burdensome for working families. SNAP benefit levels are based on the USDA's "thrifty food plan," which research has shown requires between 13 and 16 hours per week of food preparation (Ziliak, 2016).[4] This is impossibly high for adults who are working full time; in fact, almost no parents currently spend anywhere close to that amount of time on food preparation. Adults who work must instead economize on their time, and this means purchasing more expensive, processed foods.

A second policy issue is that as currently designed, SNAP adjusts benefits to account for the age of the children in the home (Ziliak, 2017). Dietary requirements for teenagers are almost as high as for adults, and food insecurity has been shown repeatedly to be higher among families with teenagers (Nord, 2009). Anderson and Butcher (2016) suggest that an additional $30 SNAP benefit per month per teenager would meet those needs.

SNAP's SEBTC is designed to address food gaps for children during the summer, when they lack access to school-based food assistance programs. USDA pilot tests have found that a $60 per eligible child per month increment in benefits reduced food insecurity among children by 26 percent (Collins et al., 2016).

The committee chose its levels of SNAP expansion based on several criteria. First, several outside experts recommended increasing the general range we had proposed, and much of the research literature on the positive

[4] For more information about USDA's food plans, see https://www.cnpp.usda.gov/USDAFoodPlansCostofFood.

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effects of SNAP focused on increases within the proposed range. Another factor was expected budgetary cost; the committee believed that this should be considered in constraining the scope of our proposal increases. We also considered the range of behavioral responses estimated in the research literature, which the committee felt would not be sufficiently reliable at levels considerably higher than those it chose. The levels we ultimately chose were similar to those proposed to the committee by Ziliak (2017). Further considerations used in choosing the levels are detailed in Appendix D, Chapter 5 appendixes.

6. Modifications to Housing Programs

We examine two expansions of the Housing Choice Voucher Program:

Housing Voucher Policy #1: Increase the number of vouchers directed to families with children so that 50 percent of eligible families not currently receiving subsidized housing would use them.

Housing Voucher Policy #2: Increase the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving subsidized housing would use them.

Details on these two policy options are provided in Appendix D, 5-7.

The cost of housing plays a key role in the calculation of the SPM poverty thresholds, because adequate housing is essential to having an adequate standard of living for low-income families. Among low-income renters in the United States, 67 percent of their income went toward rent in 2012 (Collinson, Ellen, and Ludwig, 2016, Table 2.4), and such rising housing costs for poor families have resulted in a high rate of eviction and housing displacement among families with children (Desmond, 2016).

Despite the dozens of federal programs designed to help meet the housing needs of low-income families, only one-quarter of eligible households participate in them (U.S. Congressional Budget Office, 2014), the three largest being the Housing Choice Voucher Program, public housing, and the Low-Income Housing Tax Credit (LIHTC). Although public housing has been declining for many years, in terms of both the number of recipients and expenditures, the housing voucher program has been expanding. The housing voucher program served a little more than 2 million families with expenditures of $18 billion in 2014. The LIHTC has also increased in size, with almost 2 million units placed in service at a tax expenditure cost of $7 billion in 2014 (U.S. Congressional Budget Office, 2014).

The most vexing feature of housing programs is that only a fixed number of vouchers, public housing units, and LIHTC-built units are

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available. This has led to long waiting lists for assistance from these housing programs—particularly in the case of housing vouchers—to the extent that in some cases the waiting lists have had to be closed to additional applicants. In 2012, 4.9 million households were on waiting lists for housing vouchers and 1.6 million households were on waiting lists for public housing (Collinson, Ellen, and Ludwig, 2016). About three-quarters of families who qualify for benefits do not receive them.

We limit the voucher take-up rate to 70 percent in Housing Voucher Policy #2, in keeping with a report by the U.S. Department of Housing and Urban Development (HUD), showing that a maximum of 70 percent of families who are offered vouchers end up finding an apartment and actually using the vouchers (Finkel and Buron, 2001). Our 50 percent simulation (Policy #1) is simply a smaller and less expensive version of the 70 percent policy. For both simulations, current income eligibility limits and rent payment formulas would remain as they were in 2015.

The committee chose to model expansions of voucher availability rather than other modifications, such as an increase in the level of housing subsidies, primarily because most experts agree that limited availability is currently the primary barrier preventing subsidized housing programs from having a larger impact on poverty reduction. As noted above, the 70 percent take-up rate chosen for simulation by the committee represents the maximum take-up rate possible, and hence no higher level could be simulated. In addition, there is as yet no consensus among researchers as to whether existing housing subsidy levels set by the government are sufficiently aligned with true market rents faced by low-income families; as a result, a simulation of changes in subsidy levels would produce uncertain results. The committee was also influenced by the recommendations of outside experts with respect to levels, as detailed in Appendix D, Chapter 5 appendixes.

7. Modifications to the Supplemental Security Income (SSI) Program

We examine two child-focused modifications to the SSI program, both of which involve increases to current child benefit levels:

SSI Policy #1: Increase by one-third the maximum child SSI benefit (to $977 per month from a current baseline of $733).

SSI Policy #2: Increase by two-thirds the child SSI benefit (to $1,222 from a current baseline of $733).

Details on these two policy options are provided in Appendix D, 5-8.

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SSI is a federal assistance program designed for three categories of low-income individuals: the elderly, disabled nonelderly adults, and disabled children. In 2016, about 1.2 million children under age 18 received benefits from SSI, with an average monthly payment of $649.58 (U.S. Social Security Administration, 2017). As seen in Chapter 4, the SSI program plays a noteworthy role in alleviating both child poverty and deep child poverty.

Child SSI benefit levels are low relative to the additional out-of-pocket costs families incur when providing care for a disabled child (Kuhlthau et al., 2005). Families who care for a child with special health care needs also incur significant costs in the form of their own lost earnings. For instance, Romley and colleagues (2017) estimate that families provided 1.5 billion hours of health care annually to children with special health care needs, which in turn reduced their earnings by $17.6 billion (in 2015 dollars), or $3,200 per child per year.

Child SSI recipients are among the nation's most vulnerable children, with diagnoses such as intellectual disability, Down Syndrome, cerebral palsy, and blindness (see Appendix D, Table 5-2, for a list of diagnostic groups of 2016 child SSI recipients). Only 1.7 percent of all children receive SSI benefits; to qualify, children need to meet stringent medical eligibility criteria based on a physician's functional assessment (Romig, 2017).[5] Moreover, family incomes need to be below 100 percent of the federal poverty line for a child to qualify for full benefits. Benefits decline as earnings rise, with eligibility phasing out completely at about 200 percent of the federal poverty level (Romig, 2017).[6] In addition, family assets can be no higher than $2,000, if the child lives with one parent, and $3,000, if the child lives with two parents.

The levels of the benefit increases chosen by the committee are based on the recognition that current income eligibility levels in the child SSI program are only slightly above those for families without disabled children. Consequently, at present the program implicitly assumes that families with disabled children need very little in additional resources to care for such children. Increases in benefit levels would address that concern.

[5] Child SSI eligibility rules have undergone several important changes in its history, including major changes in congressional legislation in the 1990s, that have generated extensive discussion regarding whether eligibility determinations should be altered (Daly and Burkhauser, 2003; Duggan, Kearney, and Rennane, 2016). We confine our recommendations to changes in benefit levels and do not consider possible change in eligibility rules, which would be quite complex.

[6] This varies by a number of factors including whether it is a one- or two-parent family, the number of children in the family, and by earned or unearned income.

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8. A Child Allowance Program

A child allowance is a monthly cash payment to families for each child living in the home. We consider two child allowance options:

> **Child Allowance Policy #1**: Pay a monthly benefit of $166 per month ($2,000 per year) per child to the families of all children under age 17 who were born in the United States or are naturalized citizens. In implementing this new child allowance, we would eliminate the Child Tax Credit and Additional Child Tax Credit as well as the dependent exemption for children. The child allowance benefit would be phased out under the same schedule as the Child Tax Credit.
>
> **Child Allowance Policy #2**: Pay a monthly benefit of $250 per month ($3,000 per year) per child to the families of all children under age 18 who were born in the United States or are naturalized citizens. (As with Child Allowance Policy #1, we would eliminate the Child Tax Credit and Additional Child Tax Credit as well as the dependent exemption for children.) The child allowance benefit would be phased out between 300 and 400 percent of the poverty line.

Details on these two policy options are provided in Appendix D, 5-9.

A child allowance is a monthly cash payment to families for each child living in the home. When offered universally (to all families with children), child allowances do not stigmatize low-income beneficiaries, but instead have the potential to integrate them into the social mainstream (Garfinkel, Smeeding, and Rainwater, 2010; Kumlin and Rothstein, 2005; and Rainwater, 1982). Because child allowance benefits are not reduced as earnings increase (at least not until incomes reach 300 percent of the poverty line in our Policy #2), they provide a more secure floor than means-tested benefits, one that does not penalize intermittent work. At least 17 rich nations (including all of the English-speaking countries discussed in Chapters 2 and 4, other than the United States) have some form of a child allowance.

The U.S. federal tax system's current $2,000 child tax credit (up from $1,000 beginning in 2018) is akin to a once-a-year child allowance. Most families with children benefit from its $2,000 per child reduction in taxes. But these benefits are not universal: Families with no or very low incomes (and the very rich) are not eligible. We effectively convert the current Child Tax Credit into a nearly universal child tax credit by extending eligibility to receive the same ($2,000 per year) amount per child to include those with low or no earnings. Further, we convert the nearly universal child tax credit to a nearly universal child allowance by paying the benefit on a monthly basis, because doing so enhances a family's economic security (see Chapter 8).

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When determining the appropriate level of the child allowance, it is important to balance poverty reduction and expected cost (Schaefer et al., 2018). The levels we specify are modest relative to those in many other countries and are intended to limit budgetary costs. We propose two alternative levels and gauge their impact on the poverty reduction and cost.

9. A Child Support Assurance Program

The committee simulated two variants of a policy option proposed by Cancian and Meyer (2018):

> **Child Support Assurance Policy #1**: Set guaranteed minimum child support of $100 per month per child.
>
> **Child Support Assurance Policy #2**: Set guaranteed minimum child support at $150 per month per child.

Details on these two policy options are provided in Appendix D, 5-10.

More than one-half of today's children will likely spend some time living with a single parent (Bumpass and Raley, 1995), mostly with a single mother (Vespa, Lewis, and Kreider, 2013), and increasingly with mothers who have never been married (Child Trends, 2016). Child support—financial support provided by the nonresident parent (most often the father)—is an important source of income for custodial parents (Administration for Children and Families, 2016b). However, the potential anti-poverty effectiveness of child support is undermined by the unstable employment of many nonresident parents and their failure to comply fully with child support orders. Our proposals here are for a publicly financed minimum child support benefit.

Single-mother households, and never-married mothers in particular, are much more likely to be poor than two-parent households (McLanahan, 2009). Children in single-parent families are disadvantaged compared with children in two-parent families precisely because there is only one parent and hence only one potential earner. In the United States, individual states and the federal government have already substantially strengthened enforcement of noncustodial child support orders (Garfinkel, 1994a). Enforcing private support is important because it reinforces social norms regarding the obligations of parents to provide financial support for their children.

As an anti-poverty tool, child support enforcement is inherently limited, because child support from fathers with low and irregular incomes tends to be low and irregular. This is not to say that all fathers of the children who live with low-income mothers are themselves poor or near poor or that child support enforcement has no role to play. In 2015, private child

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support reduced the number of poor children by nearly 800,000 (Renwick and Fox, 2016). Despite improvements in child support enforcement over the last 40 years, however, it is still the case that fewer than one-half of all custodial parents who are supposed to receive child support receive all the support that is due to them, and more than a quarter receive nothing in a given year (Grall, 2018). An "assured child support benefit" would increase the amount and regularity of child support and also would likely reduce the dependence of single mothers on TANF and other safety net programs.

Drawing from the experience of Sweden (Garfinkel, 1994b), a publicly financed minimum child support benefit—one that is conditional on the custodial parent being legally entitled to receive private child support—reduces the poverty and insecurity of single mothers and their children. It also increases mothers' incentives to cooperate in identifying the fathers of their children, establishing paternity, and securing a child support award (Cancian and Meyer, 2018; Garfinkel et al., 1990; Garfinkel, Meyer, and Sandefur, 1992; Schroeder, 2016). It may also reduce the father's incentive to pay child support. Little is known about the magnitudes of these incentive effects.

The $150 guaranteed minimum per child we propose is based on Cancian and Meyer (2018), who argue that it would provide a minimum level of support for families with children, enabling them to meet monthly expenses in the absence of the same amount of support from noncustodial parents, but it would exceed the level of support based on other criteria. Cancian and Meyer also propose requiring a certain standard of support from noncustodial parents, but that part of their proposal is not directly related to our focus: the poverty rate of families with children. We also choose an alternative—slightly lower—level of minimum support, $100 per child, to gauge the effect of the level on costs and poverty reduction.

10. Modification to Immigrant Policies

Given the demographic importance of children of immigrants and restricted program eligibility for unauthorized and nonqualified immigrants, the following changes were simulated:

Immigrant Policy #1: Restore program eligibility for nonqualified legal immigrants. This option would eliminate eligibility restrictions for nonqualified parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.

Immigrant Policy #2: Expand program eligibility for all noncitizen children and parents. This option would eliminate eligibility restrictions

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for all noncitizen parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.

Details on these two policy options, as well as more information on the policy background regarding immigrant eligibility for anti-poverty programs, are provided in Appendix D, 5-11.

Nearly one-quarter (24.7% as of 2014) of U.S. children live in an immigrant family, defined as a family where at least one parent is foreign-born and/or the child is foreign-born, and 10.2 percent of children live in noncitizen families, defined as families where at least one parent and/or child is not a U.S. citizen (Urban Institute, Children of Immigrants database). While the vast majority of children in the United States are themselves U.S. citizens, living in a mixed family (one where other members are not citizens) may affect children's receipt or level of benefits, because noncitizen immigrants are ineligible for various programs.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) established restrictions to immigrant eligibility, such as requiring U.S. residence for at least 5 years, for various categories of immigrants lawfully residing in the United States (National Research Council, 1999; Siskin, 2016). (See Appendix D, Chapter 5 appendixes for details on immigrant eligibility before PRWORA and additional changes associated with PRWORA, such as the expanded definition of "public charge.") Several of these restrictions were eliminated soon after welfare reform, but others remain (Singer, 2004). The programs affected are SNAP, TANF, Medicaid, SSI, and in general means-tested federal programs. Even when immigrants are eligible, they may fail to apply for benefits because of their limited awareness of their eligibility or due to a fear of deportation or of compromising their ability to apply for citizenship if they become a "public charge" (e.g., Alsan and Yang, 2018; Watson, 2014).

With children in immigrant families representing one-fourth of the U.S. child population and having higher poverty rates than children in nonimmigrant families, the committee proposed two changes to immigrant program eligibility with considerable potential for reducing poverty among children in immigrant families. These proposals were also chosen to address another criterion the committee set for itself: social inclusion. Under the current policy regime, restrictions to legal immigrants' eligibility may increase poverty rates among children in immigrant families, the vast majority of whom are U.S. citizens. Additionally, some groups of legal immigrants who are income eligible are currently denied access to programs solely on the basis of their immigrant status.

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IMPACTS ON POVERTY, COST, AND EMPLOYMENT

With two options for each of 10 program and policy areas, we have offered many different ideas for reducing child poverty. Several key questions remain: If implemented, how successful would they likely be at achieving that goal? How do the costs of the various programs compare? And what would be their impacts on earnings and employment?

This final section provides a summary of the projected impacts of these approaches along three key dimensions: (1) child poverty reduction; (2) budget cost; and (3) earnings and jobs. We conclude with a summary and comparison of each of these impacts for all 10 of our program areas, including information on social inclusion, which was part of one of the criteria identified in Chapter 1. Details on our simulation assumptions and results are provided in Appendixes E and F.

Child Poverty Reduction

The core of the committee's statement of task is poverty reduction. Which of the program and policy options, individually or in combination, would reduce child poverty by one-half in 10 years? The committee has considered three poverty lines, all defined using the SPM: 100 percent of SPM ("poverty"), 50 percent of SPM ("deep poverty"), and 150 percent of SPM ("near poverty"). As with the data presented in prior chapters, our estimates of poverty reduction are based on the TRIM3 simulation model, which adjusts for underreporting of a number of important income sources.[7]

Figure 5-1 shows percentage point reductions in child poverty defined by 100 percent of the SPM threshold. While the committee's goal of reducing child poverty by one-half would require a 6.5 percentage point drop (from 13.0 to 6.5%), it is clear that none of the program and policy options we discuss was estimated to achieve this goal on its own. The more substantial child allowance option, which would replace the child tax credit and child tax exemption with a universal $3,000 payment per child per year, comes closest. It would generate a 5.3 percentage point reduction in poverty. The less substantial child allowance option (with a $2,000 annual payment, lower maximum eligibility age, and different phase-out) is estimated to produce a 3.4 percentage-point poverty reduction.

Funding housing vouchers to the point that 70 percent of eligible nonparticipating families with children would receive them would produce a

[7] Our poverty-reduction estimates are based on annual income. We therefore ignore issues related to the timing of income and benefits within the year as well as other administrative and implementation details surrounding each policy. See Chapter 8 for a discussion of the importance of intra-year income instability and of cumbersome enrollment procedures.

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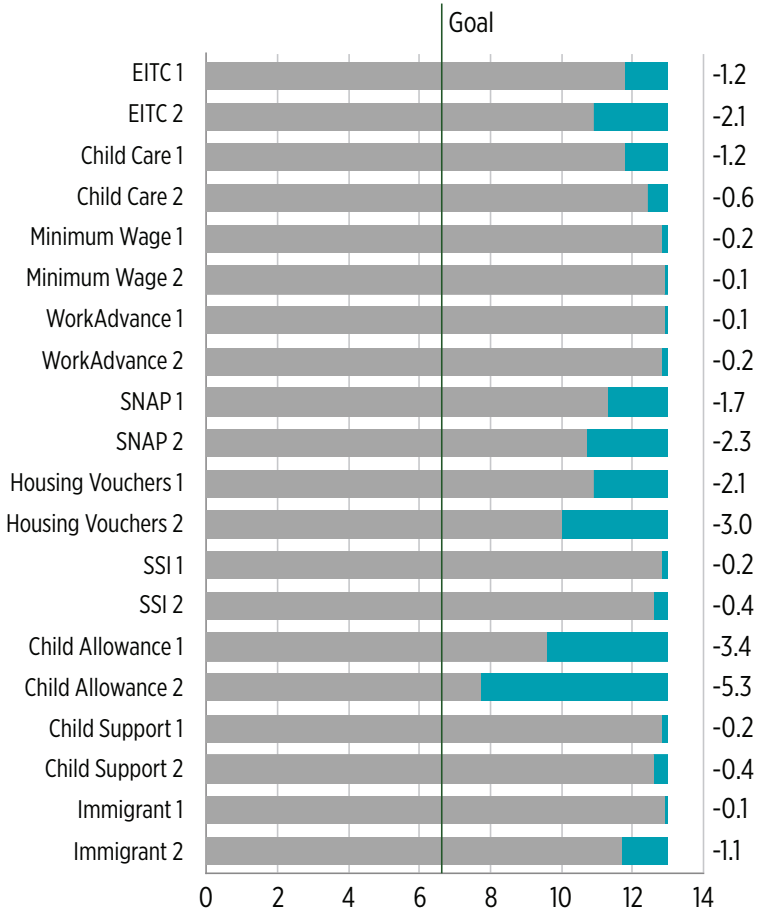

FIGURE 5-1 Simulated child poverty rates using 100 percent TRIM3 SPM under proposed programs.
NOTE: EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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3.0 percentage-point poverty reduction, while the less substantial housing voucher program and the more substantial EITC and SNAP policy options would each reduce poverty by at least 2 percentage points. The less substantial proposals for expanding the EITC, SNAP, the Child and Dependent Care Tax Credit, and immigration eligibility would all reduce child poverty by at least 1 percentage point.

These differential effects reflect the varying size of the proposed increases in benefits for the programs in question, the varying breadth of program coverage, and behavioral effects. The larger effects achieved by the child allowance, EITC, and SNAP programs result in part from the significant increases in benefits in our program proposals. Those benefit increases are much larger than the increases proposed in the child support assurance proposal or the earnings increases that would accrue from a higher minimum wage. But the greater poverty-reducing impacts of these three proposals, as well as the 70 percent housing voucher program, also reflect their near-universal coverage of low-income families with children. Much smaller fractions of the target population—children living in low-income families—would be affected by an increase in the minimum wage, an expansion of the WorkAdvance Program, or our proposed expansions of the SSI program.

In the case of deep (under 50% of SPM) poverty (see Figure 5-2), the $3,000 child allowance option is estimated to produce the biggest impact by far. Reducing deep poverty by 1.4 percentage points would cut the estimated rate of deep poverty by one-half (from its initial level of 2.9%), thus all but meeting our mandated 50 percent reduction goal for deep poverty. The SNAP and housing voucher proposals, as well as the less generous child allowance proposal, would reduce deep poverty by at least one-half of a percentage point. The EITC and child care proposals have much smaller comparative impacts on deep poverty than on 100 percent poverty, because those programs are targeted toward workers, and families in deep poverty have less connection to the labor market. The minimum wage, WorkAdvance, SSI, and immigrant policy proposals would have little impact on the number of children living in deep poverty.

Figure 5-3 shows the impacts of the program on near poverty, defined as below 150 percent of the SPM. For the majority of the programs we have proposed, the reduction in poverty at this level is smaller than the reduction based on a 100 percent poverty line (and sometimes substantially so) because the income eligibility thresholds for the proposals are rarely much higher than 100 percent of SPM poverty. The programs with impacts on families living under 100 percent and under 150 percent of poverty that differ the least are the two child allowance proposals, both of which have high income thresholds and hence relatively large impacts on near poverty.

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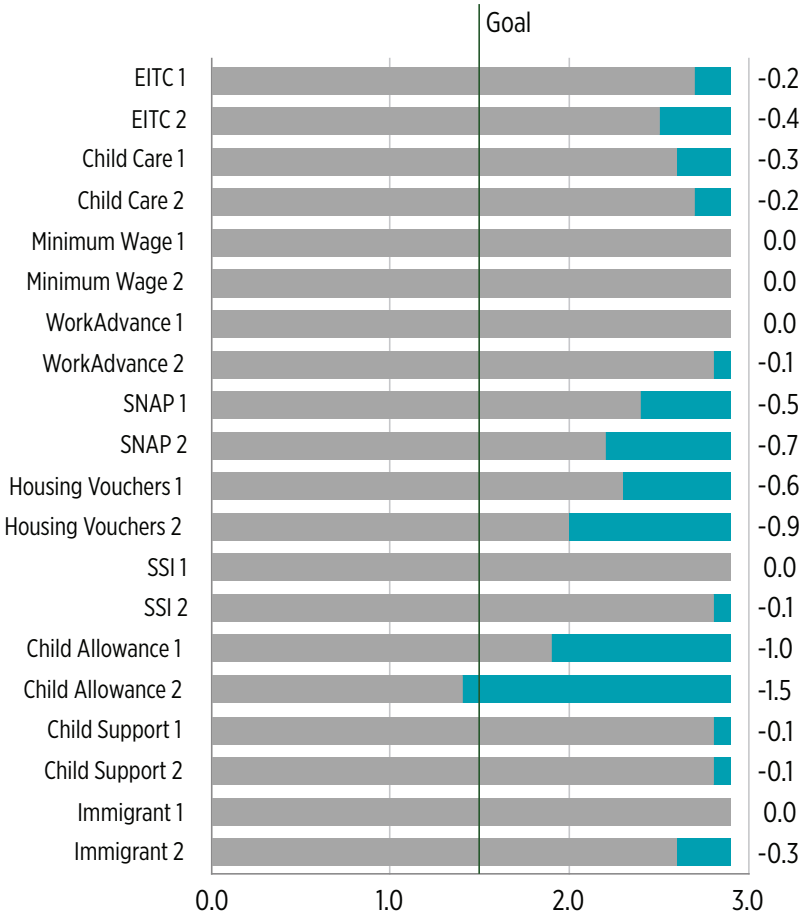

FIGURE 5-2 Simulated child poverty rates using 50 percent TRIM3 SPM under proposed programs.
NOTE: EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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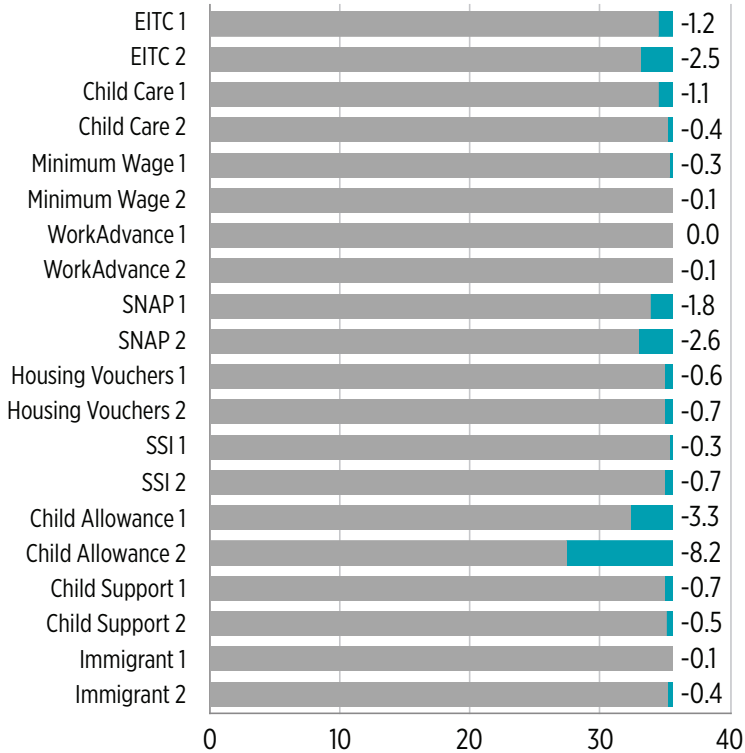

FIGURE 5-3 Simulated child poverty rates using 150 percent TRIM3 SPM under proposed programs.
NOTE: EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income.
SOURCE: Estimates from TRIM3 commissioned by the committee.

CONCLUSION 5-1: Using a threshold defined by 100 percent of the Supplemental Poverty Measure, no single program or policy option developed by the committee was estimated to meet the goal of 50 percent poverty reduction. The $3,000 per child per year child allowance policy comes closest, and it also meets the 50 percent reduction goal for deep poverty.

CONCLUSION 5-2: A number of other program and policy options lead to substantial reductions in poverty and deep poverty. Two involve existing programs—the Supplemental Nutrition Assistance Program and housing vouchers. The option of a 40 percent increase in Earned Income Tax Credit benefits would also reduce child poverty substantially.

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Tradeoffs Among Poverty Reduction, Budget Cost, and Employment

The policy and program options we have analyzed present tradeoffs for policy makers to consider. Some options achieve greater reduction in child poverty but at significant budgetary cost, while other options increase employment and earnings but move fewer children out of poverty. We first look at poverty reduction and cost tradeoffs and then consider the tradeoffs between poverty reduction and changes in employment and earnings.

Figure 5-4 shows the poverty reduction/budget cost tradeoffs among the program and policy options developed by the committee by plotting budget cost on the vertical axis and the number of children lifted above the 100 percent SPM poverty line on the horizontal axis. Costs shown in Figure 5-4 are based on the tax code prevailing in 2015; costs using the 2018 tax code

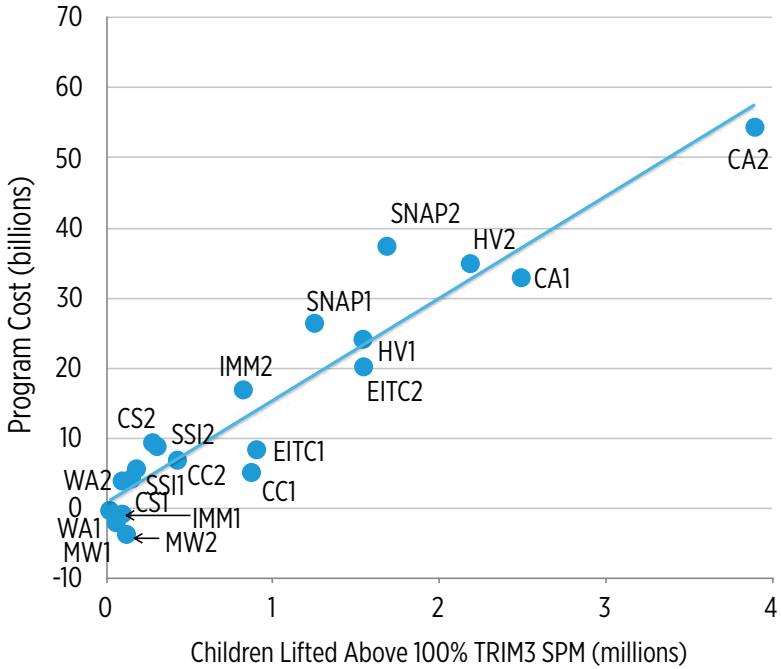

FIGURE 5-4 Simulated number of children lifted out of poverty, by program cost. NOTE: CA = Child Allowance; CC = Child Care; CSA = Child Support Assurance; EITC = Earned Income Tax Credit; HV = Housing Vouchers; IMM = Immigrant; MW = Minimum Wage; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; WA = WorkAdvance. Administrative costs are included for WA but not for other programs. Program costs are based on the tax code prevailing in 2015.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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are provided in Appendix E and are generally quite similar. The trend line divides programs into those that cost relatively more per child moved out of poverty (above the line) and those with a lower-than-average cost per child (below the line). Program summaries and abbreviations are given in Box 5-2.

As might be expected, there is a strong positive relationship between cost and the number of children moved out of poverty. Using the results across all of our policies and programs, moving a million children out of poverty (which reduces the current rate of 100% of SPM-based child poverty—13.0%—by roughly 1.3 percentage points) costs an average of about $15 billion per year. Some programs, such as the SNAP expansions, lie above the regression line, implying that they have higher-than-average costs per child moved out of poverty. This is due in part to the fact that the behavioral effects of these programs lead to reductions in earnings.

BOX 5-2
Summary of Simulated Programs and Policies

EITC Policy #1: Increase payments along the phase-in and flat portions of the EITC schedule (labeled "EITC1" in the graphs).

EITC Policy #2: Increase payments by 40 percent across the entire schedule, keeping the current range of the phase-out region (EITC2).

Child Care Policy #1: Convert the Child and Dependent Care Tax Credit (CDCTC) to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under age 5 (CC1).

Child Care Policy #2: Guarantee assistance from the Child Care and Development Fund (CCDF) for all eligible families with incomes below 150 percent of the poverty line (CC2).

Minimum Wage Policy #1: Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation after that (MW1).

Minimum Wage Policy #2: Raise the federal minimum wage to $10.25 *or* the 10th percentile of the state's hourly wage distribution, whichever is lower, and index it to inflation after that (MW2).

WorkAdvance Policy #1: Expand eligibility for WorkAdvance programming to all male heads of families with children and income below 200 percent of the poverty line and create training slots for 10 percent of them (WA1).

WorkAdvance #2: Expand eligibility for WorkAdvance programming to all male heads of families with children and income below 200 percent of the poverty line and create training slots for 30 percent of them (WA1).

SNAP Policy #1: Increase SNAP benefits by 20 percent for families with children, make adjustments for the number of children age 12 and above in the home, and increase the Summer Electronic Benefit Transfer for Children (SNAP1).

SNAP Policy #2: Increase SNAP benefits by 30 percent, make adjustments for the number of children age 12 and above in the home, and increase the Summer Electronic Benefit Transfer for Children (SNAP2).

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While Figure 5-4 focuses on the number of children brought above the 100 percent SPM poverty line, we note that our proposed expansions would help to narrow the "poverty gap" of poor children by raising their families' incomes even when the increases are not sufficient to lift them above the poverty line. Most of these proposed expansions would also raise the incomes of many families with incomes between 100 and 150 percent of SPM poverty. Program expansions with higher-than-average costs have different impacts on lower-income families (relative to higher-income families) than other programs have, and as a result they lift relatively fewer family incomes above the poverty line.

The EITC and the Child and Dependent Care Tax Credit expansions (the latter is labeled "CC1" in the figure) lie below the regression line. These programs cost less than average because part of their poverty-reducing

Housing Voucher Policy #1: Increase the number of vouchers directed to families with children so that 50 percent of eligible families not currently receiving subsidized housing would use them (HV1).

Housing Voucher Policy #2: Increase the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving subsidized housing would use them (HV2).

SSI Policy #1: Increase by one-third the maximum child SSI benefit (SSI1).

SSI Policy #2: Increase by two-thirds the maximum child SSI benefit (SSI2).

Child Allowance Policy #1: Pay a monthly benefit of $166 per month per child to the families of all children under age 17 who were born in the United States or are naturalized citizens. (In implementing this new child allowance, eliminate the Child Tax Credit and additional child tax credit as well as the dependent exemption for children.) (CA1)

Child Allowance Policy #2: Pay a monthly benefit of $250 per month per child to the families of all children under age 18 who were born in the United States or are naturalized citizens. (In implementing this new child allowance, eliminate the Child Tax Credit and additional child tax credit as well as the dependent exemption for children.) Phase out child allowance benefits between 300 percent and 400 percent of the poverty line (CA2).

Child Support Assurance Policy #1: Set guaranteed minimum child support of $100 per month per child.

Child Support Assurance Policy #2: Set guaranteed minimum child support at $150 per month per child.

Immigrant Policy Option #1: Restore program eligibility for nonqualified legal immigrants. (This option eliminates eligibility restrictions for nonqualified parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.) (IMM1)

Immigrant Policy Option #2: Expand program eligibility for all noncitizen children and parents. (This option eliminates eligibility restrictions for all noncitizen parents and children in the SNAP, TANF, Medicaid, SSI and other means-tested federal programs.) (IMM2)

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impact comes from the behavioral effects of increased earnings.[8] Taxes paid on these earnings reduce net government costs, while at the same time the increased earnings triggered by work incentives add to family income. Similarly, the two minimum wage policies actually reduce net government expenditures, owing to the fact that they increase earnings, so tax revenues on the earnings increase and expenditures on benefits from transfer programs decrease. At the same time, these minimum wage policies do not lift many children above the poverty line.

The majority of the programs fall under one of two clusters: a cluster of policy and program proposals that not only cost under $10 billion per year but also move relatively few children out of poverty, and a cluster of proposals that not only cost more but also lift more children out of poverty. In the former category are the reforms related to SSI, child care, one of the immigrant reforms, minimum wage expansions, child support assurance reforms, and the less substantial EITC expansion. None of these programs was estimated to lift more than 1 million children out of poverty.

In the second cluster are the SNAP and housing expansions, the more substantial EITC expansion, and the $2,000 per child per year child allowance proposals. These programs would move between 1 to 3 million children out of poverty, at a cost ranging from $20 to $40 billion. The $3,000 per child per year child allowance would move almost 4 million children out of poverty, but it would do so at a cost of $54 billion.

CONCLUSION 5-3: Programs producing the largest reductions in child poverty are estimated to cost the most. Almost all of the committee-developed program options that lead to substantial poverty reduction were estimated to cost at least $20 billion annually.

Policy Tradeoffs with Earnings. Tradeoffs between poverty reduction and annual earnings changes are shown in Figure 5-5.[9] As in Figure 5-4, the horizontal axis shows the number of children brought above the 100 percent SPM poverty line by the given program or policy option, but here the vertical axis shows estimated changes in earned income brought about by the behavioral responses to the introduction of the respective program

[8] Details concerning poverty reduction, cost, and employment and earnings changes in the absence or presence of behavioral responses can be found in Appendix E. Some effects are quite substantial. For example, in the case of the first child care policy, which would expand the Child and Dependent Care Tax Credit, the induced employment changes not only increase poverty reduction but also increase government cost by roughly a factor of four but also nearly triple program costs.

[9] As shown in Appendix E, tradeoffs between poverty reduction, earnings, and employment are affected very little by the 2018 tax reforms. Accordingly, only the 2015 tax law simulation results are shown in Figures 5-5 and 5-6.

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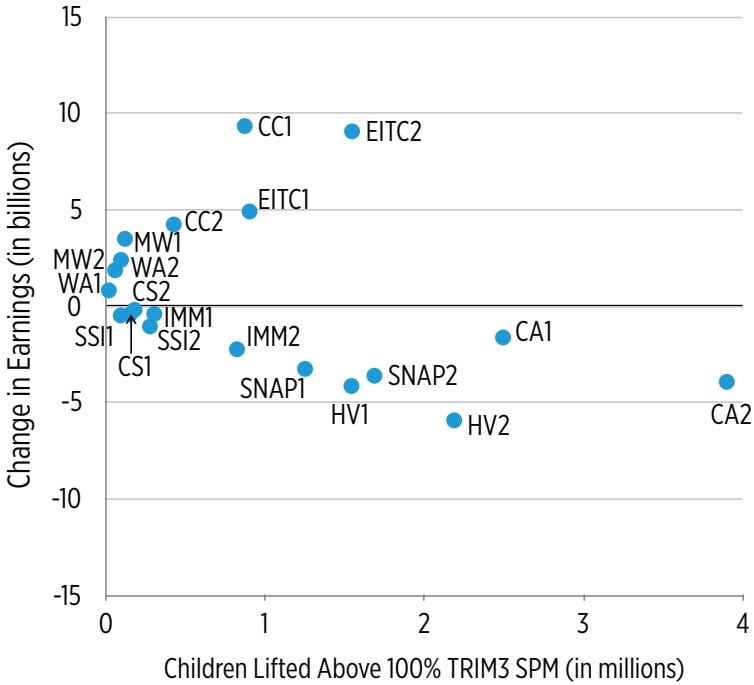

FIGURE 5-5 Simulated number of children lifted out of poverty, by change in earnings.
NOTES: Earnings changes are limited to individuals living in households with incomes below 200 percent of SPM poverty. CA = Child Allowance; CC = Child Care; CSA = Child Support Assurance; EITC = Earned Income Tax Credit; HV = Housing Vouchers; IMM = Immigrant; MW = Minimum Wage; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; WA = WorkAdvance.
SOURCE: Estimates from TRIM3 commissioned by the committee.

or policy. It is important to note that the earnings and employment changes plotted here are limited to workers in low-income families, defined as having family incomes below 200 percent of SPM poverty. This restriction was imposed because a few of the policy proposals—especially the two involving the minimum wage—would boost the earnings of workers in middle- and even high-income families.[10]

[10] In the case of Minimum Wage Policy #1, for example, earnings would increase by more than $12 billion per year overall, but only a quarter of that amount would be gained by workers in low-income households. The committee judged that the behavioral responses among low-income families would be much more relevant to our study than the behavioral responses in other portions of the income distribution.

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Earnings changes vary widely—from a nearly $6 billion drop in aggregate earnings in the case of Housing Voucher Policy #2 to more than a $9 billion increase in aggregate earnings in the cases of EITC Policy #2 and Child Care Policy #1. Apart from the minimum wage proposals, proposals for programs and policies that gear benefits to earned income are estimated to produce the greatest increase in earnings, in this case in the $4 billion to $10 billion range. By contrast, SNAP, subsidized housing, and child allowance programs are estimated to reduce earnings by amounts ranging from $1 billion to $6 billion.

An interesting combination of substantial reductions in the number of poor children and substantial earnings increases is projected for Child Care Policy #1, which converts the Child and Dependent Care Tax Credit into a fully refundable tax credit. It would reduce the number of poor children by nearly 1 million and increase total earnings by $9.3 billion, an amount that would exceed the cost of the program (estimated at $5.1 billion).

Policy Tradeoffs with Employment. Tradeoffs between poverty reduction and changes in employment are shown in Figure 5-6. As in Figure 5-5, employment changes plotted here are limited to workers in families with income less than twice the 200 percent SPM poverty line. With one notable exception, the patterns are similar to those found for changes in earnings. In general, work-based programs increase employment and benefits-based programs reduce employment. More notably, our expansions of the CDCTC and the more generous version of the EITC would increase net employment by more than 500,000 jobs.[11] The exception is our minimum wage proposals, both of which increase earnings but are estimated to reduce employment in the 28,000 (MW2) to 42,000 (MW1) range.

CONCLUSION 5-4: Projected changes in earnings and employment in response to simulations of our program and policy options vary widely, but taken as a whole they reveal a tradeoff between the magnitude of poverty reduction and effects on earnings and employment. Work-based program expansions involving the Earned Income Tax Credit and the Child and Dependent Care Tax Credit were estimated to increase earnings by as much as $9 billion and employment by as many as half a million jobs. Programs such as the child allowances and expansions of the housing voucher program were estimated to reduce earnings by up to $6 billion and jobs by nearly 100,000. The bulk of the remaining program and policy proposals are estimated to evoke more modest behavioral responses.

[11] Jobs include full- and part-time jobs. For more details, see Appendix F, the TRIM3 Technical Appendix.

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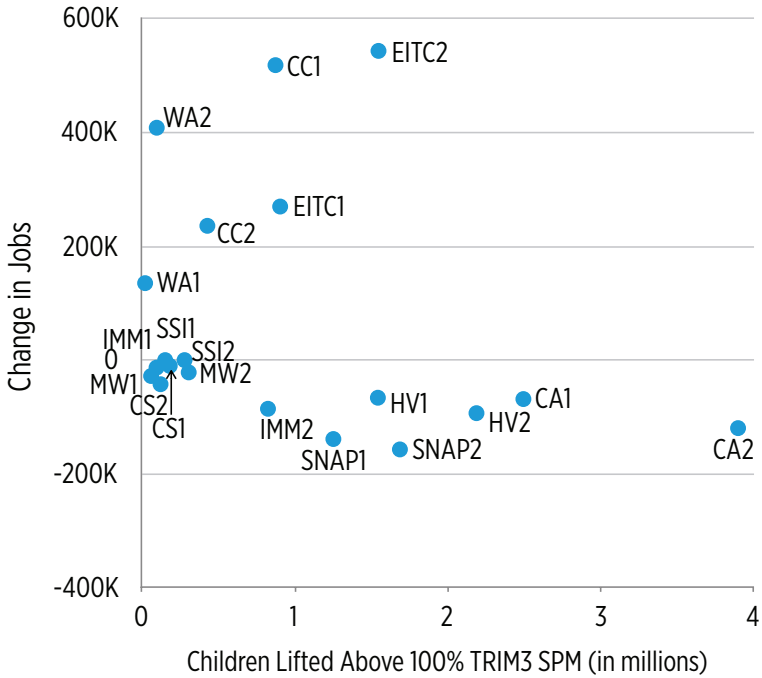

FIGURE 5-6 Simulated number of children lifted out of poverty by change in jobs. NOTES: Job changes are limited to individuals living in households with incomes below 200 percent of SPM poverty. CA = Child Allowance; CC = Child Care; CSA = Child Support Assurance; EITC = Earned Income Tax Credit; HV = Housing Vouchers; IMM = Immigrant; MW = Minimum Wage; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; WA = WorkAdvance. SOURCE: Estimates from TRIM3 commissioned by the committee.

Impacts Across Demographic Subgroups

With 20 program and policy options and nine demographic subgroups of interest, it is difficult to summarize poverty-reduction patterns in a succinct way. Full details are provided in Appendix D, Tables D5-3, D5-4, and D5-5, and in Appendix E. Perhaps the most important lesson is that all 20 program and policy options reduce child poverty across virtually all groups.

However, the poverty reductions induced by the various policy and program options vary substantially across groups and policies. Table 5-1 provides a summary of poverty reductions by subgroup. The first row of the table repeats the baseline poverty rates for particularly disadvantaged subgroups shown in Chapter 2, which range from about 17 percent for

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TABLE 5-1 Simulated Poverty Reduction of Various Programs and Policies Across Demographic Subgroups

	All children	Black	Hispanic	Mother not a HS graduate	No bio parents	Single bio/adoptive parent	No workers	Child not a citizen	Child citizen	Mother < 25 years old
Baseline	**13.0%**	**17.8%**	**21.7%**	**32.5%**	**22.9%**	**22.4%**	**61.5%**	**33.3%**	**31.5%**	**23.8%**
EITC 1	-9.2%	⌃	–	–	⌄	⌃	⌄	⌄	⌄	⌃
EITC 2	-16.2%	⌃	⌄	–	⌄	⌃	⌄	⌄	⌄	⌃
Child Care 1	-9.2%	⌃	–	–	⌄	⌃	⌄	⌄	⌄	⌃
Child Care 2	-4.6%	–	–	–	⌄	⌃	⌄	⌄	–	⌄
Minimum Wage 1	-1.5%	–	–	–	–	–	⌄	⌃	–	–
Minimum Wage 2	-0.8%	–	–	–	–	–	⌄	–	–	–
WorkAdvance 1	-0.0%	–	–	–	–	–	–	–	–	–
WorkAdvance 2	-0.8%	–	–	–	⌃	–	⌃	–	⌄	–
SNAP 1	-13.1%	–	–	–	⌃	⌄	⌄	⌄	–	–
SNAP 2	-17.7%	–	⌄	–	–	⌄	⌄	⌄	–	–
Housing Vouchers 1	-16.2%	⌃	⌃	⌃	⌄	–	⌄	⌄	–	⌃
Housing Vouchers 2	-22.3%	⌃	⌃	⌃	⌄	⌃	⌄	⌄	–	⌃
SSI 1	-1.5%	–	–	–	⌃	–	–	⌄	–	–
SSI 2	-3.1%	–	–	–	⌃	–	–	⌄	–	–
Child Allowance 1	-26.2%	⌃	⌄	–	⌃	⌃	⌃	⌄	⌄	⌃
Child Allowance 2	-40.8%	⌃	⌄	⌃	⌄	⌃	–	⌄	–	–
Child Support 1	-1.5%	–	–	–	⌄	⌃	–	⌄	⌄	–
Child Support 2	-4.6%	–	–	–	⌄	⌃	⌄	⌄	–	⌄
Immigrant 1	-0.8%	–	–	⌃	–	–	–	⌄	–	⌄
Immigrant 2	-8.5%	⌄	⌃	⌃	⌄	⌄	⌄	⌃	⌃	⌄

NOTES: EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income. The vertical dashes indicate that the proportionate poverty reduction was within 1 percent of the overall reduction; green circles indicate that the reduction was more than 1 percent greater than the overall reduction; and red circles indicate that the reduction was more than 1 percent smaller than the overall reduction. SOURCE: Committee created based on commissioned analyses of TRIM3.

Black children to more than 60 percent for children in families with no adult workers. Down the first column of the table are the proportionate reductions in overall child poverty associated with each of the program and policy options. For example, the "–9.4%" entry for the first EITC option indicates our estimate that implementing this policy would reduce the overall number of children with family incomes below the poverty line by 9.4 percent.[12]

The green and red circles and the vertical dashes across the first row indicate whether the percentage reduction in poverty for children from the first EITC option in the given subgroup is larger (green), about the same

[12] Table 5-1 mixes percentage-point poverty rates across the top row with proportionate reductions in the number of poor children in each group. Given the very different baseline rates of poverty across groups, it made the most sense to show proportionate reductions in the number of poor children within a group.

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(vertical dashes), or smaller (red) than the 9.2 percent reduction among all poor children.[13] The table shows that the first EITC option, which expands the phase-in and flat portions of the EITC schedule, produces disproportionately large poverty reductions for Black children, children living with single parents, and children with relatively younger mothers. It reduces poverty relatively less for immigrant children, children not living with biological parents and—unsurprisingly, given the earnings orientation of the policy—children living in families with no adult workers.

A broader look at Table 5-1 provides several general lessons. First, some groups—Black children and children living with single mothers or young mothers—tend to benefit more than average from many of the program and policy options. On the other hand, other groups—in particular, children in immigrant families (even if the children themselves are citizens) and children in families with no workers—tend to benefit proportionately less. This is particularly worrisome, given that the poverty rates of these groups (shown in the first row) are already among the highest in the table. These patterns reflect the fact that many of our program and policy ideas are oriented toward working families, and in only one case (the second immigration option) are benefits extended to noncitizens.

A second general lesson is that few of the program and policy options provide substantially disproportionate benefits for most of the subgroups listed in the table. Exceptions are the two child allowance proposals, which disproportionately benefit all groups other than noncitizens and Hispanic children.

CONCLUSION 5-5: The 20 program and policy options generate disparate impacts across population subgroups in our simulations. Although virtually all of them would reduce poverty across all of the subgroups we considered, disproportionately large decreases in child poverty occur only for Black children and children of mothers with low levels of education. Hispanic children and immigrant children would benefit relatively less.

Tradeoffs Among All of the Committee's Criteria

In addition to impacts on cost, employment, and reduction in 100 percent SPM poverty, the committee judged it important to consider several other dimensions of possible program impacts. In response to the evidence cited in Chapter 3 regarding the detrimental impacts of growing up in a family whose income is far below the official poverty thresholds, the committee added to its list of criteria reductions in the number of children in deep poverty (under 50% of SPM poverty). To provide a more complete

[13] See Appendix D, 5-13, for details.

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A Roadmap to Reducing Child Poverty

picture of impacts on the larger group of low-income children, we have also looked at reductions when the poverty threshold is set at 150 percent of the SPM poverty line.

In Chapter 1, we also argued for the importance of promoting social inclusion, for example by reducing the sense of stigma among groups receiving benefits from social programs. We struggled to develop a strong measure of inclusion and, as explained in this chapter's appendix (Appendix D), settled for gauging the extent to which our policy and program options would promote social inclusion by looking at the reduction of poverty rates between groups. Policies that promote social inclusion show a reduction in the gaps in poverty rates between groups.

Table 5-2 provides a summary of the performance of our 20 policy and program options across all of these criteria, most importantly poverty reduction but also cost, work incentives, and social inclusion. Further information on our methods can be found in Appendix D, 5-13, and in Appendix E. As detailed in Appendix D, 5-13, we developed a score for each of the criteria listed across the top and then classified each program and policy option as very strong, strong, neutral, weak, or very weak in meeting the criteria. Light and dark green circles indicate above-average performance in meeting the given criterion, while light and dark red circles indicate the opposite.

For example, the second EITC option, which increases EITC payments by 40 percent, strongly encourages work (as indicated by the additional earnings associated with it). The light green circles for <100 percent and <150 percent SPM poverty reduction indicate modest relative success in reducing poverty under those two definition, while the two light red circles indicate above-average cost and somewhat worse performance in reducing poverty gaps for the demographic subgroups we have been considering.

Drawing from Chapter 3, we indicate in the final column whether the research literature has provided strong evidence that the policy or program in question has been found to improve child well-being. Regardless of their performance on the criteria we have laid out, any policies or programs for which the literature shows such evidence deserve special attention.

Looking across the columns and rows of Table 5-2, it is not surprising that the first four pairs of programs, all of which are oriented toward work, are the most effective at encouraging work. But none of them is particularly effective at reducing deep child poverty, and only the EITC options are above average in reducing poverty—and this comes at a fairly high budget cost.

The three sets of means-tested transfer program options—expansions of SNAP, housing vouchers, and the child allowance—are the most effective at reducing both poverty and deep poverty for children, but all are relatively costly and none encourages work. Most of the other options cost relatively

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TABLE 5-2 Simulated Relative Performance of Program and Policy Options Across Committee Criteria

	<100% SPM poverty reduction	<50% SPM deep poverty reduction	<150% SPM poverty reduction	Low Budget	Encourages work	Social Inclusion	Causal evidence on child impacts?
EITC 1	I	V	I	∧	∧	V	Strong
EITC 2	∧	I	∧	V	⌃	V	
Child Care 1	I	V	I	∧	⌃	V	No evidence
Child Care 2	V	V	⌄	∧	∧	⌄	
Minimum Wage 1	⌄	⌄	⌄	⌃	∧	I	No evidence
Minimum Wage 2	⌄	⌄	⌄	⌃	∧	V	
WorkAdvance 1	⌄	⌄	⌄	⌃	∧	I	No evidence
WorkAdvance 2	⌄	V	⌄	⌃	∧	∧	
SNAP 1	I	∧	∧	V	V	V	Strong
SNAP 2	∧	∧	∧	⌄	V	⌄	
Housing Vouchers 1	∧	∧	V	V	V	∧	Some
Housing Vouchers 2	⌃	∧	V	⌄	⌄	∧	
SSI 1	⌄	⌄	⌄	∧	I	I	No evidence
SSI 2	V	V	V	∧	I	I	
Child Allowance 1	⌃	⌃	⌃	⌄	I	∧	Some
Child Allowance 2	⌃	⌃	⌃	⌄	V	I	
Child Support 1	⌄	V	V	∧	I	V	No evidence
Child Support 2	V	V	V	∧	I	V	
Immigrant 1	⌄	⌄	⌄	∧	I	V	No evidence
Immigrant 2	I	V	⌄	I	I	V	

NOTES: EITC = Earned Income Tax Credit; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income. Budget costs for the child allowance proposals are based on the 2018 tax law provisions. See text for explanation of the light and dark green and light and dark red circles.
SOURCE: Committee created based on commissioned analyses of TRIM3.

little but also have little impact on child poverty, which is consistent with the positive slope of the cost/poverty-reduction relationship shown in Figure 5-4.

CONCLUSION 5-6: The work-oriented program and policy options in our simulations would increase employment and earnings but are among the weakest options in reducing child poverty and, especially, deep child poverty. Three sets of means-tested programs—expansions of Supplemental Nutrition Assistance Program benefits, housing vouchers, and a new child allowance—would reduce poverty the most but would also reduce employment and earnings.

CONCLUSION 5-7: Across all of the criteria considered by the committee (poverty reduction, cost, impacts on work, social inclusion, and evidence of positive impacts on child well-being), several of our policy and program proposals stood out:

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1. **A 40 percent increase in Earned Income Tax Credit benefits would decrease child poverty and strongly encourage work and is also likely to improve child well-being. But it would cost $20 billion annually, have only modest impacts on deep poverty, and fail to promote social inclusion.**
2. **A $2,000 per year monthly child allowance would strongly reduce child poverty and deep poverty, which most research suggests would promote child development as well as social inclusion. It would also lead to modest reductions in employment and earnings. Its annual cost is $33 billion.**
3. **Our expansion of the Child and Dependent Care Tax Credit would generate more annual earnings ($9.3 billion) than cost to the budget ($5.1 billion), although its ability to reduce child poverty and deep poverty is relatively modest.**

REFERENCES

Administration for Children and Families. (2016a). *CCDF Quick Facts: FY2016 Data*. Washington, DC: U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/sites/default/files/occ/fy2016_infographic.pdf.

_____. (2016b). *The Child Support Program Is a Good Investment: The Story Behind the Numbers*. Washington, DC: U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/sites/default/files/programs/css/sbtn_csp_is_a_good_investment.pdf.

_____. (2018, May). *Fiscal Year 2018 Federal Child Care and Related Appropriations*. Washington, DC: U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/occ/resource/fiscal-year-2018-federal-child-care-and-related-appropriations.

Alsan, M., and Yang, C.S. (2018). *Fear and the Safety Net: Evidence from Secure Communities*. Unpublished manuscript. Palo Alto: Stanford University. Available: https://people.stanford.edu/malsan/sites/default/files/people.stanford.edu/malsan/sites/default/files%20/fearsafetynet_manuscript.pdf.

Anderson, P.M., and Butcher, K.F. (2016). *The Relationships Among SNAP Benefits, Grocery Spending, Diet Quality, and the Adequacy of Low-Income Families' Resources*. Washington, DC: Center on Budget and Policy Priorities.

Barnow, B.S., and Smith, J. (2016). Employment and training programs. In R.A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume II*. Chicago: University of Chicago Press.

Bumpass, L.L., and Raley, R.K. (1995). Redefining single-parent families: Cohabitation and changing family reality. *Demography*, *32*(1), 97–109.

Cancian, M., and Meyer, D.R. (2018). Reforming policy for single-parent families to reduce child poverty. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, *4*(2), 91–112.

Child Care Aware of America. (2017a). *Parents and the High Cost of Care*. Available: http://usa.childcareaware.org/wp-content/uploads/2017/12/2017_CCA_High_Cost_Report_FINAL.pdf.

_____. (2017b). *Parents and the High Cost of Child Care: County-Level Supplement*. Available: http://usa.childcareaware.org/wp-content/uploads/2018/05/CCA_CountyCosts_2018.pdf.

Copyright National Academy of Sciences. All rights reserved.

Child Trends. (2016). *Births to Unmarried Women: Indicators of Child and Youth Well-Being*. Washington, DC: Child Trends DataBank. Available: https://www.childtrends.org/wp-content/uploads/2015/12/75_Births_to_Unmarried_Women.pdf [September 2018].

Coleman-Jensen, A., Rabbitt, M., Gregory, C., and Singh, A. (2018). *Household Food Security in the United States in 2017*. Economic Research Report 256. Washington, DC: Economic Research Service, U.S. Department of Agriculture. Available: https://www.ers.usda.gov/webdocs/publications/90023/err-256.pdf?v=0.

Collins, A.M., Briefel, R., Klerman, J.A., Wolf, A., Rowe, G., Logan, C., and Lyskawa, J. (2016). *Summer Electronic Benefit Transfer for Children (SEBTC) Demonstration: Summary Report No. ae4330d2e5734003bd82df557b62478c*. Washington, DC: Mathematica Policy Research.

Collinson, R. Ellen, I.G., and Ludwig, J. (2016). Low-income housing policy. In R.A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume 2*. Chicago: University of Chicago Press.

Daly, M., and Burkhauser, R. (2003). The Supplemental Security Income Program. In R.A. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States*. Chicago: University of Chicago Press.

Desmond, M. (2016). *Evicted: Poverty and Profit in the American City*. New York: Broadway Books.

Duggan, M., Kearney, M., and Rennane, S. (2016). The Supplemental Security Income Program. In R.A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States,* Chicago: University of Chicago Press.

Eissa, N., and Hoynes, H. (2000). Explaining the fall and rise in the tax cost of marriage: The effect of tax laws and demographic trends, 1984–1997. *National Tax Journal, 53*(3, Part 2), 683–712.

_____. (2006). Behavioral responses to taxes: Lessons from the EITC and labor supply. In *Tax Policy and the Economy.* NBER Book Series Volume 20. Cambridge, MA: The MIT Press.

Eissa, N., and Liebman, J.B. (1996). Labor supply response to the earned income tax credit. *Quarterly Journal of Economics, 111*(2), 605–637.

Enchautegui, M.E., Chien, N., Burgess, K., and Ghertner, R. (2016). *Effects of the CCDF Subsidy Program on the Employment Outcomes of Low-Income Mothers*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Available: https://www.researchconnections.org/childcare/resources/33241.

Finkel, M., and Buron, L. (2001). *Study on Section 8 Voucher Success Rates. Volume I. Quantitative Study of Success Rates in Metropolitan Areas*. Prepared by Abt Associates. Washington, DC: U.S. Department of Housing and Urban Development.

Garfinkel, I. (1994a). The child-support revolution. *American Economic Review, 84*(2), 81–85.

_____. (1994b). *Assuring Child Support: An Extension of Social Security*. New York: Russell Sage Foundation.

Garfinkel, I., Robins, P.K., Wong, P., and Meyer, D.R. (1990). The Wisconsin child support assurance system: Estimated effects on poverty, labor supply, caseloads, and costs. *The Journal of Human Resources, 25*(1), 1–31.

Garfinkel, I., Meyer, D.R., and Sandefur, G.D. (1992). The effects of alternative child support systems on Blacks, Hispanics, and non-Hispanic Whites. *Social Service Review, 66*(4), 505–523.

Garfinkel, I., Smeeding, T.M., and Rainwater, L. (2010). *The American Welfare State: Laggard or Leader?* Oxford, UK: Oxford University Press.

Giannarelli, L., Lippold, K., Minton, S., and Wheaton, L. (2015). *Reducing Child Poverty in the U.S.: Costs and Impacts of Policies Proposed by the Children's Defense Fund*. Washington, DC: The Urban Institute.

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Grall, T. (2018). *Custodial Mothers and Fathers and Their Child Support: 2015*. Washington, DC: U.S. Census Bureau. Available: https://www.census.gov/content/dam/Census/library/publications/2018/demo/P60-262.pdf.

Hendra, R., Greenberg, D.H., Hamilton, G., Oppenheim, A., Pennington, A., Schaberg, K., and Tessler, B.L. (2016). *Encouraging Evidence on a Sector-Focused Advancement Strategy: Two-Year Impacts from the WorkAdvance Demonstration*. New York: MDRC.

Hotz, V.J., and Scholz, J.K. (2003). The earned income tax credit. In R.M. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States* (pp. 141–197). Chicago, IL: The University of Chicago Press.

Hoynes, H.W., and Patel, A.J. (2017). Effective policy for reducing poverty and inequality? The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources*, 1115–7494 R1.

Hoynes, H., and Rothstein, J. (2017). Tax policy toward low-income families. In A. Auerbach and K. Smetters (Eds.), *Economics of Tax Policy*. New York: Oxford University Press.

Jardim, E., Long, M.C., Plotnick, R., Van Inwegen, E., Vigdor, J., and Wething, H. (2017). *Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle*. NBER Working Paper No. 23532. Cambridge, MA: National Bureau of Economic Research.

Kuhlthau, K., Smith Hill, K., Yucel, R., and Perrin, J.M. (2005). Financial burden for families of children with special health care needs. *Maternal and Child Health Journal, 9*(2), 207– 218.

Kumlin, S., and Rothstein, B. (2005). Making and breaking social capital: The impact of welfare-state institutions. *Comparative Political Studies*, *38*(4), 339–365.

Lalonde, R.J. (2003). Employment and training programs. In R.A. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States* (pp. 517–585). Chicago: University of Chicago Press. Available: http://www.nber.org/chapters/c10261.pdf.

Maag, E. (2013). *Child-related Benefits in the Federal Income Tax*. Washington, DC: The Urban Institute.

Mattingly, M.J., Schaefer, A.P., and Carson, J.A. (2016). *Child Care Costs Exceed 10 Percent of Family Income for One in Four Families*. Carsey School of Public Policy, University of New Hampshire, Scholars' Repository, 288. Available: https://scholars.unh.edu/carsey/288.

McLanahan, S. (2009). Fragile families and the reproduction of poverty. *ANNALS of the American Academy of Political and Social Science*, *621*, 111–131.

Meyer, B. D., and Rosenbaum, D.T. (2000). Making single mothers work: Recent tax and welfare policy and its effects. *National Tax Journal, 53*(4, part 2), 1027–1062.

_____. (2001). Welfare, the Earned Income Tax Credit, and the labor supply of single mothers. *The Quarterly Journal of Economics, 116*(3), 1063–1114.

Morrissey, T.W. (2017). Child care and parent labor force participation: A review of the research literature. *Review of Economics of the Household, 5*(1), 1–24. doi: 10.1007/s11150-016-9331-3. Available: https://link.springer.com/content/pdf/10.1007%2Fs11150-016-9331-3.pdf.

National Academies of Sciences, Engineering, and Medicine (NASEM). (2018). *Transforming the Financing of Early Care and Education.* Washington, DC: The National Academies Press. https://doi.org/10.17226/24984.

National Research Council (1999). *Children of Immigrants: Health, Adjustment, and Public Assistance*. Washington, DC: National Academy Press.

Neumark, D. (2017). *The Employment Effects of Minimum Wages: Some Questions We Need to Answer*. NBER Working Paper No. 23584. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w23584.

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Nichols, A., and Rothstein, J. (2016). The Earned Income Tax Credit. In R.A. Moffitt (Ed.), *Economics of Means-Tested Programs in the United States, Volume I*. Chicago: The University of Chicago Press.

Nord, M. (2009). *Food Insecurity in Households with Children: Prevalence, Severity, and Household Characteristics*. Economic Information Bulletin No. 56. Washington, DC: U.S. Department of Agriculture.

Rainwater, L. (1982). Stigma in income-tested programs. In I. Garfinkel (Ed.), *Income-Tested Transfer Programs: The Case for and Against* (pp. 19–65). New York: Elsevier Academic Press.

Renwick, T., and Fox, L. (2016, September). *The Supplemental Poverty Measure: 2015*. Current Population Reports. Washington, DC: U.S. Census Bureau. Available: https://www.census.gov/content/dam/Census/library/publications/2016/demo/p60-258.pdf.

Romig, K. (2017). *SSI: A Lifeline for Children with Disabilities*. Washington, DC: Center on Budget and Policy Priorities.

Romley, J.A., Shah, A.K., Chung, P.J., Elliott, M.N., Vestal, K.D., and Schuster, M.A. (2017). Family-provided health care for children with special health care needs. *Pediatrics, 139*. doi: 10.1542/peds.2016-1287.

Schaberg, K. (2017). *Can Sector Strategies Promote Longer-Term Effects? Three-Year Impacts from the WorkAdvance Demonstration*. New York: MDRC.

Shaefer, H.L., Collyer, S., Duncan, G., Edin, K., Garfinkel, I., Harris, D., Smeeding, T.M., Waldfogel, J., Wimer, C., and Yoshikawa, H. (2018). A Universal Child Allowance: A plan to reduce poverty and income instability among children in the United States. *RSF: Russell Sage Foundation Journal of the Social Sciences*, *4*(2), 22–42.

Schmitt, J., and Jones, J. (2012). *Low-Wage Workers Are Older and Better Educated than Ever*. Washington, DC: Center for Economic and Policy Research. Available: https://www.takeactionminnesota.org/wp-content/uploads/2013/10/Low-wage-Workers-Are-Older-and-Better-Educated-than-Ever.pdf.

Schroeder, D. (2016). *The Limited Reach of the Child Support Enforcement System*. Washington, DC: American Enterprise Institute.

Singer, A. (2004). Welfare reform and immigrants: A policy review. In P. Kretsedemas and A. Aparicio (Eds.), *Immigrants, Welfare Reform, and the Poverty of Policy* (pp. 21–34). Westport, CT: Praeger.

Siskin, A. (2016). *Noncitizen Eligibility for Federal Public Assistance Policy Overview*. Washington, DC: Congressional Research Service.

U.S. Congressional Budget Office (2014). *The Effects of a Minimum-Wage Increase on Employment and Family Income*. Available: https://www.cbo.gov/publication/44995.

U.S. Department of Labor. (2019). *Consolidated Minimum Wage Table*. Available: https://www.dol.gov/whd/minwage/mw-consolidated.htm.

U.S. Social Security Administration. (2017). *SSI Annual Statistical Report 2016*. SSA Publication No. 13-11827. Available: https://www.ssa.gov/policy/docs/statcomps/ssi_asr/2016/ssi_asr16.pdf.

Vespa, J., Lewis, J.M., and Kreider, R.M. (2013). *America's Families and Living Arrangements: 2012*. Washington, DC: U.S. Census Bureau.

Watson, T. (2014). Inside the refrigerator: Immigration enforcement and chilling effects in Medicaid participation. *American Economic Journal: Economic Policy*, *6*(3), 313–338.

Ziliak, J.P. (2016, May). *Modernizing SNAP Benefits*. Policy Proposal 2016-06, The Hamilton Project. Washington, DC: The Brookings Institution.

_____. (2017, June). *Memorandum to the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years: Proposals to Cut Short-Run Poverty by Half*. Lexington: University of Kentucky.

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6

Packages of Policies and Programs That Reduce Poverty and Deep Poverty Among Children

As Chapter 5 made clear, none of the policy and program options that the committee identified could, by itself, meet the goal of reducing child poverty by 50 percent. As for reducing deep poverty by 50 percent, the simulations showed that only the more substantial $3,000 per child per year child allowance policy could achieve that goal. The failure of these options to meet our ambitious poverty-reduction goals can be attributed in part to the generally modest scope of the options themselves. Very few were estimated to cost more than $10 billion, and some (e.g., WorkAdvance and increases in the Earned Income Tax Credit [EITC]) were focused on the goal of encouraging paid work at least as much as that of reducing child poverty.

This chapter presents the committee's ideas for ways to achieve our 50 percent child poverty-reduction goal. One approach to achieving that goal would be simply to increase the generosity of some of the individual programs presented in the last chapter. However, the committee instead chose to take an approach of combining programs to form coordinated packages that might achieve the 50 percent goal. A package approach offers some formidable advantages over an individual program approach. Most importantly, program packages are better able to address both poverty reduction and work incentive goals by combining programs that emphasize each of them. As shown in Chapter 5, expansions to income support programs such as the Supplemental Nutrition Assistance Program (SNAP) or housing vouchers were relatively effective at reducing child poverty, but they also reduced employment and earnings. Work support programs such as EITC and the Child and Dependent Care Tax Credit (CDCTC) encouraged work

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but produced only modest reductions in child poverty. Packages combining these two types of programs have the potential to achieve substantial reductions in child poverty while simultaneously boosting employment and earnings.

Here too, as throughout this report, the 10-year window in the committee's Statement of Task leads us to focus on packages of policies and programs that produce short-run reductions in child poverty. And, as was explained in Chapter 5 and further discussed in Chapter 7, the absence of sufficiently rigorous research evidence led us to omit from our packages policies involving marriage promotion and reforms to the Temporary Assistance for Needy Families (TANF) Program.

Because different packages of programs weight poverty reduction, employment incentives, and other policy goals in different ways, the committee developed four packages, each oriented toward a different mixture of policy goals.

Our first package, the "Work-Based Package," focuses exclusively on paid employment by combining expansions of two tax credits (EITC and CDCTC) with an increase in the minimum wage and a scaling-up of the WorkAdvance Program described in Chapter 5 (see Table 6-1).

Our second package, the "Work-Based and Universal Supports Package," builds on the work-based package by combining expansions of its two tax credits (EITC and CDCTC) with a $2,000 child allowance designed to expand the reach of the Child Tax Credit.

Our third package, the "Means-Tested Supports and Work Package," combines expansions of the two tax credits in the work-oriented package with expansions of two existing income support programs: SNAP and housing voucher programs.

The fourth package, the "Universal Supports and Work Package," seeks to enhance income security and stability, reward work, and promote social inclusion. The cornerstone of this fourth package is a $2,700 per child per year child allowance, but the package also includes a new child support assurance program, an expansion of the EITC and CDCTC, an increase in the minimum wage, and elimination of the immigrant restrictions imposed by the 1996 welfare reforms.

Each package is detailed below along with its rationale. This is followed by our estimates of each package's impacts on poverty and paid employment, as well as its costs.

A WORK-BASED POVERTY-REDUCTION PACKAGE

Our proposed Work-Based Package contains four elements, with the policies numbered as they were in Chapter 5:

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TABLE 6-1 Components of the Four Packages

		1. Work-Oriented Package	2. Work-Based and Universal Supports Package	3. Means-Tested Supports and Work Package	4. Universal Supports and Work Package
Work-Oriented Programs and Policies	Expand EITC	X	X	X	X
	Expand CDCTC	X	X	X	X
	Increase the Minimum Wage	X			X
	Roll out WorkAdvance	X			
Income Support-Oriented Programs and Policies	Expand Housing Voucher Program			X	
	Expand SNAP Benefits			X	
	Begin a Child Allowance		X		X
	Begin Child Support Assurance				X
	Eliminate 1996 Immigration Eligibility Restrictions				X

NOTE: CDCTC = Child and Dependent Care Tax Credit, EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program.

- **EITC Policy #1:** Increase payments along the phase-in and flat portions of the EITC schedule.
- **Child Care Policy #1:** Convert the CDCTC to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under age 5.
- **Minimum Wage Policy #1:** Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation after it is implemented.
- **WorkAdvance Policy #2:** All male heads of families with children and income below 200 percent of the poverty line would be eligible for WorkAdvance programming. Training slots would be created for 30 percent of eligible men.

We estimate that this package of programs would cost only about $9 billion per year (with tax rules prevailing both before and after the 2018 Tax Cut and Jobs Act). However, our simulations showed that it does not come

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A Roadmap to Reducing Child Poverty

close to reaching the 50 percent reduction goal for either 100 percent Supplemental Poverty Measure (SPM) poverty or for deep (<50% SPM) poverty.

Rationale for the Work-Based Package

It is widely recognized, and also demonstrated in this report, that low levels of work and earnings are responsible for a substantial portion of the high poverty rates in the United States. As seen in Chapter 4, for example, the sharp increase in single mothers' employment meant that changes in employment, rather than changes in family structure, were the most important factor in explaining recent poverty trends. And in their analysis of differences in total family income between the top two-thirds and bottom one-third of families with an able-bodied head between ages 25 and 54, Sawhill, Rodrigue, and Joo (2016) show that the difference in earned income between the two groups explains the lion's share of the difference in their incomes and plays a much more important role than differences in unearned income (including transfer benefits).

Our Work-Based Package consists of four programs that provide either additional work incentives beyond those currently embedded in the U.S. transfer system or additional supplements to low-income working families, or both. As shown in Chapter 5, expanding the EITC and CDCTC do both, so we include those two programs in this package. As discussed in the WorkAdvance section of Chapter 5, evaluations of that program have shown considerable promise for increasing men's earnings. Finally, while an increase in the minimum wage reduces work to some extent, the major impact of such an increase is to supplement the earnings of unskilled workers.

A WORK-BASED AND UNIVERSAL SUPPORTS POVERTY-REDUCTION PACKAGE

As shown above, the Work-Based Package is unable to make much of a dent in poverty and deep poverty among children, which led the committee to formulate three additional packages, all of which combine work-based and income-support strategies. In the case of our Work-Based Plus Universal Supports package, we combined three policies from Chapter 5 that proved to be unusually cost-effective in either reducing poverty and deep poverty or promoting work:

- **EITC Policy #1**: Increase payments along the phase-in and flat portions of the EITC schedule.
- **Child Care Policy #1**: Convert the CDCTC to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under age 5.

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- **Child Allowance Policy #1**: Pay a monthly benefit of $166 per month ($2,000 per year) per child to the families of all children under age 17 who were born in the United States or are naturalized citizens.

We estimate that this package of programs would cost about $44 billion per year (regardless of whether the pre- or post-2018 tax code is used) and reduce child poverty by about one-third and deep poverty by about 40 percent—both of which fall short of the 50 percent poverty-reduction goals.

Rationale for the Work-Based and Universal-Supports Package

As noted for the first package—the Work-Based Package—two of the policy options detailed in Chapter 5 appeared to be unusually effective at combining strong work incentives and a relatively low budget cost:

- **EITC Policy #1** was estimated to increase employment among adults in low-income families by about 270,000 and earnings by $4.9 billion, at an annual cost of $8.4 billion.[1]
- **Child Care Policy #1** provided even more potent work incentives, increasing employment by more than 500,000 and earnings by around $9 billion. Its annual cost was estimated to be $5.1 billion.

But while both of these policy options performed well on work incentives and cost, their impacts on child poverty (an estimated 1.2 percentage-point reduction in the 13.0 percent child poverty rate and a 0.2 to 0.3 percentage-point reduction in the 2.9 percent rates of children living in deep poverty) fell far short of the committee's mandated 50 percent poverty-reduction goal. The committee therefore coupled these components with a relatively low-cost income support component also presented in Chapter 5:

- **Child Allowance Policy #1**: Pay a monthly benefit of $166 per month ($2,000 per year) per child to the families of all children under age 17, which was estimated to reduce the child poverty rate by 3.0 to 3.4 percentage points and the 2.9 percent rate of deep poverty by 1.0 to 1.1 percentage points, depending on the prevailing tax law. This policy's estimated annual cost was $33 billion.

[1] To simplify our discussion of cost, we will use estimates based on the tax code prevailing in 2015, the base year for the report. We will draw attention to instances where cost estimates differ significantly before and after the 2018 Tax Cut and Jobs Act. Details on the costs of all of the programs and program packages we present at provided in Tables 6-2 and 6-3 as well as Appendix E.

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TABLE 6-2 Simulated Poverty Reduction, Cost, and Employment Changes Associated with Four Poverty-Reduction Packages, Based on the 2015 Tax Law

Poverty-Reduction Package	Reduction in Poverty (<100% TRIM3 SPM Poverty)		Reduction in Deep Poverty (<50% TRIM3 SPM Poverty)		Total Change in Government Spending (millions)	Only Families with Incomes < 200% TRIM3 SPM: Net Change in Earnings (millions)	Only Families with Incomes < 200% TRIM3 SPM: Net Change in Jobs
1. Work-Based	–2.5	–18.8%	–0.6	–19.3%	$8,654	$18,395	1,002,959
Expand EITC	–1.2	–9.4%	–0.2	–6.9%	$8,384	$4,910	269,713
Expand CDCTC	–1.2	–9.1%	–0.3	–10.3%	$5,141	$9,342	518,085
Increase minimum wage	–0.2	–1.3%	0.0	0.0%	–$3,688	$3,488	–42,347
Roll out WorkAdvance	–0.1	–1.0%	–0.1	–3.4%	–$801	$2,591	408,148
2. Work–Based and Universal Supports	–4.6	–35.6%	–1.2	–41.3%	$44,536	$9,921	567,722
Expand EITC	–1.2	–9.4%	–0.2	–6.9%	$8,384	$4,910	269,713
Expand CDCTC	–1.2	–9.1%	–0.3	–10.3%	$5,141	$9,342	518,085
Begin a $2,000 child allowance	–3.4	–25.9%	–1.1	37.9%	$32,904	–$1,627	–68,434
3. Means-Tested Supports and Work	–6.6	–50.7%	–1.5	–51.7%	$90,732	$2,188	404,243
Expand EITC	–1.2	–9.4%	–0.2	–6.9%	$8,384	$4,910	269,713
Expand CDCTC	–1.2	–9.1%	–0.3	–10.3%	$5,141	$9,342	518,085
Expand Housing Voucher Program	–3.0	–22.7%	–0.9	–31.0%	$34,916	–$5,923	–93,181
Expand SNAP Benefits by 35%	–2.6	–20.2%	–0.8	–27.6%	$43,075	–$3,812	–164,392

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4. Universal Supports and Work	−6.8	−52.3%	−1.6	−55.1%	$108,771	$13,447	611,182
Expand EITC by 40%	−2.1	−16.0%	−0.4	−13.8%	$20,206	$9,065	541,366
Expand CDCTC	−1.2	−9.1%	−0.3	−10.3%	$5,141	$9,342	518,085
Increase minimum wage	−0.2	−1.3%	0.0	0.0%	−$3,688	$3,488	−42,347
Begin a $2,700 child allowance	−4.6	−35.7%	−1.3	−44.8%	$77,901	−$2,649	−103,547
Begin child support assurance	−0.2	−1.9%	−0.1	−3.4%	$5,660	−$190	−10,145
Eliminate 1996 immigration eligibility restrictions	−0.1	−1.0%	0.0	0.0%	$3,933	−$483	−13,183

NOTES: Components do not add to package totals owing to redundancies and other interactions across programs (see Appendix F).
CDCTC = Child and Dependent Care Tax Credit, EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program, TRIM3 = Urban Institute's Transfer Income Model, version 3 microsimulation model.
SOURCE: Analyses commissioned by the committee using TRIM3.

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TABLE 6-3 Simulated Poverty Reduction, Cost, and Employment Changes Associated with Four Poverty-Reduction Packages, Based on the 2018 Tax Law

Poverty-Reduction Package	Reduction in <100% TRIM3 SPM Poverty		Reduction in <50% TRIM3 SPM Poverty		Total Change in Government Spending (millions)	Only Families with Incomes < 200% TRIM3 SPM: Net Change in Earnings (millions)	Only Families with Incomes < 200% TRIM3 SPM: Net Change in Jobs
1. Work-Based	–2.4	–19.2%	–0.5	–17.9%	$9,362	$18,011	987,497
Expand EITC	–1.2	–9.8%	–0.2	–7.1%	$8,522	$4,910	269,713
Expand CDCTC	–1.2	–9.3%	–0.2	–7.1%	$5,465	$9,070	502,982
Increase minimum wage	–0.1	–1.2%	0.0	0.0%	–$3,419	$3,431	–42,347
Roll out WorkAdvance	–0.2	–1.3%	–0.1	–3.6%	–$744	$93	406,179
2. Work-Based and Universal Supports	–4.3	–33.7%	–1.2	–41.3%	$44,278	$10,185	563,000
Expand EITC	–1.2	–9.8%	–0.2	–7.1%	$8,522	$4,910	269,713
Expand CDCTC	–1.2	–9.3%	–0.3	–7.1%	$5,465	$9,070	502,982
Begin a $2,000 child allowance	–3.0	–23.9%	–1.1	–34.5%	$32,553	–$1,088	–60,000
3. Means-Tested Supports and Work	–6.3	–50.3%	–1.5	–53.6%	$90,771	$1,985	393,810
Expand EITC	–1.2	–9.8%	–0.2	–7.1%	$8,522	$4,910	269,713
Expand CDCTC	–1.2	–9.3%	–0.2	–7.1%	$5,465	$9,070	502,982
Expand Housing Voucher Program	–2.8	–22.6%	–0.8	–28.6%	$34,706	–$5,904	–93,181
Expand SNAP benefits by 35%	–2.5	–19.6%	–0.8	–28.6%	$42,969	–$3,760	–161,332

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4. Universal Supports and Work	−6.5	−51.3%	−1.5	−53.6%	$111,625	$13,687	613,000
Expand EITC by 40%	−2.0	−16.0%	−0.4	−14.3%	$20,446	$9,298	546,747
Expand CDCTC	−1.2	−9.3%	−0.2	−7.1%	$5,465	$9,070	502,982
Increase minimum wage	−0.1	−1.2%	0.0	0.0%	−$3,419	$3,431	−42,347
Begin a $2,700 child allowance	−4.3	−34.5%	−1.3	−46.4%	$85,469	−$2,329	−98,000
Begin child support assurance	−0.3	−2.0%	−0.1	−3.6%	$5,650	−$189	−10,145
Eliminate 1996 immigration eligibility restrictions	−0.2	−1.4%	0.0	0.0%	$4,844	−$483	−13,183

NOTES: Components do not add to package totals owing to redundancies and other interactions across programs (see Appendix F). Simulations are based on the Federal Income Tax provisions prevailing in 2018. CDCTC = Child and Dependent Care Tax Credit, EITC = Earned Income Tax Credit, SNAP = Supplemental Nutrition Assistance Program, TRIM3 = Urban Institute's Transfer Income Model, Version 3 microsimulation model.
SOURCE: Analyses commissioned by the committee from TRIM3.

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The principal rationale for a child allowance paid on a monthly basis is that it would provide a steady, predictable source of income to counteract the irregularity and unpredictability of market income (as described in Chapter 8). Because the child allowance would be available to both low-income and middle-class families, it would carry little stigma and would not be subject to the varying rules and administrative discretion of a means-tested program, thereby promoting social inclusion. As we saw in Chapter 5, the incremental cost of our proposed version of a $2,000 per child per year child allowance would be $32.9 billion using either the 2015 or 2018 tax law. In addition there would be the administrative costs from having the Social Security Administration pay the monthly benefits.

Although this second package—Work-Based and Universal Supports—failed to reach the 50 percent poverty-reduction goals, its combination of substantial child poverty reduction, positive impacts on employment and earnings, and cost led the committee to judge it to be of sufficient policy interest to include in this report.

A MEANS-TESTED SUPPORTS AND WORK POVERTY-REDUCTION PACKAGE

Our third and fourth policy packages were formulated in ways that fully met the 50 percent poverty-reduction goals set by the committee's charge. Both combined work-based and income support enhancements. We call the third package a Means-Tested Supports and Work Package because it would expand four existing programs:

1. **EITC Policy #1:** Increase payments along the phase-in and flat portions of the EITC schedule.
2. **Child Care Policy #1:** Convert the CDCTC to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under age 5.
3. A modification of **SNAP Policy #2:** Chapter 5's version of SNAP Policy #2 increases SNAP benefits by 30 percent as well as increasing benefits for older children and would be provided through the Summer Electronic Benefit Transfers for Children. In order to reach the 50 percent poverty-reduction goal, we included in this program package a 35 percent rather than a 30 percent increase in the basic SNAP benefit.
4. **Housing Voucher Policy #2:** Increase the number of vouchers directed to families with children so that 70 percent of eligible families that are not currently receiving subsidized housing would use them.

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We estimate that this package of programs would cost $90.7 billion per year and would achieve 50 percent reductions in both poverty and deep poverty for children.

Rationale for the Means-Tested Supports and Work Package

Developing a strategy to reduce child poverty by one-half within 10 years using existing programs provides a number of benefits. First, the congressional authorization, administrative regulations, and administrative implementation procedures for existing programs have been developed and are currently operating. Consequently, changes in these programs could be implemented rapidly and begin to yield reductions in child poverty rates soon after implementation.

It is obvious from a review of the poverty reductions associated with existing programs as set out in Chapter 5 (refer to Figures 5-1 and 5-2) that the largest poverty-reducing impacts result from our modifications to four of them—the EITC, the CDCTC, housing vouchers, and SNAP. Since both the EITC and the CDCTC condition families' receipt of benefits on employment, both have positive impacts on employment and earnings, but at the same time both are relatively less effective in reducing deep poverty (<50% of SPM) than means-tested programs like SNAP. While expanding the housing voucher and SNAP programs would generate disincentives for work, it would also boost the economic resources for children in families with incomes near the thresholds that define both poverty and deep poverty. The committee judged that the combination of the four program expansions included in this income and work supports package would provide a good balance for meeting the 50 percent poverty-reduction goals by combining work-based and income-support program expansions.

A UNIVERSAL SUPPORTS AND WORK POVERTY-REDUCTION PACKAGE

The fourth package we devised and evaluated combines work incentives, economic security, and social inclusion with some existing programs, plus two new programs introduced in Chapter 5:

- **EITC Policy #2**: Increase payments by 40 percent across the entire schedule, keeping the current range of the phase-out region.
- **Child Care Policy #1**: Convert the CDCTC to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under age 5.

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- **Minimum Wage Policy #1**: Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation after it is implemented.
- **Immigration Policy #1:** Restore program eligibility for nonqualified legal immigrants. This option would eliminate eligibility restrictions for nonqualified parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.
- A modification of **Child Allowance Policy #1**: Pay a monthly benefit of $225 per month ($2,700 per year) per child to the families of all children under age 17. Extending beyond citizen children, and consistent with Immigration Policy #1, this child allowance would also be paid to currently nonqualified legal immigrants. To barely reach the 50 percent poverty-reduction goal, we set the monthly benefit level at $225 rather than the $166 or $250 levels included in the Chapter 5 versions of the child allowance policy.
- **Child Support Assurance Policy #1**: Set a guaranteed minimum child support of $100 per month per child.

We estimate that this package of programs would cost $108.8 billion per year under the federal income tax provisions prevailing before 2018, and $111.6 billion per year based on the current tax law. It too would achieve the 50 percent poverty-reduction goals.

Rationale for the Universal Supports and Work Package

Chapter 5 results for individual programs show that the two child allowances would produce the largest impacts on both poverty (<100% SPM) and deep poverty (<50% SPM) for children, but at the same time generate work disincentives. Because supporting work as a long-term solution for child poverty was one of the criteria developed by the committee, our third proposed package combines economic security and work supports in ways that would reduce child poverty and deep child poverty, enhance security and income stability, provide significant incentives for market-based work, and promote social inclusion.

This package provides a child allowance that is similar in value to what most taxpayers now receive for their children through child tax credits and tax exemptions, combined with three work-enhancing features: an expanded EITC and CDCTC and a higher federal minimum wage. To this we add one of the Child Support Assurance policies and an additional feature that promotes equity and social inclusion—an extension of benefits to include immigrant children.

As we saw in Chapter 5, simulations showed that the incremental cost of our proposed version of a $2,000 per child per year child allowance

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would be $32.9 billion annually. In order to meet its 50 percent poverty-reduction goal, the committee increased child allowance benefit levels in the Universal Supports and Work Package to $2,700, which adds about $45 billion to its annual cost. An assured child support benefit, also paid on a monthly basis, would provide a somewhat larger measure of economic security to single-parent families legally entitled to private child support. With such an assured benefit set at $1,200 per year, coupled with the child allowance it would all but erase deep child poverty, while also reducing economic insecurity and unpredictability.

To increase the incentives for market work, the package also includes a 40 percent increase in EITC benefits, an increase in the CDCTC, and an increase in the minimum wage. Each of these elements rewards those who choose market work, even parents who have young children and cannot work full time. Finally, to further promote inclusivity, we include in the universal supports and work package the restoration of program eligibility for nonqualified legal immigrants.

SIMULATING THE IMPACTS OF THE FOUR PROGRAM PACKAGES

As explained in Appendix F, simulating the impacts of packages of programs is difficult—even more difficult than simulating impacts of individual program and policy changes. For example, the simulation program must model people's movements into and out of the labor force as the result of policy changes. All four of our packages include expansions of both the EITC and the CDCTC, and each of these two policies might induce an individual to enter the labor force. But since an individual can only enter the labor market once in response to the package, both policies cannot be estimated to produce this effect. As explained in Appendix F, the committee sought reliable estimates of package impacts by adopting conservative assumptions about these kinds of duplications. While these assumptions might be expected to produce reasonable estimates of impacts, we caution against attaching too much weight to the precise numbers generated by the simulations.

Comparisons Across the Four Packages

The simulated poverty-reducing impacts of the four packages are shown in Figure 6-1 for 100 percent poverty, in Figure 6-2 for deep poverty, and in Figure 6-3 for near poverty. As elsewhere in our simulations, the poverty definition here is based on SPM poverty, deep poverty is defined as below 50 percent of the SPM poverty line, and near poverty is defined as below 150 percent of the SPM poverty line.

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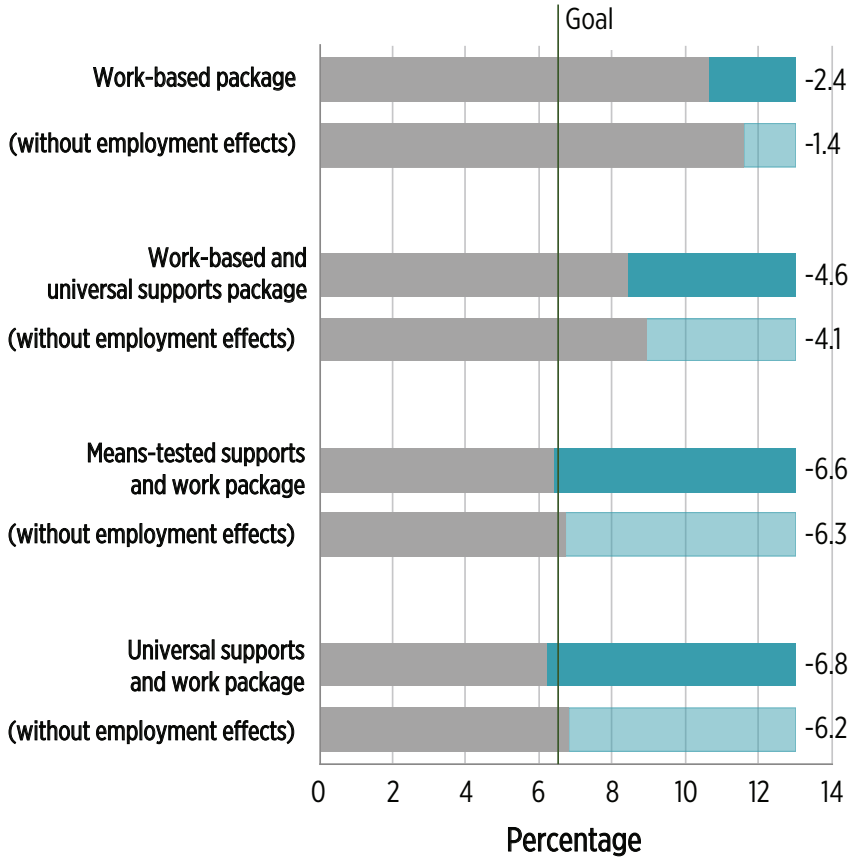

FIGURE 6-1 Simulated reductions in child poverty rates using 100 percent TRIM3 SPM for the four program packages.
NOTES: "Work-oriented package" combines expansions of the Earned Income Tax Credit (EITC), minimum wage, the Child and Dependent Care Tax Credit (CDCTC), and WorkAdvance. "Work-based and universal supports package" combines expansions of the EITC, the CDCTC, and a child allowance. "Means-tested supports and work package" combines expansions of the EITC, the CDCTC, Supplemental Nutrition Assistance Program, and housing vouchers. "Universal supports and work package" combines expansions of the EITC, minimum wage, and the CDCTC with child support assurance, restoration of immigrant program eligibility, and a child allowance.
SOURCE: Estimates from TRIM3 commissioned by committee. The vertical line indicates 50% reduction goal.

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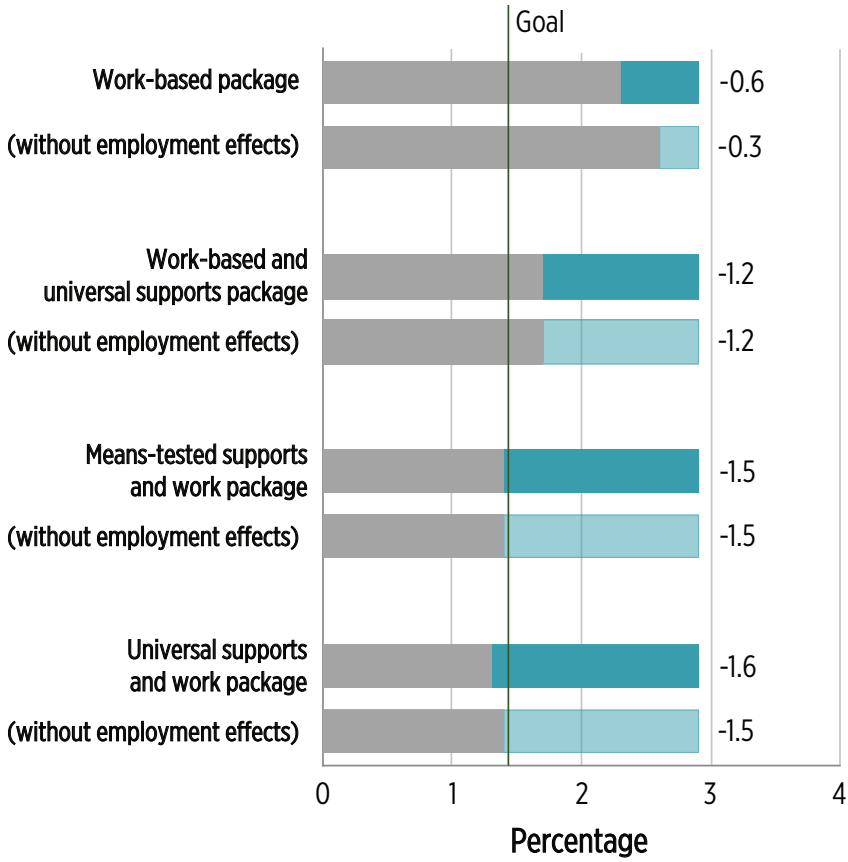

FIGURE 6-2 Simulated reductions in child poverty rates using 50 percent TRIM3 SPM for the four program packages.
NOTES: "Work-oriented package" combines expansions of the Earned Income Tax Credit (EITC), minimum wage, the Child and Dependent Care Tax Credit (CDCTC), and WorkAdvance. "Work-based and universal supports package" combines expansions of the EITC, the CDCTC, and a child allowance. "Means-tested supports and work package" combines expansions of the EITC, the CDCTC, Supplemental Nutrition Assistance Program, and housing vouchers. "Universal supports and work package" combines expansions of the EITC, minimum wage, and the CDCTC with child support assurance, restoration of immigrant program eligibility, and a child allowance. The vertical line indicates 50% reduction goal.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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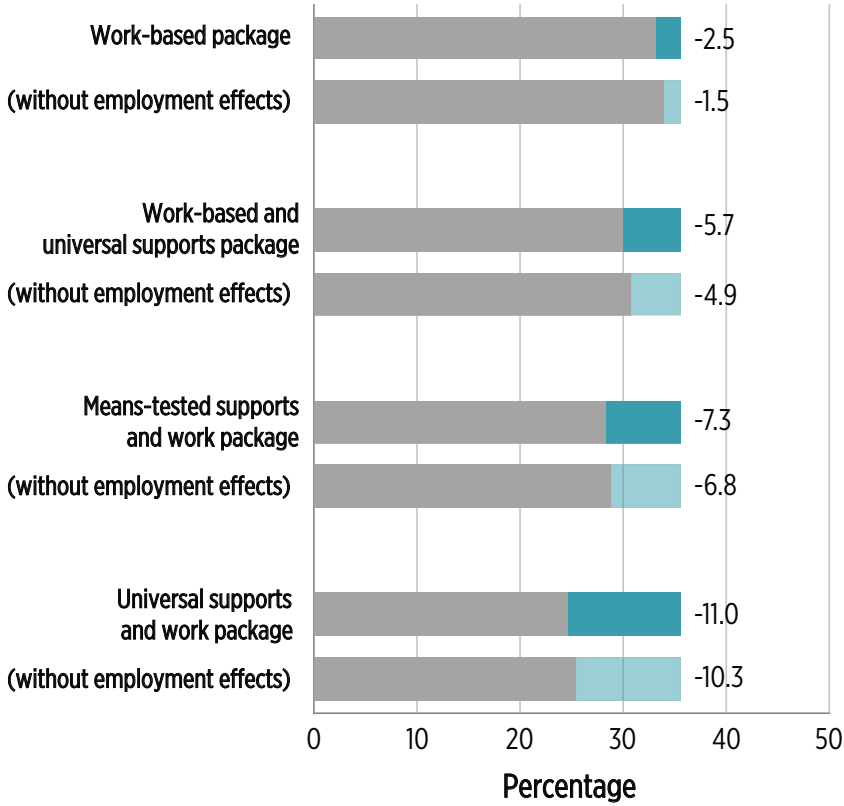

FIGURE 6-3 Simulated reductions in child poverty rates using 150% TRIM3 SPM for the four program packages.
NOTES: "Work-oriented package" combines expansions of the Earned Income Tax Credit (EITC), minimum wage, the Child and Dependent Care Tax Credit (CDCTC), and WorkAdvance. "Work-based and universal supports package" combines expansions of the EITC, the CDCTC, and a child allowance. "Means-tested supports and work package" combines expansions of the EITC, the CDCTC, Supplemental Nutrition Assistance Program, and housing vouchers. "Universal supports and work package" combines expansions of the EITC, minimum wage, and the CDCTC with child support assurance, restoration of immigrant program eligibility, and a child allowance.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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Given that some of the components in the third and fourth packages were expressly designed to meet the committee's 50 percent poverty-reduction goal, it is unsurprising that both packages succeeded in doing that. Both the third package, based on means-tested supports and work, and the fourth package, based on universal supports and work, were estimated to reduce the 13 percent SPM child poverty rate by at least 6.6 percentage points (refer to Figure 6-1). By contrast, the first package, which is focused on work alone, falls far short of meeting the reduction goal, achieving only a 2.4 percentage-point reduction in child poverty. The second package, which combines relatively low-cost work-based and universal supports components, would reduce child poverty and deep child poverty considerably but not enough to meet the 50 percent reduction goal.

Figure 6-1 also shows projected poverty reduction in the absence of the employment-related behavioral responses elicited by the program packages. In the case of the work-oriented package, all four components incentivize paid employment, thereby nearly doubling the poverty-reducing impact of the policy package, from –1.4 to –2.4 percentage points. The behavioral impacts of the other three packages are considerably smaller but do boost employment and reduce child poverty. This is because the work-incentivizing effects of the subcomponents that are work-oriented outweigh the work-disincentivizing effects of the purely transfer subcomponents. Employment and earnings increases add more than half a percentage point to the poverty-reducing impacts of the universal supports and work package but only about one-third of a point to the poverty-reducing impacts of the means-tested and work supports package.

Package-induced reductions in deep poverty parallel those found when the line is drawn at 50 percent of poverty (refer to Figure 6-2). Both the means-tested support and work package and the universal supports and work package were estimated to achieve the goal of 50 percent reduction in deep poverty, while the work-oriented package falls far short, even though relatively strong work incentives in the work-oriented package double its ability to reduce deep poverty. Both the third and fourth packages have positive impacts on employment and earnings, but these impacts are relatively small; consequently, the differences in estimated poverty reduction with and without employment effects are small as well. When the threshold is set at 150 percent SPM poverty, the second, third, and fourth packages again outperform the work-oriented package (refer to Figure 6-3).

It is also useful to examine the tradeoffs between poverty reduction and budget cost across the four packages (see Figure 6-4), as we did for the individual packages in Chapter 5. The linear nature of the tradeoffs between program cost and poverty reduction, when the poverty line is drawn at 100 percent of SPM poverty, is quite apparent in Figure 6-4. The first, work-based, package is estimated to cost relatively little ($8.6 to $9.4

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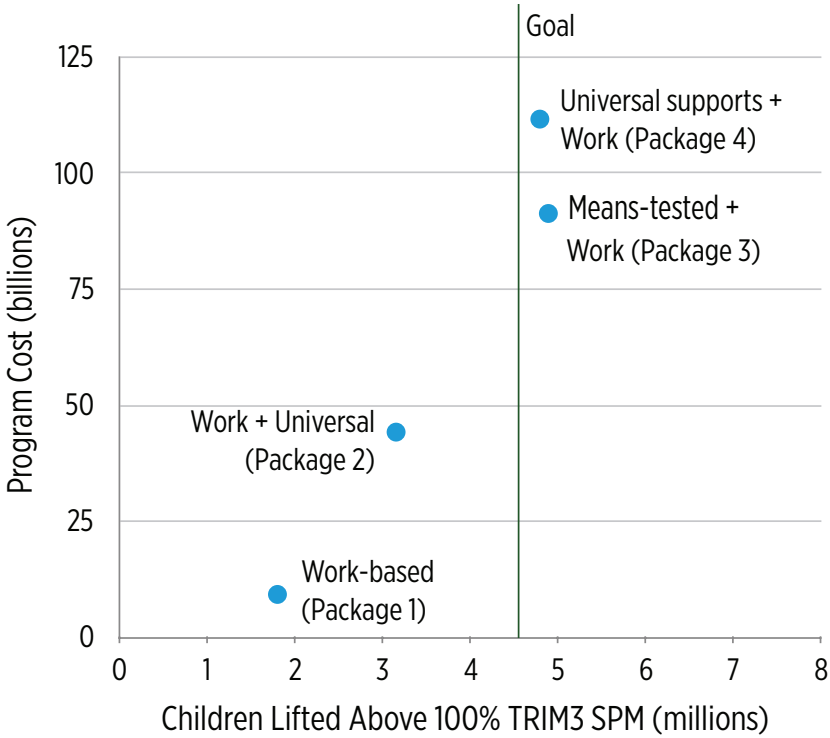

FIGURE 6-4 Simulated program cost, based on the 2015 tax law, by number of children lifted out of 100 percent SPM poverty for the four packages.
SOURCE: Estimates from TRIM3 commissioned by committee.

billion annually, depending on the tax code—refer to Tables 6-2 and 6-3) but lifts only 1.8 million children above the poverty line. The second package adds a $2,000 child allowance to the EITC and CDCTC components of the work-based package, which adds about $35 billion to the cost and lifts an additional 1.6 million children out of poverty. The third and fourth packages bring an additional 1.5 million children out of poverty, but at a marginal cost of about $45 to $67 billion per year.[2]

More details on the estimated impacts on poverty of the four packages are provided in Tables 6-2 (based on the 2015 tax law) and 6-3 (based on the 2018 tax law). The tables show overall package impacts and provide information about the role played by the individual components of each

[2] The costs can be usefully compared to the $481 billion in direct federal expenditures on children in 2017 (Isaacs et al., 2018). The most expensive of our packages, costing $111 billion using the 2018 tax code, represents a 23% increase in that expenditure.

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package.[3] The poverty-reduction numbers in the first two columns of these two tables clearly show that for the work-oriented package, expansions of the EITC and CDCTC do much more to reduce child poverty than do expansions of the minimum wage or the WorkAdvance Program rollout. Specifically, the EITC and CDCTC expansions each generate 1.2 percentage point poverty reductions, whereas neither the minimum wage increase nor the WorkAdvance expansion generates more than a 0.2 percentage-point reduction.

The patterns for deep poverty (child poverty less than 50 percent of the SPM) are somewhat different than those for 100 percent of SPM poverty (see Figure 6-5). The work package is not as effective at reducing deep poverty as it is at reducing 100 percent SPM poverty, while the second package, combining the child allowance with work supports, is relatively more effective. As they do for 100 percent SPM poverty, the third and fourth packages both meet the 50 percent poverty-reduction goal for deep poverty.

The final three columns of Tables 6-2 and 6-3 provide information on the simulated cost and labor market impacts. As seen in Figure 6-4, costs vary enormously across the packages, with the work-based package costing around $9 billion per year, the work-based and universal supports package costing $44 billion, and the costs of the third and fourth packages ranging between $90 billion and $110 billion depending on the package and whether the 2015 or 2018 tax law is used to estimate costs.

Despite their different mixtures of income support and work incentives, all four packages are estimated to increase work and earnings for adults living in low-income families (see Figure 6-6). The first, work-oriented package is estimated to add a million low-income workers to the labor force and generate $18 billion in earned income, with the expansion of the CDCTC being the key driver of these changes. The second package, which adds a $2,000 child allowance to the EITC and CDCTC components of the first package, is estimated to add around 550,000 low-income workers to the labor force. The third package, which combines means-test supports with work-oriented provisions, is estimated to add about 400,000 workers and generate about $2 billion in additional earnings.

In the case of the fourth package, which combines universal supports and work-oriented provisions, the work reductions associated with the

[3] The data compiled in Table 6-2 are based on simulations with the tax laws that prevailed in 2015 as applied to the 2015 population. Table 6-3 repeats these simulations based on the 2018 tax law but still based on the 2015 population. It is important to point out that the data listed for each component assume that each component acts independently of the others. However, in reality these components interact, and because the interactions are only factored into the package totals, the sum of the component impacts generally exceeds the overall package impacts. Nevertheless, the data for the components provide a general idea of which components matter the most.

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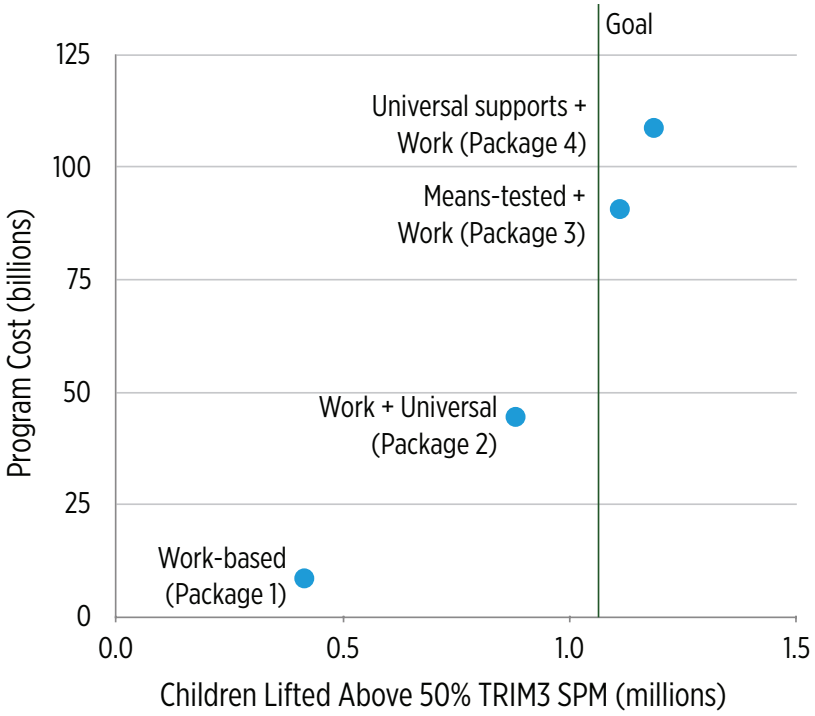

FIGURE 6-5 Simulated program cost, based on the 2015 tax law, by number of children lifted out of deep poverty (<50% SPM poverty) for the four packages. SOURCE: Estimates from TRIM3 commissioned by the committee.

child allowance are more than offset by the gains in employment and earnings associated with the expanded EITC and CDCTC programs. Indeed, the net effect of this full set of policy and program changes is to increase employment among adults living in low-income families by more than 600,000 and earnings by more than $13 billion.

None of these estimated changes in work and earnings is affected very much by the 2018 tax reforms (refer to Table 6-3). These simulations show that a package approach to child poverty reduction can bring children out of poverty and deep poverty while simultaneously inducing hundreds of thousands of their parents and other adults living in their households to enter the paid labor market.

CONCLUSION 6-1: Two program and policy packages developed by the committee met its mandated 50 percent reduction in both child poverty (defined by 100% of the Supplemental Poverty Measure [SPM])

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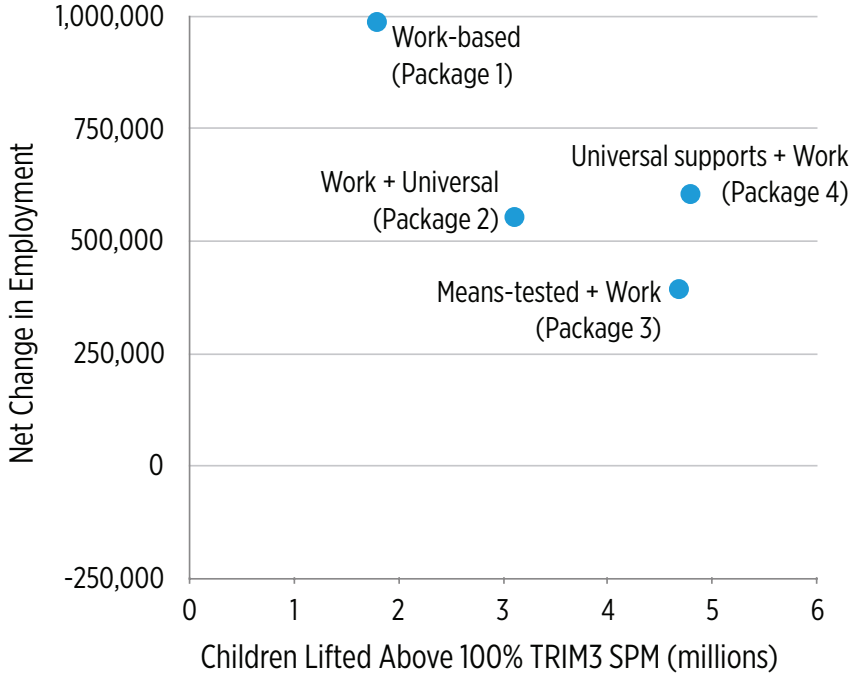

FIGURE 6-6 Simulated net change in employment, based on the 2015 tax law, by number of children lifted out of poverty for the four packages.
NOTE: Changes in employment are limited to individuals living in households with incomes below 200 percent of SPM poverty.
SOURCE: Estimates from TRIM3 commissioned by the committee.

and deep poverty (defined by 50% of SPM). The first of these packages combines work-oriented policy expansions with increases in benefit levels in the housing voucher and Supplemental Nutrition Assistance Programs. The second package combines work-oriented expansions with a child allowance, a child support assurance program, and elimination of immigrant restrictions on benefits built into the 1996 welfare reforms. Both packages increase work and earnings and both are estimated to cost between $90 and $111 billion per year.

CONCLUSION 6-2: The committee was unable to formulate an evidence-based employment-oriented package that would come close to meeting its mandate of reducing child poverty by 50 percent. The best employment-oriented package it could design combines expansions of the Earned Income Tax Credit, the Child and Dependent Care Tax

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Credit, a minimum wage increase, and a promising career development program. Although this package is estimated to add more than a million workers to the labor force, generate $18 billion in additional earnings, and cost the government only $8.6 to $9.3 billion annually, its estimated reductions in child poverty are less than one-half of what is needed to meet the goal.

CONCLUSION 6-3: The committee combined two work-based and one income-support policy expansions in a package that was projected to reduce child poverty by one-third and deep child poverty by 40 percent, at an estimated annual cost of $44 billion. This package was estimated to increase employment by 550,000 jobs and earned income by nearly $10 billion.

REFERENCES

Isaacs, J.B., Lou, C., Hahn, H., Ovalle, J., and Steuerle, C.E. (2018). *Kids' Share 2018: Report on Federal Expenditures on Children through 2017 and Future Projections*. Washington, DC: Urban Institute. Available: https://www.urban.org/sites/default/files/publication/98725/kids_share_2018_0.pdf.

Sawhill, I., Rodrigue, E., and Joo, N. (2016). *One-Third of a Nation: Strategies for Helping Working Families*. Washington, DC: The Brookings Institution.

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7

Other Policy and Program Approaches to Child Poverty Reduction

Most of the program and policy ideas featured in Chapters 5 and 6 are modifications and combinations of decades-old social programs that have been studied extensively by academic researchers and policy analysts. Their evidence makes it clear who uses these programs, how a given program interacts with other programs to affect child poverty, and how the work effort of parents changes in response to changes in the programs themselves. That knowledge has been incorporated into the Transfer Income Model, Version 3 (TRIM3), which was used to simulate the poverty-reduction effects of changes to the programs and packages of programs presented in Chapters 5 and 6.

This chapter is devoted to evidence-based program and policy ideas that were considered by the committee but, for a variety of reasons, were not chosen for inclusion in Chapters 5 and 6. For most of them, research evidence was not sufficiently strong to support predictions of the magnitude and, in some cases, even the direction of impacts on child poverty rates. In other cases, although the research suggested that a reform was likely to decrease the number of poor children, it was not feasible to simulate the magnitude of the effect.

Some of the programs the committee chose not to simulate relate to families, in particular family planning and structure, including marriage, as well as to paid family and medical leave. For other reforms, such as block grants, mandatory employment programs, and expansion of the Temporary Assistance for Needy Families (TANF) program, the evidence on poverty-reducing impacts is ambiguous or incomplete. For health insurance programs such as Medicaid, we were thwarted by serious poverty measurement

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issues, which were raised in Chapter 2, are expanded on here, and are the subject of a paper commissioned by the committee (Korenman, Remler, and Hyson, 2017). Finally, we remind readers that many evidence-based program areas such as home visiting and early education may generate benefits that fall outside of the 10-year window dictated by our statement of task. These kinds of programs are not included in this or any other report chapters.

Although it was possible to estimate poverty reductions associated with the various program and policy options and combinations discussed in Chapters 5 and 6 for many demographic subgroups of interest, small sample sizes precluded reliable estimates for certain racial/ethnic groups, such as Asians and Pacific Islanders, American Indians, and Alaska Natives. This is a serious concern, particularly in the case of American Indian and Alaska Native (AIAN) children, whose poverty rates are very high. In the final section of this chapter, we use other sources of data, as well as findings from a paper the committee commissioned (Akee and Simeonova, 2017), to discuss policy issues involving AIAN children.

FAMILY PLANNING

Background

As we will note below, research has shown that unintended births are very common and that they have a high probability of leading to family incomes below the poverty line. Reducing unintended births is therefore an option often raised in discussions of how to reduce poverty. However, before reviewing the research on the issue and discussing the policy implications of that research, the committee considered the question of whether birth control *should* be used as a policy to reduce child poverty. Given the history in the United States of limiting the reproductive freedom of women, particularly low-income women and women of color (Gordon, 1976), any policy that aims to reduce unintended pregnancies may be construed as a policy designed to prevent poor women from having children. The committee strongly condemns any such coercive efforts and considers informed, voluntary access to effective contraception a basic health care right for women and men.

However, research shows large racial/ethnic differences in the implementation of expanded access to effective contraception among women of low socioeconomic status. One study found that low-socioeconomic status African American and Latina women have three times the odds of being offered long-acting reversible contraceptives as do their their low-socioeconomic status White counterparts (Dehlendorf et al., 2010), indicating that reproductive inequities may still exist. Thus, expanding

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unbiased, voluntary, and informed access to the contraception options that women feel are best for them may be a sound policy objective in and of itself, as long as it is pursued with child poverty reduction as a secondary consequence and not the primary goal.

As background, in the United States, mothers report that nearly one-half of all their pregnancies and over one-third of births are unintended (Guttmacher Institute, 2016; Mosher, Jones, and Abma, 2012). The rate of unintentional births varies considerably by poverty status. Between 2006 and 2010, 46 percent of births to women with household incomes below the federal poverty line were reported as unintended, as compared with 18 percent of births to women with incomes more than four times higher than the poverty line (Mosher, Jones, and Abma, 2012). Furthermore, women who experience an unintended birth are likely to do so again in the future (Rajan et al., 2017).

Recent studies have found that unintended births often limit women's economic mobility and increase the likelihood of poverty-level family incomes. Unintended pregnancies may prevent adolescents and young adults from earning a college degree and make it more difficult for them to obtain and keep stable, well-paying jobs (Sonfield et al., 2013; Waldfogel, 1998). Research also suggests that limited access to and awareness of effective birth control options makes unintended births more frequent, particularly among low-income women.

Might access to effective birth control methods reduce the child poverty rate? Using the FamilyScape 2.0 simulation model, Karpilow and his colleagues (2013) found that if 25 percent of women under age 30 who are not currently using any contraception were to begin using more effective hormonal contraception methods (such as intrauterine devices or implants), the poverty rate among newborns would be reduced by one-half of a percentage point in a single year. They estimate that a sustained 25 percent uptake for each subsequent cohort of younger women would reduce child poverty by at least 2 percentage points over the 10-year period. The reduction in child poverty might be even greater over this timeframe if the indirect effects of delaying pregnancy are considered. For example, if women delay pregnancy until they intend to give birth, they may seek more schooling or have better employment opportunities, which in turn may decrease the likelihood that their child will be born into poverty (Sawhill and Venator, 2015).

Implications for Policy

The research literature on unintended births has established three facts relevant to national policy on birth control methods that would reduce child poverty by allowing women who want to delay births to do so effectively. First, since a disproportionate share of unplanned pregnancies are

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experienced by women living in poverty, any reduction in the incidence of unplanned pregnancies will lower the child poverty rate.

Second, highly effective means of birth control have been developed over the past two decades. Although the contraceptive pill afforded women and couples greater control over fertility, its impact on pregnancy prevention has been inconsistent, largely because many women have difficulty remembering to take the pill on a regular basis (Bailey, 2013). Intrauterine devices and subcutaneous forms of birth control, collectively referred to as long-acting reversible contraception (LARC), have been found to be 20 times as effective in preventing pregnancy as older methods of birth control, such as contraceptive pills and condoms (Winner et al., 2012).

Third, evidence suggests that increasing access to effective contraception can help reduce the number of unintended births. In 2009, Colorado launched its Colorado Family Planning Initiative with the goal of providing women with no-cost access to and information about the most effective forms of contraception, especially LARC (Colorado Department of Public Health and Environment, 2017). Over a 6-year period, the rate of LARC use quadrupled in Colorado Title X clinics,[1] and the rate of unintended pregnancies declined by 40 percent among teens and by 20 percent among young women ages 20 to 24 (the two groups with the highest rates of unintended pregnancy). The average mother's age at first birth also increased by 1.2 years in the state. In addition, the Colorado Family Planning Initiative saved a total of around $68 million in entitlement program costs (combining federal and state costs) for women ages 15 to 24 and their infants (Colorado Department of Public Health and Environment, 2017).

Training health center staff in proper contraceptive counseling techniques appears to be a promising way of helping women who wish to avoid pregnancy to use voluntary birth control more effectively. A recent national study of family planning clinics in the United States randomly assigned staff in 20 clinics to receive training in providing counseling and inserting IUDs or progestin implants on the same day when women came for advice and counseling about birth control and opted to try these methods; staff in 20 control-group clinics provided standard care. Researchers found that women receiving services from the experimental clinics were less than one-half as likely to become pregnant within the next 12 months (Harper et al., 2015).

In cooperation with local and state governments, Upstream USA[2] trains clinic staff in effective methods for counseling women about available birth

[1] Title X clinics are family planning clinics that provide family planning and related preventive health care services to low-income and uninsured individuals. See https://www.hhs.gov/opa/title-x-family-planning/about-title-x-grants/index.html for more information about Title X grants.

[2] For more information on Upstream USA, see https://www.upstream.org.

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control options and provides information about how federal programs such as Title X and Medicaid can help clinics finance their operations. Working with Delaware's state government, in 2014 Upstream USA carried out a statewide initiative aimed at increasing access to contraceptives. An evaluation of its efforts showed that among women ages 20 to 39 who were Delaware Title X family planning clients, use of LARC roughly doubled, from 14 to 27 percent, while use of less effective birth control measures, including the pill, the patch, and the ring, decreased substantially. These changes were projected to decrease the rate of unintended pregnancy among this population by 15 percentage points between 2014 and 2016 (Welti and Manlove, 2018).

These studies show that it is possible to increase access to and requests for LARC during a single regular visit to a health clinic, thereby reducing the rate of unintended pregnancy. Although the studies did not provide separate estimates for poor and nonpoor women, the fact that they identified very strong results among women using public clinics suggests that reducing unintended pregnancies might well be effective in reducing the child poverty rate. Research suggests, however, that it is possible for racial bias to influence clinician recommendations in contraceptive counseling sessions (Dehlendorf et al., 2010; Higgins, Kramer, and Ryder, 2016). Thus, the use of patient-centered care practices in health centers could be beneficial in protecting the reproductive autonomy of the women receiving counseling (Higgins, 2014).

In contrast to the positive outcomes that result from increased communication and training, policies that restrict women's access to family planning services have led to reductions in the use of effective contraception and increases in the number of births (Fischer, Royer, and White, 2017; Lu and Slusky, 2016; Stevenson et al., 2016; Woo, Alamgir, and Potter, 2016). Texas provides a valuable case study. Between 2011 and 2014, the Texas state legislature substantially cut funding for women's health programs, eliminated Planned Parenthood from fee-for-service programs, and significantly restricted access to abortion. Because of these policy changes, more than one-half of the abortion-providing women's health clinics and a quarter of publicly funded family planning clinics in the state closed. Stevenson et al. (2016) found that the elimination of Planned Parenthood from the state's family planning program was associated with a one-third reduction in Medicaid claims for LARC and a 1.9 percentage-point increase in Medicaid-related births in Texas (Stevenson et al., 2016).

CONCLUSION 7-1: Increasing both awareness of and access to effective, safe, and affordable long-acting reversible contraception (LARC) devices reduces the incidence of unplanned births, which could in turn reduce child poverty. In contrast, policies that reduce access to LARC

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by cutting Medicaid, Title X funding of family planning services, or mandated contraceptive coverage appear to increase the number of unintended births and thus also child poverty.

FAMILY COMPOSITION

Background

The poverty rate for children in single-parent families is roughly five times the rate for children in married-couple families (Semega, Fontenot, and Kollar, 2017). Moreover, as detailed in Chapter 4, the rise of single-parent family structures and the increase in the number of births outside marriage played important roles in child poverty trends during the last quarter of the 20th century, although as discussed in earlier chapters they have become less important since 2000. Thus, policies that increase the share of children living in married-couple or other two-parent family structures are likely to reduce child poverty rates (Gibson-Davis, 2016). By the same token, existing policies with provisions that reduce marriage rates, even if unintentionally, are likely to increase child poverty.

Implications for Policy

Social scientists have conducted numerous studies to determine how various social policies might influence the decisions that teens and adults make about family composition (Lopoo and Raissian, 2014). Some of these studies have focused on the impacts on marriage of past and current safety-net policies, while others have evaluated attempts by the George W. Bush administration to increase the share of children living in two-parent households (whether the parents are married or not) (Haskins, 2015).

Much of the rigorous research that has been conducted on the effects of existing programs focuses on the Earned Income Tax Credit (EITC), Medicaid, and the TANF program (Moffitt, 2016). In the case of the EITC, a recent review (Nichols and Rothstein, 2016) describes how low-income couples with one wage earner are incentivized by the EITC to marry, while two-earner couples are effectively penalized for marrying if their joint income brings them above the EITC eligibility level. These kinds of effects are unavoidable in a tax system that taxes income at the family rather than the individual level.

Examining the expansion of the EITC in the 1990s, Eissa and Hoynes (2003) found changes in marriage rates that are consistent with these incentives, increasing marriage rates by 1 to 5 percentage points for families with incomes below $25,000 but reducing marriage rates by 1 percent for families with incomes between $25,000 and $75,000. Other studies have

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found more uniformly negative impacts on marriage (e.g., Rosenbaum, 2000), while some have found null or very small effects (Dickert-Conlin and Houser, 2002; Ellwood, 2000; Herbst, 2011; Michelmore, 2018). Summarizing this literature, Nichols and Rothstein (2016) conclude only that links between the EITC and marriage are poorly understood.

The limited literature on Medicaid's marriage effects has focused on changes in marriage in response to expansions of Medicaid coverage. Until the mid-1980s, the strong link between Medicaid and the Aid to Families with Dependent Children (AFDC) Program meant that most married couples were ineligible for Medicaid coverage (Buchmueller, Ham, and Shore-Sheppard, 2016). Yelowitz (1998) found that after the Medicaid expansions of the 1980s and 1990s, women whose children were all eligible for Medicaid were slightly (1.5%) more likely to be married than women with at least one ineligible child. However, at least some of that effect may have been due to choices about childbearing, and it is possible that some of the effect is actually accounted for by the EITC expansions (Meyer and Rosenbaum, 2001).

Most studies of the effect of the TANF program on marriage compare it with its predecessor, the AFDC program, which it replaced as part of the welfare reforms of the 1990s. Because TANF is a more restrictive program than AFDC, and because it greatly reduced the program caseload, the effect of the reform can be broadly interpreted as showing the effects of reducing the availability of welfare programs on marriage. Reviews of the literature in this area (Grogger and Karoly, 2005; Ziliak, 2016) find mixed evidence for any effect: A few studies find effects for some subgroups but not others, while other studies find no effects for any group. One of the higher-quality studies, by Dunifon, Hynes, and Peters (2009), highlights the murky nature of program results, finding few consistent effects of welfare policy measures on the likelihood that a child is living with married, cohabiting, or single parents.

Overall, the existing literature on marriage incentives and disincentives provides little reason to believe that current social policies have had a substantial impact.[3] This may be because marriage, cohabitation, and divorce are affected by many economic and noneconomic factors other than transfer programs—including men's employment and earnings levels, women's employment potential, nonmarital birth rates (see above), and levels of community and family support, to name just a few.

In response to evidence suggesting that many low-income couples have a strong desire to marry but often do not because of financial and social

[3] We do not cover the effects of child support enforcement programs on marriage and cohabitation, but the results of the literature on that program are also inconclusive (Lopoo and Raissian, 2014).

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obstacles (Gibson-Davis, Edin, and McLanahan, 2005), the George W. Bush administration launched an ambitious effort to promote two-parent relationships and provided funding for the Administration for Children and Families to support rigorous evaluations of three different programs.

The Building Strong Families project developed and tested a number of voluntary programs that offered relationship-skills education and other support services to unmarried couples who were expecting or had just had a baby. Over the course of 3 years, more than 5,000 couples living in eight states participated in the evaluation of the Building Strong Families program, at an average program cost of about $11,000 per couple. A random-assignment evaluation found that the project had no overall effects on the quality of couples' relationships, the chances that they would stay together or get married, their coparenting relationships, or their family incomes. Of the two statistically significant effects generated by the programs, one was negative (a reduction in some aspects of father involvement) and one was beneficial (a modest reduction in children's behavioral problems). Couples in one of the eight program sites—Oklahoma City—were more likely to still be living together 3 years after the program began, but that effect did not appear to translate into improved child well-being (Wood et al., 2012).

The Supporting Healthy Marriage Program tested the effectiveness of a skills-based relationship education program designed to help low- and modest-income married couples strengthen their relationships and to support more stable and nurturing home environments. An evaluation showed that the program did not lead more couples to stay together and had little effect on indicators of coparenting, parenting, or child well-being. However, it did find a consistent pattern of modest but sustained positive impacts of the program on the quality of the couples' relationships (Lundquist et al., 2014).

The Community Healthy Marriage Initiative was a community-level effort to improve relationship skills and promote healthy marriages. It brought together multiple stakeholders from a community to develop media campaigns, offer relationship courses, make service referrals, and in other ways attempt to generate a critical mass of community awareness and positive behaviors. An evaluation of the project showed no significant effects on community-level outcomes for parenting measures, awareness of the program, or marriage options and attitudes (Bir et al., 2012).

As compared with the discouraging results from these large-scale studies, a few smaller-scale studies have produced results that some analysts believe to be more hopeful (e.g., Frimmel, Halla, and Winter-Ebmer, 2012). Perhaps the most frequently mentioned is the evaluation of the Parents and

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Children Together (PACT) Program (Avellar et al., 2018), which showed beneficial impacts on the participating couples' relationship quality, conflict behavior, coparenting relationship, and marriage rates 1 year after the program ended. Although well conducted, this study has a few limitations. One is that all participating couples were already in long-term (5 years or longer) marital or co-habitation relationships at the beginning of the study, so the marriage impact in the PACT study was one of reducing breakups rather than increasing marriage rates. Also, in contrast to the longer-run follow-ups for the three Bush administration programs, results of the PACT evaluation were obtained after only 1 year of program participation, and it is commonplace for intervention impacts to fade out over time. The committee judged that findings like those from the PACT study, although interesting and potentially important, should not override our conclusions based on the results of well-conducted, longer-term studies like those in the Bush marriage initiative.

At the state level, a related policy initiative in the early 1990s involved the passage of laws streamlining the process of paternity establishment in hospitals at the time of the birth. Rossin-Slater (2017) finds that these laws substantially increased paternity establishment and also increased the amount of time that absent fathers spend with their children and the amount of money they spend with them as well. However, the laws had the unintended effect of *reducing* marriage rates. As a result of the decline in marriage among these mothers, the mothers were more likely to marry or cohabit with men who were older and had higher employment rates than the males with whom they had conceived their baby. Moreover, the fathers who would have married the mothers in the absence of these laws were less involved with the child than they would have been otherwise. Averaged across the entire sample of both married and unmarried parents, the effects of these laws on observable measures of fathers' involvement with their children are either zero or negative.

CONCLUSION 7-2: Although increasing the proportion of children living with married or cohabiting parents, as opposed to single parents, would almost certainly reduce child poverty, the impacts of existing social programs designed to promote such a change are uncertain. Evidence from these programs is inconclusive and points to neither strong positive nor negative effects. In the early 2000s, an ambitious attempt to develop programs that would improve couple-relationship skills, promote marriage, and improve child well-being failed to boost marriage rates and achieve most of their other longer-run goals.

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PAID FAMILY AND MEDICAL LEAVE

Background

The unmet health needs of parents and children can compromise a family's ability to sustain full-time employment and generate earnings sufficient to keep family income above the poverty line. As documented in Chapters 3 and 8, low-income children and adults are more likely than their higher-income counterparts to experience health problems (Case, Lubotsky, and Paxson, 2002; Centers for Disease Control and Prevention, 2013). Further, taking time off from work to care for a sick family member is a challenge for some low-income parents, as some may not be eligible for family and medical leave or have access to paid leave (Joshi et al., 2014; Mathur et al., 2017). When workers lack access to paid leave, families must choose between addressing health needs and continuing to work to earn income (Boushey, 2016). When these individuals do take leave, they forgo wage income, which can put them at risk of falling—or falling deeper—into poverty because of inadequate savings to accommodate financial disruptions (see Chapter 8).

The United States is the only nation among the 34 members of the Organisation for Economic Co-operation and Development (OECD) that does not guarantee paid leave to mothers of infants (Raub et al., 2018b), and it is one of only two OECD nations that does not guarantee leave for personal illness (Raub et al., 2018a). In most OECD countries, benefit levels (as determined by wage replacement rates) provide median wage earners with sufficient income to remain above the poverty line during paid leave, although fewer countries ensure benefits that allow minimum wage earners to remain above the poverty line (Bose et al., 2018).

Current U.S. family and medical leave policy comprises a variety of laws enacted at the federal, state, and local levels to provide for unpaid or paid leave; additionally, in some cases employers have adopted their own policies. The national policy governing family or medical leave is embodied in the Family and Medical Leave Act (FMLA), which entitles eligible employees (roughly one-half of all workers) to take unpaid, job-protected leave for family and medical reasons with continuing group health insurance coverage (Joshi et al., 2014; Klerman, Daley, and Pozniak, 2012). Hispanic workers are less likely to be eligible for unpaid FMLA than other workers, and both Black and Hispanic workers are less likely than other workers to be both eligible for and able to afford unpaid FMLA (Joshi et al., 2014).

Seven states and Washington, D.C., as well as more than 70 municipalities, have established paid family and medical leave for targeted populations (National Partnership for Women and Families, 2018a, 2018b).

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Yet in 2016, only 6 percent of low-wage workers had access to employer-provided paid family leave, compared with 25 percent of higher-wage workers (Bureau of Labor Statistics, 2017).

Implications for Policy

Access to paid family and medical leave has the potential to reduce child poverty by increasing employment and improving maternal and child health, although the potential effects of paid family and medical leave on employment and wages are ambiguous (Klerman and Leibowitz, 1994; Olivetti and Petrongolo, 2017). Paid leave might reduce human capital by discouraging employers from hiring, leading to a decline in wages and employment. On the other hand, paid leave might increase job continuity for workers, which could result in higher wages and employment levels.

Likely impacts of paid family and medical leave on child poverty depend on their policy designs. Providing paid leave through a social insurance program could minimize employer costs and prevent wage and employment discrimination against individuals who are perceived as likely to take leave (Mathur et al., 2017). On the other hand, paid family and medical leave provided through an employer mandate might have no net effect on or even increase child poverty because employers might seek to reduce costs by avoiding hiring covered workers or workers they believe are likely to take leave (Mathur et al., 2017).

Some of the best U.S.-based evidence on the impacts of paid leave comes from California, which enacted a paid leave program that began in 2004. Under this program, workers are entitled to a maximum of 6 weeks' leave to care for a newborn, an adopted child, or an ailing family member and are paid about 60 to 70 percent of their normal wages, up to a maximum benefit based on the state's average weekly wage. A tax on all employees finances this program.

Evaluations of California's Paid Family Leave policy have shown that it has generated positive impacts on continued parental employment, when compared with the counterfactual of no provision being made for parental leave.[4] For example, the program made it more likely that mothers would return to work after childbirth (Baum and Ruhm, 2016) and increased labor force attachment around the time of childbirth (Byker, 2016). It increased leave-taking among mothers and fathers (Bartel et al., 2017; Rossin-Slater,

[4] In 2016, California increased the weekly wage replacement percentage from approximately 55 percent to approximately 60-70 percent (from $50 to $1,216). The evaluations of California's Paid Family Leave policy included in this chapter represent data collected prior to 2016. For more information on California's Paid Family Leave policy, please see https://www.edd.ca.gov/disability/FAQ_PFL_Benefits.htm.

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Ruhm, and Waldfogel, 2013) but also increased work hours for mothers 1 to 3 years after childbirth (Baum and Ruhm, 2016; Rossin-Slater et al., 2013). On the downside, one study of the program found that it was associated with an increase in unemployment among young women, both relative to men and older women in California and relative to young women, men, and older women in states without paid leave (Das and Polachek, 2015). This finding is consistent with Gruber (1994) who found that federal mandates that maternity benefits be included in health insurance plans reduced female employment.

Turning to employers, one study of the California Paid Family Leave policy suggests that it had no burdensome effects on employers' wage costs. After matching paid leave and state disability insurance program data to employee and employer data from the California Employment Development Department, researchers found no evidence that an increase in the share of employees who take leave is associated with an increase in wage costs or a significant rise in employee turnover rates (Bedard and Rossin-Slater, 2016).

The California Paid Family Leave policy also produced changes associated with improved health. In particular, it doubled the average length of time women took for maternity leave, from 3 weeks to between 6 and 7 weeks, which can have a positive impact on infant health (Rossin-Slater et al., 2013). Two California studies found that paid family and medical leave has increased the incidence of breastfeeding relative to other states without such policies (Huang and Yang, 2015) and that children in early elementary school had positive health outcomes, such as a lower probability of being overweight, compared with the period before the introduction of paid leave (Lichtman-Sadot and Bell, 2017).

There are few methodologically strong studies of the direct impact of paid leave policies on child poverty, however. Studies that have examined California's Paid Family Leave policy show positive effects on employment and wages (Baum and Ruhm, 2016; Rossin-Slater, Ruhm, and Waldfogel, 2013) but they have not isolated the effects of the policies on lower-income families.

CONCLUSION 7-3: Evidence suggests that paid family and medical leave increases parents' ability to continue in employment and has positive impacts on children's health, although it might also reduce employment among women potentially eligible for such leave. It is important to continue evaluating the labor market, health, and child-poverty impacts of states' paid-leave laws.

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MANDATORY EMPLOYMENT PROGRAMS

Background

Both common sense and a wealth of research, as documented in earlier chapters, point to increases in steady employment, wage rates, and earnings as among the strongest correlates of escaping poverty (Sawhill, Rodrigue, and Joo, 2016). Policies for increasing employment and earnings among the poor in order to help them escape poverty include efforts to build basic skills through education, government-sponsored training programs to help those pursuing specific skills (like the WorkAdvance Program featured in Chapter 5), work-related assistance such as child care subsidies, and purely financial incentives designed to work through the tax system, especially tax credits like the EITC. All of these have the potential to make a difference, and a large body of research evidence shows that many of them generate modest to substantial increases in employment and subsequent reductions in family poverty.[5]

This section focuses on another employment policy approach: *mandatory* employment programs for recipients of government transfers. Mandatory work programs have been attached to the TANF program, apply to some recipients of the Supplemental Nutrition Assistance Program (SNAP), have been tested in public housing in a few areas around the country, and most recently have been adopted in some states for recipients of Medicaid benefits. Mandatory job search requirements have also been a longstanding component of state unemployment-insurance programs in the United States.

Mandatory employment programs have the potential to be more effective than purely voluntary incentive programs at increasing work and earnings among transfer program recipients and, therefore, at reducing poverty. Moreover, they garner considerable public support because they are perceived to reinforce widely accepted social norms about the value of work.

However, while appealingly simple in theory, mandatory employment programs are complex in detail and application. Almost all of them provide for exemptions, and it is difficult to draw the line separating individuals who are from those who are not expected to work, a line that has major implications for the success of such mandates in reducing child poverty.

[5] The importance of financial work incentives in increasing employment and reducing poverty is reinforced by several randomized controlled trials conducted in the 1990s that tested major increases in earnings disregards of cash welfare programs. These programs included the Minnesota Family Investment Program, the New Hope program, and the Canadian Self-Sufficiency program. These programs often decreased poverty as well as increasing employment (see Blank, 2002, for a comprehensive review). While these programs reinforce the view that financial incentives can result in poverty reduction, their design is quite different than any program being considered today. The committee's Chapter 5 policy for expansion of the EITC represents its preferred program of this type.

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Coupling mandated employment with work supports like child care, job search assistance, and transportation assistance is often the key to success, because, as we discuss in Chapter 8, low-income families face many barriers to work related to these factors. But these supports can be expensive and cumbersome to administer.

Another challenge in implementing mandatory employment programs is determining the amount of time recipients should be given to search for jobs that match their skills and pay at least the minimum wage. Finding the right balance, while also taking into account each recipient's barriers to work, requires skill and experience on the part of job counselors and a supportive administrative structure.

Implications for Policy

The committee sought to develop mandatory employment policy options that could be included in our Chapter 5 simulations. Given the overriding importance of research evidence in the committee's deliberations, we conducted an extensive review of the research on the impacts of mandatory employment programs on poverty. Some of the strongest evidence in support of these programs comes from randomized controlled trials that were published in the 1990s, when a large number of experiments were conducted on a diverse set of mandatory employment programs in several states and localities.[6] Most of these employment-related programs were directed at recipients of benefits from the former AFDC program, most of whom were single mothers, so the bulk of the available evidence relates to that demographic group.

A particularly useful and comprehensive summary of the many randomized clinical trials conducted over that period is provided in Greenberg, Deitch, and Hamilton (2009). The authors divided mandatory employment programs for single mothers into four types, three of which required either (1) work "per se" experience, often with unpaid jobs at nonprofits or government agencies (frequently after a period of job search), (2) an immediate job search, or (3) immediate enrollment in education or training prior to either job search or work. A fourth group included a mixture of mandates, such as (1) through (3), plus work supports such as child care, with recipients' specific mandates based on an assessment of their individual needs. Programs of each type were tested across a number of cities.

[6] A randomized controlled trial evaluation of the impact of work requirements in the SNAP program is currently under way. It is being conducted by Mathematica Policy Research, in cooperation with other organizations, with funding from USDA (see https://www.mathematica-mpr.com/our-publications-and-findings/projects/snap-employment-and-training-pilots). Initial findings are expected in 2019, with a final report to be published in 2021.

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The results of the clinical trials showed that over a 3- to 5-year period following random assignment, the family incomes of participants in the "work per se" programs rose only minimally, while incomes of participants in the "immediate job search" and "immediate enrollment in education/job training" programs fell because benefit losses exceeded increases in earnings. In contrast, mixed programs tailored to recipients' needs generally produced clear increases in family income (Greenberg, Deitch, and Hamilton, 2009, Table ES.1).

The mixed and tailored program models were therefore the only types that could be expected to increase family income and reduce poverty. In the case of the mixed model, comprehensive programs at five different sites were tested, and the analysis showed net income effects (discounted over a 5-year period) ranging from –$745 to $2,651 (Greenberg, Deitch, and Hamilton, 2009, Table B-11). These 5-year summed effects correspond to an average annual income gain of $340 per year, an amount unlikely to reduce child poverty to any appreciable degree.

A smaller number of randomized clinical trials have assessed impacts on employment and family income for two-parent families. The best-known and most skillfully implemented study evaluated the California Greater Avenues for Independence (GAIN) Program (Riccio, Friedlander, and Freedman, 1994). The GAIN program was a statewide initiative targeted toward increasing employment and self-sufficiency for individuals who received AFDC cash welfare program (Riccio, Friedlander, and Freedman, 1994). The impacts of mandatory work programs on participants in this program (who, unlike the Greenberg et al. [2009] study participants, were not grouped into categories of program types) were generally unfavorable. By the 5th year after random assignment, net family income had fallen by an average of $260 per year, and some sites reported annual income losses exceeding $2,000. While programs implemented at some of the sites did produce substantial gains in household income, the evaluations were unable to identify the program features that made this difference.

Evidence on the impacts of mandatory work programs also comes from the implementation of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which required that all states mandate work for most recipients of benefits under the new TANF program. A number of studies have sought to estimate the effects of this legislation on employment, poverty, and other outcomes (Blank, 2002; Grogger and Karoly, 2005; Hamilton, 2002). The most consistent evidence indicates that the legislation reduced welfare receipt and increased employment. But while these work mandates may have generated short-run reductions in poverty, they may have simultaneously increased the number of families with incomes far below the poverty line (Bitler, Gelbach, and Hoynes, 2006). However, it is problematic to draw conclusions about work mandates from this evidence,

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because impacts on families were generated by multiple features of the legislation, including mandatory work requirements as well as time limits, block grants, and in some cases earnings disregards. Researchers have been unable to identify the relative contributions of mandatory employment and other features to the outcomes that have been observed.[7]

Given that the evidence on the effects of mandatory employment under TANF is inconclusive, the best available evidence on child poverty reduction comes from the experimental evaluations just described, which were conducted in the 1990s. The question remains: Do the increases found in the family incomes of single mothers participating in the mixed programs that were the focus of those evaluations warrant conducting simulations of the impacts of such program for today's transfer recipients? We conclude that they do not.

The AFDC caseload in the early 1990s was very different from the caseloads of major programs today, both in its demographic composition and in the nature of participants' experience and employment-related education. The SNAP program, for example, includes far more nondisabled, nonelderly able-bodied workers than AFDC did, in addition to including large numbers of elderly and disabled individuals. The Medicaid program, with its high income-eligibility levels, covers more workers than AFDC did in the past. The labor market and the availability of other work supports, such as child care and the EITC, are also very different today.

CONCLUSION 7-4: There is insufficient evidence to identify mandatory work policies that would reliably reduce child poverty, and it appears that work requirements are at least as likely to increase as to decrease poverty. The dearth of evidence also reflects underinvestment over the past two decades in methodologically strong evaluations of the impacts of alternative work programs.

BLOCK GRANTS

Background

Block grants provide federal assistance, typically to state governments, for broadly defined functions such as social services. Unlike categorical grants, federal block grants give states considerable flexibility in allocating and spending the allotted funds. In the case of safety-net programs, block

[7] See the extensive discussion of this issue in Blank (2002). One study which attempted to separate the work components concluded that "work requirements alone have relatively weak effects on family income and poverty" (Grogger and Karoly, 2005, p. 171).

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grants have the potential to affect child poverty rates, and in principle they can be a tool for reducing poverty.

For two key reasons, however, the committee chose not to simulate block grant proposals and reforms in Chapter 5. First, very little evidence concerning the impact of block grants on poverty rates meets the standard of rigor we imposed on the other reforms we simulated. Second, block grants come in a variety of forms, and knowing how they are constructed is crucial in assessing any poverty impacts they might have. Accordingly, there is no simple answer to the question of whether block grants are likely to increase or reduce poverty.

Implications for Policy

Key features of block grants can be gleaned from states' experience with several existing block grants—in particular, the TANF block grant, the Title XX Social Services block grant, and the Child Care and Development block grant.[8] A fundamental feature is the block grant's initial funding level. Ideally, the grant level is geared to a state's level of need, but determining how that compares with the level of funding already received by the state is usually a contentious issue. Generally, block grants require "maintenance-of-effort" provisions to keep total spending at a reasonable level and encourage the recipient state's commitment to program effectiveness and quality. Maintenance-of-effort provisions typically require states to continue to contribute a certain amount of their own funds, and penalties are in place for violating that requirement.

A potentially even more important feature in a block grant's design is how its funding will change over time. Inflation-adjusted expenditures from block grants will fall as time goes by if funding amounts are fixed in nominal dollars and not allowed to change with inflation, unless states make up the shortfall with their own additional funds. Drops in funding for programs directed at children are likely to increase child poverty unless the level of need in the state is also dropping.[9] Additionally, to avoid inequities in federal support over time, block grants also need to adjust to changes in a state's level of need. Recessions are a special case of increased need;

[8] There is extensive literature on block grants that discusses in greater detail the issues raised here; see Dilger and Boyd (2014); Finegold, Wherry, and Schardin (2004); and Stenberg (2009).

[9] In the TANF program, the caseload has fallen significantly since the 1990s, so that real spending per recipient has not dropped as much as the drop in real total TANF spending. However, a large share of the block grant is now funding activities other than cash assistance and work supports, and the participation rate of financial eligibles has fallen, demonstrating that the TANF program is now serving a smaller share of the needy population (Bitler and Hoynes, 2016).

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without rules stipulating that adjustments are to be made in response to recessions, a block grant is not likely to be effective in reducing poverty during a downturn.

A common argument in favor of block grants is that they enable states to be flexible in addressing the needs of their populations and responding to the will of their voters. However, in some cases that flexibility can allow states to use block-grant funds to finance other, unrelated state activities, contrary to the intent of the grant. As a result, a key challenge in designing block grants is to formulate legislation in a way that constrains states, as intended by Congress, and prevents them from spending funds for unintended purposes. This raises a philosophical question: To what extent should the federal government restrict the states' flexibility? The answer to that, in turn, depends on how much weight should be given to voters' interest in supporting the poor in states other than their own and how important it is to have a uniform floor below which poor families are not allowed to fall.

The TANF block grant is a prime example worth examining, since it allows states considerable flexibility in spending block-grant funding. States vary widely in the amount of money they spend from this grant on cash assistance or a variety of other programs, and they also vary widely in the amounts they allocate per family at different income levels.[10] Unfortunately, we know very little about how states' choices relate to changes in state child-poverty rates.[11] States' reporting requirements under TANF are quite minimal, so federal policy makers and researchers are unable to determine whether the funds are being spent in keeping with the letter or spirit of the block grant.[12] All of these issues illustrate the challenges that are inherent in the design and operation of block grants, which will in turn affect the degree to which these grants are able to reduce the poverty rate.

CONCLUSION 7-5: Block grants that are adequately funded and sustained over time, and that provide for countercyclical relief, may serve local populations well by providing more fiscal flexibility for state

[10] See Falk (2016) for a detailed discussion of the TANF block grant. In FY2016, for example, overall, states spent 24% of their block grants on cash assistance, 11% on work-related activities, 20% on early care and education (child care and preschool), and the other 45% on a variety of activities including program management, state EITCs, and child welfare (https://www.acf.hhs.gov/ofa/resource/tanf-financial-data-fy-2016).

[11] Some have suggested that states should be required to put aside some fraction of funds to conduct evaluations of the poverty impacts of their programs. This would provide important information to help states as well as Congress assess the grants' impacts.

[12] Beginning in federal fiscal year 2015, the Administration for Children and Families has required more detailed financial reporting from the states, leading to considerably more detail on spending categories than had been the case in prior years.

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and local governments. However, block grants that are inadequately funded, fail to be sustained, or lack provisions for countercyclical adjustment have resulted in reduced support for low-income families and in increased poverty. In addition, most block grants require only limited reporting and almost no evaluation, which decreases the likelihood that their funds will be used for their intended purposes.

THE TANF PROGRAM

Background

On a bipartisan basis, Congress created the TANF program, which was signed into law by President Clinton in 1996. The legislation converted what was previously known as AFDC from a matching grant to a block grant program, introduced work requirements and time limits, and imposed a large number of conditions on the states. Subsequent to the reform, the caseload in the program fell dramatically, and by 2000 it was only a little more than one-half of what it had been in 1995, prior to passage of the TANF legislation (Office of the Assistant Secretary for Planning and Evaluation, 2008). Similarly, expenditures on cash assistance for the affected families dropped by nearly one-half relative to expenditures on cash assistance in 1995 (Falk, 2015).[13]

One of the chief goals of the 1996 law was to increase employment and reduce poverty. Poverty could be expected to decline if the reform led to an increase in earnings and market income that exceeded the decrease in family income triggered by caseload reductions and a consequent drop in benefit receipt. As Figures 4-1 and 4-6 in this report show, market-based poverty fell sharply in the years after 1996, and most of the reduction in the overall poverty rate (including taxes and transfers) in the first 3 or 4 years after 1996 was a result of an increase in market income rather than expansions of transfers (although by 2015 most of the decline in overall poverty could be attributed to increases in transfers rather than increases in market income). However, the years after 1996 were also marked by improvements in the economy and the expansion of the EITC, both of which probably made independent contributions to poverty reduction.

A substantial research literature has attempted to distinguish the various contributions of these forces to poverty reduction. A review examining the short-run poverty impacts of well-evaluated pre-1996 programs

[13] Because expenditures in the TANF program have fallen so dramatically, the cash component of the program currently contributes very little to poverty reduction. Eliminating TANF would increase the child poverty rate by about one-half of one percentage point (Wheaton and Haldar, 2018).

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resembling TANF, as well as studies of TANF itself, concluded that while evaluations of most of the pre-1996 programs showed no effect on poverty, some of the studies of TANF itself suggested that it did indeed reduce poverty (Grogger and Karoly, 2005, Chapter 7). The review cautioned that after time limits became effective and block grants declined in real value, the program might show different effects. A later review by Ziliak (2016) found less evidence for the poverty-reducing impact of the 1996 legislation, which suggests that the longer-run impacts of TANF on poverty reduction may have been smaller than its short-run impacts.

Implications for Policy

The committee chose not to simulate an expansion of the TANF program or the elimination or removal of any of the provisions of the 1996 law, for several reasons. First, the evidence suggests that the TANF law did in fact reduce poverty in the short run, if not necessarily in the long run, so it is unlikely that the poverty rate would decline if the pre-1996 system were to be reinstated. Furthermore, it would be impossible to simulate changes in work requirements or block grants, for reasons explained in the preceding two sections. All other features of the law held constant, it is impossible to identify the relative contributions of those two components. Based on the available evidence, it would be an impossible task to simulate changes in the many features of state TANF programs and the impacts of these changes on the U.S. child poverty rate.

HEALTH, HEALTH INSURANCE, AND MEASURING POVERTY

Background

Few would disagree with the premise that all children deserve to be healthy and that public policy should enable them to benefit from the dramatic advances in U.S. medical care. Moreover, as documented in Chapter 3, investments in child health provide long-run benefits to society as a whole. Healthier children are more likely to grow up into healthier adults who will, as a consequence, work and earn more (Brown, Kowalski, and Lurie, 2015), experience greater happiness and life satisfaction (Council on Community Pediatrics, 2016), and be more likely to marry (Smith, 2009). Thus, policies aimed at improving child health could significantly reduce future poverty as today's children grow up and start families of their own.

Poverty reduction in the next generation falls outside of the committee's 10-year window. However, we considered how providing health insurance and taking other steps to improve children's health might reduce child poverty in the short run through such mechanisms as reducing families'

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out-of-pocket medical expenses and allowing parents to work (see Chapter 8). In addition, affordable health insurance may enable parents to seek needed health care for themselves and their children without falling behind on rent or other necessary expenses. Indeed, evidence suggests that good insurance coverage improves parents' mental health, presumably by reducing stress and worry about health-care costs (Baicker et al., 2013; Finkelstein et al., 2016).

Implications for Policy

The United States has always relied on a patchwork health insurance system, one that does not cover everyone and can strain families' ability to afford premiums, copayments, deductibles, and the costs of needed but uncovered care. At the same time, the federal government and the states have made substantial efforts to improve the health of poor children by providing access to medical care through Medicaid and the Children's Health Insurance Program (CHIP).

Abundant evidence suggests that Medicaid and CHIP, which have both grown in size over the years, have had a major positive impact on child health and well-being (see Chapter 3). As documented in Chapter 4, in terms of expenditures Medicaid is by far the largest benefit program for low-income families with children, accounting for expenditures of $180 billion annually. The CHIP program spends an additional $15 billion per year (Centers for Medicare & Medicaid Services, 2017). Yet despite their proven benefits, health insurance programs such as Medicaid and CHIP are not directly reflected in official poverty measures. Consequently, the committee was unable to estimate the full effects on child poverty (as measured by the Supplemental Poverty Measure or SPM) of Medicaid expansion or other improvements in health insurance coverage for low-income families using the TRIM3 simulations (see Chapter 2).

There are two main obstacles to including health care needs and health-insurance benefits in poverty measures. First, families' health care needs vary much more, both within and across years, than other needs such as food and housing. Incorporating these changing needs in poverty thresholds would require constructing a large number of poverty thresholds using, at a minimum, information on people's health conditions and family size. Second, there is no publicly available information on the costs of coverage for many of the different health insurance packages families have.

As detailed in a paper commissioned by the committee (Korenman, Remler, and Hyson, 2017), the SPM takes an indirect approach to these problems. SPM thresholds are based on needs for food, clothing, shelter, utilities, and a few other things, but do not include health care. The SPM resource definition includes nonmedical in-kind benefits but excludes

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health insurance benefits. Instead, the SPM deducts medical out-of-pocket (MOOP) expenses—for health insurance premiums, copayments, deductibles, and uncovered care—from family resources. When these expenses are deducted, some families that are above the poverty line defined by the Official Poverty Measure (OPM) drop below the SPM poverty line. Conversely, reductions in MOOP as a result of Medicaid expansion, for example, will add to family resources and reduce measured SPM poverty, all else being equal.

Yet the National Research Council (1995, p. 236) has acknowledged that its indirect approach for taking into account medical care benefits and costs (the basis for the SPM) was not fully satisfactory, because ". . . it does not explicitly acknowledge a basic necessity, namely, medical care, that is just as important as food or housing. Similarly, the approach devalues the benefits of having health insurance, except indirectly." In the case of people who defer medically necessary care because they lack affordable insurance or access to free care, the MOOP deduction is too small—consequently, they appear to be better off than they actually are.

In the same paper commissioned by the committee from Korenman, Remler, and Hyson (2017), the authors critique various ways of accounting for health care needs and health insurance benefits in poverty measurement. Their critique covers, among other methods, the SPM indirect approach and the fungible or recipient-value approach of adding a portion of the market value of health insurance to family resources (see, e.g., Winship, 2016, Figure 2). They identify problems in each approach, and conclude by suggesting that health insurance costs, rather than health care needs, should be added to the SPM poverty thresholds and that the benefits from health insurance coverage (net of MOOP) should be included in resources. They name this proposed approach the Health-Inclusive Poverty Measure (HIPM).

Designating health insurance as a fundamental health care need would eliminate the problems of estimating care needs for inclusion in the thresholds, provided that certain conditions were met: Health insurance prices must not vary substantially with health conditions (otherwise, sicker people with higher-cost insurance may seem to be better off than they are), and it must be possible to designate a "Basic Plan"—namely, a plan that covers all health care that is deemed by society to be essential and for which cost-sharing requirements are capped. The Affordable Care Act (ACA) exchange plans make it possible to satisfy these conditions. The ACA-guaranteed issue and community rating regulations allow anyone to purchase health insurance at a price that does not depend on health status and that caps nonpremium MOOP.

As detailed in Korenman, Remler, and Hyson (2017), the HIPM starts with the SPM and then (1) adds health insurance needs to the SPM thresholds, using as the Basic Plan the unsubsidized premium of the

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second-cheapest Silver Plan available in a household's rating area; (2) adds the health insurance benefits received to resources; and (3) deducts non-premium MOOP for medical care received. Korenman, Remler, and Hyson (2017, Table 1) display SPM thresholds and HIPM thresholds for 2014 by family size and composition. The average threshold for all families with children is $39,745. Of this amount, the average material need (SPM threshold) is $27,662, and the average health insurance need is $12,083, or 30 percent of the HIPM threshold, which makes explicit the importance and high cost to families of obtaining health insurance (in the absence of subsidies). For a family with one adult and two children, the average HIPM threshold is $27,727, of which $6,949 is the health insurance need, constituting 25 percent of the threshold.

Using the HIPM approach, Korenman, Remler, and Hyson (2017, Table 2) estimate that Medicaid reduces child poverty by 5.3 percentage points, compared with a 4.4 percentage point reduction from other means-tested benefits such as SNAP and a 6.5 percentage point reduction from tax credits such as the EITC. To the extent that more states expand Medicaid, child poverty will be further reduced; to the extent that states introduce premiums, copayments, and deductibles for Medicaid, as some are doing under waivers from the federal government, child poverty will increase.

CONCLUSION 7-6: Despite the importance of medical care needs and benefits for both poverty reduction and child health and well-being, these needs and benefits are captured only indirectly by current poverty measures. Thus, by definition, health spending can have little direct short-run impact on child poverty measures. Nevertheless, the significant child-poverty-reducing effects of Medicaid are illustrated by the 2014 results of a Health-Inclusive Poverty Measure, which augments the Supplemental Poverty Measure by considering health insurance needs when setting the thresholds and appropriately treating net medical expenses in measuring family resources.

POLICIES TOWARD AMERICAN INDIAN AND ALASKA NATIVE CHILDREN

Background

AIAN are eligible for the standard programs and services available to all U.S. citizens, and they may also be eligible for additional programs and services offered by their tribes or the U.S. federal government. As mentioned in Appendix D, 2-7, the AIAN population is not only a racial/ethnic group but also recognized by the U.S. government as a political group, which allows individual tribal communities to participate in programs and

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services designed specifically for them (see Chapter 2 for a discussion of the demographic characteristics of the AIAN population). In addition to federal programs such as TANF and EITC, other programs and policies that have shown promise for reducing poverty in the AIAN population include training and education programs that focus on cultural connections and internal tribal programs and services. The committee's analysis of these policies benefited greatly from a paper we commissioned on the subject (Akee and Simeonova, 2017).[14]

Implications for Policy

Improvements in education and training programs hold promise for reducing poverty in the AIAN adult population, which has lower levels of educational attainment than the U.S. population as a whole (Akee and Taylor, 2014). In particular, programs that incorporate a tribe's values and culture tend to be more effective (Goodluck and Willeto, 2009; HeavyRunner, 2003). The Family Education Model, for example, takes a family-centered approach to education and advocates for a more inclusionary process that takes into account the AIAN students' cultural worldview. This enables them to enroll in, and successfully complete, higher education (HeavyRunner, 2003).

Tribal governments also play an important role in reducing child poverty. In addition to providing direct services and programs to support residents, they are a significant source of employment. Thriving and successful tribal governments are therefore a key component in reducing child poverty among the AIAN population (Jorgensen, 2007). Local political and legal authorities may also play a role in improving incomes on American Indian reservations. For example, Dimitrova-Grajzl, Peter, and Joseph (2014) found that when civil and criminal jurisdiction is removed from tribal control and given to states (U.S.), tribal incomes decrease. Changes in tribal political institutions may come from effective lobbying at the U.S. congressional level as well as the more local level in enacting reforms in tribal constitutions, which many AIAN tribes have been engaged in over the past 25 years (Lemont, 2006).

The Indian Gaming Regulatory Act of 1988, for example, grants federally recognized AIAN tribes the authority to operate casinos on tribal lands, providing a large economic opportunity for tribal communities.[15] Over the past 10 years, the Indian gaming industry has reported annual revenues

[14] Papers commissioned by the committee are available on the National Academies Press website, www.nap.edu/25246.

[15] Not all tribal nations operate casinos, and those that do are not all equally successful; revenue generation is dependent primarily on location and proximity to large population centers.

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of approximately $28 billion, which may serve as an important means of alleviating child poverty (Akee, Spilde, and Taylor, 2015). Wolfe and colleagues (2012) reported increases in household incomes of about $1,700 for American Indians residing in counties with tribal casinos. Anderson (2013) found that the presence of a casino reduced child poverty rates by 4.6 percent between 1990 and 2000; however, some of that reduction may have been caused by the influx of new residents with more favorable economic characteristics.

One mechanism that might play a direct role in reducing household poverty levels is the use of casino revenues to fund cash transfers. Not all tribes provide this type of transfer, some electing instead to use casino revenues for tribal program operations. Nevertheless, as detailed in Chapter 3, Akee and colleagues (2010) found that these cash transfers result in improved child educational attainment for households that were originally in poverty, and there is no evidence that this additional unearned income reduces the probability that parents will find full- or part-time employment.

Federal programs like EITC and TANF are also important to AIAN households living in poverty. Wagner and Hertel (2008) surveyed individuals in 14 Volunteer Income Tax Assistance areas located on American Indian reservations. When asked how they would spend their tax refunds, respondents overwhelmingly answered that they would spend refunds on basic needs such as groceries, utilities, clothing, and rent or mortgage payments. Only 10 percent of respondents indicated that they would use the refund for savings.

Approximately 70 AIAN tribal governments, serving almost 300 different AIAN tribes and villages, are approved to operate TANF programs.[16] Tribally operated TANF programs are unique in that their participants are exempt from the 5-year lifetime limit on benefits, provided that participants reside on reservations with unemployment rates above 50 percent. As a result, the binding TANF constraint does not apply to a number of AIAN communities and program recipients. Limited evaluation of these programs suggests that tribes that operate their own TANF programs experienced a drop of about 5 percentage points in poverty rates between 1990 and 2010 (Mather, 2017). Yet while TANF recipients on reservations received training and other preparation for jobs, employment opportunities on reservations are scarce, and the few studies that have evaluated TANF programs show that the availability of employment opportunities are the primary determinant of whether an individual is able to leave the TANF program.

[16] The U.S. Department of Health and Human Services currently allows federally recognized tribal governments to operate their own TANF programs.

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CONCLUSION 7-7: Small sample sizes in population surveys have made it particularly difficult to reliably measure poverty rates among American Indian and Alaska Native children. Moreover, we know little about the effectiveness of a number of important programs and policies—whether provided by the tribes, by the states, or by the federal government—that affect this population. Available evidence does suggest that some federal and tribal programs designed to improve opportunities for educational attainment, boost employment, and increase income have the potential to reduce child poverty.

REFERENCES

Akee, R., and Simeonova, E. (2017). *Poverty and Disadvantage Among Native American Children: How Common Are They and What Has Been Done to Address Them?* Washington, DC: The National Academies Press.

Akee, R., and Taylor, J. (2014). *Social & Economic Change on American Indian Reservations: A Databook of the U.S. Census and the American Community Survey 1990-2010*. Available: http://taylorpolicy.com/us-databook.

Akee, R., Costello, J., Copeland, W., Keeler, G., and Angold, A. (2010). Parents' incomes and children's outcomes: A quasi-experiment with casinos on American Indian reservations. *American Economics Journal: Applied Economics, 2*(1), 86–115.

Akee, R., Spilde, K., and Taylor, J. (2015). The Indian Gaming Regulatory Act and its effects on American Indian economic development. *Journal of Economic Perspectives, 29*(3), 185–208.

Anderson, R.J. (2013). Tribal casino impacts on American Indians' well-being: Evidence from reservation-level census data. *Contemporary Economic Policy, 31*(2), 291–300.

Avellar, S., Covington, R., Moore, Q., Patnaik, A., and Wu, A. (2018). *Parents and Children Together: Effects of four responsible fatherhood programs for low-income fathers*. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Baicker, K., Taubman, S.L., Allen, H.L., Bernstein, M., Gruber, J.H., Newhouse, J.P., Schneider, E.C., Wright, B.J., Zaslavsky, A.M., Finkelstein, A.N., and Oregon Health Study. (2013). The Oregon experiment: Effects of Medicaid on clinical outcomes. *The New England Journal of Medicine, 368*(18), 1713–1722.

Bailey, M.J. (2013). *Fifty Years of Family Planning: New Evidence on the Long-Run Effects of Increasing Access to Contraception*. Brookings Papers on Economic Activity (Spring 2013). Washington, DC: Brookings Institution Press.

Bartel, A., Rossin-Slater, M., Ruhm, C., Stearns, J., and Waldfogel, J. (2017). Paid family leave, fathers' leave-taking, and leave-sharing in dual-earner households. *Journal of Policy Analysis and Management, 37*(1), 10–37.

Baum, C.L., and Ruhm, C.J. (2016). The effects of paid family leave in California on labor market outcomes. *Journal of Policy Analysis and Management, 35*(2), 333–356.

Bedard, K., and Rossin-Slater, M. (2016). *The Economic and Social Impacts of Paid Family Leave in California*. Washington, DC: U.S. Department of Labor.

Bir, A., Lerman, R., Corwin, E., MacIlvain, B., Beard, A., Richburg, K., and Smith, K. (2012). *The Community Health Marriage Initiative Evaluation*. OPRE Report No. 2012-34A. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Copyright National Academy of Sciences. All rights reserved.

Bitler, M.P., and Hoynes, H.W. (2016) *Strengthening Temporary Assistance for Needy Families*. Policy Proposal 2016–04. The Hamilton Project, Brookings.

Bitler, M.P., Gelbach, J.B., and Hoynes, H.W. (2006). What mean impacts miss: Distributional effects of welfare reform experiments. *American Economic Review, 96(4),* 988–1012.

Blank, R. (2002). Evaluating welfare reform in the United States. *Journal of Economic Literature, 40*(4), 1105–1166.

Bose, B., Raub, A., Earle, A., and Heymann, J. (2018, June). *Can Working Women and Men in OECD Countries Afford to Take Paid Leave? A Comparative Study of the Extent to Which Paid Leave Benefits Keep Families Out of Poverty.* Paper presented at the Work and Family Researchers Conference. Washington, DC: Work and Family Researchers Network.

Boushey, H. (2016). *Finding Time*. Cambridge, MA: Harvard University Press.

Brown, D., Kowalski, A., and Lurie, I. (2015). *Medicaid as an Investment in Children: What Is the Long-Term Impact on Tax Receipts?* Cambridge, MA: The National Bureau of Economic Research.

Buchmueller, T., Ham, J.C., and Shore-Sheppard, L.D. (2016). The Medicaid program. In R.A. Moffit (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume 1* (pp. 21–136). Chicago: The University of Chicago Press.

Bureau of Labor Statistics. (2017). *National Compensation Survey: Employee Benefits in the United States, March 2017*. Washington, DC.

Byker, T. S. (2016). Paid parental leave laws in the United States: Does short-duration leave affect women's labor-force attachment? *American Economic Review, 106*(5), 242–246.

Case, A., Lubotsky, D., and Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *American Economic Review, 92*(5), 1308–1334.

Centers for Disease Control and Prevention. (2013). CDC health disparities and inequalities report supplement. *Morbidity and Mortality Weekly Report, 62*(3).

Centers for Medicare & Medicaid Services. (2017). *HHS FY 2017 Budget in Brief. CMS-CHIP*. Available: https://www.hhs.gov/about/budget/fy2017/budget-in-brief/cms/chip/index.html.

Colorado Department of Public Health and Environment. (2017). *Taking the Unintended out of Pregnancy: Colorado's Success with Long-Acting Reversible Contraception*. Denver, CO: The Colorado Department of Public Health and Environment.

Council on Community Pediatrics. (2016). Poverty and child health in the United States. *Pediatrics, 137*(4).

Das, T., and Polachek, S.W. (2015). Unanticipated effects of California's paid family leave program. *Contemporary Economic Policy, 33*(4), 619–635.

Dehlendorf, C., Ruskin, R., Grumbach, K., Vittinghoff, E., Bibbins-Domingo, K., Schillinger, D., and Steinauer, J. (2010). Recommendations for intrauterine contraception: A randomized trial of the effects of patients' race/ethnicity and socioeconomic status. *American Journal of Obstetrics and Gynecology*, *203*(4), 319.e1–319.e8.

Dickert-Conlin, S., and Houser, S. (2002). EITC and marriage. *National Tax Journal, 55*(1), 25–40.

Dilger, R.J., and Boyd, E. (2014). *Block Grants: Perspectives and Controversies*. Washington, DC: Congressional Research Service.

Dimitrova-Grajzl, V., Peter, G., and Joseph, G.A. (2014). Jurisdiction, crime, and development: The impact of Public Law 280 in Indian country. *Law & Society Review*, *48*(1), 127–160.

Dunifon, R., Hynes, K., and Peters, H.E. (2009). State welfare policies and children's living arrangements. *Social Service Review, 83*(3), 351–388.

Eissa, N., and Hoynes, H. (2003). *Good News for Low-Income Families? Tax-Transfer Schemes, and Marriage*. Mimeograph. Berkeley: University of California, Department of Economics.

Copyright National Academy of Sciences. All rights reserved.

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_____. (2004). Taxes and the labor market participation of married couples: The Earned Income Tax Credit. *Journal of Public Economics, 88*(9), 1931–1938.

Ellwood, D.T. (2000). The impact of the Earned Income Tax Credit and social policy reforms on work, marriage, and living arrangements. *National Tax Journal, 53*(4), 1063–1065.

Falk, G. (2015). *Temporary Assistance for Needy Family (TANF) Financing Issues*. Washington, DC: Congressional Research Service.

_____. (2016). *The Temporary Assistance for Needy Families (TANF) Block Grant: Responses to Frequently Asked Questions*. Washington, DC: Congressional Research Service.

Finegold, K., Wherry, L., and Schardin, S. (2004). Block grants: Historical overview and lessons learned. In *New Federalism: Issues and Options for States*. Washington, DC: The Urban Institute.

Finkelstein, A.N., Taubman, S.L., Allen, H.L., Wright, B.J., and Baicker, K. (2016). Effect of Medicaid coverage on ED use: Further evidence from Oregon's experiment. *New England Journal of Medicine, 375*(16), 1505–1507.

Fischer, S., Royer, H., and White, C. (2017). *The Impacts of Reduced Access to Abortion and Family Planning Services: Evidence from Texas*. Bonn, Germany: IZA Institute of Labor Economics.

Frimmel, W., Halla, M., and Winter-Ebmer, R. (2012). *Can Pro-Marriage Policies Work? An Analysis of Marginal Marriages*. Germany: IZA.

Gibson-Davis, C.M. (2016). Single and cohabiting parents and poverty. In D. Brady and L. Burton (Eds.), *The Oxford Handbook of the Social Science of Poverty*. New York, NY: Oxford University Press.

Gibson-Davis, C.M., Edin, K., and McLanahan, S. (2005). High hopes but even higher expectations: The retreat from marriage among low-income couples. *Journal of Marriage and Family, 67*, 1301–1312.

Goodluck, C., and Willeto, A. (2009). *Seeing the Protective Rainbow: How Families Survive and Thrive in the American Indian and Alaska Native Community*. Baltimore, MD: Annie E. Casey Foundation.

Gordon, L. (1976). *Woman's Body, Woman's Right: A Social History of Birth Control in America*. New York, NY: Grossman.

Greenberg, D., Deitch, V., and Hamilton, G. (2009). *Welfare-to-Work Program Benefits and Costs: A Synthesis of Research*. New York, NY: MDRC.

Grogger, J., and Karoly, L.A. (2005). *Welfare Reform: Effects of a Decade of Change*. Cambridge, MA: Harvard University Press.

Gruber, J. (1994). The incidence of mandated maternity benefits. *The American Economic Review, 84*(3), 622–641.

Guttmacher Institute. (2016). *Unintended Pregnancy in the United States Fact Sheet*. Washington, DC.

Hamilton, G. (2002). *Moving People from Welfare to Work: Lessons from the National Evaluation of Welfare-to-Work Strategies*. New York: MDRC.

Harper, C.C., Rocca, C.H., Thompson, K.M., Morfesis, J., Goodman, S., Darney, P.D., Westhoff, C.L., and Speidel, J.J. (2015). Reductions in pregnancy rates in the USA with long-acting reversible contraception: A cluster randomised trial. *Lancet, 386*(9993), 562–568.

Haskins, R. (2015). The family is here to stay—or not. *The Future of Children, 25*(2), 129–153.

HeavyRunner, I. (2003). Miracle survivors: Promoting resilience in Indian students. *Tribal College, 14*(4), 14–18. Available: https://tribalcollegejournal.org/miracle-survivors-promoting-resilience-Indian-students.

Copyright National Academy of Sciences. All rights reserved.

Herbst, C.M. (2011). The impact of the Earned Income Tax Credit on marriage and divorce: Evidence from flow data. *Population Research and Policy Review, 30*(1), 101–128.

Higgins, J.A. (2014). *Celebration meets caution: LARC's boons, potential busts, and the benefits of a reproductive justice approach*. Contraception, 89(4), 237-241.

Higgins, J.A., Kramer, R.D., and Ryder, K.M. (2016). Provider bias in long-acting reversible contraception (LARC) promotion and removal: Perceptions of young adult women. *American Journal of Public Health*, *106*(11), 1932–1937.

Huang, R., and Yang, M. (2015). Paid maternity leave and breastfeeding practice before and after California's implementation of the nation's first paid family leave program. *Economics and Human Biology, 16*, 45–59.

Jorgensen, M. (2007). *Rebuilding Native Nations: Strategies for Governance and Development*. Tucson: University of Arizona Press.

Joshi, P., Geronimo, K., Romano, B., Earle, A., Rosenfeld, L., Hardy, E.F., and Acevedo-Garcia, D. (2014). Integrating racial/ethnic equity into policy assessments to improve child health. *Health Affairs, 33*(12), 2222–2229.

Karpilow, Q., Manlove, J., Sawhill, I.V., and Thomas, A. (2013). *The Role of Contraception in Preventing Abortion, Nonmarital Childbearing, and Child Poverty*. Washington, DC: The Brookings Institution.

Klerman, J.A., and Leibowitz, A. (1994). The work-employment distinction among new mothers. *The Journal of Human Resources, 29*(2), 277–303.

Klerman, J.A., Daley, K., and Pozniak, A. (2012). *Family and Medical Leave in 2012: Technical Report*. Cambridge, MA: Abt Associates.

Korenman, S., Remler, D.K., and Hyson, R. (2017). *Accounting for the Impact of Medicaid on Child Poverty*. Washington, DC: The National Academies Press.

Lemont, E.D. (2006). *American Indian Constitutional Reform and the Rebuilding of Native Nations*. Austin: The University of Texas Press.

Lichtman-Sadot, S., and Bell, N.P. (2017). Child health in elementary school following California's paid family leave program. *Journal of Policy Analysis and Management, 36*(4), 790–827.

Lopoo, L.M., and Raissian, K.M. (2014). U.S. social policy and family complexity. *The ANNALS of the American Academy of Political and Social Science, 654*(1), 213–230.

Lu, Y., and Slusky, D.J. (2016). The impact of women's health clinic closures on preventive care. *American Economic Journal: Applied Economics, 8(3)*, 100–124.

Lundquist, E., Hsueh, J., Lowenstein, A., Faucetta, K., Gubits, D., Michalopaulos, C., and Knox, V. (2014). *A Family-Strengthening Program for Low-Income Families: Final Impacts from the Supporting Healthy Marriage Evaluation*. OPRE Report No. 2013-49A. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Mather, R.A. (2017). *Temporary Assistance with Lasting Effects: A Report on Policies of Self-Determination in Native America*. The University of Minnesota Digital Conservancy.

Mathur, A., Sawhill, I.V., Boushey, H., Gitis, B., Haskins, R., Holtz-Eakin, D., Holzer, H.J., Jacobs, E., McCloskey, A.M., Rachidi, A., Reeves, R.V., Ruhm, C.J., Stevenson, B., and Waldfogel, J. (2017). *Paid Family and Medical Leave: An Issue Whose Time Has Come*. Washington, DC: American Enterprise Institute and Brookings Institution.

Meyer, B.D., and Rosenbaum, D.T. (2001). Welfare, the Earned Income Tax Credit, and the labor supply of single mothers. *The Quarterly Journal of Economics, 116(3),* 1063–1114.

Michelmore, K. (2018). The Earned Income Tax Credit and union formation: The impact of expected spouse earnings. *Review of Economics of the Household, 16*(2), 377–406.

Moffitt, R. (2016). *Economics of Means-Tested Transfer Programs in the United States, Volume I*. Chicago, IL: The University of Chicago Press.

Copyright National Academy of Sciences. All rights reserved.

Mosher, W.D., Jones, J., and Abma, J.C. (2012). Intended and unintended births in the United States: 1982-2010. *National Health Statistics Reports, 2012*(55), 1–28.

National Partnership for Women and Families. (2018a). *Paid Family/Parental Leave Policies for Municipal Employees*. Washington, DC.

_____. (2018b). *State Paid Family Leave Insurance Laws*. Washington, DC.

National Research Council. (1995). *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.

Nichols, A., and Rothstein, J. (2016). The Earned Income Tax Credit. In R.A.Moffit (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume 1* (pp. 137–218). Chicago: University of Chicago Press.

Office of the Assistant Secretary for Planning and Evaluation. (2008). *Indicators of Welfare Dependence: Annual Report to Congress, 2008, AFDC/TANF Program Data*. Available: https://aspe.hhs.gov/report/indicators-welfare-dependence-annual-report-congress-2008/afdctanf-program-data.

Olivetti, C., and Petrongolo, B. (2017). The economic consequences of family policies: Lessons from a century of legislation in high-income countries. *Journal of Economic Perspectives, 31*(1), 205–230.

Rajan, S., Morgan, S.P., Harris, K.M., Guilkey, D., Hayford, S.R., and Guzzo, K.B. (2017). Trajectories of unintended fertility. *Population Research and Policy Review, 36*(6), 903- 928.

Raub, A., Chung, P., Batra, P., Earle, A., Bose, B., Jou, J., Chorny, N.D.G., Wong, E., Franken, D., and Heymann, J. (2018a). *Paid Leave For Personal Illness: A Detailed Look at Approaches Across OECD Countries*. Los Angeles, CA: WORLD Policy Analysis Center.

Raub, A., Nandi, A., Earle, A., Chorny, N.D.G., Wong, E., Chung, P., Batra, P., Schickendanz, A., Bose, B., Jou, J., Franken, D., and Heymann, J. (2018b). *Paid Parental Leave: A Detailed Look at Approaches Across OECD Countries*. Los Angeles, CA: WORLD Policy Analysis Center.

Riccio, J., Friedlander, D., and Freedman, S. (1994). *GAIN: Benefits, Costs, and Three-Year Impacts of a Welfare-to-Work Program*. New York: MDRC.

Rosenbaum, D.T. (2000). *Taxes, the Earned Income Tax Credit, and Marital Status*. Chicago: Northwestern University, University of Chicago Joint Center for Poverty.

Rossin-Slater, M. (2017). Signing up new fathers: Do paternity establishment initiatives increase marriage, parental investment, and child well-being? *American Economic Journal: Applied Economics*, *9*(2), 93–130.

Rossin-Slater, M., Ruhm, C.J., and Waldfogel, J. (2013). The effects of California's paid leave program on mothers' leave-taking and subsequent labor market outcomes. *Journal of Policy Analysis and Management, 32*(2), 224–245.

Sawhill, I.V., and Venator, J. (2015). *Improving Children's Life Chances Through Better Family Planning*. Washington, DC: The Brookings Institution.

Sawhill, I., Rodrigue, E., and Joo, N. (2016). *One Third of a Nation: Strategies for Helping Working Families*. Washington, DC: Center on Children and Families at Brookings.

Semega, J.L., Fontenot, K.R., and Kollar, M.A. (2017). *Income and Poverty in the United States: 2016*. Washington, DC: U.S. Government Printing Office.

Smith, J.P. (2009). The impact of childhood health on adult labor market outcomes. *Review of Economics and Statistics, 91*(3), 478–489.

Sonfield, A., Hasstedt, K., Kavanaugh, M.L., and Anderson, R. (2013). *The Social and Economic Benefits of Women's Ability to Determine Whether and When to Have Children*. New York, NY: Guttmacher Institute.

Stenberg, C.W. (2009). Block grants and devolution: A future tool? In T.J. Conlan and P.L. Posner (Eds.), *Intergovernmental Management for the 21st Century*. Washington, DC: Brookings Institution Press.

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Stevenson, A.J., Flores-Vazquez, I.M., Allgeyer, R.L., Schenkkan, P., and Potter, J.E. (2016). Effect of removal of Planned Parenthood from the Texas women's health program. *The New England Journal of Medicine, 344*(9), 853–860.

Wagner, K., and Hertel, A.L. (2008). *EITC in Indian country: Moving Beyond the Safety Net to Asset Building*. St. Louis, MO: Center for Social Development, Washington University in St. Louis.

Waldfogel, J. (1998). Understanding the "family gap" in pay for women with children. *The Journal of Economic Perspectives, 12*(1), 137–156.

Welti, K., and Manlove, J. (2018). *Unintended Pregnancy in Delaware: Estimating Change After the First Two Years of an Intervention to Increase Contraceptive Access*. Bethesda, MD: Child Trends.

Wheaton, L., and Haldar, S. (2018). *2015 TRIM3 Supplemental Poverty Measure*. Unpublished project memorandum. Washington, DC: The Urban Institute.

Winner, B., Peipert, J.F., Zhao, Q., Buckel, C., Madden, T., Allsworth, J.E., and Secura, G.M. (2012). Effectiveness of long-acting reversible contraception. *The New England Journal of Medicine, 366*(21), 1998–2007.

Winship, S. (2016). *Poverty after Welfare Reform*. New York, NY: Manhattan Institute.

Wolfe, B., Jakubowski, J., Haveman, R., and Courey, M. (2012). The income and health effects of tribal casino gaming on American Indians. *Demography, 49*(2), 499–524.

Woo, C.J., Alamgir, H., and Potter, J.E. (2016). Women's experiences after Planned Parenthood's exclusion from a family planning program in Texas. *Contraception, 93*(4), 298–302.

Wood, R.G., Moore, Q., Clarkwest, A., Killewald, A., and Monahan, S. (2012). *The Long-Term Effects of Building Strong Families: A Relationship Skills Education Program for Unmarried Parents*. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Yelowitz, A.S. (1998). Will extending Medicaid to two-parent families encourage marriage? *The Journal of Human Resources, 33*(4), 833–865.

Ziliak, J. (2016). Temporary Assistance for Needy Families. In R. A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs, Volume 1*. Chicago: University of Chicago Press.

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8

Contextual Factors That Influence the Effects of Anti-Poverty Policies and Programs

WHY CONTEXT MATTERS

A fundamental lesson from the social and the behavioral sciences is that the context of people's lives can affect their behavior in profound ways. Poverty itself is a powerful context because of its economic, physical, social, and psychological dimensions. In Chapter 3, we documented the adverse consequences for children of living in poverty, as well as the severe constraints and stressors that inadequate financial resources place on families. Those constraints and stressors may in turn result in difficult choices and circumstances for both parents and children.

In this chapter, we consider a more general set of contextual factors that can promote or impede the effectiveness of anti-poverty policies and programs. For example, Supplemental Nutrition Assistance Program (SNAP) payments can best promote children's nutrition and health when families have ready access to healthy and affordable food, and families can further benefit more from cash transfers when convenient and receptive banking institutions are available to help them manage their funds. Conversely, a job training program for parents may be less effective if there is racial discrimination in hiring, if there is an absence of employment opportunities, reliable transportation, or affordable child care options, or if parents are too disabled or sick to attend training.

Given the potential for such contextual factors to influence the effectiveness of programs and policies, it is surprising to our committee how little rigorous empirical research has been conducted to test these factors' moderating influence. Nevertheless, a strong empirical case can be made

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that these contextual factors influence decision-making in low-income families as well as the impact of consequential programs and policies. Note that because the committee's charge is confined to a 10-year period, we refrain from addressing several structural factors—including race and gender attitudes, perceptions of the poor, and the formerly incarcerated—that might generate longer-run impacts on the success and equity of program administration.

SIX MAJOR CONTEXTUAL FACTORS

Through internal discussions, public information-gathering sessions, and a review of the scholarly and policy literatures, the committee identified six major, often co-occurring contextual factors that policy makers and program administrators are advised to consider when designing and implementing anti-poverty programs of the sort discussed in Chapters 5, 6, and 7:

1. ***Stability and predictability of income***—Unstable and unpredictable income makes it difficult for families to juggle everyday challenges, diminishes the quality of everyday decisions, and renders the poor vulnerable to financial ruin.
2. ***Equitable and ready access to programs***—Because of cumbersome, inconsistent, or demeaning enrollment procedures, or because of other barriers, not all families who qualify for benefits from government programs receive them.
3. ***Racial/ethnic discrimination***—Our nation's long and painful history of discrimination persists today in many forms and continues to influence differential access to opportunities and resources to overcome poverty, including employment, education, and housing opportunities.
4. ***Equitable treatment by the criminal justice system***—Unequal treatment in legal penalties and law enforcement has disproportionately affected low-income families, especially Black and Hispanic families, in ways that disrupt family and social networks and reduce the economic and psychological resources that people who have been incarcerated could otherwise provide to their families.
5. ***Positive neighborhood conditions***—Supportive, thriving social networks and neighborhood conditions enrich family life, personal connections, and access to opportunities, yet too frequently people who live in poverty are concentrated in neglected urban areas or are widely dispersed in rural areas with limited transportation or access to employment, poverty-reduction programs, or community resources.

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6. ***Health and well-being***—Among parents, physical and mental ailments, substance abuse, and domestic violence can harm their ability to make sound decisions, care for their children, become educated, obtain and keep work, and support their households.

The chapter summarizes why each of these six contextual factors matters, how each of them might affect the administration of anti-poverty policies, and what conclusions the committee has reached. Research recommendations on these contextual factors are provided in the final chapter.

INCOME STABILITY AND PREDICTABILITY

Why It Matters

An adequate and stable monthly family income enables parents to pay bills, meet basic needs, and engage in financial planning. When savings or access to affordable emergency resources are added to that, they can help buffer families against income shortfalls. But low-income families typically lack liquid assets and often pay high interest rates to obtain short-term credit (Barr, 2012). The resulting income instability can generate other kinds of instability—in housing and child care, for example—that in turn may limit families' ability to work (Hahn et al., 2016; McKernan, Ratcliffe, and Vinopal, 2009) and compromise their children's development (Hill et al., 2013). Because the savings and assets of Black and Hispanic families, at all income levels, are often considerably lower than those of White families, these populations are more vulnerable than White families to unpredictable changes in income (Kochhar and Cilluffo, 2017).

Research has provided ample evidence of these differences in financial stability, and of their consequences. For example, the incomes of low earners are more unstable than those of higher earners, and many lower-wage jobs offer little job security, fluctuating work hours, and no paid time off, which makes it difficult to budget and pay for dependable child care (Enchautegui, 2013; Gennetian and Shafir, 2015). Additionally, unexpected financial emergencies are ubiquitous among low-income households (Barr, 2009), and often require deferring bills or cutting spending on basic necessities, such as food. Approximately 9 percent of all children live in households in which one or more child is food insecure. Food security is defined as "access by all people at all times to enough food for an active, healthy life" (Coleman-Jensen et al., 2017, pg. 2).

Another important set of factors creating employment instability is the nature of the low-wage labor market and the difficulties many low-wage workers have in maintaining employment. Many low-wage jobs have high rates of turnover that create frequent periods of unemployment and require

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looking repeatedly for new jobs. Low-wage jobs are also more likely to have irregular hours and require shift work that low-income parents have difficulty sustaining (Enchautegui, 2013; Enchautegui, Johnson, and Gelatt, 2015). Transportation can pose challenges for low-income parents if they do not live close to work and have to take public transportation, which is unreliable and often includes extremely long commutes (Enchautegui, 2013; Holzer and Wissoker, 2001). Compounding these problems are difficulties in obtaining reliable and flexible child care that can respond to these irregular shifts, long commutes, and high-turnover jobs (Enchautegui, 2013). Taken together, low-income families face a multitude of barriers to work that middle-income families do not face to the same degree (Enchautegui, 2013; Hill et al., 2013).

More than one-half of all low-income families are *asset-poor*, defined as lacking the liquid resources necessary to finance essential consumption for 3 months (Lusardi, Schneider, and Tufano, 2011). Related to this, in recent years, due to their limited financial reserves one in four U.S. households has used at least one alternative financial service, such as a payday, auto title, or refund anticipation loan, during the preceding year—services that are typically subject to very high interest rates (Burhouse et al., 2014; Caskey, 2006). Finally, more than one-half of all low-income families living in rental housing spend more than one-half of their income on housing costs (Desmond, 2016). Most of these problems are worse for racial/ethnic minority families, largely because of differences in wealth or assets minus debt (Kochhar and Cilluffo, 2017; Pew Charitable Trusts, 2015) and more limited options in terms of neighborhoods in which they can live.

The combination of unstable incomes, high fixed expenses, and low savings translates into persistent material hardship for many low-income families, as adverse events challenge their ability to meet basic living needs. These families have little "slack," defined by Mullainathan and Shafir (2013) as the ease with which one can cut down on other expenses to satisfy an unexpected need. When better-off families experience a rough patch of income instability, they typically have discretionary expenses they can cut back on and savings or access to credit to tide them over. In contrast, when low-income families face unanticipated shocks, they first cut back on somewhat less urgent needs, such as certain foods and the bills that are least likely to produce dire consequences if left unpaid. They then must cut back on essentials, which means skipping payments and incurring costly late fees, utility or phone reconnection fees, and eviction threats, and consequently they face a new round of disruptions to work, child care, education, and family life (Barr, 2009; Edin and Lein, 1997; Shipler, 2004).

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Relationship to Policy

The unstable circumstances faced by the families of children living in poverty have significant implications for the design of benefit programs. Programs such as SNAP and Housing Choice Vouchers aim to fulfill basic needs by providing monthly benefits. In the case of SNAP, the long, 4-week intervals between benefits, coupled with income instability, lead recipient families to overspend early in the benefit period and run short at the end (Hamrick and Andrews, 2016). Distributing SNAP benefits at weekly intervals might be more helpful to many families. For example, researchers have found lower achievement test scores among children of families receiving SNAP benefits when those tests were taken near the end of the benefit month (Castellari et al., 2017; Gassman-Pines and Bellows, 2018). Experimentation with weekly versus monthly benefit payments would help guide policy in this case. Moreover, although the Earned Income Tax Credit (EITC) can help families pay down debt or purchase needed durables by providing credits annually as a lump sum (Halpern-Meekin et al., 2015; Mendenhall et al., 2012), some families may need the credit to meet basic expenses and may therefore benefit from more frequent payments.[1]

Other program design features to consider are the ease of determining eligibility and the frequency with which renewal is required. For example, when the subsidy authorization period for child care subsidies was expanded from 6 to 12 months, families made use of the subsidies for which they were eligible for 2.5 months longer, on average (Michalopoulos, Lundquist, and Castells, 2010). Other studies have examined the administrative burden on families related to eligibility assessment, documentation, and scheduling and transportation issues. Research has shown that when these burdens are high, unpredictable (yet highly frequent) changes in family circumstances, such as job loss, moving, or a change in child care providers, can lead to a family abruptly losing its child care subsidy (Adams and Rohacek, 2010; Holcomb et al., 2006; Joshi et al., 2018). Abrupt subsidy losses of that kind can make finding or holding a job more difficult.

Programs that provide emergency assistance can help prevent low-income families from falling deeper into poverty when unexpected financial problems occur (Pavetti, Schott, and Lower-Basch, 2011). For example, the Temporary Assistance to Needy Families (TANF) program provides emergency grants so that families at risk of losing the ability to work can repair a vehicle or pay rent without having to turn to public assistance over the longer term. However, in 2013, only 2 percent of TANF spending was on "nonrecurrent short-term benefits" or emergency spending (Schott, Pavetti,

[1] For example, see the discussion in Chapter 7 of American Indian families and the discussion in Holt (2015) regarding periodic EITC benefit payments.

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and Floyd, 2015). Moreover, the asset limits set on many government assistance programs prohibit parents from saving money for emergencies or purchasing items, such as a reliable car, that can facilitate work and help move their family out of poverty, without the risk of losing the benefit (Campbell, 2014). States have the flexibility to set asset limits for most programs, and across states there is considerable variation in this regard.

Public officials have a responsibility to ensure that families only receive benefits during the time period for which they are eligible, and short renewal periods for programs are a useful mechanism for carrying out that responsibility. However, low-income families' eligibility may change rapidly with a loss or addition of a job or household member. Eligibility periods that are too short may leave families with such fluctuating circumstances more vulnerable than necessary and make it difficult for parents to move out of poverty.

School meal programs have moved to an annual eligibility determination, rather than requiring parents to report any time their income rises above the cutoff. This means that when children become eligible, they remain eligible for the whole school year. In addition, school districts have many options for directly certifying children who, for example, receive SNAP, so that they can also be eligible for the school lunch program without even applying. This sort of streamlining of eligibility requirements and using eligibility for one program as proof of eligibility for another could be a model for other programs (Currie, 2008).[2]

In the context of SNAP, longer periods between recertification have consistently been associated with higher rates of take-up and lower rates of drop-off, among eligible families (Hanratty, 2006; Ratcliffe, McKernan, and Finegold, 2007; Wilde et al., 2000). Research has also shown that simplification of the certification process increases the participation rate (Kaushal and Gao, 2011). Furthermore, replacing paper vouchers with Electronic Benefit Transfer (EBT) cards, which look and operate like prepaid debit cards and, in this way, feel quite mainstream and reduce potential stigma, increased participation (Kabbani and Wilde, 2003; Kaushal and Gao, 2011; Kornfeld, 2002; Wilde et al., 2000).

Another policy consideration related to instability is that participation in public programs can be hindered by income instability. To take maximal advantage of work supports like the EITC and child care subsidies, parents need to be able to sustain steady employment. The barriers to such employment, discussed above, also generate barriers to receiving the public program benefits of work-encouraging programs. Participation in child care

[2] For other examples of steps that have been taken to improve access to school meals, see https://www.cbpp.org/research/key-steps-to-improve-access-to-free-and-reduced-price-school-meals.

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programs is particularly problematic if child care usage is sporadic and unstable, which typically reduces take-up of child care subsidies.

CONCLUSION 8-1: Income instability, a paucity of savings, and little or no cushion for responding to unexpected financial difficulties are typical for many low-income families, and are more prevalent among Black and Hispanic families than among their White counterparts. Programs that provide regular income support, whether through tax credits, cash, or vouchers, may be more helpful to families if they provide adequate benefits at well-timed intervals. Further, programs that are easily accessible and that facilitate savings or provide emergency cash assistance or credit at a modest cost can help families cope with unexpected emergencies and may prevent them from falling deeper into poverty.

EQUITABLE AND READY ACCESS TO PROGRAMS

Why It Matters

Creating programs to reduce poverty through legislation does not, in itself, ensure equal program access to all families who qualify. If people are to participate in these programs, they need to understand them and then they need to be able to navigate the enrollment process. Often the bureaucratic systems that underpin enrollment are cumbersome, and they vary considerably both by program and even within the same program across different states. The receipt of benefits may even be more a function of where a family lives than of the family's need.

For example, SNAP participation rates vary greatly across states, from an estimated low of 59 percent of eligible families to an estimated high of 100 percent (Gray and Cunnyngham, 2016). Some of this variation has been shown to be a function of enrollment requirements that are easier in some states than in others; 47 states allow families to apply for SNAP online, while the others require the recipient to fill out a paper application at a local office (Currie and Grogger, 2001).[3] Such variation in administrative procedures can lead to considerable variation in participation rates among eligible families for anti-poverty programs across states, and even within states participation rates can differ markedly by the applicant's race, ethnicity, and other characteristics (Moore, Perez-Lopez, and Hisnanick, 2017).

[3] Information about SNAP benefits and enrollment requirements is provided on the United States Department of Agriculture's Food and Nutrition Service website, see https://www.fns.usda.gov/snap/facts-about-snap.

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The state in which a family lives may also determine the level of benefits families receive. For example, monthly TANF payments to a family vary from a low of $170 in Mississippi to a high of $1,021 in New Hampshire, and these differences are not fully accounted for by the variation in the cost of living across states (Floyd, 2017). Moreover, some states supplement federal programs, whereas others do not; 26 states have their own version of the EITC, increasing the benefit families receive (Internal Revenue Service, 2018b). A study comparing the availability of assistance programs across states following the 1996 federal welfare reforms found that states fell into one of five package-support clusters, which ranged from minimal (with low inclusion rates and below-average support) to integrated (with generous and highly inclusive support packages) (Meyers, Gornick, and Peck, 2001). Naturally, such "contextual" variation can have a profound influence on the potential success of federal programs. Furthermore, there is real concern that the application of programs can be biased—whether intentionally or unintentionally. For example, it has been argued that long-acting, reversible birth control methods like intrauterine devices and implants, as tools for fighting poverty are more likely to be recommended to Black and Latina women of low socioeconomic status than to White women of the same status (Dehlendorf et al., 2010)

In some cases, access for certain groups, such as immigrants or felons, is limited by a program's design. An example can be found in the 1996 welfare reform legislation, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), which was designed to create a separate eligibility regime for legal immigrants to limit their access to means-tested federal programs. Under this law, income-eligible documented immigrants who have been in the United States for less than 5 years are ineligible for the primary federal means-tested programs (SNAP, TANF, Supplemental Security Income [SSI], and Medicaid) unless they have 40 quarters of work history in the United States or have a military connection.

PRWORA also gave states discretion over immigrant eligibility after the 5-year period of ineligibility. Moreover, while citizen children of undocumented immigrants who are income-eligible can receive government benefits, when fears of deportation are high undocumented parents are hesitant to apply for benefits for their American children (Alsan and Yang, 2018; Capps et al., 2004). Even legal immigrants who are income-eligible may be reluctant to apply for anti-poverty programs for themselves or their children due to the fear of being deemed a "public charge," which may jeopardize their ability to become permanent residents or become U.S. citizens (Batalova, Fix, and Greenberg, 2018; Perreira, Yoshikawa, and Oberlander, 2018). Hispanic families bear the brunt of these kinds of restrictions (Child Trends, 2014).

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Even if access were not problematic, program participation is often limited because funding is insufficient to provide benefits to all eligible families. For example, the Housing Choice Voucher Program (often called the Section 8 program) is available to only about 15 percent of income-eligible families with children (Joshi et al., 2014). Moreover, the federal Child Care and Development Fund supports only 17 percent of eligible children.[4]

Relationship to Policy

As discussed above, state policies vary widely in the administrative burdens and requirements they impose on parents in anti-poverty programs, and states experience widely differing rates of participation in the programs (e.g., Holcomb et al., 2003). Data compiled by the Center on Budget and Policy Priorities indicate that many states are taking advantage of automated technology so that people can more easily apply for assistance, update relevant information (e.g., changes in earnings), and renew their eligibility online (Wagner and Huguelet, 2016). Florida's public assistance program, Automated Community Connection to Economic Self-Sufficiency (ACCESS), provides an example of a program that increases efficiency in the enrollment process (Cody et al., 2010).[5] Key features of the Florida program include automating the public assistance application process and providing for online submission of applications for TANF, SNAP, and Medicaid (Cody et al., 2010). Other states have also turned to automation to streamline eligibility processes and increase program access, but wide variation in application processes across states and counties remains a significant factor limiting the participation of eligible families in many places (Isaacs, Katz, and Amin, 2016; Loprest, Gearing, and Kassabian, 2016).

Work Support Strategies (WSS), a privately funded multistate initiative, is another example of how automation can improve the uptake of public assistance programs. The WSS initiative, which began in 2011, was developed to determine whether the implementation of technology improvements could better help qualifying families connect to work support programs (Isaacs, Katz, and Amin, 2016; Loprest, Gearing, and Kassabian, 2016). Evaluations suggest that using automated processes to streamline enrollment has resulted in time and money savings for both the applicants and the states. For example, in addition to reductions in lobby wait times in Colorado, Idaho, Illinois, and Rhode Island, individual participants gained an average of $195 annually in benefits, and one state, Idaho, reduced annual administrative costs by an estimated $53,500 (Isaacs, Katz, and Amin, 2016).

[4] Congressional Research Service, as reported in the Committee on Ways and Means' Green Book (Congressional Research Service, 2016), Chapter 9, Figure 9.5.

[5] See http://www.myflorida.com/accessflorida for more information on ACCESS Florida.

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Training caseworkers to more effectively communicate and work with the families they serve may also improve the chances that parents will obtain steady employment. Caseworker training may also improve the chances that parents are informed about valuable services, such as child care subsidies (Strawn and Martinson, 2000). Federal rules have sought to establish minimum standards for access to information to help eligible families determine which benefits they qualify to receive. For example, SNAP regulations require applications and notices to be available in languages other than English when specific population thresholds are met.[6] How effective such rules are in facilitating access to benefits is not known, however.

Other efforts to increase access to benefits and better coordinate and streamline services have been tried in many states (Annie E. Casey Foundation, 2010; Hoffman, 2006). Rigorous evaluations of the pilot programs would better inform states as to how to ensure that parents who are eligible for programs actually receive the benefits.

One program that has worked to minimize the administrative burden on eligible participants is the EITC. Because it is administered through the tax code rather than through a social services office, it does not require repeated sign-ups throughout the year or a lengthy and complicated application process. Eligible persons must simply fill out their tax returns. Take-up rates have improved over time as commercial tax preparers have increasingly served this market, and more organizations have begun to help lower-income workers file their taxes (Kopczuk and Pop-Eleches, 2007), although commercial tax preparers charge large fees and remove their fees before their clients receive their refunds. The Internal Revenue Service has also provided specific information for tax preparers to help reduce errors (Internal Revenue Service, 2018c).

CONCLUSION 8-2: Unnecessarily burdensome administrative procedures can discourage families from applying for, and thus prevent them from receiving, income assistance program benefits for which they are otherwise eligible. State-by-state variation in the implementation of federal policies can lead to inconsistencies in access among eligible families and to variation in the efficacy of anti-poverty programs.

CONCLUSION 8-3: Federal rules such as limits on the eligibility of documented immigrants and measures that discourage program use (e.g., "public charge" determination) reduce access to means-tested programs for entire groups, even for individuals who meet income-eligibility requirements. These rules may harm both citizen and immigrant children

[6] Specifically, Code of Federal Regulations item 7CFR 272.4.

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in such families by reducing the benefits available to them, with a disproportionate impact on racial and ethnic minority families.

RACIAL/ETHNIC DISCRIMINATION

Why It Matters

A substantial body of social science research shows that large racial/ethnic disparities persist in U.S. society in access to education, employment, housing, and health care, as well as in equitable treatment in the civil and criminal justice systems (Pager and Shepherd, 2008). Discrimination and unequal access to resources can lead to social policies being less effective for parents who are racial/ethnic minorities.

Employment and housing provide two examples. Discrimination in hiring makes it more difficult for parents from a racial/ethnic minority group to obtain employment and therefore to benefit from policies aimed at supporting low-wage workers or to maintain eligibility for programs that require beneficiaries to work (Bertrand and Mullainathan, 2004; Holzer, Raphael, and Stoll, 2006; Stoll, Raphael, and Holzer, 2004). Discrimination by landlords renders policies to expand housing less effective for parents who are members of racial/ethnic minorities and may expose these families to greater housing instability and the risk of homelessness (Desmond, 2016).

Even for individuals with similar levels of education, racial/ethnic minorities have higher rates of unemployment and lower earnings than Whites (Pew Research Center, 2016), with Black unemployment rates typically twice as high as White unemployment rates (U.S. Bureau of Labor Statistics, 2018a). Black and Hispanic employment is also more vulnerable to downturns in the economic cycle and takes longer to recover (U.S. Bureau of Labor Statistics, 2018b). Moreover, Black and Hispanic families have on average one-sixth of the wealth of their White counterparts (McKernan et al., 2013).

While not all of the racial/ethnic differences in employment, earnings, and asset accumulation can be attributed directly to discrimination, compelling evidence suggests that discrimination plays a continuing role, particularly for employment, and to a lesser degree for wages (Pager and Shepherd, 2008). For example, among job applicants, Whites receive 36 percent more requests to advance in the hiring process (callbacks), on average, than equally qualified Black applicants and 24 percent more callbacks than equally qualified Hispanic applicants (Quillian et al., 2017). Callback rates for Black and Hispanic males without a criminal record are lower than for Whites *with* a criminal record (Pager, Western, and Bonikowski, 2009).

Discrimination against racial/ethnic minorities also persists in housing. Rigorous studies sponsored by the U.S. Department of Housing and

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Urban Development (HUD) find that while racial/ethnic discrimination in both rental and sales markets has declined over the past 40 years, Blacks, Hispanics, and Asians seeking housing continue to be informed of and shown fewer housing units than their White counterparts (Turner et al., 2013). For example, one paired-testing study, which sampled 8,000 qualified apartment home-seekers across 28 states, found that for every 25 visits, Black home-seekers were shown one unit fewer than White home-seekers, while Hispanic home-seekers were shown one unit fewer for every 14 visits (Turner et al., 2013).

As discussed above, provisions that limit legal immigrants' eligibility for anti-poverty programs even when they would qualify based on income are discriminatory by program design.

Relationship to Policy

Discrimination against racial/ethnic minorities in the labor and housing markets can limit the effectiveness of anti-poverty programs in several ways. For example, the Housing Choice Voucher program sets a time limit on voucher-subsidized housing searches—typically 60 days (U.S. Department of Housing and Urban Development, 2015). Families unable to locate qualifying housing within that amount of time must return the vouchers. Consequently, if minority families seeking to move are shown fewer units than majority families, as Turner et al. (2013) found, this may result in lower levels of program take-up. Further, if minority families are steered toward housing in neighborhoods with access to fewer job opportunities, then housing subsidy programs will be less successful in promoting economic mobility.

Indeed, research has found that White families receiving Housing Choice vouchers are more likely to find rental units in low-poverty neighborhoods (those with poverty rates under 10%) with higher-performing schools than are Black and Hispanic families seeking the same (Horn, Ellen, and Schwartz, 2014; McClure, Schwartz, and Taghavi, 2015). Therefore, even when different families receive a housing subsidy that is comparable in monetary value, nonmonetary factors such as social ties, reliable information, and housing discrimination (associated with prevailing residential segregation patterns) may reduce the ability of Black and Hispanic families to translate their monetary benefit into better outcomes in employment and well-being.

Discrimination in the operation of anti-poverty programs themselves may also reduce the benefit these programs offer to people who belong to racial/ethnic minorities. In an examination of six types of federal programs (TANF, child care subsidies, Head Start, child support enforcement, programs for homeless and runaway youth, and adolescent pregnancy

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prevention programs), McDaniel et al. (2017) concluded that employment discrimination, as well as the organization and delivery of the programs themselves, results in racial/ethnic inequities in access to the programs and, consequently, in program outcomes. For example, evidence indicates that TANF case workers are more likely to offer work supports, such as child care, to White TANF recipients than to Black or Hispanic recipients, which may make it more difficult for the latter to find or sustain employment (McDaniel et al., 2017).

CONCLUSION 8-5: Past and current racial/ethnic discrimination have contributed to substantial disparities in access to employment and housing. Discrimination in hiring and employment may undermine policies that aim to increase or subsidize wages and policies that require beneficiaries to work. Housing discrimination reduces racial/ethnic minority families' access to and benefits from housing programs.

CRIMINAL JUSTICE SYSTEM INVOLVEMENT

Why It Matters

As of 2015, some 2.8 percent of the U.S. adult population was either incarcerated (2.2 million adults) or on probation or parole (4.7 million adults) (Kaeble and Glaze, 2016; Kaeble and Bonczar, 2016). Although these figures have declined since their peak in 2007–2008, it remains the case that millions of Americans have close connections to people who are in prison or otherwise involved with the criminal justice system (Kaeble and Glaze, 2016; Kaeble and Bonczar, 2016; Lee et al. 2015).

In 2015, 7 percent of non-Hispanic White children had a parent who was ever incarcerated, compared with 16 percent of Black children and 8 percent of Hispanic children.[7] Such racial/ethnic differences persist even after controlling for parents' educational attainment. For example, among children born in 1990 whose fathers were high school dropouts, the cumulative risk of paternal incarceration by the time the child reached age 14 was 50.5 percent for Black children, but only 7.2 percent for White children (Wildeman, 2009).

Racial/ethnic differences in involvement with the criminal justice system can be attributed to several factors, including disproportionality in school discipline, differential involvement in delinquency, criminal case characteristics, and unequal treatment in the criminal justice system (Donnelly, 2018).

[7] For more information, see https://datacenter.kidscount.org/data/tables/9734-children-who-had-a-parent-who-was-ever-incarcerated-by-race-and-ethnicity#detailed/1/any/false/1539/10,11,9,12,1,13/18995,18996.

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In a recent quasi-experimental study, Arnold and colleagues (forthcoming) found that inexperienced and part-time judges in Miami and Philadelphia were more likely to make racially biased prediction errors when imposing bail amounts. Racial/ethnic disparities, however, can be seen throughout the various stages of the criminal justice process (National Research Council, 2014). An example from a recent consensus report issued by the National Research Council is that, for similar crimes, sentences issued for Blacks are more likely to be on the higher end of sentencing guidelines, whereas sentences for Whites tend to be toward the lower end. Further, the report committee found that both Blacks and Hispanics are more likely than Whites to be detained before trial, which has been shown to increase the chances that the defendant will receive a prison sentence (National Research Council, 2014).

According to a recent report by the U.S. Commission on Civil Rights (2017), the fines and fees levied against individuals for even minor crimes can cause low-income families to sink into debt, which can be difficult to escape. The same report also found that these fees were often targeted at communities of color and low-income individuals (U.S. Commission on Civil Rights, 2017).

The net effect of these disparities is that Black and Hispanic children are more vulnerable to the economic, social, and psychological adversities associated with having an incarcerated parent. Reviewing the most rigorous studies on the effect of parental incarceration on children's behavioral problems, academic achievement, and delinquency, Wildeman, Wakefield, and Turney (2013) found that paternal incarceration has consistently negative effects on child well-being and that the effects are greater than if the father were merely absent from the household (e.g., due to divorce).

Research suggests that the effects of maternal incarceration are dependent on the behavior of the mother. For example, if a mother consistently placed her child in dangerous or stressful situations prior to being imprisoned, child outcomes may improve after incarceration. Children who were not exposed to dangerous or stressful situations may experience negative outcomes when the mother is incarcerated (Wildeman and Turney, 2014). Hagan and Foster (2015) have found higher rates of food insecurity and economic insecurity (inability to pay for rent or mortgage, telephone, and utilities) among families with adolescents who were experiencing or had experienced paternal or maternal imprisonment.

Relationship to Policy

Incarcerated parents face challenges in supporting their children economically and psychologically (Turney and Goodsell, 2018). Moreover, the incarceration of one parent puts added stress on the nonincarcerated parent

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(National Research Council, 2014). However, the release of an incarcerated parent does not end the adverse effects, because a record of incarceration substantially reduces the parent's ability to work (Looney and Turner, 2018) and to find housing (Keene et al., 2018) and reduces eligibility for public services (Sugie, 2012). The lower levels of educational achievement of parents who enter prison may also reduce their chances of gaining employment after release (Looney and Turner, 2018).

Accordingly, programs that aim to increase or supplement earnings or require beneficiaries to work, such as the EITC, may be less effective for families in which a parent has been incarcerated, unless efforts are made to reduce barriers to employment for these parents. Although the level of evidence in this area is slim, programs for which there is some evidence of effectiveness include training to recognize bias on the part of employers in the recruitment and hiring of staff (Carnes et al., 2015; Devine et al., 2012); readily accessible procedures to expunge records of criminal offenses committed as juveniles (Selbin, McCrary, and Epstein, 2018); and proactive assistance for newly released convicts in obtaining employment (Broadus et al., 2016).

Reforms directed at these problems can sometimes backfire, however. Recently, several states and municipalities have passed laws to "ban the box," meaning they prohibit employers from asking about applicants' criminal history. There is some evidence that employers undercut the effectiveness of such laws by discriminating against all of the applicants in the larger groups that are statistically more likely to have a criminal history. For example, employers may automatically screen out names that appear to be Black or Hispanic (Agan and Starr, 2018; Doleac and Hansen, 2016).

Social policies that exclude felons from receiving benefits may have developed with both punishment and deterrence in mind. A consequence of these policies, however, is that children in these families are (often unintentionally) denied benefits that are extended to other children in otherwise identical economic circumstances. The 1996 welfare reform imposed a lifetime ban on the receipt of TANF and SNAP for individuals with a drug felony conviction, except in states that opt out of the ban. The children of parents with a felony drug conviction are still eligible for SNAP benefits; however, by reducing the total amount of SNAP benefits a family receives as a result of these bans, families living in poverty may not be able to purchase the amount of food needed to maintain good health. To date, 37 states have implemented a full or modified ban on the receipt of TANF benefits for drug felons and 34 states have done so for SNAP benefits as well (Mauer and McCalmont, 2015).

Individuals with a drug conviction also lose their eligibility for college financial aid (U.S. Department of Education, 2019), and Housing Choice Voucher housing assistance is not available to ex-convicts (who are not

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members of a protected class under anti-discrimination laws) unless local housing authorities choose to allow them to qualify (Curtis, Garlington, and Schottenfeld, 2013). Given the large racial disparity in criminal justice involvement (Lyons and Pettit, 2011), and specifically in drug-related convictions (National Research Council, 2014, pp. 91-97), these reductions in public benefits particularly penalize Black families and limit the ability of incarcerated and previously incarcerated parents to support their children (either privately or through the child support system) or to enable their children to rise out of poverty (Sugie, 2012, pp. 3-4).

CONCLUSION 8-6: Involvement of a parent or other relative with the criminal justice system harms significant numbers of low-income children, particularly minority children, both economically and in other ways. Prior incarceration may render some parents ineligible for benefits that could reduce child poverty and leave them unable to secure housing or work and thus provide for their children.

NEIGHBORHOOD CONDITIONS

Why It Matters

Neighborhood conditions—particularly those associated with high concentrations of families living in poverty—are a potentially important context both for families and children and for the anti-poverty programs that serve them. As the county-based information presented in Chapter 2 makes clear, high-poverty areas—defined as census tracts (neighborhoods of about 4,000 people) with an official poverty rate of 20 percent or more—exist all over the United States. Census data show that the adult residents of these neighborhoods are more likely than residents of low-poverty areas to lack a high school diploma, to be unemployed, to be separated or never-married, to be single parents, and to rent rather than own a home (Bishaw, 2014, Table 2a).

Additionally, levels of child development, educational outcomes, psychological well-being, and health are all worse among children living in high-poverty neighborhoods than among other children (Leventhal, Dupere, and Shuey, 2015). At the same time, as noted concerning the associations between family-based poverty and child outcomes discussed in Chapter 3, it is difficult to disentangle correlation and causation in the associations between neighborhood-based poverty and child outcomes (Gennetian et al. 2012; Sanbonmatsu et al., 2006). Moreover, the effects of neighborhood poverty seem to depend on when children were exposed over the life course (Chetty, 2015).

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Neighborhood conditions are associated with a person's ability to move out of poverty. Areas with lower levels of intergenerational mobility are characterized by greater residential segregation by race and income, higher income inequality, poorer quality K–12 schools, weaker measures of social networks and community involvement, and weaker family structures (as measured by the prevalence of single parents) (Chetty et al., 2014).

Lack of intergenerational mobility is highest among Black families living in high-poverty neighborhoods. Chetty et al. (2018) found that White and Hispanic families are more likely than Black families to move up in the income distribution across generations. Moreover, the few geographic areas in which Black-White mobility gaps were found to be relatively small tended to be low-poverty neighborhoods where Whites had low levels of racial bias and Blacks grew up with their fathers present. However, fewer than 5 percent of Black children, as compared with 63 percent of White children, grow up in areas with poverty rates below 10 percent and where more than one-half of fathers are present.

The role of past *de jure* discrimination should not be overlooked. High levels of current racial/ethnic residential segregation have been shaped by historical discrimination in housing policy and lending, such as redlining in the mortgage market and segregation in public housing, as well as by current zoning regulations (Rothstein, 2017). Segregation in turn has led to a disproportionate share of racial/ethnic minority families living in high-poverty neighborhoods intergenerationally (Sharkey 2008, 2013).

Relationship to Policy

Policies that aim to increase access to nutrition, housing, or employment are likely to be less effective in places that lack the resources or social networks to support them. For example, families who live in high-poverty neighborhoods tend to eat substantially less nutritious food than their counterparts in low-poverty areas. Although socioeconomic status and limited access to nutritious food in high-poverty areas contribute to unhealthy eating, the vast part of this difference is explained by the concentration of lower levels of education and knowledge about the value of healthy eating in high-poverty neighborhoods as compared to lower-poverty neighborhoods (Allcott, Diamond, and Dube, 2018; Handbury, Rahkovsky, and Schnell, 2015). Thus, the SNAP program may be more effective at increasing nutritional outcomes for families who live in high-poverty neighborhoods if the program is coupled with counseling or education about how to choose and prepare healthy food. States have access to grant funding for such programs through the Supplemental Nutrition Assistance Program—Education

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(SNAP-Ed) initiative.[8] While not all states have chosen to implement nutrition education programs, a recent evaluation of the SNAP-Ed program by the Research Triangle Institute suggests that they have the potential to encourage low-income families to make healthier food choices (Hersey et al., 2014).

Geographic location can also play a significant role in creating environments that help break the cycle of intergenerational poverty. In particular, access to high-quality educational experiences, which integrate students from various socioeconomic backgrounds, can improve the likelihood of future success (Rothwell and Massey, 2014).

Housing programs can also have a considerable effect on the level of neighborhood poverty that families experience. The Moving to Opportunity (MTO) experiment, discussed in Chapter 3, demonstrated that offering housing vouchers to families to move to low-poverty neighborhoods (those with less than 10 percent of residents in poverty) led to a reduction in neighborhood poverty by 20 percentage points for families that took up the offer (Gennetian et al., 2012). Although the decrease in their experience of neighborhood poverty led to virtually no improvements in MTO-participating children's well-being in the short term (Sanbonmatsu et al., 2006; Gennetian et al., 2012), the subset of children who moved to a lower-poverty neighborhood at a young age (before age 13) showed longer-term benefits in their college and labor market outcomes (Chetty, 2015). Thus housing programs may be made more effective by targeting families with younger children in high-poverty neighborhoods, as long as the program does not have enough funding to serve all families.

The MTO experiment and corresponding Three-City Study (Cove et al. 2008; Orr et al., 2003) also provide insight into the employment effects on parents of moving from a high-poverty neighborhood to a lower-poverty neighborhood. The effects of this experiment on employment were generally weak and showed that it was difficult for many families to integrate into lower-poverty neighborhoods and take advantage of new social networks and employment opportunities. Thus, policies that require a parent to work to receive benefits may be less effective for families with limited social networks or access to resources.

Rural areas have distinctly different needs where poverty is concerned. Low-income families in some of the nation's rural areas face substantial burdens to employment because of extremely limited public transportation and child care options (Whitener, Duncan, and Weber, 2002). Families in these areas will not benefit from work-based policies in the same way that families with better access to employment will. These rural families may

[8] For more information on the SNAP-Ed program, please see https://snaped.fns.usda.gov.

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benefit more from income supports that are not based on employment, such as child allowances or child support assurance.

CONCLUSION 8-7: Living in areas of concentrated poverty makes it difficult for parents to lift their children out of poverty; poor Black and Hispanic families face a considerably higher risk of concentrated neighborhood poverty and other forms of neighborhood disadvantage than poor White families.

HEALTH AND DISABILITY

Why It Matters

Across the United States, as in other countries, people living in poverty tend to have worse health than the rest of the population. In the case of U.S. children, this so-called health gradient grows steeper across childhood and adolescence (Case, Lubotsky, and Paxson, 2002), although the gradient has grown flatter in recent years with the expansion of Medicaid coverage for young children (Currie, Decker, and Lin, 2008). In adulthood, the gradient is steeper still: Adults (ages 18 and older) living in poverty in the United States were almost four times as likely in 2016 to report that they were in fair or poor health (28.2%)[9] as adults with family incomes above twice the official poverty line (7.76%),[10] and in 2014–2015 they were several times more likely to report serious psychological distress during the past 30 days (8% vs. less than 2%).[11]

According to the National Council on Disability, approximately 4.1 million parents in the United States live with disabilities, and their number is increasing (National Council on Disability, 2012). Of these 4.1 million parents, 52 percent receive SSI. The Social Security Administration maintains an extensive list of impairments[12] that it has judged to be severe enough to limit or prevent an individual's ability to work. Some examples include cystic fibrosis, multiple sclerosis, cerebral palsy, traumatic brain injury, and schizophrenia (Social Security Administration, 2018). Parents with work-limiting impairments such as these are twice as likely to be

[9] National Center for Health Statistics, *Summary Statistics: National Health Interview Survey*, Table A-11a, https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-11.pdf.

[10] National Center for Health Statistics, *Summary Statistics: National Health Interview Survey*, Table A-11a, https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-11.pdf.

[11] National Center for Health Statistics, *Health, United States, 2016*, Table 46 (page 1 of 2).

[12] For a complete list of qualifying impairments, see https://www.ssa.gov/disability/professionals/bluebook/listing-impairments.htm.

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unemployed (48% compared to 22%) and three times as likely to live in poverty as those without disabilities (National Council on Disability, 2012).

Regardless of their own health, parents living below the federal poverty level may have to care for children with physical or mental health conditions or disabilities, which can affect the parents' employability and increase stress on the family (Carlson, Keith-Jennings, and Chaudhry, 2017). According to a secondary analysis of data collected for the National Health Interview Survey (NHIS) from 2001 to 2011, children living in poverty are more likely than other children to have a disability. Results from this analysis also show that the number of children with disabilities living below 100 percent of the federal poverty level increased by 10.7 percent between 2001 to 2011 (Houtrow et al., 2014). Some family members may have to reduce the number of hours they work or stop work altogether to care for relatives with disabilities, which can place an additional strain on family finances (Rupp and Ressler, 2009). This difficult balance between work and caregiving can be especially challenging for single parents (Rupp and Ressler, 2009).

Furthermore, the costs related to caring for a family member with a disability may also create a significant financial burden (Carlson, Keith-Jennings, and Chaudhry, 2017; Stabile and Allin, 2012). An analysis of the period 1996 to 2004 found that people with disabilities had significantly higher health expenditures when compared to those without disabilities[13] (Mitra, Findley, and Sambamoorthi, 2009). Moreover, a more recent examination of administrative and survey data suggests that families with children with disabilities are less likely than other families with children to visit the doctor, more likely to delay paying bills and rent, and more likely to require food assistance[14] (Carlson, Keith-Jennings, and Chaudhry, 2017).

Impacts on the health, employability, and quality of life for persons living with a disability are often further exacerbated if they are Black or Hispanic, are older, have low educational attainment, or are living in poverty (Ross and Bateman, 2018). As an example, Blacks and Native Americans with disabilities have the lowest employment rates (McGrew, Scott, and Madowitz, 2018).

Mental health, developmental, and intellectual disabilities can also create significant barriers to employment (Luciano and Meara, 2014; National Council on Disability, 2012). An analysis of data from 2009 and 2010 found that individuals with a diagnosed mental illness were less likely to work, and 39 percent of those who identified as having a serious mental

[13] This was a secondary analysis of the nationally representative Medical Expenditure Panel Survey (MEPS) collected from 1996 to 2004.

[14] This was an analysis of SNAP administrative data and National Health Interview Survey data.

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illness had incomes below $10,000[15] (Luciano and Meara, 2014). However, this last analysis also found that when these individuals received employment services such as vocational counseling, their employment rates doubled (Luciano and Meara, 2014). Other studies suggest that families that care for ill or disabled members have an increased risk of emotional, mental, and physical health problems, including increased levels of depression and anxiety.[16]

Substance abuse is also linked to lower levels of employment and wages, although the causal pathway may work in several directions. Adults who abuse drugs or alcohol may seek less work or be less qualified for well-paying jobs (Terza and Vechnak, 2007). Alternatively, the loss of employment or stress of low wages may lead to greater use of substances as a coping mechanism (Badel and Greaney, 2013). Also, injuries that initially limit a person's ability to work may lead to a growing dependency on pain medication (i.e., opioids) that further reduces the person's ability to work or care for himself or herself (National Institute on Drug Abuse, 2018).

Relationship to Policy

A key question for policy is the extent to which poor health is the primary cause of lower employment and earnings, as opposed to poverty causing poor health.[17] However, the fact that health and income are so highly correlated suggests that programs that condition receipt of benefits on employment or that are intended to increase or supplement earnings will not help poor parents who are unable to sustain stable employment due to poor health or a disability. According to a recent National Council on Disability (2012) report, additional family and work supports such as assistance for child care, transportation, and job training may help parents living with disabilities comply with TANF work requirements. Low-income families in which the parents have disabilities that prevent them from maintaining full-time, stable employment are also less likely to be eligible for family and medical leave and less likely to be able to afford to take leave when eligible (Mathur et al., 2017). Further, while the Family and Medical Leave Act guarantees job protection for eligible workers who need to take leave for up to 12 weeks, it does not include wage replacement.[18] Lack of leave time places people with disabilities at extreme risk, because they may

[15] Based on data collected from the National Survey on Drug Use and Health between 2009 and 2010.

[16] For more information, see https://www.caregiver.org/caregiver-health.

[17] For reviews of the literature, see Cutler, Lleras-Muney, and Vogl (2008); Evans, Wolfe, and Adler (2012).

[18] For more information about the Family and Medical Leave Act, see https://www.dol.gov/whd/fmla.

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experience sporadic health flare-ups or need time off for medical appointments (Vallas, Fremstad, and Ekman, 2015).

Vocational rehabilitation programs have been shown to be effective in helping adults with mental or physical health challenges find and maintain employment (Cullen et al., 2017; Graham et al., 2016; Suijkerbuijk et al., 2017). Despite this, little has been done to connect low-income parents to most of these programs (Farrell et al., 2013; Farrell and Walter, 2013). A recent study conducted by the Office of Planning, Research, and Evaluation at the U.S. Department of Health and Human Services found that there is often only limited collaboration between TANF agencies and Social Security Administration agencies (Farrell et al., 2013). One of the most successful programs included in the study—Families Achieving Success Today, in Ramsey County, Minnesota—found that participants were more likely to receive vocational rehabilitation services and obtain employment than members of the control group and that on average they earned $1,235 more in the first year (Farrell et al., 2013), although this amount may not be enough to enable a family to rise out of poverty.

CONCLUSION 8-8: Because parents who are in poor health or caring for a child in poor health may be less able to work and care for themselves or their children, anti-poverty programs that require employment to maintain eligibility or that have cumbersome eligibility requirements may be less effective for these families.

REFERENCES

Adams, G., and Rohacek, M.H. (2010). *Child Care Instability: Definitions, Context, and Policy Implications*. Washington, DC: The Urban Institute.

Agan, A., and Starr, S. (2018). Ban the box, criminal records, and racial discrimination: A field experiment. *The Quarterly Journal of Economics, 133*(1), 191–235.

Allcott, H., Diamond, R., and Dube, J.P. (2018). *The Geography of Poverty and Nutrition: Food Deserts and Food Choices Across the United States*. Cambridge, MA: National Bureau of Economic Research.

Alsan, M., and Yang, C. (2018). *Fear and the Safety Net: Evidence from Secure Communities*. Cambridge, MA: National Bureau of Economic Research.

Annie E. Casey Foundation. (2010). *Improving Access to Public Benefits: Helping Eligible Individuals and Families Get the Income Supports They Need*. Baltimore, MD: Annie E. Casey Foundation.

Arnold, D., Dobbie, W., and Yang, C.S. (Forthcoming). Racial bias in bail decisions. *Quarterly Journal of Economics*.

Badel, A., and Greaney, B. (2013). Exploring the link between drug use and job status in the U.S. *Regional Economist*, January 7. Available: https://www.stlouisfed.org/publications/regional-economist.

Copyright National Academy of Sciences. All rights reserved.

Barr, M. (2009). Financial services, savings, and borrowing among low- and moderate-income households: Evidence from the Detroit Area Household Financial Services Survey. In R.M. Blank and M.S. Barr (Eds.), *Insufficient Funds: Savings, Assets, Credit, and Banking Among Low-Income Households* (pp. 66–96). New York, NY: Russell Sage Foundation.

Barr, M.S. (2012). Introduction. In M.S. Barr (Ed.), *No Slack: The Financial Lives of Low-Income Americans* (pp. 1–21). Washington, DC: Brookings Institution Press.

Batalova, J., Fix, M., and Greenberg, M. (2018). *Chilling Effects: The Expected Public Charge Rule and Its Impact on Legal Immigrant Families' Public Benefits Use*. Washington, DC: Migration Policy Institute.

Bertrand, M., and Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, 94(4), 991–1013.

Bishaw, A. (2014). *Changes in Areas with Concentrated Poverty: 2000 to 2010*. Washington, DC: U.S. Census Bureau.

Broadus, J., Muller-Ravett, S., Sherman, A., and Redcross, C. (2016). *A Successful Prisoner Reentry Program Expands: Lessons from the Replication of the Center for Employment Opportunities*. New York, NY: MDRC.

Burhouse, S., Chu, K., Goodstein, R., Northwood, J., Osaki, Y., and Sharma, D. (2014). *2013 FDIC National Survey of Unbanked and Underbanked Households*. Washington, DC: Federal Deposit Insurance Corporation.

Campbell, A.L. (2014). *Trapped in America's Safety Net: One Family's Struggle*. Chicago, IL: University of Chicago Press.

Capps, R., Fix, M., Ost, J., Reardon-Anderson, J., and Passel, J.S. (2004). *The Health and Well-Being of Young Children of Immigrants*. Washington, DC: The Urban Institute.

Carlson, S., Keith-Jennings, B., and Chaudhry, R. (2017). *SNAP Provides Needed Food Assistance to Millions of People With Disabilities*. Washington, DC: Center on Budget and Policy Priorities.

Carnes, M., Devine, P.G., Baier Manwell, L., Byars-Winston, A., Fine, E., Ford, C.E., Forscher, P., Isaac, C., Kaatz, A., Magua, W., Palta, M., and Sheridan, J. (2015). The effect of an intervention to break the gender bias habit for faculty at one institution: A cluster randomized, controlled trial. *Academic Medicine, 90*(2), 221–230.

Case, A., Lubotsky, D., and Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *American Economic Review, 92*(5), 1308–1334.

Caskey, J. (2006). *Can Personal Financial Management Education Promote Asset Accumulation by the Poor?* Terre Haute, IN: Networks Financial Institute.

Castellari, E., Cotti, C., Gordanier, J., and Ozturk, O. (2017). Does the timing of food stamp distribution matter? A panel data analysis of monthly purchasing patterns of U.S. households. *Health Economics, 26*(11), 1380–1393.

Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *American Economic Review, 105*(5), 1–33.

Chetty, R., Hendren, N., Kline, P., and Saez, E. (2014). *Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*. Cambridge, MA: National Bureau of Economic Research.

Chetty, R., Hendren, N., Jones, M.R., and Porter, S.R. (2018). *Race and Economic Opportunity in the United States: An Intergenerational Perspective*. Cambridge, MA: National Bureau of Economic Research.

Child Trends. (2014). *Immigrant Children: Indicators of Child and Youth Well-Being*. Washington, DC: Child Trends.

Copyright National Academy of Sciences. All rights reserved.

Cody, S., Reed, D., Basson, D., Pedraza, J., Martin, E.S., Santos, B., and Smith, E. (2010). *Simplification of Health and Social Services Enrollment and Eligibility: Lessons for California from Interviews in Four States: Final Report*. Washington, DC: Mathematica Policy Research.

Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., and Singh, A. (2017). *Household Food Security in the United States in 2016*. Washington, DC: U.S. Department of Agriculture, Economic Research Service.

Congressional Research Service. (2016). *Green Book: Background Material and Data on the Programs within the Jurisdiction of the Committee on Ways and Means*. Washington, DC: Congressional Research Service.

Cove, E., Turner, M.A., Briggs, X.D.S., and Duarte, C. (2008). *Can Escaping from Poor Neighborhoods Increase Employment and Earnings?* Washington, DC: The Urban Institute.

Cullen, K.L., Irvin, E., Collie, A., Clay, F., Gensby, U., Jennings, P.A., Hogg-Johnson, S., Kristman, V., Laberge, M., McKenzie, D., Newnam, S., Palagyi, A., Ruseckaite, R., Sheppard, D.M., Shourie, S., Steenstra, I., Van Eerd, D., and Amick, B.C. (2017). Effectiveness of workplace interventions in return-to-work for musculoskeletal, pain-related and mental health conditions: An update of the evidence and messages for practitioners. *Journal of Occupational Rehabilitation, 28*(1).

Currie, J. (2008). *The Invisible Safety Net*. Princeton: Princeton University Press.

Currie, J., and Grogger, J. (2001). Explaining recent declines in Food Stamp Program participation. *Brookings-Wharton Papers on Urban Affairs*, 203–244.

Currie, J., Decker, S., and Lin, W. (2008). Has public health insurance for older children reduced disparities in access to care and health outcomes? *Journal of Health Economics*, *27*(6), 1567–1581.

Curtis, M.A., Garlington, S., and Schottenfeld, L.S. (2013). Alcohol, drug, and criminal history restrictions in public housing. *Cityscape: A Journal of Policy Development and Research, 15*(3).

Cutler, D.M., Lleras-Muney, A., and Vogl, T. (2008). *Socioeconomic Status and Health: Dimensions and Mechanisms*. Cambridge, MA: National Bureau of Economic Research.

Dehlendorf, C., Ruskin, R., Grumbach, K., Vittinghoff, E., Bibbins-Domingo, K., Schillinger, D., and Steinauer, J. (2010). Recommendations for intrauterine contraception: A randomized trial of the effects of patients' race/ethnicity and socioeconomic status. *American Journal of Obstetrics and Gynecology*, *203*(4), 319-e1–319-e8.

Desmond, M. (2016). *Evicted: Poverty and Profit in the American City*. New York, NY: The Crown Publishing Group.

Devine, P.G., Forscher, P.S., Austin, A.J., and Cox, W.T. (2012). Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. *Journal of Experimental Social Psychology, 48*(6), 1267–1278.

Doleac, J., and Hansen, B. (2016). *Does "Ban the Box" Help or Hurt Low-skilled Workers? Statistical Discrimination and Employment Outcomes When Criminal Histories Are Hidden*. Cambridge, MA: National Bureau of Economic Research.

Donnelly, E.A. (2018). Do disproportionate minority contact (DMC) mandate reforms change decision-making? Decomposing disparities in the juvenile justice system. *Youth Violence and Juvenile Justice*. doi: https://doi.org/10.1177%2F1541204018790667.

Edin, K., and Lein, L. (1997). *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work*. New York, NY: Russell Sage Foundation.

Enchautegui, M.E. (2013). *Nonstandard Work Schedules and the Well-Being of Low-Income Families*. Washington, DC: The Urban Institute.

Enchautegui, M.E., Johnson, M., and Gelatt, J. (2015). *Who Minds the Kids When Mom Works a Nonstandard Schedule?* Washington, DC: The Urban Institute.

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A Roadmap to Reducing Child Poverty

Evans, W., Wolfe, B., and Adler, N. (2012). The SES and health gradient: A brief review of the literature. In *The Biological Consequences of Socioeconomic Inequalities* (pp. 1–37). New York, NY: Russell Sage Foundation.

Farrell, M., and Walter, J. (2013). *The Intersection of Welfare and Disability: Early Findings from the TANF/SSI Disability Transition Project*. OPRE Report 2013-06. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Farrell, M., Baird, P., Barden, B., Fishman, M., and Pardoe, R. (2013). *The TANF/SSI Disability Transition Project: Innovative Strategies for Serving TANF Recipients with Disabilities*. OPRE Report 2013-51. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Floyd, I. (2017). *TANF Cash Benefits Have Fallen by More Than 20 Percent in Most States and Continue to Erode*. Washington, DC: Center on Budget and Policy Priorities.

Gassman-Pines, A., and Bellows, L. (2018). Food instability and academic achievement: A quasi-experiment using SNAP benefit timing. *American Educational Research Journal*, *56*(5),897–927.

Gennetian, L.A., and Shafir, E. (2015). The persistence of poverty in the context of financial instability: A behavioral perspective. *Journal of Policy Analysis and Management*, 1–33.

Gennetian, L.A., Sciandra, M., Sanbonmatsu, L., Ludwig, J., Katz, L.F., Duncan, G.J., Kling, J.R., and Kessler, R.C. (2012). The long-term effects of Moving to Opportunity on youth outcomes. *Cityscape, 14*(2), 137–168.

Graham, C.W., West, M.D., Bourdon, J.L., Inge, K.J., Seward, H.E., and Campbell, C. (2016). Employment interventions for return to work in working aged adults following traumatic brain injury (TBI): A systematic review. *Campbell Systematic Reviews 2016:6*. Oslo, Norway. Available: http://www.campbellcollaboration.org.

Gray, K.F., and Cunnyngham, K. (2016). *Trends in Supplemental Nutrition Assistance Program Participation Rates: Fiscal Year 2010 to Fiscal Year 2014*. Washington, DC: Mathematica Policy Research.

Hagan, J., and Foster, H. (2015). Mass incarceration, parental imprisonment, and the Great Recession: Intergenerational sources of severe deprivation in America. *The Russell Sage Foundation Journal of the Social Sciences, 1*(2), 80–107.

Hahn, H., Adams, G., Spaulding, S., and Heller, C. (2016). *Supporting The Child Care and Workforce Development Needs of TANF Families*. Washington, DC: The Urban Institute.

Halpern-Meekin, S., Edin, K., Tach, L., and Sykes, J. (2015). *It's Not Like I'm Poor: How Working Families Make Ends Meet in a Post-Welfare World* (1st ed.). Oakland: University of California Press.

Hamrick, K.S., and Andrews, M. (2016). SNAP participants' eating patterns over the benefit month: A time-use perspective. *PLoS ONE, 11*(7). Available: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0158422.

Handbury, J., Rahkovsky, I., and Schnell, M. (2015). *Is the Focus on Food Deserts Fruitless? Retail and Food Purchases Across the Socioeconomic Spectrum*. Cambridge, MA: National Bureau of Economic Research.

Hanratty, M.J. (2006). Has the Food Stamp Program become more accessible? Impacts of recent changes in reporting requirements and asset eligibility limits. *Journal of Policy Analysis and Management*, *25*(3), 603–621.

Hersey, J.C., Cates, S.C., Blitstein, J.L., and Williams, P.A. (2014). *SNAP-Ed Can Improve Nutrition of Low-Income Amercians Across Life Span*. Research Triangle Park, NC: RTI International.

Hill, H.D., Morris, P., Gennetian, L.A., Wolf, S., and Tubbs, C. (2013). The consequences of income instability for children's well-being. *Child Development Perspectives, 7*(2), 85–90.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

Hoffman, L. (2006). *Improving Access to Benefits for Low-Income Families*. Washington, DC: NGA Center for Best Practices.

Holcomb, P.A., Tumlin, K.C., Koralek, R., Capps, R., and Zuberi, A. (2003). *The Application Process for TANF, Food Stamps, Medicaid and SCHIP: Issues for Agencies and Applicants, Including Immigrants and Limited English Speakers*. Washington, DC: The Urban Institute.

Holcomb, P.A., Adams, G., Snyder, K., Koralek, R., Martinson, K., Bernstein, S., and Capizzano, J. (2006). *Child Care Subsidies and TANF: A Synthesis of Three Studies on Systems, Policies, and Parents*. Washington, DC: The Urban Institute.

Holt, S. (2015). *Periodic Payment of the Earned Income Tax Credit Revisited*. Washington, DC: The Brookings Institution. Available: https://www.brookings.edu/research/periodic-payment-of-the-earned-income-tax-credit-revisited.

Holzer, H.J., Raphael, S., and Stoll, M.A. (2006). Perceived criminality, criminal background checks, and the racial hiring practices of employers. *The Journal of Law and Economics*, *49*(2), 451–480.

Holzer, H.J., and Wissoker, D. (2001). *How Can We Encourage Job Retention for Welfare Recipients*. Series No. A-49, October. Washington, DC: The Urban Institute.

Horn, K.M., Ellen, I.G., and Schwartz, A.E. (2014). Do Housing Choice Voucher holders live near good schools? *Journal of Housing Economics, 23*, 28–40.

Houtrow, A.J., Larson, K., Olson, L.M., Newacheck, P.W., and Halfon, N. (2014). Changing trends of childhood disability, 2001–2011. *Pediatrics 134*(3), 530–538.

Internal Revenue Service. (2018a). *States and Local Governments with Earned Income Tax Credit*. Available: https://www.irs.gov/credits-deductions/individuals/earned-income-tax-credit/states-and-local-governments-with-earned-income-tax-credit.

_____. (2018b). *Welcome to the Tax Preparer Toolkit: EITC and Other Refundable Credits*. Available: https://www.eitc.irs.gov/tax-preparer-toolkit/welcome-to-the-tax-preparer-toolkit.

Isaacs, J.B., Katz, M., and Amin, R. (2016). *Improving the Efficiency of Benefit Delivery: Outcomes From the Work Support Strategies Evaluation*. Washington, DC: The Urban Institute.

Joshi, P., Ha, Y., Schneider, K.G., and Hardy, E. (2018, January). *Multiple and Interacting Sources of Child Care Subsidy Stability: Complexities of Administrative and Family-Level Factors*. Paper presented at the Society for Social Work and Research Annual Meeting, Washington, DC.

Joshi, P.K., Geronimo, K., Romano, B., Earle, A., Rosenfeld, L., Hardy, E., and Acevedo-Garcia, D. (2014). Integrating racial/ethnic equity into policy assessments to improve child health. *Health Affairs, 33*(12), 2222–2229.

Kabbani, N.S., and Wilde, P.E. (2003). Short recertification periods in the U.S. Food Stamp Program. *The Journal of Human Resources*, *38*, 1112-1138.

Kaeble, D., and Bonczar, T. (2016). *Probation and Parole in the United States, 2015*. Washington, DC: Bureau of Justice Statistics.

Kaeble, D., and Glaze, L. (2016). *Correctional Populations in the United States, 2015*. Washington, DC: Bureau of Justice Statistics.

Kaushal, N., and Gao, Q. (2011). Food Stamp Program and consumption choices. In M. Grossman and N. Mocan (Eds.), *Economic Aspects of Obesity*. Chicago, IL: University of Chicago Press.

Keene, D.E., Rosenberg, A., Schlesinger, P., Guo, M., and Blankenship, K.M. (2018). Navigating limited and uncertain access to subsidized housing after prison. *Housing Policy Debate, 28*(2), 199–214.

Copyright National Academy of Sciences. All rights reserved.

Kochhar, R., and Cilluffo, A. (2017). How wealth inequality has changed in the U.S. since the Great Recession, by race, ethnicity, and income. *Fact Tank: News in the Numbers*. Available: http://www.pewresearch.org/fact-tank/2017/11/01/how-wealth-inequality-has-changed-in-the-u-s-since-the-great-recession-by-race-ethnicity-and-income.

Kopczuk, W., and Pop-Eleches, C. (2007). Electronic filing, tax preparers and participation in the Earned Income Tax Credit. *Journal of Public Economics, 91*, 1351–1367.

Kornfeld, R. (2002). *Explaining Recent Trends in Food Stamp Program Caseloads: Final Report*. Washington, DC: U.S. Department of Agriculture, Economic Research Service.

Lee, H., McCormick, T., Hicken, M.T., and Wildeman, C. (2015). Racial inequalities in connectedness to imprisoned individuals in the United States. *Du Bois Review: Social Science Research on Race, 12*(2), 269–282.

Leventhal, T., Dupere, V., and Shuey, E.A. (2015). Children in neighborhoods. In H. Bornstein, T. Leventhal, and R.M. Lerner (Eds.), *Handbook of Child Psychology and Developmental Science: Ecological Settings and Processes*. Hoboken, NJ: John Wiley & Sons, Inc.

Looney, A., and Turner, N. (2018). *Work and Opportunity Before and After Incarceration*. Washington, DC: The Brookings Institution.

Loprest, P., Gearing, M., and Kassabian, D. (2016). *States' Use of Technology to Improve Delivery of Benefits: Findings From the Work Support Strategies Evaluation*. Washington, DC: The Urban Institute.

Luciano, A., and Meara, E. (2014). The employment status of people with mental illness: National survey data from 2009 and 2010. *Psychiatric Services*, *65*(10), 1201–1209.

Lusardi, A., Schneider, D., and Tufano, P. (2011). *Financially Fragile Households: Evidence and Implications*. Washington, DC: The Brookings Institution.

Lyons, C.J., and Pettit, B. (2011). Compounded disadvantage: Race, incarceration, and wage growth. *Social Problems, 58*(2), 257–280.

Mathur, A., Sawhill, I.V., Boushey, H., Gitis, B., Haskins, R., Holtz-Eakin, D., Holzer, H.J., Jacobs, E., McCloskey, A.M., Rachidi, A., Reeves, R.V., Ruhm, C.J., Stevenson, B., and Waldfogel, J. (2017). *Paid Family and Medical Leave: An Issue Whose Time Has Come*. Washington, DC: The American Enterprise Institute and The Brookings Institution.

Mauer, M., and McCalmont, V. (2015). *A Lifetime of Punishment: The Impact of the Felony Drug Ban on Welfare Benefits*. Washington, DC: The Sentencing Project.

McClure, K., Schwartz, A.F., and Taghavi, L.B. (2015). Housing Choice Voucher location patterns a decade later. *Housing Policy Debate, 25*(2), 215–233.

McDaniel, M., Woods, T., Pratt, E., and Simms, M. (2017). *Identifying Racial and Ethnic Disparities in Human Services: A Conceptual Framework and Literature Review*. OPRE Report No. 2017-69. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

McGrew, A., Scott, L., and Madowitz, M. (2018). *The State of the U.S. Labor Market: Pre-March 2018 Jobs Release*. Available: https://www.americanprogress.org/issues/economy/news/2018/04/05/448989/state-u-s-labor-market-pre-march-2018-jobs-release.

McKernan, S.M., Ratcliffe, C., and Vinopal, K. (2009). *Do Assets Help Families Cope with Adverse Events?* Washington, DC: The Urban Institute.

McKernan, S.M., Ratcliffe, C., Steuerle, C.E., and Zhang, S. (2013). *Less than Equal: Racial Disparities in Wealth Accumulation*. Washington, DC: The Urban Institute.

Mendenhall, R., Edin, K., Crowley, S., Sykes, J., Tach, L., Kriz, K., and Kling, J.R. (2012). The role of Earned Income Tax Credit in the budgets of low-income households. *Social Service Review, 86*(3), 367–400.

Meyers, M.K., Gornick, J.C., and Peck, L.R. (2001). Packaging support for low-income families: Policy variation across the United States. *Journal of Policy Analysis and Management, 20*(3), 457–483.

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Michalopoulos, C., Lundquist, E., and Castells, N. (2010). *The Effects of Child Care Subsidies for Moderate-Income Families in Cook County, Illinois*. OPRE 2011–3. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Mitra, S., Findley, P.A., and Sambamoorthi, U. (2009). Health care expenditures of living with a disability: Total expenditures, out-of-pocket expenses, and burden, 1996 to 2004. *Archives of Physical Medicine and Rehabilitation, 90*(9), 1532–1540.

Moore, K., Perez-Lopez, D., and Hisnanick, J.J. (2017). *Participation Rates and Monthly Payments From Selected Social Insurance Programs*. Household Economic Studies. Current Population Reports, March. Washington, DC: U.S. Census Bureau.

Mullainathan, S., and Shafir, E. (2013). *Scarcity: Why Having Too Little Means So Much*. New York, NY: Times Books/Henry Holt.

National Council on Disability. (2012). *Rocking the Cradle: Ensuring the Rights of Parents With Disabilities and Their Children*. Washington, DC: National Council on Disability.

National Insitute on Drug Abuse. (2018). *Opiod Overdose Crisis*. Available: https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis.

National Research Council. (2014). *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. Washington, DC: The National Academies Press.

Orr, L., Feins, J.D., Jacob, R., Beecroft, E., Sanbonmatsu, L., Katz, L.F., Liebman, J.B., and Kling, J.R. (2003). *Moving to Opportunity Interim Impacts Evaluation*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Pager, D., and Shepherd, H. (2008). The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets. *Annual Review of Sociology, 34*, 181–209.

Pager, D., Western, B., and Bonikowski, B. (2009). Discrimination in a low-wage labor market: A field experiment. *American Sociological Review, 74*, 777–799.

Pavetti, L., Schott, L., and Lower-Basch, E. (2011). *Creating Subsidized Employment Opportunities for Low-Income Parents: The Legacy of the TANF Emergency Fund*. Washington, DC: Center on Budget and Policy Priorities.

Perreira, K.M., Yoshikawa, H., and Oberlander, J. (2018). A new threat to immigrants' health—the public-charge rule. *New England Journal of Medicine*, *379*(10), 901–903.

Pew Charitable Trusts. (2015). *What Resources Do Families Have for Financial Emergencies? The Role of Emergency Savings in Family Financial Security?* Issue Brief. Available: http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/11/emergency-savings-what-resources-do-families-have-for-financial-emergencies.

Pew Research Center. (2016). *On Views of Race and Inequality, Blacks and Whites Are Worlds Apart*. Washington, DC: Pew Research Center.

Quillian, L., Pager, D., Hexel, O., and Midtboen, A.H. (2017). Meta-analysis of field experiments shows no change in racial discrimination in hiring over time. *Proceedings of the National Academy of Sciences*, *114*(41), 10870–10875.

Ratcliffe, C., McKernan, S.M., and Finegold, K. (2007). *The Effect of State Food Stamp and TANF Policies on Food Stamp Program Participation*. Washington, DC: The Urban Institute.

Ross, M., and Bateman, N. (2018). *Disability Rates Among Working-Age Adults Are Shaped by Race, Place, and Education*. Washington, DC: The Brookings Institution.

Rothstein, R. (2017). *The Color of Law: A Forgotten History of How Our Government Segregated America*. New York, NY: Liveright.

Rothwell, J.T., and Massey, D.S. (2014). Geographic effects on intergenerational income mobility. *Economic Geography, 91*(1), 83–106.

Copyright National Academy of Sciences. All rights reserved.

Rupp, K., and Ressler, S. (2009). Family caregiving and employment among parents of children with disabilities on SSI. *Journal of Vocational Rehabilitation, 30*, 153–175.

Sanbonmatsu, L., Kling, J.R., Duncan, G.J., and Brooks-Gunn, J. (2006). *Neighborhoods and Academic Achievement: Results From the Moving to Opportunity Experiment*. NBER Working Paper No. 11909. Cambridge, MA: National Bureau of Economic Research.

Schott, L., Pavetti, L., and Floyd, I. (2015). *How States Use Federal and State Funds Under the TANF Block Grant*. Washington, DC: Center on Budget and Policy Priorities. Available: https://www.cbpp.org/sites/default/files/atoms/files/4-8-15tanf_0.pdf.

Selbin, J., McCrary, J., and Epstein, J. (2018). Unmarked: Criminal record clearing and employment outcomes criminal law/criminology. *The Journal of Criminal Law and Criminology, 108*(1).

Sharkey, P. (2008). The intergenerational transmission of context. *American Journal of Sociology*, *113*(4), 931–969.

_____. (2013). *Stuck in Place: Urban Neighborhoods and the End of Progress Toward Racial Equality*. Chicago, IL: University of Chicago Press.

Shipler, D.K. (2004). *The Working Poor: Invisible in America*. New York, NY: Vintage.

Social Security Administration. (2018). *Disability Evaluation under Social Security: Part III—Listing of Impairments*. Available: https://www.ssa.gov/disability/professionals/bluebook/listing-impairments.htm.

Stabile, M., and Allin, S. (2012). The economic cost of childhood disability. *Future of Children, 22*(1), 65–96.

Stoll, M.A., Raphael, S., and Holzer, H.J. (2004). Black job applicants and the hiring officers' race. *Industrial and Labor Relations Review*, *57*(2), 267–287.

Strawn, J., and Martinson, K. (2000). *Steady Work and Better Jobs: How to Help Low-Income Parents Sustain Employment and Advance in the Workforce*. New York, NY: MDRC.

Sugie, N.F. (2012). Punishment and welfare: Paternal incarceration and families' receipt of public assistance. *Social Forces: A Scientific Medium of Social Study and Interpretation, 90*(4), 1403–1427.

Suijkerbuijk, Y.B., Schaafsma, F.G., van Mechelen, J.C., Ojajarvi, A., Corbiere, M., and Anema, J.R. (2017). Interventions for obtaining and maintaining employment in adults with severe mental illness, a network meta-analysis. *Cochrane Database System Review, 9*, CD011867.

Terza, J.V., and Vechnak, P.B. (2007). *The Effect of Substance Abuse on Employment Status*. University Park: The Pennsylvania State University.

Turner, M.A., Santos, R., Levy, D.K., Wissoker, D., Aranda, C., and Pitingolo, R. (2013). *Housing Discrimination Against Racial and Ethnic Minorities 2012*. Washington, DC: U.S. Department of Housing and Urban Development.

Turney, K., and Goodsell, R. (2018). Parental incarceration and children's wellbeing. *The Future of Children, 28*(1).

U.S. Bureau of Labor Statistics (2018a). *Table A-2. Employment Status of the Civilian Population by Race, Sex, and Age*. Washington, DC: U.S. Bureau of Labor Statistics. Available: https://www.bls.gov/news.release/empsit.t02.htm.

_____. (2018b). *Labor Force Statistics from the Current Population Survey*. August 30. Washington, DC: U.S. Bureau of Labor Statistics. Available: https://www.bls.gov/cps/demographics.htm#race.

U.S. Commission on Civil Rights. (2017). *Targeted Fines and Fees Against Low-Income Communities of Color: Civil Rights and Constitutional Implications*. Washington, DC: U.S. Commission on Civil Rights.

U.S. Department of Education. (2019). *Federal Student Aid: Students with Criminal Convictions*. Washington, DC: U.S. Department of Education. Available: https://studentaid.ed.gov/sa/eligibility/criminal-convictions#incarcerated.

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A Roadmap to Reducing Child Poverty

U.S. Department of Housing and Urban Development. (2015). Housing search and leasing. Chapter 8 in *Housing Choice Voucher Program Guidebook*. Washington, DC: U.S. Department of Housing and Urban Development.

Vallas, R., Fremstad, S., and Ekman, L. (2015). *A Fair Shot for Workers with Disabilities*. Washington, DC: Center for American Progress. Available: https://www.americanprogress.org/issues/poverty/reports/2015/01/28/105520/a-fair-shot-for-workers-with-disabilities.

Wagner, J., and Huguelet, A. (2016). *Opportunities for States to Coordinate Medicaid and SNAP Renewals*. Washington, DC: Center on Budget and Policy Priorities.

Whitener, L., Duncan, G., and Weber, B. (2002). *Reforming Welfare: What Does It Mean for Rural Areas?* Washington, DC: U.S. Department of Agriculture.

Wilde, P., Cook, P., Gundersen, C., Nord, M., and Tiehen, L. (2000). *The Decline in Food Stamp Program Participation in the 1990s*. Washington, DC: U.S. Department of Agriculture, Economic Research Service.

Wildeman, C. (2009). Parental imprisonment, the prison boom, and the concentration of childhood disadvantage. *Demography, 46*(2), 265–280.

Wildeman, C., and Turney, K. (2014). Positive, negative, or null? The effects of maternal incarceration on children's behavioral problems. *Demography*, *51*(3), 1041–1068.

Wildeman, C., Wakefield, S., and Turney, K. (2013). Misidentifying the effects of parental incarceration? A comment on Johnson and Easterling (2012). *Journal of Marriage and Family, 75*(1), 252–258.

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9

Recommendations for Research and Data Collection

Despite the success of government assistance programs in reducing child poverty in the United States over the past 50 years, an estimated 9.7 million children (13%) still live in families with incomes below 100 percent of the Supplemental Poverty Measure (SPM) poverty threshold. Of these, 2 million are in deep poverty, with family incomes below 50 percent of the SPM poverty line.[1] With this as a backdrop, Congress has asked for expert guidance in ways to achieve greater progress. In 2016, Congress passed legislation directing the National Academies of Sciences, Engineering, and Medicine to establish an expert committee to conduct a comprehensive study of child poverty, with the goal of identifying programs that could achieve further significant reductions in child poverty within 10 years. This report is the fruit of that labor.

In the preceding chapters of this report, our Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years has fulfilled the first four elements of its charge, namely, to: (1) review the literature on the health and social costs of child poverty; (2) evaluate the anti-poverty effectiveness of major assistance programs in the United States and other industrialized countries; (3) identify policies and programs with the potential to further reduce poverty and deep poverty for children by 50 percent within 10 years; and (4) perform analyses to identify combinations of programs that have a strong potential to reduce child poverty and

[1] These estimates are for 2015 and use the SPM with income adjusted for underreporting for three large programs—the Supplemental Nutrition Assistance Program (SNAP), Supplemental Security Income (SSI), and Temporary Assistance to Needy Families (TANF) (see Chapter 2).

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meet other policy objectives. All of our analyses, as specified in the charge made to us, used the SPM, adjusted for underreporting of major assistance programs, as the standard for assessing program benefits and costs. This chapter addresses the fifth element of our charge from Congress:

> . . . to identify high-priority research gaps, the filling of which would significantly advance the knowledge base for developing policies to reduce child poverty in the United States and assessing their effects.

Substantial evidence undergirds our conclusions in the preceding chapters concerning the effectiveness of programs and combinations of programs at combating child poverty. Owing to gaps in the relevant policy literature and associated data, however, we were unable to assess certain program and policy options as fully as we would have liked. To provide just a few examples:

- In contrast to the wealth of evidence available during the welfare reform debates of the 1990s, today we have very few recent strong evaluations of programs and policies designed to boost the job skills and employment of parents in low-income families receiving public assistance.
- For some assistance programs, such as Supplemental Security Income (SSI) and various types of housing assistance, there is relatively little evidence of their effects on children.
- There is insufficient evidence to assess the potential poverty-reducing effects of programs that do not provide income support, such as family planning and marriage promotion programs.
- Available data sources lack sufficient sample sizes or variables, or both, to assess the poverty-reducing effects of programs for small or specialized population groups, such as American Indians and Alaska Natives, children with disabilities, and children with incarcerated parents.
- Crucial measures of family resources, such as benefits (cash or in-kind) from assistance programs (e.g., Supplemental Nutrition Assistance Program [SNAP] benefits), are underreported or misreported in household surveys. This problem is severe enough that it compromises these measures' use for poverty analysis without substantial investment in data correction and adjustments using administrative data. Fortunately, there is a growing evidence base on ways to make these corrections.

Accordingly, this concluding chapter contains (1) a list of priority areas for research and (2) recommendations for data collection and measurement,

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which if acted on will fill gaps in the literature and evidence base and make it possible to evaluate program and policy changes that may be made on the basis of our conclusions. In this chapter we also discuss (3) how having high-quality monitoring and evaluation efforts in place will enable a future expert study committee to evaluate progress and identify further steps that may be needed to further reduce child poverty and deep poverty. We could not address the entire field of poverty and well-being research; rather, we focused on areas for which the absence of solid research findings most compromised the committee's ability to assess the effects of alternative programs and policies on child poverty reduction over a 10-year period.

Finally, this chapter concludes by underscoring the importance of a coordinated effort by relevant government agencies to set priorities for research and data collection so that scarce public resources can be used to their greatest effect. The U.S. social safety net is decentralized, with different agencies in charge of administering programs related to food, housing, energy, job training, medical care, and various kinds of income assistance. It is critical for these agencies to work together to provide for cost-effective data collection, monitoring of program administration and child outcomes, and research on the benefits and costs of the nation's current and proposed efforts to reduce child poverty.

PRIORITY AREAS FOR RESEARCH

In this section, we identify four priority areas for research on finding ways to (1) assist parents in obtaining sustained employment; (2) reduce uncertainty and fluctuations in income that make it difficult for low-income families to handle the daily challenges of living; (3) facilitate access for all families to programs for which they are qualified; and (4) help offset the added barriers to poverty reduction encountered by low-income families that are living in urban areas of concentrated poverty or in rural areas lacking transportation and community resources, by low-income families that face pervasive discrimination in housing, employment, and other areas, and by children who have a parent involved in the criminal justice system.

In addition, there are two areas for which we do not make formal recommendations, but which nonetheless deserve attention. First, among the major assistance programs, SSI and various kinds of housing assistance have undergone little evaluation to determine their effectiveness in reducing child poverty and improving child well-being. The agencies with responsibility for these programs need to subject them to rigorous assessment of these impacts.

Second, as we documented in Chapter 7, several family-related issues deserve further research. Despite extensive experimentation, there has been little success in devising programs with positive effects on marriage rates,

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despite the fact that child poverty would probably decline if more children were living in two-parent households. We are unable to identify specific programs that should be tested. However, we encourage the states, as they are testing work incentives (see next section), to seek out and test ideas for structuring benefits in a way that encourages marriage, or at least does not discourage it by penalizing families with married parents.

Two other family-related issues concern contraception and family leave. There is strong evidence that increasing awareness of and access to effective, safe, and affordable long-acting reversible contraception (LARC) reduces unplanned births, which in turn might reduce child poverty. States therefore have ample evidence that they could use to develop, test, and implement policies that promote the use of LARC. In addition, evidence from a small number of states suggests that paid family and medical leave may promote parental employment and improve child health, although it may reduce employment among women potentially eligible for such leave. It is therefore important to continue evaluating the labor-market, health, and poverty impacts on child poverty of state paid-leave laws.

We stress the importance of randomized controlled methodologies, where feasible, when evaluating the effectiveness of existing or proposed programs and policies for reducing child poverty and deep poverty. These methodologies can also provide evidence to help achieve other program goals that can improve child well-being, such as increasing marriage rates and parents' labor force participation. Such experiments, while not without problems (e.g., missing data, attrition, small samples, high relative cost; see Deaton and Cartwright, 2018; National Research Council, 2010), make it possible to draw causal inferences—and not just correlational associations—concerning the effects of alternative policies.

Although we stress the importance of experiments, we recognize that it is often impossible to carry out controlled experimentation. For example, understanding the longer-term effects of alternative policies might require an experiment lasting far longer than resource constraints, family consent, and attrition from the experiment would allow. When random assignment of families to treatment groups is not an option, alternative methods can often provide compelling evidence on the effects of different regimes. Such methods include regression discontinuity, instrumental variables, propensity score matching, and case control studies, among others.

Analyses of natural experiments can also provide strong evidence of program effects. This approach might be useful, for example, in assessing the poverty-reducing effects of Medicaid expansion based on before-and-after comparisons of states that have and those have not implemented expansion. These before-and-after methods could also be applied to data gathered in health surveys to study policy effects on child and parental biomarkers and mental health. Quasi-experimental methods can be especially

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helpful for determining the long-term effects of policies to alleviate child poverty on earnings, chronic diseases, and other important components of intergenerational mobility. In fact, much of what we know about long-term outcomes derives from studies with these research designs.

Data from randomized experiments and quasi-experiments often turn up evidence of differential effects of policies on different groups, although these findings should be subject to further testing in cases where analyzing such differences is not part of the original research design. In addition to experimentation and quasi-experimentation, other kinds of research can be used to (1) identify policy features that merit the use of scarce resources for rigorous but expensive research methods; (2) help understand the circumstances and family situations for which a given program might be more or less successful; and (3) help identify aspects of program administration that affect child outcomes. Research methods for these purposes include process analysis, which could look at the details of how programs operate; qualitative analysis, through which community sociologists could examine families' circumstances and behaviors; and correlational analysis, which could suggest promising avenues for poverty reduction and other policy goals, based on ex-postanalysis of multivariate data, that warrant experimentation. (For an assessment of the strengths and weaknesses of various research methods, see National Research Council, 2001, Ch. 4, and National Academies of Sciences, Engineering, and Medicine, 2016, Ch. 6.)

In the recommendations that follow, for the sake of readability, rather than name every agency that could benefit from each proposed action, we call on "relevant agencies" to take appropriate action, on the assumption that agencies will be able to identify those recommendations that are relevant to their missions. The last section discusses the need for a coordination of efforts among the many relevant agencies, including a role for the U.S. Office of Management and Budget (OMB), as well as the need for making administrative data available to qualified researchers outside those agencies for the purposes of program evaluation.

Research on Effective Work-Oriented Child Poverty-Reduction Programs

Historically, an important goal of programs to reduce child poverty in the United States has been to move low-income families from reliance on government assistance to greater participation in the labor force. If government is to reach appropriate conclusions about which policies will have the largest effects on poverty reduction and labor force participation, it needs a solid and reliable body of research evidence. Much of what is known about the effects of work-oriented features of assistance programs on poverty, government budgets, and society at large (see Chapter 7) comes

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from many well-run experiments that states conducted before the 1996 welfare reform (Grogger and Karoly, 2005; Haskins and Margolis, 2014; National Research Council, 2001). That research was largely a response to the requirement by the U.S. Department of Health and Human Services that states rigorously assess the effects of program modifications as a condition for obtaining waivers to implement them (Gueron and Rolston, 2013).

In recent years, however, states seeking to test new work-oriented programs, especially those including work requirements, have often chosen evaluations with methodologically weak designs, which have produced unreliable and misleading results (Mitchell, 2018). Low-quality evaluations are a waste of public funds and can harm the public discussion of the merits of new programs. When the government agencies that grant waivers do not prioritize high-quality evaluations, they fail to ensure that the public discussion of the programs' strengths and weaknesses is based on strong evidence. Federal agencies therefore should require states to conduct rigorous and scientifically valid evaluations of any new programs implemented as a result of the waiver process.

RECOMMENDATION 9-1: Relevant federal departments and agencies, especially those granting waivers to state and local governments to test new work-related programs, should prioritize high-quality, methodologically rigorous research and experimentation to identify ways to boost the job skills and employment of parents of low-income families receiving public assistance. Congress should ensure that sufficient funding is made available to conduct these evaluations.

Research on Features of Assistance Program Administration That Will Enhance the Financial Stability of Low-Income Families

We have documented the financial instability that makes it difficult for many low-income families to juggle everyday challenges and find stable housing, for example when they lack the funds for a deposit and the first month's rent. Low-income families are also vulnerable to financial catastrophe triggered by a loss of employment, a reduction in work hours, the loss of transportation, or other changes in parents' circumstances—which can have dire consequences for children.

We recommend rigorous evaluation of those features of assistance programs that might make it easier for families to obtain and retain benefits. Examples include methods for integrating and streamlining enrollment across multiple program areas (e.g., housing, food, energy) and simplified procedures for updating information so that families retain eligibility. It would also be useful to experiment with different ways of offering

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short-term financial assistance, such as to enable families to pay a deposit on a rental unit or a large car-repair bill, as well as ways to make existing benefit payments more frequent (e.g., for the Earned Income Tax Credit or EITC), in the interest of accommodating families' needs.

RECOMMENDATION 9-2: Relevant federal departments and agencies should prioritize research and experimentation aimed at finding ways to reduce the financial instability of low-income families participating in assistance programs. Program features that may contribute to this goal and merit evaluation include streamlined program administration, more convenient access to the benefits that families are eligible to receive, provisions for emergency assistance, and flexibility in the frequency of benefit payments.

Research on Features of Assistance Program Administration That Will Reduce Barriers to Access by All Population Groups

The passage of legislation or implementing regulations to improve the government's safety net for low-income families with children is necessary but insufficient to achieve the desired reductions in child poverty and other priority outcomes. In addition to being run as efficiently as possible, programs need to focus on ensuring equitable access to all families who qualify for benefits. In this report we have documented disparities in program take-up rates (e.g., for SNAP benefits) both among states and among demographic groups. While a number of factors may produce such disparities, cumbersome or demeaning enrollment procedures can prevent potential beneficiaries from accessing resources to which they are entitled. Another barrier to access is simply the lack of awareness that programs are available, including awareness of any new program features, such as the provision of emergency assistance. Multifaceted experimentation and other research on ways to reduce these kinds of barriers ought to be high priorities.

RECOMMENDATION 9-3: Relevant federal departments and agencies should prioritize research and experimentation designed to improve the administration of assistance programs, especially to facilitate full and equitable access to the benefits to which low-income families are entitled. Such research should focus not only on streamlining program processes but also on making outreach about programs more effective, enhancing the communication skills of program staff, and strengthening program staff's ability to interact with all population groups.

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Research on Reducing Barriers to the Effectiveness of Assistance Programs Resulting from Contextual Factors Affecting Families

Not all low-income families face the same problems as they attempt to climb out of poverty with the help of government assistance programs. Families that live in urban neighborhoods with concentrated poverty (with poverty rates of 40 percent or higher)[2] or in depressed rural areas that lack transportation and community resources are particularly likely to face obstacles to gainful employment and other means of improving their economic situations. Families in which a parent has a chronic disease or is disabled face similar challenges, as do families that routinely encounter discrimination in employment, housing, medical care, and other areas because of their race or ethnicity. Compounding the obstacles to economic betterment that confront minority low-income families is the fact that they are more likely than White families to live in areas of concentrated poverty and to have a parent involved in the criminal justice system.

Income assistance programs, which are the focus of our report, cannot in isolation be expected to significantly reduce neighborhood segregation, discrimination in realms such as employment, or mass incarceration. However, as described in Chapter 8, these programs can help reduce the negative impacts of such conditions on families' access to and use of benefits designed to reduce child poverty. Meanwhile, research is needed to identify and combat discriminatory behaviors, such as neglecting to inform minority families of child care vouchers and other available benefits. Along with that, experimentation is needed to find ways to improve minority families' job prospects. The latter may include providing active assistance in job searches, working directly with major employers to help low-income and formerly incarcerated parents gain a foothold in the labor market, and helping families move to neighborhoods with better public transportation and other supports.

It is also important to note that administrative changes that give more discretion to case workers, for example so they can respond to families experiencing emergencies, may also increase opportunities for discriminatory behavior. This is a tradeoff that needs to be explicitly recognized, studied, and addressed.

RECOMMENDATION 9-4: Relevant federal departments and agencies should prioritize research and experimentation designed to find ways to mitigate the effects of contextual factors that impair the effectiveness of current programs to combat child poverty. These contextual

[2] For more information on concentrated poverty, see https://www.cbpp.org/sites/default/files/atoms/files/11-3-15hous2.pdf.

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factors include (1) detrimental neighborhood conditions, such as those found in urban areas of concentrated poverty and rural areas with limited transportation and/or access to community resources; (2) racial and social discrimination in employment and housing; and (3) adverse consequences of the criminal justice system, which disproportionately affect poor people, especially minorities. Such research should focus on population groups that are known to be most harmed by discrimination and bias and most likely to face adverse contexts that worsen their families' poverty and their ability to overcome it.

IMPROVEMENTS IN DATA COLLECTION AND MEASUREMENT

Better data can be just as important as closing the research gaps in the effort to assess promising anti-child-poverty initiatives. Improved federal statistics on income and poverty threshold components are also needed to better inform policy makers and the public.

We have prioritized four improvements in data and measures: (1) the addition of relevant variables to surveys and administrative records to better assess the impact of contextual factors on child poverty programs; (2) the expansion of sample sizes for small populations of policy interest; (3) the use of administrative records to correct reported income and program benefits in the Current Population Survey Annual Social and Economic Supplement (CPS ASEC), which is the basis of both the Official Poverty Measure (OPM) and the SPM; and (4) an assessment of the merits of a Health-Inclusive Poverty Measure (HIPM, see Chapter 7) to capture more fully than the SPM does the effects on child poverty of changes to Medicaid and other medical care assistance programs. Improvement of household expenditure data would also be helpful for analyzing consumption patterns and the relationship between income poverty and consumption poverty, and in the longer run it would be helpful for developing a consumption-based measure of poverty.

Collecting Relevant Variables to Analyze Program Effectiveness and Child Poverty

The portfolio of ongoing federal household surveys provides a rich array of data for tracking child poverty and other indicators of child well-being. However, some important variables are systematically missing from both surveys and program administrative records. Having family members involved in the criminal justice system, about which surveys rarely collect information, is a prime example. Surveys rarely ask whether family members are or have been incarcerated or on probation or parole

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(see National Academies of Sciences, Engineering, and Medicine, 2017a). Similarly, criminal justice records are rarely linked to assistance program records. More generally, it is important for relevant program agencies and statistical agencies to systematically review the extent to which existing and proposed data collections include important variables for the analysis of low-income families' participation in assistance programs, characteristics of parents that are important for understanding child outcomes, and trends in child poverty and other indicators of child well-being. Based on that review, the next step is for agencies to identify priority data gaps and to develop plans, in conjunction with OMB's Statistical Policy Division and relevant OMB budget units, for filling these gaps.

RECOMMENDATION 9-5: Relevant federal program agencies and statistical agencies, working with the U.S. Office of Management and Budget, should review relevant data collection programs and proposed programs, including surveys and administrative records, to ensure that they include measures for monitoring and assessing the effects of assistance programs, family characteristics, and contextual factors on child poverty and other child outcomes. For example, surveys on income, wealth, and program participation should obtain information about family members who are currently incarcerated or on parole or probation, using techniques that are known to facilitate response, to support research on how these circumstances may increase child poverty.

Collecting Data on Small Populations for Analyzing Child Poverty

Household surveys use probability samples to collect information, a method that costs less and imposes less of a burden on respondents than a complete population census would. Surveys intended to yield the data necessary for analyzing income and poverty, such as the CPS ASEC, employ a sufficient sample size for major population groups (the CPS ASEC includes 100,000 households each year), but their sample size is not sufficient to allow the analysis of small population groups that merit particular attention in the context of child poverty. While the American Community Survey, which includes 3 million households each year,[3] can provide poverty estimates for small population groups, it lacks the richness of content to support detailed analysis of program effects on child outcomes.

An important example of this problem concerns the American Indian and Alaska Native (AIAN) population, about which there is a dearth of

[3] See https://www.census.gov/topics/income-poverty/poverty/guidance/data-sources/acs-vs-cps.html.

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data, particularly on children. Because of the relatively small size of this population, it often goes uncounted in national surveys or is combined with other small racial/ethnic groups. Moreover, evaluations of the effectiveness of programs and policies designed to combat child poverty—whether provided by a tribe or by federal or state governments—have rarely been conducted for this population, even though AIAN families have very high poverty rates and other deficits, such as poor health.

Other groups for which small sample sizes make analysis difficult (assuming the group is identified in the first place) include children with disabilities and children with one or both parents incarcerated or on parole. Data on such small populations can be obtained by adding supplemental samples to existing surveys on a periodic basis. For example, additional samples can be rotated so that one small group, such as AIAN households with children, is oversampled in one year and another group, such as households that have children with disabilities, is oversampled in another. In addition, targeted surveys can be fielded at regular intervals. Finally, program agencies could be required to include relevant variables, such as child disabilities and AIAN status, in their administrative records.

RECOMMENDATION 9-6: Federal program agencies and statistical agencies working with the U.S. Office of Management and Budget should explore ways to obtain sufficient sample sizes for the analysis of small population groups of concern for child poverty. Such groups include American Indian and Alaska Native families, families that have children with disabilities, and families with one or both parents involved in the criminal justice system. Methods to consider include adding supplemental samples to existing surveys on a rotating basis, fielding targeted surveys periodically, and ensuring that assistance program records include relevant variables for analysis.

Improving Measures of Income and Poverty

Estimates of income, poverty, and assistance program participation that are derived from major federal household surveys, including the CPS ASEC, the American Community Survey, and the Survey of Income and Program Participation (SIPP), are followed closely by policy analysts and researchers and serve to inform the public as well as policy makers. However, over time the completeness and accuracy of survey respondents' reports have declined.

When CPS ASEC estimates of recipients and amounts of income from various programs are compared with administrative records, one finds high rates of net underreporting. In 2006–2007, for example, the CPS captured only 83 percent of benefits paid out from the EITC, only 68 percent of

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unemployment insurance benefits, and only 54 percent of SNAP benefits (Meyer, Mok, and Sullivan, 2009, Tables 3, 8, 10). Similarly, child support receipts reported in the 2017 CPS are only 75 percent of payments distributed to families recorded by the Office of Child Support Enforcement (Grall, 2018; and Office of Child Support Enforcement, 2018). This underreporting has persisted even after the Census Bureau has imputed missing amounts for respondents who say they participated in a program but did not provide an amount, and even after it has reweighted the data to reproduce population estimates by age, gender, and race and ethnicity.

In Chapter 2 we described the TRIM3 model procedures for correcting the underreporting of receipt and amounts of major assistance programs, specifically SNAP, SSI, and Temporary Assistance to Needy Families (TANF), in the CPS ASEC; without such adjustments, the SPM poverty rate for children in 2015 would have been 3.3 percentage points higher. Yet the TRIM3 adjustments, which use published aggregate statistics such as total SNAP beneficiaries, cannot be as accurate as adjustments that could be made by the Census Bureau using administrative records for individuals and households. Moreover, TRIM3 does not attempt to adjust for underreporting of other income types, such as child support, pensions, interest, or dividends (see Chapter 2). Several reports by expert panels of the Committee on National Statistics have recommended that the Census Bureau use administrative records to correct for reporting errors in the CPS ASEC and the SIPP (see, e.g., National Research Council, 1989, 2009). To date, the Census Bureau has used the administrative records to which it has access for statistical purposes to evaluate reporting in its surveys, but not to adjust the data.

One impediment is that the Census Bureau lacks ready access to most state administrative records. (States maintain records for SNAP, Medicaid, unemployment insurance, TANF, and workers' compensation.) Also, the Census Bureau would require additional budget resources to redesign its questionnaires and processes to permit integration of survey responses and administrative records. There are also concerns as to the legal authority for using records to replace survey responses, although Title 13 of the U.S. Code[4] authorizes the Secretary of Commerce (on behalf of the Census Bureau) to obtain and use records to the extent possible in place of direct inquiries.

Over the past decade there has been a growing recognition of the need to use administrative records together with surveys to improve the quality of the data on which important statistics are based by adopting a multiple-data-sources paradigm instead of a survey paradigm (see National Academies of Sciences, Engineering, and Medicine, 2017b, III-3). In 2014,

[4] U.S. Code, Title 13, Chapter 1, Subchapter I, § 6.

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OMB issued guidance stating that the use of federal administrative records should be routinely considered when compiling federal statistics (Office of Management and Budget, 2014). The more recent report of the Commission on Evidence-Based Policymaking (2017, Ch. 2) includes several recommendations for enhancing the government's ability to use administrative records for evidence-based program evaluation and policy research.[5]

We add our voice to those of other institutions underscoring the importance of producing high-quality statistics that accurately reflect levels of and trends in household income, poverty, and program participation. Organizations such as the Urban Institute (in producing its TRIM3 model) and the Congressional Budget Office have done invaluable service by producing adjusted income statistics to inform policy debate. Nonetheless, it ought to be the role of the responsible federal statistical agency, which can gain access to microlevel administrative records for statistical purposes, to regularly produce authoritative income statistics to ensure that everyone is using the same high-quality information for public discussion and policy analysis.

It would also be useful for the Census Bureau to conduct or commission research on the OPM, anchored SPM, unanchored SPM, and consumption-based measures of poverty to see which of these measures more accurately track other measurements of disadvantage and hardship, such as food insecurity, both over time and across space.

RECOMMENDATION 9-7: Relevant federal departments and agencies, together with the Office of Management and Budget, should work with the Census Bureau to obtain and use administrative records in conjunction with household surveys to improve the quality of the official income, poverty, and program participation estimates that are needed by the public, policy makers, program analysts, and researchers. It is understood that research access to microdata for linked datasets would be governed by relevant laws and regulations for protecting data confidentiality and individual privacy.

Developing a Health-Inclusive Poverty Measure (HIPM)

Extensive evidence points to the positive effects of Medicaid and the Children's Health Insurance Program (CHIP) on child outcomes. Yet the SPM measure used throughout this report, while a significant improvement on the OPM, provides no way to translate the resources transferred to low-income families by health insurance coverage into a trustworthy estimate of poverty reduction. While the SPM takes into account medical

[5] Available: https://www.whitehouse.gov/wp-content/uploads/2018/06/Government-Reform-and-Reorg-Plan.pdf.

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out-of-pocket (MOOP) expenses, such as premiums and copayments, its thresholds do not include an allowance for medical care needs, and its measurement of family resources does not directly capture the benefits of Medicaid or other health insurance coverage.

In Chapter 7, we describe an approach that seeks to turn the SPM into an HIPM by adding needs for health care insurance to the SPM poverty thresholds and adding health insurance coverage benefits (net of MOOP) to SPM-defined family resources. The proposal uses the Affordable Care Act's Silver Plan provisions as the basis for the threshold amounts and benefits, including caps on premium and nonpremium MOOP expenses, so that families never have benefits added that exceed what the Affordable Care Act deems to be acceptable cost-sharing. Using this HIPM, Medicaid is estimated to have reduced child poverty by over 5 percentage points in 2014 (Korenman, Remler, and Hyson, 2017).

We urge the agencies that produce the SPM—namely, the Bureau of Labor Statistics, which produces the thresholds, and the Census Bureau, which measures family resources and produces poverty estimates—to work with OMB and the Department of Health and Human Services on a plan to evaluate and move toward implementation of an HIPM.

RECOMMENDATION 9-8: The Bureau of Labor Statistics and the U.S. Census Bureau, working with the U.S. Office of Management and Budget and the U.S. Department of Health and Human Services, should move expeditiously to evaluate a Health-Inclusive Poverty Measure (HIPM) of the kind illustrated in this report. Using the evaluation results, these agencies should proceed to implement an HIPM that builds on the Supplemental Poverty Measure. Such a measure would permit a fuller assessment of the effectiveness of health insurance programs, such as Medicaid, in reducing measured child poverty.

CONTINUED MONITORING AND PROGRAM EVALUATION

Provided that the above-described improvements can be made in research and data sources to fill important gaps in what is known about effective child anti-poverty programs, executive branch agencies and Congress (when legislation is needed) should be able to identify promising program features to implement at scale. It is important that program budgets, whether for new or current programs, include sufficient resources for data collection to enable continuous monitoring of program operations and child outcomes.

Needed data may require the inclusion of additional variables in ongoing federal household surveys, additional variables collected in the course of program administration, and new targeted surveys. Budgets also need

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to include sufficient resources for regular program evaluation and research to support further improvements in program effectiveness. Similarly, budgets for block grant programs like TANF—which allow state governments considerable latitude in their design and administration—need to include resources for data collection, program evaluation, and research.

In other words, implementation of a new or modified income assistance program, whether at the federal or state level, should not signal an end to relevant data collection and research, as occurred to some extent following welfare reform in the mid-1990s. Instead, it ought to be standard practice for policy makers to require continued monitoring and evaluation and to ensure that resources are available to determine where program innovations are and are not working and what further improvements may be possible.

Our recommendation in this regard comports with recommendations for program evaluation contained in the 2017 report by the Commission on Evidence-Based Policymaking. Recommendations 5-1 through 5-6 from that 2017 report call for each department to have a chief evaluation officer, a trained evidence-building workforce, and a multiyear learning agenda; for OMB to coordinate evidence-building activities across departments; for streamlined procedures for approving data collection to support evidence-based policy; and for sufficient resources to support evidence-based program design, implementation, and evaluation. Several of these recommendations by the Commission are adopted in the administration's June 19, 2018, report, *Delivering Government Solutions in the 21st Century—Reform Plan and Reorganization Recommendations*, which includes a section on strengthening federal evaluation.[6] They are also included in the recently passed Foundations for Evidence-Based Policymaking Act of 2018.[7]

RECOMMENDATION 9-9: Federal and state executive agencies and legislatures should ensure that child anti-poverty assistance programs require and include adequate resources for regular monitoring of program operations and child outcomes, as well as for rigorous program evaluation and research on ways to improve program effectiveness.

COORDINATING RESEARCH AND DATA PRIORITIES ACROSS DEPARTMENTS

Our report lays out packages of anti-poverty programs that have the potential to cut child poverty and deep poverty by one-half within 10 years.

[6] Available: https://www.whitehouse.gov/wp-content/uploads/2018/06/Government-Reform-and-Reorg-Plan.pdf.

[7] Available: https://bipartisanpolicy.org/blog/congress-provides-new-foundation-for-evidence-based-policymaking.

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It also identifies priorities for research and data collection to fill important gaps in the evidence base, thereby paving the way for further improvements in the effectiveness of programs designed to combat child poverty. We hope the relevant agencies and the U.S. Congress will take our conclusions and recommendations seriously and act on them.

As we noted earlier, however, responsibilities for administering the federal safety net are spread among half a dozen cabinet departments: the U.S. Departments of Agriculture, Energy, Health and Human Services, Housing and Urban Development, Labor, and Treasury, as well as the U.S. Social Security Administration. Responsibilities for data collection, program evaluation, and research on program improvements are similarly dispersed. State agencies, working with their federal counterparts, play an important role in the administration of many assistance programs.

Assuming that stakeholders—Congress, federal and state agencies, and the public—agree that further reduction of child poverty is a priority goal for U.S. policy, we offer a final recommendation: A coordinating mechanism should be put in place to ensure that our report is followed up and that well-considered decisions are made establishing priorities for new and improved assistance programs and supporting the associated research and data needed for monitoring, evaluation, and further improvement. We believe that the Office of Management and Budget is the appropriate agency to coordinate the assessment of our conclusions and recommendations and to put together an action plan.

In response to the 1995 National Research Council report calling for a new approach to poverty measurement, OMB acted on the report's recommendation that it play a lead role by establishing a technical working group of relevant agencies to assess and refine the panel's recommendations. The result of that action was the SPM. Similarly, OMB regularly leads interagency committees on such matters as the content of the decennial census, the American Community Survey, and SIPP. In its 2017 report (p. 6), the Commission on Evidence-Based Policymaking specifically assigned a lead role to OMB to coordinate evidence-based policymaking in the federal government:

> REC. 5-3: The Congress and the President should direct the Office of Management and Budget (OMB) to coordinate the federal government's evidence-building activities across departments, including by undertaking any necessary reorganization or consolidation within OMB and by bolstering the visibility and role of interagency councils.

We conclude our report with a similar recommendation:

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RECOMMENDATION 9-10: The Office of Management and Budget (OMB) should convene working groups of appropriate federal program, research, and statistical agencies to assess this report's conclusions about program packages that are capable of reducing child poverty by half within 10 years of adoption. OMB should also convene working groups charged with assessing the report's recommendations for research and data collection to fill important gaps in knowledge about effective anti-child-poverty programs. These working groups should be tasked with recommending action steps, and OMB should work with the relevant agencies to draw up implementation plans and secure appropriate resources. The working groups should consult with the relevant state agencies and outside experts, as appropriate, to inform their deliberations.

REFERENCES

Commission on Evidence-Based Policymaking. (2017). *The Promise of Evidence-Based Policymaking*. Washington, DC. Available: https://cep.gov/content/dam/cep/report/cep-final-report.pdf.

Deaton, A., and Cartwright, N. (2018). Understanding and misunderstanding randomized controlled trials. *Social Science & Medicine, 210*, 2–21.

Grall, T. (2018). *Custodial Mothers and Fathers and Their Child Support: 2015*. Current Population Reports. Washington, DC: U.S. Census Bureau.

Grogger, J., and Karoly, L.A. (2005). *Welfare Reform: Effects of a Decade of Change*. Cambridge, MA: Harvard University Press.

Gueron, J.M., and Rolston, H. (2013). *Fighting for Reliable Evidence*. New York: Russell Sage Foundation.

Haskins, R., and Margolis, G. (2014). *Show Me the Evidence: Obama's Fight for Rigor and Results in Social Policy*. Washington, DC: Brookings Institution Press.

Korenman, S., Remler, D.K., and Hyson, R. (2017). *Accounting for the Impact of Medicaid on Child Poverty*. Washington, DC: The National Academies Press.

Meyer, B., Mok, W.K.C., and Sullivan, J.X. (2009). *The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences*. NBER Working Paper No. 15181. Cambridge, MA: National Bureau of Economic Research. Available: https://doi.org/10.3386/w15181.

Mitchell, T. (2018). *Some House Leaders Ignore Evidence, Cite Flawed Reports to Justify Taking Basic Assistance Away from Needy Individuals*. Washington, DC: Center for Budget and Policy Priorities. Available: https://www.cbpp.org/sites/default/files/atoms/files/4-18-18tanf.pdf.

National Academies of Sciences, Engineering, and Medicine. (2016). *Commercial Motor Vehicle Driver Fatigue, Long-Term Health, and Highway Safety: Research Needs*. Washington, DC: The National Academies Press.

_____. (2017a). *Improving Collection of Indicators of Criminal Justice System Involvement in Population Health Data Programs: Proceedings of a Workshop*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/24633.

_____. (2017b). *Principles and Practices for a Federal Statistical Agency, Sixth Edition*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/24810.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

National Research Council. (1989). *The Future of the Survey of Income and Program Participation*. Washington, DC: National Academy Press. Available: https://doi.org/10.17226/2072.

_____. (1995). *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.

_____. (2001). *Evaluating Welfare Reform in an Era of Transition*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/10020.

_____. (2009). *Reengineering the Survey of Income and Program Participation*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/12715.

_____. (2010). *The Prevention and Treatment of Missing Data in Clinical Trials*. Washington, DC: The National Academies Press. Available: https://doi.org/10.17226/12955.

Office of Child Support Enforcement. (2018). *Preliminary Report FY 2017*. Washington, DC: U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/css/resource/fy-2017-preliminary-data-report.

Office of Management and Budget. (2014). *Guidance for Providing and Using Administrative Data for Statistical Purposes*. OMB Memorandum M-14-06. Washington, DC: Office of Management and Budget. Available: https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2014/m-14-06.pdf.

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Appendix A

Biosketches of Committee Members and Project Staff

COMMITTEE MEMBERS

Greg Duncan *(Chair)* is a distinguished professor of education at the University of California, Irvine. Duncan spent the first 25 years of his career at the University of Michigan, working on and ultimately directing the Panel Study of Income Dynamics project. He held a faculty appointment at Northwestern University between 1995 and 2008. His recent work has focused on assessing the role of school-entry skills and behaviors on later school achievement and attainment and the effects that increasing income inequality has on schools and children's life chances. He was president of the Population Association of America in 2008 and of the Society for Research in Child Development between 2009 and 2011 and was elected to the National Academy of Sciences in 2010. Duncan holds a B.A. in economics from Grinnell College and a Ph.D. in economics from the University of Michigan. He has an honorary doctorate from the University of Essex.

J. Lawrence Aber is the Willner family professor of psychology and public policy at the Steinhardt School of Culture, Education, and Human Development and university professor at New York University, where he also chairs the board of the Institute of Human Development and Social Change and is co-director of Global TIES for Children, an international research center. Aber is the former director of the National Center for Children in Poverty at Columbia University. An internationally recognized expert in child development and social policy, he has co-edited a number of

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books on the intersection of these fields. Aber's basic research examines the influence of poverty and violence, at the family and community levels, on the social, emotional, behavioral, cognitive, and academic development of children and youth. He also designs and conducts rigorous evaluations of innovative programs and policies for children, youth, and families. He has served on numerous National Academies committees. Aber holds a Ph.D. in clinical-community and developmental psychology from Yale University.

Dolores Acevedo-Garcia is Samuel F. and Rose B. Gingold professor of human development and social policy and director of the Institute for Child, Youth, and Family Policy at the Heller School for Social Policy and Management, Brandeis University. Her research focuses on the social determinants of racial/ethnic inequities in health, the role of social policies in reducing those inequities, and the health and well-being of children with special needs. She is also project director for diversitydatakids.org, a comprehensive research program and indicator database on child well-being and opportunity by race and ethnicity across multiple sectors (such as education, health, and neighborhoods) and geographies, which is funded by the W.K. Kellogg Foundation and the Robert Wood Johnson Foundation. She was a member of the MacArthur Foundation Research Network on How Housing Matters for Families and Children (2009–2014). She is a member of the editorial board of the journals *Social Problems; Cityscape* and the *Journal of Health and Social Behavior*. Acevedo-Garcia holds a B.A. in public administration from El Colegio de Mexico (Mexico City) and both a master's degree in public administration/urban and regional planning and a Ph.D. in public policy with a concentration in demography from the Woodrow Wilson School of Public and International Affairs at Princeton University.

Janet Currie is the Henry Putnam professor of economics and public affairs at Princeton University and the co-director of Princeton's Center for Health and Wellbeing. She also co-directs the Program on Families and Children at the National Bureau of Economic Research. She has served as the vice president of the American Economic Association, is an incoming president of the American Society of Health Economics, and is a member of both the National Academy of Medicine and the American Academy of Arts and Sciences. She is a fellow of the American Academy of Political and Social Science, the Society of Labor Economists, and the Econometric Society, and has honorary degrees from the University of Zurich and the University of Lyon. She has served on the Board of Reviewing Editors of *Science* and as the editor of the *Journal of Economic Literature,* as well as serving on the editorial board of the *Quarterly Journal of Economics* and many other economics journals. Her research focuses on health and well-being,

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especially concerning children. She has written about early intervention programs, programs to expand health insurance and improve health care, public housing, and food and nutrition programs. Her current research focuses on socioeconomic differences in health and access to health care, environmental threats to health, and mental health. Currie holds a Ph.D. in economics from Princeton University.

Benard P. Dreyer, past president (2016) of the American Academy of Pediatrics (AAP), is a general and development-behavioral pediatrician who has spent his professional lifetime serving poor children and families. He is also professor of pediatrics at New York University, where he leads the Division of Developmental-Behavioral Pediatrics, and director of pediatrics at Bellevue, where he works as a hospitalist. For more than 30 years he led a primary care program at Bellevue, including co-located mental and oral health services and clinics in homeless shelters. His research focuses on interventions in primary care to improve early childhood outcomes, including early brain development and obesity. Dreyer has held numerous positions on AAP task forces and executive and research committees and is also the medical director of policies for the AAP, which produces more than 80 policies and clinical reports each year. He was president of the Academic Pediatric Association and founded and chairs the association's Task Force on Childhood Poverty and its Research Scholars Program. He also hosts a weekly radio show, On Call for Kids, on the Sirius XM Doctor Radio channel. He has served on multiple roundtables, committees, and planning committees for the National Academies. Dreyer holds an M.D. from the New York University School of Medicine.

Irwin Garfinkel is the Mitchell I. Ginsberg professor of contemporary urban problems and co-founding director of the Columbia Population Research Center. Previously, Dr. Garfinkel was the director of the Institute for Research on Poverty (1975–1980) and the School of Social Work (1982–1984), both at the University of Wisconsin. Between 1980 and 1990, he was the principal investigator of the Wisconsin child support study. His research on child support and welfare influenced legislation in Wisconsin and other states in the United States, in the U.S. Congress, and in Great Britain, Australia, and Sweden. A social worker and an economist by training, he has authored or coauthored more than 200 scientific articles and 16 books and edited volumes on poverty, income transfers, program evaluation, single-parent families and child support, and the welfare state. He was a member of the committee for the Workshop on Design of the National Children's Study Main Study and a member of the Panel on Data and Methods for Measuring the Effects of Changes in Social Welfare Programs. Garfinkel holds a Ph.D. in social work and economics from the University of Michigan.

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Ron Haskins is a senior fellow and holds the Cabot Family Chair in Economic Studies at the Brookings Institution, where he co-directs the Center on Children and Families. He is also a senior consultant at the Annie E. Casey Foundation and was president of the Association for Public Policy Analysis and Management in 2016. He is the coauthor of several books on welfare reform social policy. Beginning in 1986, he spent 14 years on the staff of the House Ways and Means Committee, and subsequently he was appointed to be the senior advisor to President George W. Bush for welfare policy. He and his Brookings colleague Isabel Sawhill were recently awarded the Moynihan Prize by the American Academy of Political and Social Science for being champions of the public good and advocates for public policy based on social science research. He was recently appointed by House Speaker Paul Ryan to cochair the Commission on Evidence-based Policymaking. Haskins holds a B.A., M.A., and Ph.D. in developmental psychology, all from the University of North Carolina at Chapel Hill.

Hilary Hoynes is a professor of public policy and economics and holds the Haas Distinguished Chair in Economic Disparities at the University of California, Berkeley, where she also codirects the Berkeley Opportunity Lab. She is a member of the American Academy of Arts and Sciences and a fellow of the Society of Labor Economists. She has served as co-editor of the *American Economic Review* and the *American Economic Journal: Economic Policy* and is on the editorial board of the *American Economic Review: Insights*. Hoynes currently serves on the American Economic Association's Executive Committee and on the State of California Task Force on Lifting Children and Families out of Poverty, while her many previous appointments include membership on the Commission on Evidence-based Policymaking. In 2014, she received the Carolyn Shaw Bell Award from the American Economic Association. Her research focuses on poverty and inequality and the impacts of government programs on low-income families. Current projects include evaluating the effects of access to the social safety net in early life on outcomes in later life, as well as the role of the safety net in mitigating income losses. Hoynes holds a Ph.D. in economics from Stanford University.

Christine James-Brown became president and chief executive officer of the Child Welfare League of America (CWLA) in April 2007, assuming the leadership of the nation's oldest and largest membership-based child welfare organization. She came to CWLA from United Way International, where she had served since 2004 as the organization's fifth president and CEO. As president and CEO, she was responsible for the efforts of the world-wide network of United Way nonprofit member organizations spanning six continents and five regions and serving communities in 45 countries and

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territories. She has served as a member of the boards of the School District of Philadelphia, Community College of Philadelphia, the Samuel S. Fels Fund, the Greater Philadelphia Chamber of Commerce, Citizens Bank, Public/Private Ventures, and the Pennsylvania Bar Association Judicial Evaluation Commission. She has received numerous awards and recognition throughout her career, including the National Council of Negro Women's Mary McLeod Bethune Award, B'nai B'rith's Humanitarian Award, and Operation Understanding's Distinguished Community Leadership Award. In 1996, she received an honorary doctorate from Drexel University in Philadelphia, Pennsylvania. James-Brown holds a B.A. in cultural anthropology from Rutgers University.

Vonnie C. McLoyd is the Ewart A. C. Thomas collegiate professor of psychology in the College of Literature, Science, and the Arts at the University of Michigan. McLoyd's scholarship helped shape the field of developmental psychology by focusing on how a child develops socially and how social interactions influence cognitive development, shedding light on the ways in which the environment and social context, especially race, ethnicity, and poverty, influence development. Her work has helped change the perspective of the field and has led to a widespread recognition of how socio-environmental factors influence the health, well-being, and developmental experiences of children, adolescents, and their families. Most notable among the many honors McLoyd has received is a MacArthur Fellowship, which was awarded in 1996. Other scholarly activities include participation in the MacArthur Network on Transition to Adulthood, the Council of the Foundation of Child Development, and the advisory board of the National Center for Children in Poverty. She has also served as a member of the Board on Children, Youth, and Families at the National Academies. McLoyd holds a Ph.D. in psychology from the University of Michigan.

Robert Moffitt is the Krieger-Eisenhower professor of economics at Johns Hopkins University, where he has worked since 1995. He also holds a joint appointment at the Johns Hopkins School of Public Health. His research interests are in the areas of labor economics and applied microeconometrics. He is a fellow of the Econometric Society, a fellow of the Society of Labor Economists, a national associate of the National Academy of Sciences, a recipient of a MERIT Award from the National Institutes of Health, a recipient of a Guggenheim fellowship, a fellow of the American Academy of Arts and Sciences, and past president of the Population Association of America. He has served as chief editor of the *American Economic Review* and the *Journal of Human Resources* and as co-editor of the *Review of Economics and Statistics*. He has also served on multiple

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National Academies panels, including the Committee for the Behavioral and Social Sciences and Education, the Panel on Data and Methods for Measuring the Effects of Changes in Social Welfare Programs, the Panel to Evaluate Microsimulation Models for Social Welfare Programs, and the Panel to Evaluate Welfare Reform, which he chaired. Moffitt holds a Ph.D. in economics from Brown University.

Cynthia Osborne is an associate professor and director of the Center for Health and Social Policy at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. She is also the director of the Child and Family Research Partnership, an in-house research group that conducts rigorous research on policy issues related to young children, adolescents, and their parents. Her teaching and research interests include social policy issues, poverty and inequality, family and child well-being, and family demography. Osborne has extensive experience leading long-term evaluations of state and national programs, with the aim of helping organizations understand what works and how to ensure sustainable implementation of effective policies. Her work includes evaluations for the Texas Home Visiting Program, the largest home visiting program in the country; for critical child welfare programs of the Texas Department of Family and Protective Services; and for key child support programs of the Texas Office of the Attorney General. She previously was director of the Lyndon B. Johnson School of Public Affairs' Project on Education Effectiveness and Quality, an initiative that measured state educator preparation programs' influence on student achievement. Osborne holds a Ph.D. in demography and public affairs from Princeton University.

Eldar Shafir is the Class of 1987 professor of behavioral science and public policy at Princeton University, the inaugural director of Princeton's Kahneman-Treisman Center for Behavioral Science and Public Policy, and cofounder and scientific director at ideas42, a social science research and development lab. He studies decision making, cognitive science, and behavioral economics. His recent research has focused on decision making in contexts of poverty and on the application of behavioral research to policy. He is past president of the Society for Judgment and Decision Making, and a member of the World Economic Forum's Global Council on Behavioural Science. He was a member of President Barack Obama's Advisory Council on Financial Capability. He has received several awards, most recently a Guggenheim fellowship, as well as the William James Book Award. He was named one of *Foreign Policy Magazine*'s 100 Leading Global Thinkers of 2013. Books he has edited or coauthored have addressed fundamental issues in understanding poverty and social policy. Shafir holds a Ph.D. in cognitive science from the Massachusetts Institute of Technology.

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Timothy M. (Tim) Smeeding is the Lee Rainwater distinguished professor of public affairs and economics at the University of Wisconsin–Madison. He was director of the Institute for Research on Poverty from 2008 to 2014 and the founding director of the Luxembourg Income Study from 1983 to 2006. Smeeding's recent work has examined social and economic mobility across generations, inequality of income, consumption and wealth, and poverty in national and cross-national contexts, and he has authored several books on those topics. He is a member of the National Academy of Sciences' Standing Committee on the American Opportunity Study, and in the past has served on the Committee for Behavioral, Social Sciences and Education as well as multiple planning, steering, and other committees for the National Academies. He is also a member of the American Pediatrics Association Taskforce on Child Poverty. Smeeding holds a Ph.D. in economics from the University of Wisconsin–Madison.

Don E. Winstead, Jr., founded Don Winstead Consulting, LLC, a Tallahassee, Florida, health and human services consulting practice in 2011. He is a nationally recognized expert on federal funding issues and has negotiated ground-breaking federal waivers in welfare reform and child welfare. Winstead began his career as a front-line caseworker and has worked in a variety of direct service, administrative, and managerial positions ranging from social worker to deputy secretary of the Florida Department of Children and Families. He served as deputy secretary for a total of 8 years, serving under four secretaries and three governors. From late 2001 to early 2005, he served as deputy assistant secretary for human services policy at the U.S. Department of Health and Human Services. He is a member of the advisory board for the National Poverty Centers and is a past member of the board of directors of Child Trends, a nonprofit, nonpartisan research center that studies children at all stages of development. Winstead holds a B.A. in English from the University of South Florida.

PROJECT STAFF

Suzanne Le Menestrel (*Study Director*) is a senior program officer with the Board on Children, Youth, and Families at the National Academies, where her responsibilities have included directing four consensus studies focused on children and adolescents, from birth to age 21. Prior to her tenure with the National Academies, Le Menestrel was the founding national program leader for youth development research at 4-H National Headquarters, served as research director at the Academy for Educational Development's Center for Youth Development and Policy Research, and was a research associate at Child Trends. She was a founder of the *Journal of Youth Development: Bridging Research and Practice* and chaired its

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Publications Committee. She has published in numerous refereed journals and is an invited member of several advisory groups, including a research advisory group for the American Camp Association, a Girl Scouts of the Nation's Capital STEM Strategy advisory group, and the National Leadership Steering Committee for the Cooperative Extension System–Robert Wood Johnson Foundation Culture of Health Initiative. Le Menestrel holds an M.S. and a Ph.D. in human development and family studies from the Pennsylvania State University, a B.S. in psychology from St. Lawrence University, and a nonprofit management executive certificate from Georgetown University.

Pamella Atayi has served since 2009 as a program coordinator on the Board on Children, Youth, and Families of the National Academies. She currently coordinates and oversees the work of support staff handling clerical, administrative, and logistical aspects of meetings. Atayi provides work direction and assists with the daily supervision of support staff. She also compiles and summarizes information for the development and revision of a variety of documents and participates in research efforts. She serves as a liaison between programs and boards of the National Academies and related external customers, members, and sponsors concerning clerical and administrative matters. She was awarded the Sandra H. Matthews Cecil Award by the Institute of Medicine (now Health and Medicine Division) in 2013 and the DBASSE Espirit de Corps Award in 2017. Atayi earned her B.A. in English from the University of Maryland University College and holds a diploma in computer information systems from Strayer University.

Constance F. Citro is a senior scholar with the Committee on National Statistics (CNSTAT) of the National Academies. She previously served as CNSTAT's director (2004–2017), acting chief of staff (2003–2004), and senior study director (1986–2003). She began her career with CNSTAT in 1984 as study director for the panel that produced *The Bicentennial Census: New Directions for Methodology* in 1990. Prior to joining CNSTAT, she held positions as vice president at both Mathematica Policy Research, Inc., and Data Use and Access Laboratories, Inc. Citro was an American Statistical Association/National Science Foundation/Census research fellow in 1985–1986 and is currently a fellow of the American Statistical Association and an elected member of the International Statistical Institute. She co-edited the 2nd through 6th editions and edited the 7th edition of *Principles and Practices for a Federal Statistical Agency* and contributed to studies on measuring racial discrimination, expanding access to research data, the usability of estimates from the American Community Survey, the National Children's Study research plan, and the Census Bureau's 2010 census program of experiments and evaluations. Citro holds a B.A. in political

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science from the University of Rochester and an M.A. and Ph.D. in political science from Yale University.

Christopher Mackie is a study director with the Committee on National Statistics of the National Academies, where he specializes in economic measurement and statistics. Mackie served most recently as study director for the Panel on the Economic and Fiscal Consequences of Immigration. His prior projects were on the measurement of self-reported well-being and on measuring civic engagement and social cohesion. He was study director for the expert committees that produced the reports, *At What Price? Conceptualizing and Measuring Cost-of-Living and Price Indexes*; *Beyond the Market: Designing Nonmarket Accounts for the United States*; *Understanding Business Dynamics: An Integrated Data System for America's Future*; *Accounting for Health and Health Care: Approaches to Measuring the Sources and Costs of Their Improvement*; *Improving Measurement of Productivity in Higher Education*; and *Subjective Well-being: Measuring Happiness, Suffering, and Other Dimensions of Experience*. He is author of *Canonizing Economic Theory: How Theories and Ideas Are Selected in Economics*. Mackie holds a Ph.D. in economics from the University of North Carolina and has held teaching positions at the University of North Carolina, North Carolina State University, and Tulane University.

Dara Shefska is a research associate on the Board on Children, Youth, and Families of the National Academies. Shefska supports two consensus studies. She joined the National Academies in 2015 as a research assistant on the Food and Nutrition Board, staffing the Roundtable on Obesity Solutions. In this role, she focused on early childhood obesity prevention, publications, and communications. She was awarded the Health and Medicine Division's Fineberg Impact Award in 2016 for her efforts to increase the visibility of roundtable workshops and publications. She holds a B.A. in urban geography from McGill University in Montreal, Quebec.

Elizabeth Townsend serves as an associate program officer on the Board on Children, Youth, and Families, supporting two consensus studies. Prior to joining these studies, Townsend was a research associate for the Board on Behavioral, Cognitive, and Sensory Sciences' Decadal Survey on Social and Behavioral Sciences for Applications to National Security. Under the Board on Children, Youth, and Families other studies that she has worked on produced the reports *Ethical Considerations for Research on Housing-Related Health Hazards Involving Children*; *Children's Health, the Nation's Wealth: Assessing and Improving Child Health*; and *Working Families and Growing Kids: Caring for Children and Adolescents*. Townsend holds a B.S. from Radford University and an M.P.H. from the University of Alabama at

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Birmingham, where she interned at the Comprehensive Cancer Center and volunteered with the Alabama Vaccine Research Clinic and 1917 Clinic.

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Appendix B

Public Session Agendas

PUBLIC INFORMATION-GATHERING SESSION

June 20, 2017

National Academy of Sciences
Lecture Room
2101 Constitution Avenue, NW
Washington, DC

1:00 – 1:05 pm **Welcome and Goals**
Greg Duncan, Committee Chair, Distinguished Professor, University of California, Irvine

1:05 – 1:15 pm **Remarks on Study Statement of Task**
Huilan Krenn, Director of Learning and Impact, W.K. Kellogg Foundation

1:15 – 2:50 pm **PANEL 1**
Moderator: Greg Duncan

Edgar Olsen, Professor of Economics and Public Policy, University of Virginia; Visiting Scholar, American Enterprise Institute

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Isabel Sawhill, Senior Fellow in Economic Studies, Brookings Institution
Douglas Besharov, Professor of Public Policy, University of Maryland
W. Bradford Wilcox, Director, National Marriage Project and Professor of Sociology, University of Virginia; Senior Fellow, Institute for Family Studies; Visiting Scholar, American Enterprise Institute

2:50 – 3:00 pm **BREAK**

3:00 – 4:30 pm **PANEL 2**
Moderator: Don Winstead, Principal, Don Winstead Consulting, LLC

Miles Corak, Professor of Public and International Affairs, University of Ottawa, Canada; Economist in Residence, Employment and Social Development Canada
Olivia Golden, Executive Director, Center for Law and Social Policy
Arloc Sherman, Senior Fellow, Center on Budget and Policy Priorities
MaryLee Allen, Director of Policy, Children's Defense Fund

4:30 – 4:55 pm **Open Discussion Period**

4:55 – 5:00 pm **Closing Remarks and Adjourn**
Greg Duncan

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PUBLIC INFORMATION-GATHERING SESSION

September 21, 2017

National Academy of Sciences
Lecture Room
2101 Constitution Avenue, NW
Washington, DC

1:00 – 1:05 pm **Welcome and Goals**
Greg Duncan, Committee Chair, Distinguished Professor, University of California, Irvine

1:05 – 2:40 pm **PANEL 1: Holistic Approaches to Poverty Reduction**

Moderator: Christine James-Brown, Committee Member; President and Chief Executive Officer, Child Welfare League of America

Jesús Gerena, Chief Executive Officer, Family Independence Initiative
Marla Dean, Executive Director, Bright Beginnings
Satira Streeter, Executive Director, Ascensions Psychological and Community Services
Gary Bonner, Director of Family Stability and Economic Success Programs, Center for Urban Families

2:40 – 3:00 pm **BREAK**

3:00 – 4:35 pm **PANEL 2: Community Contexts**

Moderator: Dolores Acevedo-Garcia, Committee Member; Professor of Human Development and Social Policy, Brandeis University

Bruce Western, Professor of Sociology, Harvard University (via WebEx)
Roy Brooks, President, National Association of Counties; Commissioner, Tarrant County, Texas
Nora Morales, Diversity Officer, Prince George's County, Maryland Public Schools

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	Anita Sampson, Title I Instructional Specialist, Prince George's County, Maryland Public Schools **Tara Lobin**, Coordinator of Title I Programs, Fairfax County, Virginia Public Schools
4:35 – 4:55 pm	**Open Discussion Period**
4:55 – 5:00 pm	**Closing Remarks and Adjourn** Greg Duncan

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Appendix C

Authors of Memos Submitted to the Committee

INDIVIDUALS

David Brady, University of California Riverside and WZB Berlin Social Science Center
Sarah K. Bruch, University of Iowa
Maria Cancian and Daniel R. Meyer, Institute for Research on Poverty
Miles Corak, University of Ottawa
Matthew Desmond, Harvard University
Robert Doar, American Enterprise Institute
Samuel Hammond, Niskanen Center
Jody Heymann and Aleta Sprague, University of California, Los Angeles
Pamela Joshi, Brandeis University, and Yoonsook Ha, Boston University
John H. Laub, University of Maryland, College Park
Ronald B. Mincy, Columbia University School of Social Work
Edgar O. Olsen, University of Virginia
Pia M. Orrenius, Federal Reserve Bank of Dallas, and Madeline Zavodny, University of North Florida
James Riccio, MDRC
Isabel Sawhill, Brookings Institution
Arloc Sherman, Center on Budget and Policy Priorities
Mark Shriver, Save the Children Action Network
Eugene Steuerle, The Urban Institute
Laura M. Tach, Cornell University
W. Bradford Wilcox, University of Virginia
James P. Ziliak, University of Kentucky

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A Roadmap to Reducing Child Poverty

ORGANIZATIONS

The Children's Defense Fund
First Focus
The Bernard L. Schwartz Rediscovering Government Initiative (RGI) at The Century Foundation (TCF)
Youth Development Institute of Puerto Rico

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Appendix D

Technical Appendixes to Select Chapters

APPENDIX D, 2-1
A BRIEF HISTORY OF POVERTY MEASUREMENTS IN THE UNITED STATES

The nation's Official Poverty Measure (OPM), developed in the 1960s by Mollie Orshansky of the Social Security Administration, is based on research showing that, in the 1950s, the average family spent about one-third of its after-tax income on food (Fisher, 1992). Orshansky then multiplied the cost of the U.S. Department of Agriculture's "basic" diet food plan by three to calculate poverty thresholds for families of different compositions and sizes (she used somewhat different methods for families of one and two people). Families with resources (regular money income as measured in a supplement to the Current Population Survey) below these amounts were considered to be poor. These thresholds have been adjusted for inflation every year using the Consumer Price Index. The official poverty rate is calculated in essentially the same way now as it was in the 1960s.

This approach to measuring poverty has numerous shortcomings: It is based on the now outdated assumption that families spend one-third of their post-tax income on food (today they spend less than one-half that amount); it fails to adjust for geographic differences in living costs; and, more importantly, it counts neither in-kind benefits nor refunded tax credits as income. Thus, the Earned Income Tax Credit (EITC), the Child Tax Credit, Supplemental Nutrition Assistance Program (SNAP) benefits, child care assistance, subsidized housing, and many other in-kind benefits are ignored in computing the poverty rate. It is also an absolute poverty

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A Roadmap to Reducing Child Poverty

measure in that the poverty thresholds are updated for inflation but not for changes in the country's standard of living.[1]

These problems with the OPM were considered serious enough to generate congressional interest in an improved measure. Funding from a provision in the Family Support Act of 1988, which mandated a National Research Council study of a national minimum benefit standard for the now defunct Aid to Families with Dependent Children (AFDC) Program, combined with funding from the Bureau of Labor Statistics and the Department of Agriculture, supported the work of an NRC panel of poverty experts. This panel produced an influential report, *Measuring Poverty—A New Approach*, in 1995.

Despite the attention generated by that panel's report, the OPM remains unchanged for many reasons, two of which are of major importance. First, numerous pieces of legislation stipulate that cash grants are to be provided to states, cities, and school districts, and the allocation of those grants is often based on the area's poverty rate. Changing the poverty measure used in allocation formulas would affect the distribution of money among states and local areas, substantially in some cases.

Relatedly, the official poverty thresholds (actually a variant of them) are used to determine eligibility of families for a number of assistance programs. Second, defining a poverty level requires making judgments. Given the financial stakes of determining who is poor and who is not, Congress would certainly be mired in a long and contentious debate if it sought to set new poverty thresholds or change other aspects of the official measure.

Nonetheless, following the 1995 report, analysts at the Census Bureau and the Bureau of Labor Statistics began the complicated work of implementing many of the report's recommendations for improving the measurement of poverty. By 2011, after more than a decade of study, the Census Bureau released a new method of defining poverty. The title of the new measure—the "Supplemental Poverty Measure" (SPM)—made it clear that the federal government, and in particular the Census Bureau, was not proposing to replace the OPM with a new one, but rather adding a new measure that would advance research and provide additional information for policy discussions.

[1] Because the inflation index used for the Official Poverty Measure (OPM) overstated price changes for a period, the official thresholds have actually been updated to some extent in real terms—that is, for changes in living standards. See Appendix D, 2-2, for a discussion of absolute versus relative poverty measures and the use of different inflation measures for adjusting thresholds.

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APPENDIX D, 2-2
TYPES OF INCOME-BASED POVERTY MEASURES AND THE ADVANTAGES OF USING THE ADJUSTED SPM FOR POLICY ANALYSIS

Poverty measurement requires a set of decisions about the purpose and specifications of the measure. As background, Box D2-1 defines key terms in poverty measurement, such as threshold and resource concepts and whether the measure is intended to be absolute or relative. It also briefly defines types of poverty measures, including economic measures, such as those based on income or consumption, and other kinds of deprivation and hardship indexes.

The committee's charge is to identify and estimate the benefits and costs of government policy and program options that can reduce child poverty and deep poverty in the United States within 10 years and to propose practical measures to do so given the available data. For this purpose, it is necessary to use an income-based economic poverty measure, which can clearly show the effects of one or another policy option on the adequacy of families' resources. Other types of measures, such as deprivation and material hardship indexes, add to the picture of families' living situations and well-being but present challenges to any straightforward estimation of the effects of government tax and transfer policies on them. This is also a limitation at present of consumption-based economic poverty measures—see Appendix D, 2-3.

The committee's charge directs us to base our analyses on the income-based SPM and not on either the OPM or a consumption-based poverty measure. Unlike the Census Bureau, we use an adjusted SPM, in which we correct the underlying data for some types of income underreporting using the Urban Institute's Transfer Income Model, Version 3 (TRIM3) micro-simulation model. This appendix section describes and assesses the OPM, the SPM, and the adjusted SPM. It then discusses several contentious issues for income-based poverty measurement: relative versus absolute poverty; inflation adjustments; and the implications for income-based poverty, particularly deep poverty, of error in the underlying data source—the Current Population Survey Annual Social and Economic Supplement (CPS ASEC). See Appendix D, 2-3, for a discussion of consumption-based poverty measures, for which issues of relative versus absolute poverty, inflation adjustments, and data quality are also relevant.

Three Income-based Poverty Measures: OPM, SPM, Adjusted SPM

The OPM, the SPM, and the adjusted SPM used in this report are based on resources defined by a family's income. A family is defined as poor if

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BOX D2-1
Poverty Measurement: Key Definitions

ABSOLUTE VS. RELATIVE MEASURES

Absolute Poverty Measure: A measure that updates poverty ***thresholds*** for inflation but not for changes in real living standards (see also ***anchored*** poverty measure). Absolute measures are used when the intent is to monitor trends in poverty over a period on the basis of a fixed standard of need. Absolute measures maintained over long periods of time will likely result in unrealistic poverty thresholds relative to contemporary living standards (see ***relative poverty measure***) and thus be less informative for policy. Absolute measures are sensitive to the inflation index used.

Anchored Poverty Measure: A type of absolute poverty measure in which a threshold is chosen not on its intrinsic merits but to give a starting point (current or in the past) for assessing not only trends in poverty rates relative to the starting point but also the poverty effects of economic growth (or decline) and changes over time in government assistance programs (assuming those are reflected in ***resources***) separately from changes in living standards.

Relative Poverty Measure: A measure that regularly updates poverty ***thresholds*** for changes in the standard of living, such as a percentage of median income. Poverty is always relative to time and place—for example, poverty budgets developed in the United States in the1930s were about 65% (in real terms) of the 1963 OPM threshold.[a] Relative measures, however, can make it harder to disentangle the effects of the business cycle and government programs from changes in living standards. For these purposes, ***anchoring*** a relative threshold at a point in time and keeping it constant in real terms with an inflation index can be useful. The SPM is a ***quasi-relative*** measure (see Table D2-1).

ECONOMIC POVERTY VS. OTHER MEASURES OF INABILITY TO MEET BASIC MATERIAL NEEDS

Deprivation: General term for lack of something needed to function in a society. One type of deprivation index is ***perceived deprivation***, which uses surveys to identify necessities (e.g., home heating) and then measures people's lack of necessities due to lack of resources (rather than choice).[b] Several countries use small-area deprivation indexes, based on combinations of indicators in such domains as income, employment, health, education, housing, and the environment.[c] Requires specification of threshold index value (e.g., number of necessities lacking) that represents "deprivation."

Economic Poverty: The lack of sufficient economic resources to obtain minimum levels of necessary economic goods and services, measured by comparing a monetary poverty ***threshold*** for a ***unit of measurement*** to the unit's available ***resources***. Economic poverty underlies most poverty measurement in the United States. For appropriate measurement, threshold concepts must be consistent with resource concepts. Because the United States lacks nationwide affordable health insurance, how to treat health care needs and benefits in poverty measures is not settled (see Ch. 7).

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Material Hardship: General term for difficulty in affording basic needs or lack of basic needs. Examples of hardship indicators include food insecurity, difficulties in paying utility bills, housing quality hardship (e.g., broken plumbing), and inadequate array of durable goods (e.g., lack of a washing machine).[d] Requires specification of threshold index value (e.g., number of housing quality problems) that represents "hardship."

KEY ELEMENTS OF ECONOMIC POVERTY MEASURES

Threshold: The spending level at which minimum basic needs for food, shelter, and other goods and services can be satisfied. The minimum level may be set in a variety of ways—with expert budgets for food, shelter, and other basics; from spending patterns on basics by units at the lower end of the distribution; as a percentage of median income or spending; or from people's opinions about basic needs for input to a so-called ***subjective*** poverty measure. There is always an element of judgment in defining a poverty threshold, although careful analysis, including comparisons among thresholds derived in different ways, can provide face validity. Thresholds are typically adjusted to account for economies of scale within families and may be adjusted for geographic differences in living costs or other family characteristics (see App. D, sections 2-4 and 2-5).

Resources: The economic wherewithal available to a family (or other ***unit of measurement***) to obtain the standard of living of the ***threshold***. Resources have been defined variously as gross income, disposable income (subtracting net taxes and other nondiscretionary expenses), income plus financial assets, and consumption (total or subtracting some components); and income plus near-cash benefits. For analysis, it can be useful to eliminate one or more components (e.g., government assistance) to study their separate effects on poverty.

Unit of Measurement: Unit for which ***resources*** are aggregated and compared to the applicable ***threshold***, usually defined as all family members living in the same house (with unrelated individuals treated as one-person "families"). It may include unrelated household members such as cohabitors in the "family." Unit may be a neighborhood, for which poverty is based on a specified percentage of poor people (see Ch. 8). Poverty is rarely ascertained for people living in institutions (e.g., prisons) or the homeless because of difficulties of data collection.

OTHER ELEMENTS OF ECONOMIC POVERTY MEASUREMENT

Metric: The kind of estimator used to present statistics on poverty. The U.S. Census Bureau annually publishes numbers and percentages of people (or families and unrelated individuals) below 100% of poverty, together with other ratios of income to the poverty threshold: below 50% (***deep poverty***), between 100% and 150% (***near poverty***), and so on up the income scale. Other measures, such as the ***poverty gap*** (the difference between the aggregate income of poor people and their income if they were all at 100% of poverty), are less often estimated.

Reference Period: The period for which poverty ***thresholds*** are defined and ***resources*** aggregated. The most common reference period is annual; longer reference periods have been used to study long-term poverty and shorter reference periods to study intrayear poverty.

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BOX D2-1 Continued

NOTE: Terms in ***bold italics*** are defined where they appear or in separate entries.

[a]See https://aspe.hhs.gov/relative-or-absolute-—-new-light-behavior-poverty-lines-over-time-0.

[b]See http://www.poverty.ac.uk/definitions-poverty.

[c]See https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015.

[d]See https://aspe.hhs.gov/report/measures-material-hardship-final-report/chapter-3-material-hardship-indexes.

family income is below a specific cutoff. The cutoff is chosen to indicate the income needed to attain a minimum or basic level of goods and services. This simple description masks the many specific decisions that are required to define an acceptable, feasible, and useful income-based poverty measure. Table D2-1 compares the OPM, the SPM, and the adjusted SPM on 11 dimensions: uses, measurement unit, threshold concept, threshold adjustments, threshold updating, treatment of health benefits and costs, resource measure, reference period, metric(s) estimated, data source, and data quality.

Three key differences between the OPM and the SPM merit fuller discussion: the type of measure (absolute or relative), the threshold concept, and the definition of family resources. Other important differences—in the adjustments to the thresholds for family composition and the unit of measurement—are briefly described in Table D2-1.

Type of measure. The OPM officially became an absolute measure in 1969, when proposals to update in real terms the original 1963 thresholds (based only on food needs—see next section) were turned down because policy makers were reluctant to show any increase in poverty.[2] Since then, the thresholds have been updated for inflation only, using the flagship series published by the Bureau of Labor Statistics—the All Items Consumer Price Index for All Urban Consumers, known as the CPI-U. Overestimation of inflation in the CPI-U, however, resulted in real increases to the thresholds in the 1970s and early 1980s (see discussion of inflation indexes below).

The SPM, in contrast, is a quasi-relative poverty measure in which the thresholds are based on needs for a specific set of goods—but a broader set than food—and are recalculated every year as spending on those goods changes. It is similar to an absolute measure because the thresholds are

[2] See https://www.census.gov/content/dam/Census/library/working-papers/1995/demo/fisher3.pdf. Between 1963 and 1969, changes in the costs of Economy Food Plan were used to update the thresholds.

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TABLE D2-1 Dimensions of Three Income-Based Economic Poverty Measures: Official Poverty Measure (OPM), Supplemental Poverty Measure (SPM), Adjusted SPM

Measure/ Dimension	Official Poverty Measure	Supplemental Poverty Measure	Adjusted SPM
Kinds of Uses	*Statistical* (from 1967 in annual Census Bureau publications): —monitor trends over time and among population groups and geographic areas—see Ch. 2 *Research:* —study how child poverty affects child (e.g., health) or longer-term adult (e.g., employment) outcomes—see Ch. 3 —aggregate over families in neighborhoods (e.g., census tracts) to study effects on outcomes—see Ch. 8 *Policy*: —determine eligibility for government programs —simulate effects on poverty of existing and proposed programs and policies that affect cash income	*Statistical* (from 2011 in annual Census Bureau publications): —monitor poverty trends over time and among groups (see Fox et al., 2015, for series back to 1967 using an anchored SPM); for geographic areas, the Fox et al. anchored SPM series is available by state, and some states and cities have developed SPM estimates[a] *Research:* —too new to be used for long-term outcomes research *Policy:* —growing uses, which can include simulation of full range of government policies and programs that affect disposable income (e.g., tax credits, SNAP)	*Policy:* —used in TRIM3 model to simulate effects of programs and policies with a more accurate income measure (see Resource Measure below)

continued

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TABLE D2-1 Continued

Measure/ Dimension	Official Poverty Measure	Supplemental Poverty Measure	Adjusted SPM
Comment:	OPM is used extensively because of its official status; ill-designed for monitoring differences among groups and areas and for policy analysis because it neglects importance sources of government income support and nondiscretionary costs (see Resource Measure below)	SPM could be used as extensively as OPM; well designed for policy analysis of effects of government benefits delivered in-kind and through tax credits (see Resource Measure below); would likely be improvement over OPM for outcomes research (although any reasonable way to identify low-income groups can work)	Same as SPM with advantage of providing a more accurate income measure (see Resource Measure below)
Measurement Unit	Family (individuals related by birth, marriage, or adoption co-resident in the same house) or unrelated individual age 15 or older living in a house	Resource unit (official family definition plus any co-resident unrelated or foster children under age 18, or unmarried partners and their relatives) or other unrelated individual age 15 or older	Same as SPM
Comment:	Does not define poverty for unrelated children in a house (e.g., foster children) under age 15; does not include anyone living in an institution (e.g., prison) or who is homeless. These limitations are inherent in the underlying data—see Data Source below	"Family" definition is more inclusive than OPM and thereby responds to societal changes, such as the increase in the number and percentage of cohabiting partners with children; does not include people living in prisons or other institutions or homeless people	Same as SPM

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Poverty Threshold Concept	Three times the cost of a minimum food diet in 1963, derived from the ratio of all (after-tax) spending to food spending for families in a 1955 survey (a so-called "expert" budget method of establishing poverty thresholds)	Based on expenditures for food, clothing, shelter, and utilities (FCSU), and a little more, derived from Consumer Expenditure Survey (CE) data for the 33rd percentile of FCSU spending by families with 2 children. The multiplier for "a little more" is 1.2	Same as SPM
Comment:	Threshold concept is outdated: today, families spend 8 times the cost of food consumed at home or eaten outside	Covers broad set of basic necessities (about 45% of total spending); 33rd percentile validated by comparison with other types of income-based thresholds and assistance program needs standards (see National Research Council, 1995, Ch. 2)	Same as SPM
Threshold Adjustments	Vary by family size, composition, and age of householder (see App. D, 2-4)	Vary by family size and composition (see App. D, 2-4) and tenure (rent, own home with mortgage, own home free and clear); also vary geographically by differences in housing costs (see App. D, 2-5)	Same as SPM
Comment:	Method to determine family size/ composition threshold adjustments produced hard-to-justify variations; no adjustment for geographic variations in costs of living	Equivalence scale used for family size and composition adjustments well justified; adjustments for housing cost differences across areas address largest component of spending	Same as SPM
Threshold Updating	CPI-U (flagship index published by the Bureau of Labor Statistics)	5-year moving average of expenditures on FCSU (each year in a 5-year average is updated to the most recent year using the CPI-U)	Same as SPM

continued

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TABLE D2-1 Continued

Measure/ Dimension	Official Poverty Measure	Supplemental Poverty Measure	Adjusted SPM
Comment:	OPM is an *absolute* poverty measure with thresholds updated only for inflation since 1963; because the CPI-U was corrected for overestimation of inflation, the OPM thresholds are estimated to have actually increased in real terms (see text)	SPM is a *quasi-relative* poverty measure with thresholds updated for changes in real spending on necessities on a lagged basis; does not depend on an inflation measure except to adjust 5 years of CE data in calculating each year's thresholds	Same as SPM
Treatment of Health Care Costs and Benefits	OPM thresholds implicitly include a small amount for out-of-pocket medical care spending; resources ignore health care benefits and costs	SPM thresholds explicitly exclude health care insurance premiums and other out-of-pocket medical care costs; resources deduct out-of-pocket costs	Same as SPM
Comment:	OPM ignores expansion of health care benefits and costs	SPM treats out-of-pocket medical care costs as nondiscretionary but ignores expansion in health care benefits; National Research Council (1995, pp. 223-237) recommended a separate "medical care risk index"	Same as SPM
Resource Measure (to compare to threshold)	Gross before-tax regular money income (see App. 2-5)	Disposable income: sum of regular money income, plus noncash benefits that resource units can use to meet FCSU needs, minus taxes (or plus tax credits), minus work expenses, out-of-pocket medical expenses, and child support paid to another household (see App. D, 2-6)	Same as SPM except for adjustments for underreporting of certain income types (see Data Quality below)

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Comment:	Gross money income concept relevant in the 1960s before expansion of government assistance through in-kind programs and tax credits, but outdated today; captures effects of economic cycles but not of important programs or nondiscretionary expenses	Disposable income concept is relevant today	Same as SPM with the advantage of correcting for some kinds of income underreporting
Reference Period	Calendar year	Calendar year	Calendar year
Comment:	Annual is standard reference period; estimates have been constructed for poor months over a year or poor years over a period (e.g., childhood)	Same as for OPM; little use made to date of SPM for measuring short-term or long-term poverty	Same as SPM
Metric(s) estimated	Statistics typically presented as ratios of income to the poverty threshold: less than 50% (deep poverty); less than 100% (poverty); 100–150% (near poverty); poverty gap sometimes calculated (aggregate amount of income by which families are below poverty)	Same as OPM	Same as SPM
Comment:	Additional metrics could be calculated (see National Research Council, 1995, Ch. 6)	Same as OPM	Same as SPM
Data Source	Current Population Survey Annual Social and Economic Supplement (CPS ASEC)—sample of 100,000 households	Same as OPM, but uses additional CPS-ASEC data, such as in-kind benefits and nondiscretionary expenses; tax credits/debits are modeled by the Census Bureau	Same as SPM with some kinds of income adjusted for underreporting

continued

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TABLE D2-1 Continued

Measure/ Dimension	Official Poverty Measure	Supplemental Poverty Measure	Adjusted SPM
Comment:	OPM measures have been constructed with many datasets—e.g., ACS for small-area estimates and SIPP for part-year estimates	SPM measures have been constructed with SIPP and, by some states and cities, with ACS (often augmented with administrative data to fill in ACS gaps)	Could be constructed with other datasets
Data Quality	CPS ASEC obtains high response rates but exhibits underreporting of many income types, even after imputation (which itself can create error) of amounts for respondents reporting receipt (see text)	Same as OPM	Adjusts three income types for underreporting: SNAP, SSI, and TANF (see text)
Comment:	Quality concerns with income data in the CPS (ACS and SIPP have similar problems) are an important disadvantage of the OPM (see text)	Same as OPM	Some but not all quality concerns are reduced because of adjustments

NOTE: ACS = American Community Survey; CPI-U = Consumer Price Index-Urban Consumers; NRC = National Research Council; SIPP = Survey of Income and Program Participation; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; TANF = Temporary Assistance to Needy Families.

[a] See, e.g., https://www.urban.org/sites/default/files/publication/24401/904570-Expanded-Poverty-Measurement-at-the-State-and-Local-Level.PDF [January 2019].

SOURCE: Compiled by committee staff from Census Bureau and other sources.

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based on a specific set of needs, but it has an element of a relative measure because the thresholds change as spending on those goods changes over time in the U.S. population. The SPM consequently does not require an inflation index per se except to make all 5 years of Consumer Expenditure Survey (CE) data used in constructing the thresholds consistent in real terms.[3] The recalculation of SPM thresholds every year is intended to produce a conservative or quasi-relative measure compared with a relative measure, such as a percentage of median income (see discussion of absolute vs. relative measures and inflation indexes below).

Threshold concept. The OPM thresholds, developed originally for 1963, represent a type of "expert budget." Specifically, U.S. Department of Agriculture nutritionists costed out a basic food plan (the Economy Food Plan) that would be minimally nutritious and palatable. Mollie Orshansky at the Social Security Administration multiplied the cost of the food plan for different sizes and compositions of three-or-more-person families by three to allow for all other needed spending, using the spending patterns of the average family in 1955 as the basis for the multiplier. She used a different method for two-person families and single individuals, with lower thresholds when such a family was headed by someone aged 65 or older, on the grounds that their food needs were less.

The SPM thresholds, in contrast, allow for the costs of a much broader bundle of basic needs, including food, clothing, shelter, and utilities (FCSU), plus a small multiplier (1.2) to account for other necessary items, such as non-work-related transportation and personal care. The FCSU component is based on actual consumer expenditures for families with any number of adults and two children at the 33rd percentile of the distribution. A lower percentile is not used because families' spending could be constrained by their income, and therefore a lower percentile could underestimate their basic needs. The thresholds for two-child families are calculated separately for renters, homeowners with a mortgage, and homeowners who own their homes free and clear. Homeowners without mortgage debt have a lower threshold than the other two groups because their out-of-pocket housing needs are less. A formal equivalence scale is used to adjust the SPM thresholds for different sizes and composition of families (see Appendix D, section 2-4), and, finally, the thresholds are adjusted for geographic variations in the cost of housing (see Appendix D, section 2-5).

Resource concept. The OPM has a limited measure of family resources, namely, regular money before-tax cash income, which was the definition used for data collection in the CPS. The definition was not unreasonable at the time before the expansion of tax credits and in-kind benefit programs.

[3] That is, the thresholds rise over time in response to price increases only to the extent that the prices of the basic goods rise.

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The SPM defines resources (see Appendix D, section 2-6) to recognize that substantial government assistance is provided to families through the tax system and in-kind transfers, such as housing subsidies, free school lunches, and SNAP (formerly food stamps). The SPM uses a disposable money and near-money income resource definition, not only including the cash value of such programs as SNAP and lump sums received as tax credits, but also recognizing that some expenses are nondiscretionary. Specifically, the SPM definition subtracts work-related expenses including transportation and child care, child support payments to another family, out-of-pocket medical care payments (including premiums, co-pays, deductibles, and uncovered care), and net taxes (federal income and payroll and state income) after credits. This definition provides a much more realistic picture of families' resources for their everyday needs for food, clothing, shelter, utilities, and a little more.

The adjusted SPM is the same as the SPM published by the Census Bureau with one important exception. The TRIM3 model used by the committee for its analyses adjusts three types of government transfers for underreporting by survey respondents, using aggregate totals from administrative records as benchmarks. These three sources are SNAP, Supplemental Security Income (SSI), and Temporary Assistance to Needy Families (TANF). They contribute importantly to low-income families' resources and also suffer from significant and increasing underreporting in the CPS ASEC and other surveys (see discussion below).

Key Issues for Economic Poverty Measurement

This section discusses three key issues that are sources of debate in evaluating not only the OPM, the SPM, and the adjusted SPM, but also consumption-based measures (see Appendix D, section 2-3). They are absolute vs. relative measures; inflation indexes; and the implications of the well-documented underreporting of income in surveys for poverty measurement, particularly deep poverty.

Absolute vs. Relative Measures

The OPM is intended to be an absolute poverty measure even though the thresholds were inadvertently adjusted in real terms because of problems with the CPI-U used to update them for inflation. Recent work on consumption-based poverty also uses an absolute measure, or more precisely, an anchored measure (see Appendix D, section 2-3).

An absolute measure may make sense for monitoring poverty trends for a period of time because it affords a fixed standard of need. In contrast, relative measures offer a moving target, which may be less intuitive to the public and policy makers. Maintaining an absolute measure over long

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periods, however, can give results that do not square with contemporary perceptions of deprivation and are not helpful for policy. The National Research Council (1995, Figure 1-1) illustrated this phenomenon by comparing the OPM two-adult/two-child threshold with a subjective threshold derived from public opinion and a threshold (similar to that used in many countries) of 50 percent of median after-tax money income, all in constant 1992 dollars. In 1963, all three thresholds were in agreement, but in 1947, the other two thresholds were only 68-75 percent of the OPM threshold. In contrast, by 1970, the other two thresholds exceeded the OPM threshold by 20 percent (National Research Council, 1995, Tables 2-3, 2-4).

At the heart of the difference between absolute and relative poverty measures is whether the basic needs that society deems that every family should have should be allowed to change over time. This is most clearly illustrated by the concept of deprivation and material hardship (see Appendix D, Box 2-1). Arguments have been made, by looking at such deprivation measures as material hardship, that the poverty rate is not as high as the OPM or even an income-based measure corrected for income underreporting would indicate (see, e.g., Meyer and Sullivan, 2011). For example, more lower-income families had air conditioning and other appliances in 2009 compared with 1980 (the period studied in Meyer and Sullivan, 2011), and using an absolute measure poverty declined between those years. More generally, living standards overall have increased over the past 30 years for the entire population. Yet that increase does not mean that an absolute poverty measure, established 30 or 40 years in the past, is necessarily preferable to a relative or quasi-relative measure, because what is regarded as a basic need by society generally increases along with living standards.

An historical example is telling in this regard: In 1940, 45 percent of U.S. households lacked complete plumbing facilities compared with only 7 percent in 1970 shortly after the OPM was adopted.[4] Yet it is unlikely that a 1940 poverty threshold would have been set so as to result in a 45 percent poverty rate. Conversely, the OPM threshold set in 1963, which was universally felt to be "right" at the time (see National Research Council, 1995, p. 110), gave a poverty rate for 1970 of 12.6 percent, almost twice as high as the percent of households then with inadequate plumbing. Moreover, as noted above, by 1969 the OPM threshold itself was viewed as too low, and today basic budgets constructed by nongovernmental organizations, when expressed in comparable terms, are as high as the SPM thresholds, which represent a real increase over the OPM thresholds (see, e.g., the "Household

[4] See https://www.census.gov/hhes/www/housing/census/historic/plumbing.html.

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Survival Budget" calculated for counties in 18 states as part of the United Way ALICE Project).[5]

The National Research Council (1995) study that recommended a new poverty measure, which with some modifications became the SPM (see Appendix D, 2-1), did not recommend a completely relative measure, such as a percentage of median income, as used in many other countries (see Appendix D, 2-11). Instead, it recommended what it termed a "quasi-relative" updating procedure, based on changes in consumption of basic necessities (food, clothing, shelter, and utilities) in the lower part of the distribution of consumer expenditures as measured in the CE. The 1995 study (Ch. 2) cited evidence that subjective thresholds, based on public opinion, lagged increases in median income as support for its supposition that a quasi-relative updating procedure would be more acceptable to the public and policy makers. It further cited evidence that real increases in consumption on necessities lagged real increases in total expenditures as measured in the Bureau of Economic Analysis Personal Consumption Expenditures series as justification for its recommended updating procedure.

Inflation Indexes

All poverty measures that have any absolute element, including anchored measures, require a measure of price change or inflation to keep their thresholds constant in real terms. It is well known that the CPI-U, which is used to adjust the OPM thresholds each year, has overstated inflation in the past. BLS maintains the CPI-U-Research Series (CPI-U-RS) to provide a historical series that estimates improvements in the CPI-U back through 1978, with the CPI-U-RS reestimated annually to incorporate as many additional improvements in the CPI-U as is feasible. Most, but not all, of the improvements reflected in the CPI-U-RS produced lower inflation rates relative to the corresponding CPI-U, often significantly so prior to 2000. Since 2001, the two series are very similar.

In 2002, BLS introduced a chained CPI series, the C-CPI-U, which lowered inflation even more than the CPI-U-RS by more fully capturing consumers' ability to substitute among items in the face of price changes. In 1999, a method for capturing substitution within item categories was introduced into the CPI and CPI-U-RS; the C-CPI-U, also beginning in

[5] ALICE stands for Asset-Limited, Income-Constrained, Employed, as the focus of the ALICE Project is on the working poor; see https://www.unitedwayalice.org/overview. Note that alternative basic budgets typically need to have several components subtracted for comparability with the SPM thresholds—e.g., child care, work-related transportation, medical care, and taxes must be subtracted from the ALICE Household Survival Budget because these items are subtracted from SPM resources and are therefore not included in SPM thresholds. Interestingly, the Household Survival Budget includes smartphone costs as a basic need.

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1999, uses in addition a method for capturing substitution among item categories.[6] Between 1999 and August 2017 (the latest estimate available), the C-CPI-U has averaged 1.9 percent inflation per year, compared with 2.2 percent for the CPI-U and the CPI-U-RS between 1999 and 2017.[7]

Whether the official poverty thresholds should be adjusted with the C-CPI-U rather than the CPI-U, or whether they should be adjusted with an index that exhibits even less inflation than the C-CPI-U, are questions for further research.[8] The SPM does not require an inflation index, except to make all 5 years of CE data used in the threshold calculations expressed in the same dollars and except when SPM thresholds are anchored for purposes of historical analysis (see Appendix D, 2-10), although its thresholds do rise over time as the price of its basic necessities rise in addition to rising because of increased consumption (in real terms) of these necessities.

Data Quality and Deep Poverty

Chapter 2 notes the extent of income underreporting in the CPS ASEC for many types of income and not just those accounted for in the adjusted SPM. Researchers (e.g., Winship, 2016; Appendix D, 3-1) have cited underreporting as a reason to doubt estimates of deep poverty, even with TRIM3 adjustments to some types of income. Meyer and Sullivan (2012a; online appendix table 10), using the 2010 CE, find that families in deep poverty with an SPM measure (unadjusted for underreporting) do not lack for amenities (e.g., major appliances) any more than officially deeply poor families. Further analysis would be required to assess these findings using the adjusted SPM measure, which in our analysis yields a very low deep poverty rate for children in 2015—2.9 percent—compared with a rate of 4.9 percent with the unadjusted SPM and a rate of 8.9 percent for the official measure.

Yet, cognizant that problems in income reporting could affect our estimates of adjusted SPM deep poverty, given the low thresholds involved (about $13,000 for two-adult/two-child renters and owners with a mortgage in 2015), we investigated further the characteristics of deeply poor

[6] See https://www.bls.gov/cpi/additional-resources/chained-cpi-questions-and-answers.htm.

[7] The C-CPI-U historical series is available at: https://www.bls.gov/cpi/additional-resources/chained-cpi-table24C.pdf; the CPI-U and CPI-U-RS calculations are derived from a spreadsheet provided by Bruce Meyer and James Sullivan to the committee in an e-mail, January 8, 2019.

[8] Indeed, there are many reasons for research into the effects of using different price indices in measuring well-being over time for specific populations. For instance, some think that the prices paid by poor people differ from those paid by rich people.

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families with children in 2015.[9] We found evidence of anomalies resulting from the treatment of self-employment income in the CPS ASEC. Thus, deeply poor children in families with self-employment income made up 12.6 percent of the deeply poor group (15% of these families, or 1.9% of all deeply poor, had negative self-employment income). The CPS ASEC asks respondents for their profit or loss from self-employment, which means that many self-employed people may report accounting losses (or a lesser amount of profit) when they have not, in fact, experienced real declines in their ability to meet their needs.

We also found anomalies in the case of interest and dividend income. Thus, 28.1 percent of deeply poor children lived in families receiving dividends or interest (although two-thirds of these families had their dividend or interest income imputed by the Census Bureau). Examining the distribution of interest and dividends (imputed and reported), the dollar amounts for most families were small (the 75th percentile value for deeply poor children was $142, compared with $109 for poor children and $1,200 for all children). But there were outliers with relatively high amounts of dividend income (the 90th percentile value for deeply poor children was $1,559, compared with $1,001 for poor children and $5,879 for all children). These results suggest that some imputations of high values for interest and dividend income may have been made erroneously, especially given that the 90th percentile values for deeply poor children in families with reported interest and dividends were several hundred dollars lower than those for imputed and reported combined. It is also likely that at least some deeply poor families with income from such sources as self-employment and interest and dividends were not usually poor, let alone deeply poor, but had a below-average year with high out-of-pocket medical care expenditures or work expenses that pushed them into deep poverty.

Our very preliminary analysis suggests that further research is needed into the characteristics of children living in families classified as deeply poor under the adjusted SPM. Research is also needed on better ways to collect self-employment income in the CPS ASEC and to evaluate imputation procedures to be sure they take relevant variables into account and do not impute high values of such sources as interest and dividends inappropriately.

Advantages of the Adjusted SPM for Policy Analysis

From what is known about the strengths and weaknesses of the three income-based poverty measures reviewed above, the committee concludes

[9] Results presented for self-employment and interest and dividend income were performed at the committee's request by the Urban Institute using TRIM3.

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that for its purpose of analyzing government policies and programs that can reduce income-based child poverty:

- The SPM is preferable to the OPM because, among other improvements, it includes "near-cash" benefits from SNAP, housing subsidies, and other assistance programs and from refundable tax credits. It also accounts for costs of work, such as day care. By contrast, the OPM counts only regular gross money income and thereby overstates the extent of child poverty and underestimates the positive effects of government programs in reducing child poverty. Critical for the committee's purposes is that the OPM cannot be used to estimate the effects on child poverty of policy or program options that involve in-kind benefit programs or tax credits.
- The adjusted SPM is preferable to the unadjusted SPM because of its corrections for underreporting of income from SNAP, SSI, and TANF in the CPS ASEC, which has worsened in recent years.
- The adjusted SPM shares some of the drawbacks of the SPM (and the OPM) as a measure of income, namely:
    - The adjusted SPM (also the SPM and OPM) underestimates the poverty-reducing effects of medical care coverage, such as from Medicaid and Medicare (see Ch. 7 for a proposed solution).
    - The adjusted SPM does not correct for underreporting of sources of income other than SNAP, SSI, and TANF, including underreporting of market income.
    - The adjusted SPM (also the SPM and OPM) may overestimate the extent of deep poverty as a result of how certain kinds of income are collected in the CPS ASEC, such as self-employment losses, and as a result of error in imputations for families reporting receipt but not amounts of some income types. These problems could be ameliorated with research and improvements to the quality of CPS ASEC income data (see Ch. 9).

Finally, we note that parts of our report rely on the OPM or an anchored (unadjusted) SPM. For example, our review in Chapter 3 of the literature on the consequences of child poverty for outcomes necessarily uses the OPM, because the SPM has not been available for a long enough period for outcomes research. While the SPM (even better, a fully adjusted SPM) would be an improvement over the OPM, any reasonable measure of low income can suffice for this type of research. Our review of trends in child poverty in Chapter 4 uses an unadjusted SPM anchored in 2012, because TRIM3 adjustments to the SPM are not available historically. Consequently, the poverty rates shown are somewhat higher than they

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would be with the adjusted SPM, but there is no reason to believe that the overall trends are invalid (see Appendix D, 2-10). None of our simulated packages in Chapters 5 and 6—and therefore none of our calculations for which programs would reduce poverty by 50 percent—use the OPM or an anchored SPM. In addition, as experience is gained with the SPM going forward, particularly if our recommendations in Chapter 9 for improvements to the CPS ASEC are adopted so that the SPM can be derived from complete income information, we are confident that the SPM will continue to be useful and informative for research and policy.

APPENDIX D, 2-3
CONSUMPTION-BASED POVERTY MEASURES

All of the economic poverty measures discussed in Appendix D, 2-2, use variants of an income-based measure of resources. An alternative approach to economic poverty measurement is to use a family's consumption rather than its income to capture family resources. In this appendix, we discuss the definition of consumption poverty, how it has been measured, and the arguments in favor of a consumption-based poverty approach. We also discuss a number of problems with implementing a measure of consumption-based poverty using data currently available from the federal statistical system.

Most economists believe that consumption is a better measure of well-being than income because their theories consider a family's well-being ("utility") to be generated by the goods and services consumed by the family. If, over the course of every month, a family consumes exactly 100 percent of its monthly income, then income and consumption would be equal and would indicate the same level of well-being. But incomes can fluctuate from period to period. Provided that a family is able to save its income and/or access credit from one period to the next, it should be able to "smooth" consumption against income fluctuations, which would produce more stable and consistent amounts of monthly consumption than would be indicated by monthly income. If smoothing is feasible for families, then consumption should provide a better measure of well-being.

In practice, however, low-income families have little in the way of assets and savings (see Ch. 8), so it is unclear whether the low-income families with children who are the focus of our report can do much, if any, smoothing (Hurst, 2012, p. 191). Indeed, to the extent that families facing declining income maintain their consumption by such strategies as unsecured credit, pay-day loans with high interest rates, and the like, a consumption-based poverty measure may not provide as timely an indicator of when low-income families are under increasing financial stress as an income-based poverty measure, assuming good measurement of income.

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As detailed in the main body of Chapter 2, a practical challenge with income poverty measurement in the United States is significant underreporting of government transfers and other kinds of income in the CPS ASEC and other household surveys (Meyer, Mok, and Sullivan, 2009, 2015; Moffitt and Scholz, 2009; Wheaton, 2008). A potential advantage of a consumption-based definition of poverty stems from more complete survey reports of expenditures than income. Thus, Meyer and Sullivan (2003, 2011) find that expenditures (and consequently consumption, which is derived from expenditures) appear to be better measured than income in the CE for lower-income Americans (although CE income is less well reported than CPS ASEC income).[10] It is not known how much of the difference is a result of underreporting of conventional sources of income in the CE versus families' not being asked to report or not reporting less conventional sources, such as unsecured credit and gifts or short-term loans from relatives and friends, as income.[11]

The CE has a number of drawbacks for measuring consumption poverty. It collects data on expenditures and asset holdings but not consumption per se. A comprehensive consumption measure requires imputing service flows to such assets as housing, vehicles, and consumer durables (e.g., appliances) and may also involve subtracting some types of expenditures because they are viewed as investments or for other reasons (see below). As with income data in all government household surveys, expenditures in the CE are underreported and are subject to important measurement error, attrition bias, and nonresponse bias (National Research Council, 2013).

The CE also has much smaller sample sizes than income surveys such as the CPS ASEC and especially the American Community Survey (ACS).[12] Thus, in its current form, the CE is not well suited to generate subnational estimates for poverty; in fact, the public-use version of the CE does not even identify state of residence. The CE data, in their current form, also are challenging to work with because they must be assembled for five quarters to measure consumption during a calendar year for a consumer unit (a family

[10] Once the CE began in 2004 to impute amounts for people who said they had income but did not provide an amount, the ratio of CE income to CPS/ASEC income rose from under 80 percent to about 95 percent across all income types; see https://www.bls.gov/cex/twoyear/200607/csxcps.pdf, text table 4.

[11] The CE Interview Survey questionnaire module on income asks about lump sum payments from "persons outside your household" as part of a broad question on lump sum income; the CE Interview Survey asset and liability module asks about balances on credit cards, student loans, and all other loans, including personal loans, but this information is not integrated with "income" for purposes of comparing with expenditures (see https://www.bls.gov/cex/capi/2017/2017-CEQ-CAPI-instrument-specifications.pdf).

[12] The CE Interview Survey obtains about 7,500 consumer unit interviews per quarter, compared with the CPS ASEC's 94,000 household interviews per year and the ACS's 2.2 million household interviews per year.

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or one or more people in a household who share income). Alternatively, quarters of expenditures can be pooled and annualized. This approach (used by Meyer and Sullivan in their studies—see below) maximizes the available sample but may not produce the same results as if expenditures were constructed for the same consumer units over the year. The Bureau of Labor Statistics (BLS) has a program under way to redesign the CE to improve its measurement of expenditures and related information, but implementation will take a number of years, and there is unlikely to be expansion of the sample.[13]

Most recent research on using the CE to measure trends in consumption inequality that attempts to correct for the CE's measurement errors shows that consumption inequality tracks income inequality very closely through the mid-2000s (Attanasio and Pistaferri, 2016). Meyer and Sullivan (2017) show that the two measures diverge after approximately 2006, although they use a nonstandard price index (see below), which accounts for a good part of the divergence.

Meyer-Sullivan Consumption-Based Poverty Measure

Meyer and Sullivan, in a series of studies (Meyer and Sullivan, 2012b, 2017, 2018), use the CE to measure consumption poverty across groups and over time. They construct poverty thresholds by finding the threshold (after equivalizing consumption using equivalence scales from National Research Council, 1995) that leads to the same consumption and income poverty rates in some base year. They adjust the threshold from one year to the next using an inflation index that subtracts 0.8 percentage points per year from the All Items Consumer Price Index for All Urban Consumers-Research Series (known as the CPI-U-RS—see Appendix D, 2-2). Meyer and Sullivan (2012b) term this a "bias-corrected" CPI-U-RS (see further discussion below).

Using 1980 as the base year, Meyer and Sullivan (2018, Table 3) find that in 2017, 3.5 percent of children are poor based on their measure of consumption poverty compared with 9.4 percent based on their measure of income poverty. They measure income poverty using an after-tax-and-transfer resource measure that has some similarities to but is not the same as the SPM (see Box D2-2). Comparing the two series over time, their consumption and income poverty measures track each other fairly closely until 2000, when their child income poverty measure flattens out (as does the SPM), whereas the consumption-based measure of child poverty continues to decline steadily. They use the same inflation index, namely, their bias-corrected CPI-U-RS, for both series, so the sources of the difference

[13] See https://www.bls.gov/cex/ce_gemini_redesign.pdf.

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in trends must be due to other factors. Some possible explanations include these: the CE could have experienced an increasing rate of income underreporting after 2000 (similar to the CPS ASEC);[14] homeowners could have given increasingly inflated estimates of the rent they expect their homes would bring;[15] other expenditures could have become better reported over time;[16] consumption, perhaps supported by credit, could have grown markedly faster than income; or some combination of these and other factors.

Comparing Meyer and Sullivan's consumption measure for the whole population with the OPM using CE income data (they do not show results for the OPM comparison separately for children), the two measures track each other fairly closely until 1990, when the OPM poverty rate remains fairly steady, whereas the consumption rate declines steadily and substantially. By 2017, OPM poverty for the entire population was 12.3 percent compared with 7.0 percent for their income measure compared with only 2.8 percent for their consumption measure (Meyer and Sullivan, 2018, Table 1). The continued higher poverty rate for the OPM not only reflects the factors that account for the difference between Meyer and Sullivan's income and consumption measures, but also two other factors: (1) increases in noncash benefits (e.g., SNAP) and tax credits over the period, which are not included in the OPM resource measure; and (2) the "bias-corrected" CPI-U-RS price index used by Meyer and Sullivan in contrast to the OPM, which uses the CPI-U (see further discussion below).

Meyer and Sullivan's work uses an anchored measure of consumption-based economic poverty. In anchored measures, the starting (or ending) threshold value is selected to facilitate analysis of trends rather than on the threshold's merits in level terms (see Appendix 2-2). For their series anchored in 1980, Meyer and Sullivan selected their threshold to give the same 13 percent poverty rate as the OPM. Consequently, their threshold was at the 13th percentile of the distribution of their measure of consumption, which amounted to $8,100 for a two-adult/two-child family in 1980

[14] Meyer, Mok, and Sullivan (2009, Tables 2-9) show increased underreporting in both surveys over the 1990s and through 2006–2007 compared with earlier years for transfer program income, including SNAP and Temporary Assistance to Needy Families. Whether 2000 is the precise inflection point for marked deterioration in reporting would require closer examination of the data.

[15] With regard to housing, the ratio of the CE estimate of imputed homeowners' rent to the comparable estimate from the Bureau of Economic Analysis (BEA) personal consumption expenditures (PCE) series rose continuously from the mid-1990s to as high as 120 percent in the mid-2000s, falling back during the Great Recession (see Bee, Meyer, and Sullivan, 2012, Figure 1a). The ratio has stayed constant for 2014–2018 at 110 percent (see https://www.bls.gov/cex/cepceconcordance.htm).

[16] The evidence on the accuracy of CE reporting of various expenditures, relative to the BEA PCE series, beginning in 2000 is mixed—with some types of expenditures exhibiting better reporting and others worse (see Bee, Meyer, and Sullivan, 2012, Figures 1a–1i).

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BOX D2-2
Meyer-Sullivan (M-S) Consumption-Based Poverty Measure

Uses—Primarily statistical to monitor trends over time and among population groups and to evaluate alternative income and consumption measures:

- Meyer and Sullivan (2018), in their latest *Annual Report*, present trends from 1960-2017 for the Meyer-Sullivan (M-S) consumption poverty measure compared with the OPM and an after-tax money income measure (see below); annual reports provide time series for the M-S measures by age; M-S (2018) examine changes in income, consumption, and well-being of single mother-headed families after the 1996 welfare reform.
- Although M-S consumption includes goods and services (e.g., food) obtained from government benefits, the M-S consumption measure is not suitable for simulating effects on consumption of changes in government tax and assistance policies in the absence of behavioral research (see text).

Measurement Unit—CE consumer units (CUs): family members related by blood, marriage, or adoption (includes foster children) in same household; one or more co-resident individuals sharing expenses.

Poverty Threshold Concept—None; thresholds chosen to match the OPM poverty rate at a point in time and kept constant in real terms; Meyer and Sullivan (2018) present series using 1980 and 2015 as anchors (see text).

Threshold Adjustments—Uses National Research Council (1995) equivalence scale to adjust for CU size and composition.

Threshold Updating—Anchored absolute measure; uses "bias-corrected" CPI-U-RS (subtracts 0.8 percentage points each year from the CPI-U-RS), which produces a substantially lower threshold over a 25-or-more-year period.

Treatment of Health Care Costs and Benefits—Excludes out-of-pocket medical care costs from resources; does not account for health care needs or

dollars. That threshold was 97 percent of the official poverty threshold of $8,350 for 1980.[17] The Meyer and Sullivan approach thus shares the OPM defect of using absolute needs in a particular year and then deriving poverty rates in other years without any direct assessment of whether needs are changing, unlike what is done in the SPM.

Further, Meyer and Sullivan did not assess basic consumption needs against their 1980 thresholds to see if the thresholds made sense relative to living standards at the time. Yet by 1980 it was clear that the OPM

[17] The 97 percent figure is from Meyer and Sullivan (2012b, footnote 7); 1980 official poverty thresholds are available at https://www2.census.gov/library/publications/1982/demographics/p60-133.pdf; the threshold cited in the text is for "other" nonfarm families with four members, including two children.

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benefits in annual reports, although Meyer and Sullivan (2012b) construct a consumption measure that includes a value for public and private health insurance.

Resource Measure—Consumption: start with CE expenditures, then:

- Subtract health care and educational expenses (on grounds that they represent investments; educational expenses include costs for day care outside the home).
- Subtract pension plan contributions and contributions to others.
- Replace homeowners' housing expenditures (mortgage interest, property taxes, maintenance, repairs, insurance) with the rent the homeowner expects the property would bring; use out-of-pocket rent for renters not in public or subsidized housing; for the latter, predict a rental value.
- For vehicles, replace purchases and loan payments with an estimated service flow based on the purchase value and a depreciation rate.

[NOTE: Resource Measure for M-S income-based poverty measure: CE income (equivalent to census regular money income); plus SNAP benefits, lump sum payments, and money received from the sale of personal items; minus net state and federal income tax and FICA taxes calculated using TAXSIM; uses complete income reporters (i.e., those not requiring imputation for amounts), reweighted to match CE consumer unit totals]

Reference Period—3 months for expenditures; quarters are pooled and annualized

Data Source—CE Interview Survey

Data Quality—See text

NOTE: CE = Consumer Expenditure Survey; CPI-U = Consumer Price Index-Urban Consumers (flagship index); CPI-U-RS = CPI-U-Research Series (corrects CPI-U historically for overestimation of inflation); CU = Consumer Unit; NRC = National Research Council.

SOURCES: Extracted by committee staff from Meyer and Sullivan (2008, data appendix), with additional information obtained from personal communications from Meyer and Sullivan, January 8–9, 2019.

thresholds fell considerably below other kinds of thresholds, such as those based on one-half of median income or those derived by asking samples of people their assessment of a poverty line (so-called subjective thresholds—see Appendix 2-2).

As it turned out, using their "bias-corrected" CPI-U-RS inflation factors, Meyer and Sullivan's two-adult/two-child threshold for the current end point in their series (2017) was $17,765, which was only 71 percent of the comparable OPM threshold of $24,858.[18] Yet they intend their

[18] The Meyer and Sullivan threshold for 2017 was derived using deflators provided by Bruce Meyer and James Sullivan in an e-mail communication, January 9, 2019; 2017 official poverty thresholds are available at https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-263.pdf.

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series not only for analytic purposes (as in the committee's use of anchored SPM thresholds—see Ch. 2 and Appendix 2-10), but also as the basis for a substantively meaningful poverty series for policy makers. Given how their anchored thresholds were developed, it is hard to know how to assess the face validity of their thresholds either in 1980 or today.

Meyer and Sullivan's use of their "bias corrected" CPI-U-RS is a major reason for the marked decline in poverty observed in their consumption-based measure. It is well known that the CPI-U has overstated inflation in the past and that BLS has endeavored to correct the CPI-U going forward. BLS produces the CPI-U-RS as a historically comparable series back to 1978 that incorporates the latest CPI-U improvements. BLS also, beginning in 1999, has produced a chained CPI-U (C-CPI-U), which corrects for a remaining source of overstatement of inflation in the CPI-U (the C-CPI-U averages about 0.3 percentage points per year below the CPI-U—see Appendix 2-2).

Meyer and Sullivan rely on several studies of bias in the CPI-U for their decision to subtract 0.8 percentage points per year from each year's growth in the CPI-U-RS. The studies include Berndt (2006), the Boskin Report (Advisory Commission to Study the Consumer Price Index, 1996), and Hausman (2003). Berndt (2006), which reviewed what was done to improve the CPI-U following the Boskin report and other studies, found that BLS had made and was continuing to make major improvements. Meyer and Sullivan's bias correction, which is applied at the same rate every year, does not have a direct basis in any particular prior study.

Whether there is justification for the sizeable correction Meyer and Sullivan make for upward bias in the CPI-U and CPI-U-RS is unclear and would require more study.[19] More study would also be needed to investigate the optimum schedule for updating poverty thresholds in real terms—continuously as in the SPM and percentage-of-median income measures (which do not rely on an inflation measure); close to 40 years (as in the Meyer-Sullivan consumption measure); 55 years as would be the case for the OPM if the CPI-U had not been found to overestimate inflation; or a shorter interval. Suffice it to say that the use of the bias-corrected CPI-U-RS by Meyer and Sullivan to keep their 1980 threshold constant over almost 40 years produces contemporary thresholds and poverty rates that seem unrealistically low compared with other thresholds and rates.

It should also be emphasized that the method of anchoring used by Meyer and Sullivan makes the actual poverty rate in any given year an

[19] Researchers often prefer the PCE deflator produced by BEA, which generally increases at a lower rate than the CPI-U (see, e.g., Winship, 2016). It also differs significantly from the CPI in scope (e.g., including medical care costs paid for by insurers) and other features, so that its advantages for adjusting poverty thresholds are not clear. See, for example, Johnson (2017).

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arbitrary function of the anchoring year chosen. For example, if Meyer and Sullivan anchored their consumption poverty series in 2015 instead of 1980, they would conclude that the poverty rate in 2015 is the same as the OPM poverty rate—13.5 percent—and not the 3.4 percent they obtain for 2015 when anchoring in 1980. But that would imply that their poverty rate in 1960–1961 was as high as 62 percent (see Meyer and Sullivan, 2018, Table 2). Thus, their inflation index results in either implausibly high 1960–1961 poverty rates or implausibly low contemporary poverty rates, depending on the anchoring year chosen.

Reasons to Use the Adjusted SPM for This Study

For the purposes of our report, we do not use a consumption measure of poverty for four reasons:

1. The TRIM3 model adjusts the CPS ASEC for underreporting of three major types of transfer income, thereby addressing a large component of the problem with the use of income survey data.
2. The available data on consumption have the measurement issues discussed above.
3. Because the congressional charge to our committee is to assess how current and alternative transfer and other programs might change poverty, using a consumption poverty measure would require knowing how changes in those programs would affect consumer expenditures, and the research base on that relationship is scant and far from sufficient to use as a basis for simulations. Moreover, while the effect of transfers on income is conceptually straightforward and mostly mechanical, the effect of transfers on consumer spending requires understanding individual behavior and necessarily requires a higher level of research understanding than for income.
4. The Statement of Task for our committee directs us to use a specific income-based measure of poverty.

Taking this all into account, income poverty measured with the adjusted SPM is the appropriate measure for our use. The ability to incorporate corrections for underreporting of government transfers, using the TRIM3 model, is clearly crucial. A longer-term solution is to invest in improving our household surveys for income measurement—see Chapter 9. In fact, there is significant effort at the Census Bureau to incorporate administrative data into household surveys to do just that. Initial work by Meyer and coauthors (Meyer and Mittag, 2015; Meyer and Wu, 2018) shows that this is feasible and can lead to important findings on the measurement of

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poverty and the evaluation of the antipoverty effects of government tax and transfer programs.

Work to improve the CE for measurement of expenditures and related information, as is currently under way at BLS, is also a worthwhile investment in an important component of the suite of essential federal statistics for research, public understanding, and policy analysis. The 1995 National Research Council report that recommended what became the SPM in fact recommended (p. 13) improvements in the CE that could support consumption-based poverty measures. Further research on how to relate changes in government policies and programs to consumption would also be very worthwhile.

APPENDIX D, 2-4
HOW EQUIVALENCE SCALES ARE USED TO ADJUST POVERTY THRESHOLDS

The resources needed for a family to achieve a basic standard of living, however defined, vary with the size and composition of the family. Expenditures on some basic need categories, such as shelter and utilities, may not increase dramatically with a marginal increase in household size; meanwhile, expenditures on other basics, such as food and clothing, may be more sensitive to the number of people in the household.[20]

Since the amount spent on some necessities by larger families is greater than the amount spent by smaller families, poverty thresholds based on a 5-year moving average for consumption of food, clothing, and shelter must be adjusted to reflect the differences. *Equivalence scales* are typically used to make these adjustments so that families of various sizes and composition may be compared on as equal a basis as possible. The OPM thresholds, however, were constructed using a different approach (see National Research Council, 1995, Ch. 3).

As described in the first section of Chapter 2, for the SPM the poverty threshold is based on the 33rd percentile of expenditures on FCSU for resource units (families),[21] multiplied by 1.2.[22] The SPM poverty threshold is estimated using 5 years of data from the CE on out-of-pocket FCSU spending by household units with one or more adults and exactly two children; this is referred to as the *resource threshold for the reference family*.

[20] Although, even in these cases, economies of scale may be realized. Consider hand-me-downs, which allow expenditures on clothing for a second child to be lower than those for the first child, or the fixed costs associated with preparing a meal for, say, five versus four people.

[21] The expenditures on FCSU include the value of spending funded through in-kind subsidies for SNAP, school lunches, WIC, and rental subsidies (Garner, 2010).

[22] In contrast, for the OPM, the threshold is defined as three times the cost of a minimum food diet (as established in 1963); see App. D, 2-2, for more detail.

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A different reference threshold value is calculated for renters, owners with mortgages, and owners without mortgages.

A "three-parameter" scale is used to adjust the reference threshold to families of differing size and composition mix, specified as follows (Short, 2001):

1. Scale for units with one and two adults = (number of adults) $^{0.5}$
2. Scale for single parent units = (number of adults + 0.8 * first child + 0.5 * number of other children) $^{0.7}$
3. Scale for all other families = (number of adults + 0.5 * number of children) $^{0.7}$

The equations contain both "multipliers" (as in 0.8 and 0.5 in the second equation) and "exponents." The 0.8 and 0.5 multipliers recognize that children do not consume as much as adults (who are assigned a multiplier of 1.0). The exponents 0.5 and 0.7 recognize that the additional costs of adding a member to the resource unit decreases with the number in the resource unit; in other words, the per-unit cost of basic needs decreases with household size. The threshold resource level for the reference family is multiplied by the resulting equivalence scale to determine the thresholds for each combination of family size and composition.

Table D2-2, displays the equivalence scaling ratios for selected family types relative to that of the reference family. So, for example, to achieve the poverty threshold, a one-parent, two-child family is assumed to require about 83 percent of the level of resources required by a two-parent, two-child family. In 2015, the reference renter family is assigned an SPM threshold of $25,583, estimated using the CE.[23]

Table D2-3, provides a comparison of the SPM equivalence scale to the equivalence scales implicit in the three government benefit programs: the EITC, SNAP, and the Child Tax Credit (CTC).

APPENDIX D, 2-5
COST-OF-LIVING ADJUSTMENTS IN POVERTY THRESHOLDS AND BENEFITS

The cost of maintaining a given standard of living changes over time and varies from place to place. In the case of the former, prices may rise (or fall) from one period to the next, meaning that an individual or household requires more (or less) nominal income to purchase a similar "basket" of goods and services. Regarding change by place, the cost of purchasing a

[23] This is the figure for renters—the threshold for owners with a mortgage is about the same, and the threshold for owners without a mortgage is quite a bit lower than the $25,583 figure.

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TABLE D2-2 SPM Equivalence Scales by Household Size, 2015

Household Size	Implied Equivalence Scale	2015 SPM Thresholds
1 Parent, 1 Child	69.94	$17,891.94
2 Parents, 1 Child	88.02	$22,517.73
1 Parent, 2 Children	83.03	$21,241.05
2 Parents, 2 Children	100.00	$25,583.00
1 Parent, 3 Children	95.29	$24,376.83
2 Parents, 3 Children	111.39	$28,497.99

SOURCE: Fox (2018).

similar market basket may vary from one city, state, or country, to another. Cost-of-living adjustments (COLAs) are used as a method to equate dollar amounts, in terms of purchasing power, either temporally or spatially; they are often applied to payments such as those made for wage contracts.

However, with the exception of SNAP, none of the cash or near-cash benefits paid to low-income people, including the EITC and the CTC, contains any set of regional COLAs. The benefits are the same nominal amount across the entire nation. The only exception is public housing allowances, which are implicitly tied to the cost of rentals and which vary widely across the nation. In this appendix section, we explore these differences in the treatment of COLAs on the threshold side and the benefit or income side of income-based poverty measures; we also describe how the OPM and SPM address COLAs.[24]

The Role of COLAs in Setting Poverty Thresholds

While the income thresholds (the boundary designating who is and is not living in poverty) established by the Census Bureau's OPM are updated to account for price inflation over time (using the CPI-U), they do not include adjustments to account for geographic differences in the cost of living. As a result—assuming the measurement goal is to provide an accurate perception of the relative economic well-being of populations across the country—in high-cost states the OPM undercounts the number of people living in poverty, and in low-cost states it overcounts them, relatively speaking.

By contrast, the income thresholds set by the SPM are designed to incorporate changes in the standard of living over time and are also

[24] SNAP contains a modest adjustment for differences in housing costs across areas by allowing for deductions (against earned income) for shelter cost.

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TABLE D2-3 Implied Equivalence Scales for EITC, CTC, and SNAP Programs by Household Size

Household Size	Basic SPM Equivalence Scale	Implied EITC Equivalence Scale	Implied CTC Equivalence Scale	Implied SNAP Equivalence Scale	Max EITC Credit 2016	Max CTC	SNAP Max Benefit
1 Parent, 1 Child	69.94	60.53	50	55.01	$3,373	$1,000	$ 4,284
2 Parents, 1 Child	88.02	60.53	50	78.74	$3,373	$1,000	$ 6,132
1 Parent, 2 Children	83.03	100.00	100	78.74	$5,572	$2,000	$ 6,132
2 Parents, 2 Children	100.00	100.00	100	100.00	$5,572	$2,000	$ 7,788
1 Parent, 3 Children	95.29	112.51	150	100.00	$6,269	$3,000	$ 7,788
2 Parents, 3 Children	111.39	112.51			$6,269	$3,000	$ 9,252

SOURCE: Committee-generated, using data from Tax Policy Center (2017).

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partially adjusted to reflect geographic differences in families' living costs. The SPM income thresholds are based on a measure of resources required to purchase necessities—food, clothing, shelter, and utilities—at a basic level, as estimated using the previous 5 years of CE data from the Bureau of Labor Statistics.[25] They are re-estimated every year instead of being adjusted for inflation. The SPM thresholds generally, but not always, show a greater year-to-year increase than the OPM thresholds, indicating that living standards are outpacing inflation.

The geographic COLAs in the SPM compensate for differences in the price of rental housing, as measured by the median rent index, across areas. The median rent index is the ratio of the median outlays by renters for rent and utilities (for a two-bedroom unit with complete kitchen and plumbing facilities) in a specific metropolitan area or state to the median outlays nationwide for the same type of unit (Renwick, 2018). Rental price data from the Census Bureau's American Community Survey are used to adjust the housing component of the poverty thresholds.

The impact on poverty threshold levels of including regional COLAs—whether based only on housing costs or on consumption items more broadly—turns out to be quite significant in terms of the resulting distribution of the population on either side of the line. It follows that incorporating geographic variation into poverty guidelines used in determining eligibility for public-benefits programs would have a considerable impact on the number of families eligible in different parts of the country (the overall number eligible nationwide might not vary much, if at all).[26] In high-cost areas, such as the urban areas of the East and West coasts, COLAs increase the size of the population falling below the poverty line, both in absolute terms and proportionally. Meanwhile, in lower-cost regions, such as states in the South and Midwest, the portion of the population falling below the poverty line decreases (Curran et al., 2008). For example, based on Census Bureau data for 2015–2017, Mississippi's official poverty rate for the total population of 19.5 percent was more than 3 percentage points higher than the cost-of-living adjusted SPM for the same period. In California, during the same period, the SPM rate was 5.6 percentage points higher than the OPM rate, and at 19 percent was the second-highest rate in the nation (Fox, 2018).

[25] Thresholds are adjusted to reflect family size and composition. See App. D, 2-4 for a full discussion of equivalence scales.

[26] Poverty guidelines are a version of the official poverty thresholds that use a simpler method for adjusting for family size. They are developed by the U.S. Department of Health and Human Services for use in determining program eligibility (e.g., for SNAP)—see https://aspe.hhs.gov/poverty-guidelines.

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Alternative Approaches to Geographic COLAs

An alternative geographic COLA approach, explored in Renwick et al. (2014), involves applying state and metropolitan regional price parities (RPPs), which account for cross-area variation in a broader set of essential consumption items rather than simply housing costs. This method may draw from either an "all item" index that tracks prices from a broad group of expenditure classes, or from an index focused on food, clothing, and rents. The Bureau of Economic Analysis has been measuring variation in living costs through its RPP program for several years (Bureau of Economic Analysis, 2017). Its estimates (which combine CPI data for various consumption expenditure classes, including rents, food, apparel, transportation, housing, education, recreation, medical, and other goods and services) can be used to express price levels for states and metropolitan areas in comparison to the overall national averages. Using the RPPs produced by the Bureau of Economic Analysis, the Tax Foundation (2017) demonstrated that, relative to what can be purchased at the national level for $100, a market basket can be purchased worth $116.01 in Mississippi, worth $115.21 in Alabama, and worth $114.42 in Arkansas. At the other end of the spectrum, $100 is effectively worth only $84.18 in Hawaii, $85.47 in the District of Columbia, and $86.73 in New York State.

Renwick et al. (2014, p. 2) found significant differences between poverty thresholds adjusted by the rent index only and those adjusted by an all-item RPP, "resulting in higher poverty rates for 15 states and lower rates for 26 states." Even when the narrower (food, clothing, and rent) RPP COLA was used, poverty estimates were "higher than the median rent index poverty rates in 20 states, lower in 22 states and not statistically different in 9 states." In metropolitan areas, use of the RPP lowers the poverty rates when compared to the median rent index, because percentage differences in the combined price level of goods and services are generally not as large as those for rents alone.

Both the 1995 National Research Council report on measuring poverty[27] and a report by an Interagency Technical Working Group (2010) concluded that although adjusting the entire market basket may be desirable for an SPM, data on price differences for elements other than rent and utilities were inadequate to do so. However, given the subsequent work on RPPs by the Bureau of Economic Analysis's Regional Price Branch, the situation has changed such that a COLA could be implemented.

[27] *Measuring Poverty: A New Approach*. Available at: https://www.nap.edu/catalog/4759/measuring-poverty-a-new-approach.

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The Role of COLAs in Setting Benefits

Just as it makes sense to adjust poverty income/resource thresholds to reflect regional variation in the cost of achieving a given standard of living, it is also reasonable to consider treating benefit payment formulas similarly. Currently, most anti-poverty programs do not feature COLAs that would formulate variations in payment levels across regions. The CTC and the EITC are examples of programs that fall into this category, making them much more valuable in lower-cost areas (Fitzpatrick and Thompson, 2010).

Likewise, eligibility for SNAP, administered by the U.S. Department of Agriculture, is determined by a uniform national standard with maximum benefit allotments, deductions, and income eligibility standards (by family size) adjusted for price inflation over time (COLAs take effect on October 1 each year). With only a couple of exceptions, however, SNAP benefits to low-income families are not distributed according to the cost of living in a city or metropolitan area (USDA, 2013). Net monthly income (eligibility) limits, set at 100 percent of the poverty level for the household size, are different (higher) only for Alaska and Hawaii, and maximum benefit amounts only vary for Alaska, Hawaii, Guam, and the U.S. Virgin Islands.[28]

Regional COLAs for food have less impact than COLAs for housing, because grocery costs vary by region considerably less than rental costs do. For example, the Council for Community and Economic Research survey estimates that average housing costs in Tulsa are only 66 percent of the national average, while in Baltimore and San Francisco they are 155 percent and 295 percent, respectively. But even in the case of food, there are some extreme differences. In Manhattan, for example, costs are 158 percent of the national average, while food costs in Tulsa are 81 percent of the national average (USDA, 2013). In either expenditure category, however, measured child poverty rates would be increased (relative to the OPM) in places like New York and California by including COLA adjustments to offset high housing or food costs.

APPENDIX D, 2-6
DIFFERENCES BETWEEN THE RESOURCE MEASURES USED BY THE OPM AND SPM POVERTY MEASURES

As noted in the text (see also Appendix D, 2-2), *family resources* in both the OPM and SPM poverty measures are the sum of money income from all sources, including earnings and government cash benefits such as Social Security and Unemployment Compensation. A key difference

[28] Families with housing and utility costs that exceed one-half of net income are allowed a deduction for excess shelter costs, which may be more likely to occur in areas with higher-than-average housing costs generally.

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between the OPM and SPM resource definitions is that SPM-based family resources also include "near-cash" income benefits such as SNAP (formerly known as food stamps) and housing subsidies, as well as near-cash benefits from many smaller programs. The SPM resource measure is also an after-tax measure, including deductions for payroll and federal and state income taxes as well as additions to resources through the EITC and the CTC. Table D2-4 provides a more complete accounting for the differences between OPM resources and SPM resources.

APPENDIX D, 2-7
POVERTY AMONG AMERICAN INDIAN AND ALASKA NATIVE CHILDREN

American Indians and Alaska Natives (AIAN) make up a small but rapidly expanding proportion of the U.S. population (Norris, Vines, and Hoeffel, 2012).[29] Of the 5.3 million people who identify as AIAN, nearly one-half also identify as some other race, and the mixed-race population is growing faster than the AIAN-alone group (Norris, Vines, and Hoeffel, 2012). Because of the AIAN population's relatively small size, data documenting it are scarce, particularly concerning AIAN children. In this appendix, we draw upon data from large-scale data collections efforts conducted by the U.S. Census Bureau.

Unlike other minority groups in the United States, the AIAN population is also recognized as a political group, with political rights that may or may not align with racial or ethnic designations. As such, the AIAN population is eligible for certain programs and benefits that would otherwise be deemed illegal or unconstitutional in other settings (e.g., preferential hiring, treaty payments, and sovereign immunity). These benefits accrue directly as a result of their unique political status and not from a racial or ethnic designation. In the discussion that follows, we will primarily discuss the AIAN population as a racial and ethnic group; in Chapter 7, we discuss potential programs that may be of benefit only to the AIAN population that are considered citizens of their tribal nations.

As measured by the OPM,[30] the child poverty rate among the AIAN population as a whole was 31 percent in 2015, but there are differences by race and geography (Table D2-5). The OPM poverty rate for the entire population identifying as at least part AIAN increased from 27 to 31 percent from 1990 to 2016. However, for the AIAN-alone child population,

[29] This appendix is adapted from a study (Akee and Simeonova, 2017) commissioned by the committee for this report.

[30] Poverty data measured by the Supplemental Poverty Measure for this population were not available for all time periods covered in this analysis.

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TABLE D2-4 Difference Between OPM Resources and SPM Resources

	Resource Measures		
	OPM	SPM	Market Income Poverty
Market Income			
Wages and Salaries	X	X	X
Self-Employment Income	X	X	X
Farm Income	X	X	X
Returns from Assets	X	X	X
Child Support and Alimony	X	X	X
Private Disability and Retirement	X	X	X
Transfers			
AFDC/TANF	X	X	
Social Security Ret./SSDI	X	X	
SSI	X	X	
Unemployment Insurance	X	X	
Food Stamps		X	
Free/Reduced Lunch		X	
Housing Subsidies		X	
LIHEAP		X	
Veterans Payments, Workers Comp	X	X	
Taxes			
EITC		X	
Child Tax Credit		X	
Additional Child Tax Credit		X	
Stimulus Tax Credits/Rebates		X	
Federal Taxes, Other		X	
State Taxes		X	
Payroll Contributions to Social Security and Medicare		X	
Deductions			
Child Support		X	
Medical Out-of-Pocket Expenditures		X	
Other Work Expenses		X	
Child Care		X	

NOTES: Market income poverty is a subset of either OPM or SPM poverty that researchers use when they want to compare the effects of market income on poverty separately from other income sources. AFDC/TANF = Aid to Families with Dependent Children; EITC = Earned Income Tax Credit; LIHEAP = Low-Income Home Energy Assistance Program; OPM = Official Poverty Measure; SPM = Supplemental Poverty Measure; SSDI: Social Security Disability Insurance; SSI = Supplemental Security Income; TANF = Temporary Assistance to Needy Families.
SOURCE: Adapted from Bitler, Hoynes, and Kuka (2017).

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TABLE D2-5 Child Poverty Rates by Year and Population

	U.S. Total			
	1990	2000	2010	2015
Panel A. American Indian Alaska Native, Alone or in Combination				
Total number of children under 18 living in families with income below the poverty level		370,610	417,773	472,713
Total number of children under 18 living in families		1,365,233	1,453,782	1,543,301
Percentage living in poverty		27	29	31
Percentage living in poverty on-reservation		44	43	46
Panel B. American Indian Alaska Native Alone				
Total number of children under 18 living in families with income below the poverty level	254,431	249,561	238,827	233,227
Total number of children under 18 living in families	664,454	789,509	716,251	690,535
Percentage living in poverty	38	32	33	34
Percentage living in poverty on-reservation	55	44	44	47
Panel C. Black or African American Alone				
Total number of children under 18 living in families with income below the poverty level	3,180,111	3,467,900	3,755,610	3,928,519
Total number of children under 18 living in families	8,107,759	10,477,365	10,609,249	10,254,083
Percentage living in poverty	39	33	35	38

SOURCE: Adapted from a study by Akee and Simeonova (2017) commissioned by the committee for this report.

poverty rates were higher in 1990 and then, over the 1990s, dropped by 6 percentage points (from 38 to 32%), remained constant through the 2000s before increasing to 47 percent in 2015. In comparison, Black (or African American) children experienced poverty rates that fell and then rose in roughly similar ways throughout this time period, suggesting that there were national trends that affected poverty in these different groups in approximately similar magnitudes.

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The rate of poverty among AIAN children also varies by geography. One-fifth of the AIAN population lives on reservations, in traditional homelands, or in Alaska Native villages (Norris, Vines, and Hoeffel, 2012). Among the on-reservation child population, the poverty rates are on average about 10 percentage points higher at all points in time than the off-reservation AIAN population (Table D2-5). In addition, there is much less difference in the child poverty rates between the AIAN-alone and AIAN-in-combination populations, which may be due to the relatively few mixed-race AIAN children residing on reservations (Norris, Vines, and Hoeffel, 2012).

There was a larger (in percentage points) reduction in poverty for the on-reservation population than for the AIAN population residing in the United States as a whole between 1990 and 2000, which coincides with the era of widespread expansion of American Indian casino operations. Thus, while AIAN children have historically suffered from high poverty rates, there is evidence that policies expanding resources available to tribal governments have reduced poverty, at least in the tribal-enrolled population.

APPENDIX D, 2-8
THE CHANGING DEMOGRAPHY OF CHILDREN, INCLUDING CHILDREN IN POVERTY

The U.S. population is becoming increasingly racially and ethnically diverse, and the child population is even more diverse than the total population. In 2016, 51 percent of the child population was White,[31] compared to 61 percent of the population ages 18–64, and 77 percent of the population ages 65 and over (U.S. Census Bureau, 2018a). Figure D2-1, shows the historical and projected racial/ethnic composition of the child population. Over the coming decades, the child population will become even more diverse (U.S. Census Bureau, 2018b). For example, Hispanic children represented only 9 percent of the child population in 1980 but 25 percent in 2017, and they will represent 32 percent in 2050. By midcentury, racial/ethnic "minority" children will be 61 percent of the child population (U.S. Census Bureau, 2018b), and the U.S. population as a whole is projected to become majority-minority (U.S. Census Bureau, 2018b).

The changes in the racial/ethnic composition of the child population reflect increases in immigration as well as higher fertility among minorities and especially among immigrants (Martin et al., 2018; U.S. Census Bureau, 2016). The proportion of the child population in immigrant families (those where at least one of the parents and/or the children is foreign-born) grew

[31] Note that all race categories used in this report exclude Hispanics.

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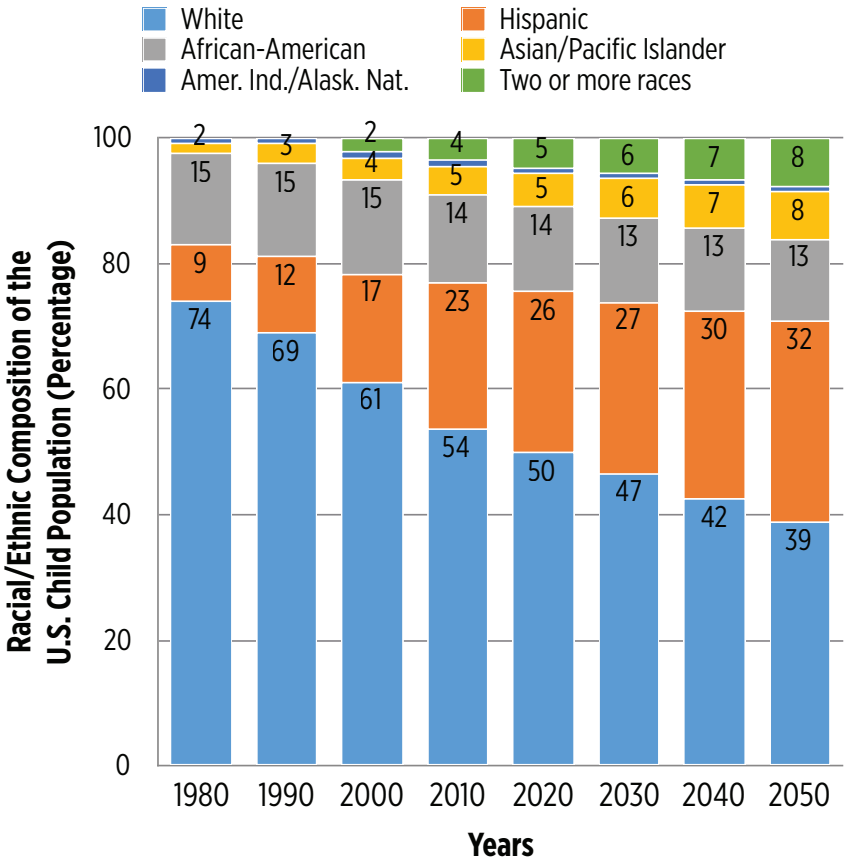

FIGURE D2-1 Historical and projected racial/ethnic composition of the U.S. child population.

NOTES: Racial groups include only non-Hispanic members. Hispanics may be of any race. Data on two or more races not available before 2000. These data are available on the U.S. Census Bureau website on the Population Estimates and Population Projections pages. The data for 1980 to 2009 are intercensal estimates and incorporate the 1980, 1990, 2000, and 2010 Censuses as benchmarks. The data for 2010 to 2016 are based on the population estimates released for July 1, 2016. Data beyond 2016 are derived from the national population projections released in December 2014.

SOURCE: U.S. Census Bureau, Population Division, obtained from Federal Interagency Forum on Child and Family Statistics (2017).

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from 6 percent in 1970 to 25 percent in 2016 (Capps and Fortuny, 2006; Federal Interagency Forum on Child and Family Statistics, 2017). Children in immigrant families are more than 25 percent of the child population in 13 states and in 31 of the 100 largest metropolitan areas (Urban Institute, 2018). Child poverty in families where parents are U.S.-born is 9.9 percent, compared with 20.9 percent in families where at least one of the parents is an immigrant (i.e., foreign-born) (refer to Table D2-5). Child poverty is even higher in households where some members are not citizens or are authorized (refer to Table D2-5).

The increasing diversity of the child population—driven largely by the growth in the Hispanic child population—coupled with higher poverty rates among Hispanic, Black, and AIAN children has led to significant changes in the composition of the child population in poverty. As shown in Figures D2-2 and D2-3, the increasing diversity of children in poverty is apparent in both OPM-based and SPM-based figures. In 2016, 33 percent of the poor child population (<100 percent SPM) was White, down from 55 percent in 1970, while in 2016 Hispanic children represented 40 percent of the population of children in poverty, up from 12 percent in 1970. Hispanic children have been the largest group of children in poverty (4.6

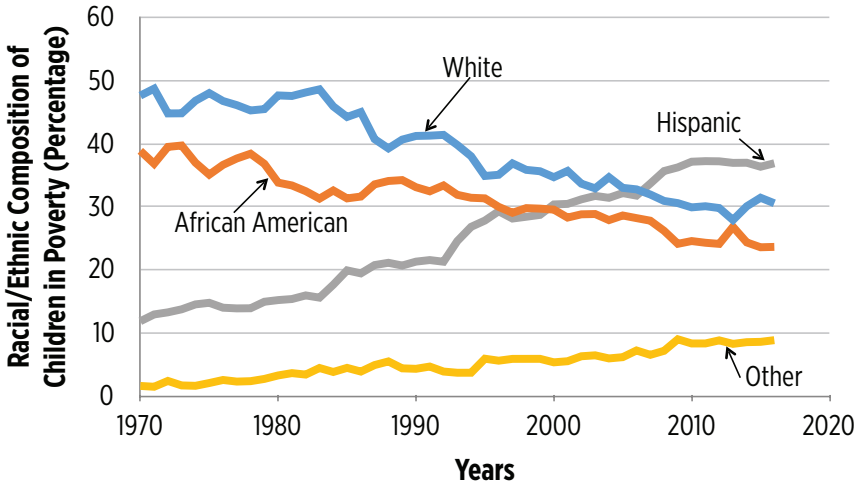

FIGURE D2-2 Historical and current racial/ethnic composition of children in poverty, OPM-based poverty.
NOTES: Racial groups include only non-Hispanic members. Hispanics may be of any race. Official rates are calculated using the University of Minnesota's Integrated Public Use Microdata Series (IPUMS.org).
SOURCE: Original analyses commissioned from Sophie Collyer and Christopher Wimer, Columbia Center on Poverty and Social Policy (2018, July).

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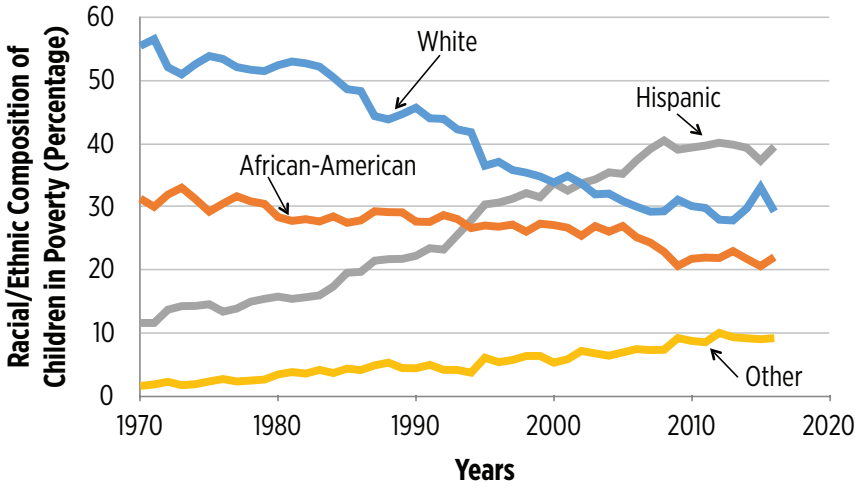

FIGURE D2-3 Historical and current racial/ethnic composition of children in poverty, SPM-based poverty.
NOTES: The SPM poverty measure is anchored in 2012 living standards and adjusted back to 1967 using the Consumer Price Index. Income data are not adjusted for underreporting. Racial groups include only non-Hispanic members. Hispanics may be of any race.
SOURCE: Original analyses commissioned from Sophie Collyer and Christopher Wimer, Columbia Center on Poverty and Social Policy (2018, July) based on augmented Current Population Survey microdata.

million in 2016) since 2002, followed by White children (3.4 million) and Black children (2.5 million). The trends in the composition of children in poverty based on the OPM are similar to those discussed above based on the SPM, although based on the OPM measure Hispanic children overtook White children to become the largest group in poverty in 2007, 5 years later than they did following the SPM measure.

The downward trend in child poverty for all groups, as measured in SPM-based rates, is readily apparent in Figure D2-4. Because the decline was steeper for minorities, racial/ethnic gaps in child poverty also declined during this period. Between 1970 and 2016, the absolute difference in poverty rates between Black children and White children declined from 38 to 16 percentage points, and between Hispanic and White children from 32 to 16 percentage points. In contrast, gaps in OPM-based poverty rates declined by only about 6 percentage points between Black and White children and remained constant, at about 20 percentage points, between Hispanic and white children (Figure D2-5). The difference between trends

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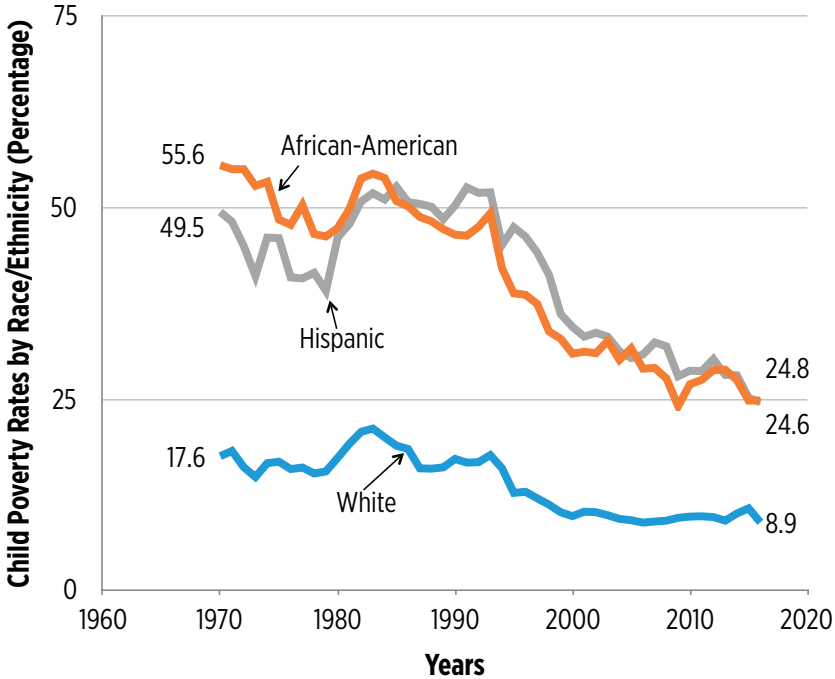

FIGURE D2-4 Trends in SPM child poverty rates by race/ethnicity.
NOTES: The SPM poverty measure is anchored in 2012 living standards and adjusted back to 1967 using the Consumer Price Index. Income data are not adjusted for underreporting. Racial groups include only non-Hispanic members. Hispanics may be of any race.
SOURCE: Original analyses commissioned from Sophie Collyer and Christopher Wimer, Columbia Center on Poverty and Social Policy (2018, July) based on augmented Current Population Survey microdata.

in racial/ethnic gaps computed using SPM and OPM reflects the growth of in-kind transfers to the poorest families, who were disproportionately minority.

Additionally, family structure has changed dramatically in recent decades and, as shown in Figure D2-6, poverty rates have declined for each group—single parent, cohabitating parents, and married parents. TRIM3-adjusted poverty rates for select demographic groups (defined by age of child, region, metropolitan/nonmetropolitan status, disability, and health insurance status) for 2015 are shown in Table D2-6, for deep poverty, poverty, and near poverty.

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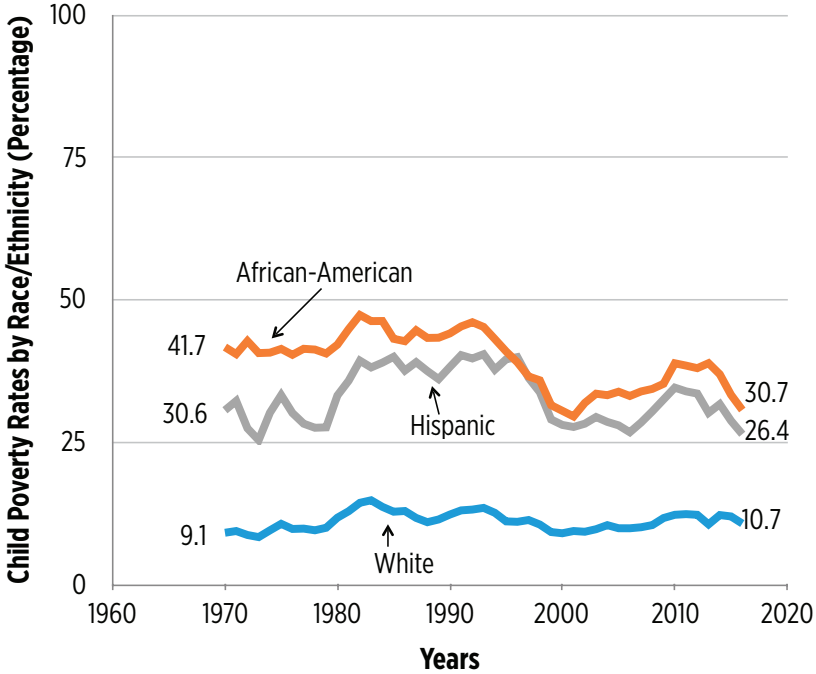

FIGURE D2-5 Trends in OPM child poverty rates by race/ethnicity.
NOTES: Racial groups include only non-Hispanic members. Hispanics may be of any race.
SOURCE: Original analyses commissioned from Sophie Collyer and Christopher Wimer, Columbia Center on Poverty and Social Policy (2018, July). Official rates are calculated using the University of Minnesota's Integrated Public Use Microdata Series Flood et al. (2017).

APPENDIX D, 2-9
DISTRIBUTION OF CHILD POPULATION ACROSS PERSISTENTLY HIGH-POVERTY COUNTIES

Child poverty rates vary greatly not only by child demographic characteristics but also geographically. The material hardships associated with poverty and families' ability to get out of poverty vary across communities. The experience of child poverty in a community with good schools and resources for families and with pathways for economic mobility may be different than in a community that has suffered persistent poverty for decades. The burden of poverty may be harder in rural areas where access to services for low-income families may be limited (Schaefer, Mattingly, and Johnson, 2016).

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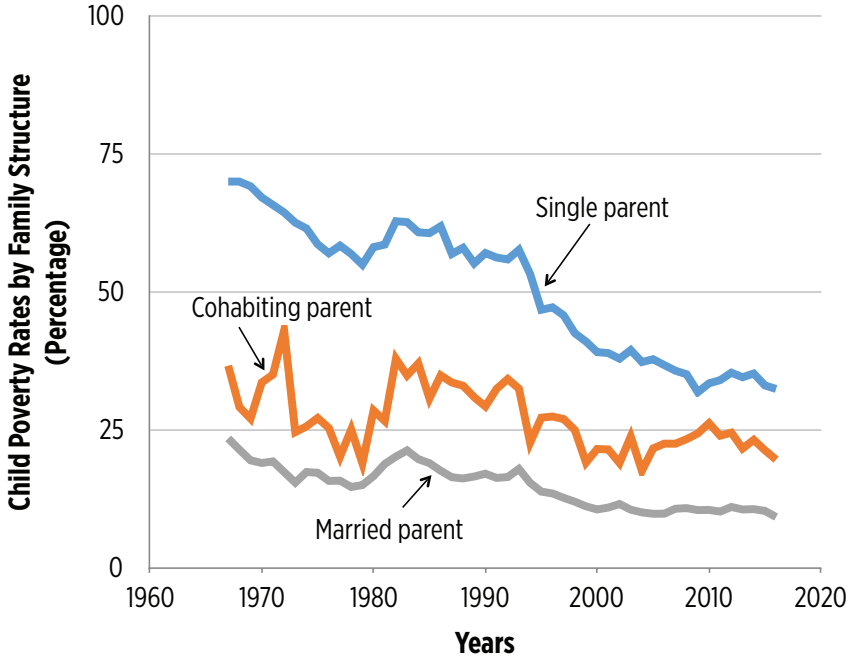

FIGURE D2-6 Trends in SPM child poverty rates by family structure.
SOURCE: Original analyses commissioned by the committee from Christopher Wimer (2017, October).

As discussed in Chapter 2, we classified a county as experiencing persistently high poverty if 20 percent or more of children under 18 years old were poor as measured by the 1980, 1990, and 2000 decennial censuses and the American Community Survey's 5-year estimates for 2007–2011.[32] Using this definition, we classified 708 of 3,141 counties in the United States as persistently high-poverty counties. The analyses use county-level estimates of the U.S. child population by race/ethnicity provided by the Census Bureau as part of the U.S. Population Estimates Program (data are as of July 1, 2015). In analyses by race/ethnicity, Hispanics may be of any race; other racial groups exclude Hispanics.

In the following, we analyze the distribution of the child population across persistently poor and nonpoor counties, focusing on disparities between racial/ethnic groups, metropolitan and nonmetropolitan areas, and states. We then repeated the analysis using point-in-time poverty rates

[32] This definition was adapted from the U.S. Department of Agriculture. For more information, see https://www.ers.usda.gov/webdocs/DataFiles/48652/ERSCountyTypology2015Edition.xls.

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to classify counties as poor versus nonpoor. Specifically, we used the 2015 poverty rate for children under 18 from the Census Small Area Income and Poverty Estimates (SAIPE) Program to classify counties as poor if 20 percent or more children under 18 years old were poor in 2015. Using this definition, we classified 1,858 of 3,141 counties as poor counties. By this definition, more than one-half of all counties are currently poor. We refer to either persistently poor counties or point-in-time poor counties to distinguish between the two definitions.[33]

Approximately 10 million children ages 0 to 17 resided in persistently poor counties in 2015 (Table D2-7). This corresponds to 13.9 percent of the 74 million children under age 18 living in the United States. Of children living in persistently poor counties, 73 percent resided in metro areas, while 27 percent resided in nonmetro areas (Table D2-6). There are significant racial/ethnic differences in the proportion of children who live in persistently poor counties: from 8.2 percent of Asian and Pacific Islander children to 36 percent of AIAN children (Figure D2-7). In all racial/ethnic groups, except for AIAN children, the majority of children in persistently poor counties live in metropolitan areas (Figure D2-8). However, children in persistently poor counties are more likely to live outside metropolitan areas (26.7%) than children in nonpersistently poor counties (11.9%) (Table D2-8). As discussed in greater detail later in this appendix, most children in persistently poor counties live in the South (6.2 million, 61.1 percent, see Table D2-11). In absolute terms, (non-Hispanic) White children represent the largest racial/ethnic group of children living in persistently poor counties (Table D2-8). However, compared to the 3.6 million White children living in persistently poor counties, the number of Hispanic and (non-Hispanic) Black children living in such counties is of similar magnitude, 3.1 million and 2.7 million, respectively.

Among White children residing in persistently poor counties, 61 percent live in metro areas (Figure D2-8). The comparable figures for Black, Hispanic, and AIAN children are 77.7 percent, 85.4 percent, and 22.6 percent, respectively. In nonmetro area counties that are persistently poor, 51 percent of children are White, 22.4 percent are Black, and 16.6 percent are Hispanic (Figure D2-9). In metro-area counties that are persistently poor, each of these groups contributes about 30 percent of the child population (Figure D2-9).

In contrast, 66 percent of children living in currently poor metro counties are White, 12.1 are Black, and 13.8 are Hispanic (Figure D2-10). In

[33] We also repeated parts of the analysis using the 2015 poverty rate of the total population to classify counties as poor vs. nonpoor. In this case, counties were classified as poor if 20 percent or more of the total county population was poor. Using this classification, 755 of 3,414 counties were classified as poor.

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TABLE D2-6 Percent of Children in Poverty based on TRIM3—Adjusted SPM for 2015 by Level of Poverty

	<50 percent SPM (deep poverty)	<100 percent SPM (SPM poverty rate)	100-149 percent SPM (near poverty)
All Children	2.9	13.0	22.6
Age of Child			
0–5 Years	3.1	13.9	23.8
6–17 Years	2.8	12.6	22.0
Race/Ethnicity			
White-only (non-Hispanic)	2.1	7.9	15.0
Black-only (non-Hispanic)	3.7	17.8	32.8
Hispanic	4.0	21.7	32.9
Other (non-Hispanic)[a]	3.3	11.1	22.0
Metro Status [b]			
Principal City of Metro Area	3.3	16.9	27.4
Metro Area, Not Principal City	2.9	11.8	20.7
Metro Area, Principal City Status Not Disclosed	3.1	11.1	21.7
Nonmetro Area	3.0	11.1	20.3
Region			
Northeast	2.8	12.8	21.4
South	3.4	14.4	23.3
Midwest	2.1	9.6	19.4
West	2.8	14.0	25.0
Nativity of Parent/Head			
Native-born Parent/Head	2.2	9.9	20.8
Immigrant Parent/Head	3.8	20.9	27.7
Citizenship/Legal Status of Child [c, d]			
All Unit Members Are Citizens	2.3	10.2	20.4
Child is a Citizen, Unit Contains Unauthorized Immigrant	6.4	31.5	32.7
Child is a Citizen, Unit Contains Recent Immigrant	3.4	24.7	27.0
Child is a Citizen, Unit Contains Other Immigrant	2.4	17.7	33.7

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TABLE D2-6 Continued

	<50 percent SPM (deep poverty)	<100 percent SPM (SPM poverty rate)	100-149 percent SPM (near poverty)
Child is a Noncitizen, Unit Contains Unauthorized Immigrant	15.2	33.3	26.5
Child is a Noncitizen, Unit Contains Recent Immigrant	7.3	31.8	32.3
Child is a Noncitizen, Unit Contains Other Immigrant	4.7	22.5	40.6
Family Composition			
Married/Cohabitating Parents	1.9	9.3	18.2
Single Parent	5.0	22.4	35.5
No Parents	7.6	22.9	24.3
Employment/Health Status of Adults in Unit [e, f]			
1+ Full-year/Full-time Worker	0.9	6.5	19.6
1+ Part-year or Part-time Worker	5.5	27.8	36.1
No Workers, 1+ Adult Neither Elderly or Disabled	27.9	69.1	23.8
No Workers, All Adults Elderly or Disabled	7.3	45.4	40.0
No Adults in Unit	81.5	90.3	5.1
Education of Biological Mother, Father, or Unit Head			
No HS Degree/No GED	6.5	32.5	38.2
HS degree/GED, No College	3.4	17.7	30.9
Some College, No BA	2.0	9.9	25.1
BA+	1.5	4.8	8.8
Age of Mother, Father, or Unit Head [g]			
Under 25 Years	5.7	23.8	36.0
25 to 35 Years	3.2	14.4	28.1
35+ Years	2.3	11.4	19.0
Child's Health Insurance			
Has Private	2.0	7.0	14.2
Has Public	4.0	23.3	37.7
Uninsured	6.3	20.2	27.6

continued

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A Roadmap to Reducing Child Poverty

TABLE D2-6 Continued

[a] The *Other* (Non-Hispanic) race/ethnicity category includes children who are Asian or Pacific Islanders or American Indian or Alaska Natives, or who report more than one race.

[b] The *Metro status* category categorizes a child's household by geography. A metropolitan area includes a large population nucleus and any outlying communities that are highly socially or economically integrated with the nucleus. Nonmetropolitan areas are those outside of metropolitan areas. Households in the *Principal city of metro area* category live within the largest city of the metropolitan area, and *Metro area, nonprincipal city* captures households in communities adjacent to the largest city. Some households do not have their metro status suppressed to preserve privacy, and are captured in the *Metro Area, principal city status not disclosed* category. For more information on this category, see the Current Population Survey Subject Definitions, available at https://www.census.gov/programs-surveys/cps/technical-documentation/subject-definitions.html.

[c] If a child has at least one biological, adoptive, or step-parent that was born in another country, the child is classified as having an immigrant parent. Persons born abroad to American parents are counted as native-born. If a child does not have a parent present, the immigrant status of the unit head and the unit head's spouse are used, unless the child is the unit head, spouse, or cohabiting partner (these children are tabulated separately).

[d] The child is placed in the first row that applies. Citizens include both native-born and naturalized citizens. An *Other noncitizen* includes noncitizens not classified as unauthorized, recent, or temporary. These include legal permanent residents who have been in the United States for more than 5 years and refugees/asylees.

[e] These rows reflect the work status of persons aged 18 or older in the unit. *Full-year* is classified as 50 weeks or more, and *full-time* is classified as 35 hours per week or more.

[f] A child is classified as being in a unit with a person with a disability if there is at least one person in the unit who is younger than 65 and is identified as disabled according to the definition used when determining SSI eligibility.

[g] These rows reflect the characteristics of the biological, adoptive, or stepmother (if present), otherwise the biological, adoptive, or stepfather (if present). If neither the father nor mother is present, then the characteristics of the SPM unit head are used, unless the child is the unit head, spouse, or cohabiting partner.

SOURCE: TRIM3 analyses commissioned by the committee.

TABLE D2-7 Distribution of Children Under 18 Across Persistently Poor and Nonpoor Counties, by County Metro Area Status

	Nonpoor	Poor	Total
Nonmetro	7,542,121 (11.9%)	2,726,995 (26.7%)	10,269,116 (13.9%)
Metro	55,850,927 (88.1%)	7,496,716 (73.3%)	63,347,643 (86.1%)
Total	63,393,048 (100%)	10,223,711 (100%)	73,616,759 (100%)

SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015.

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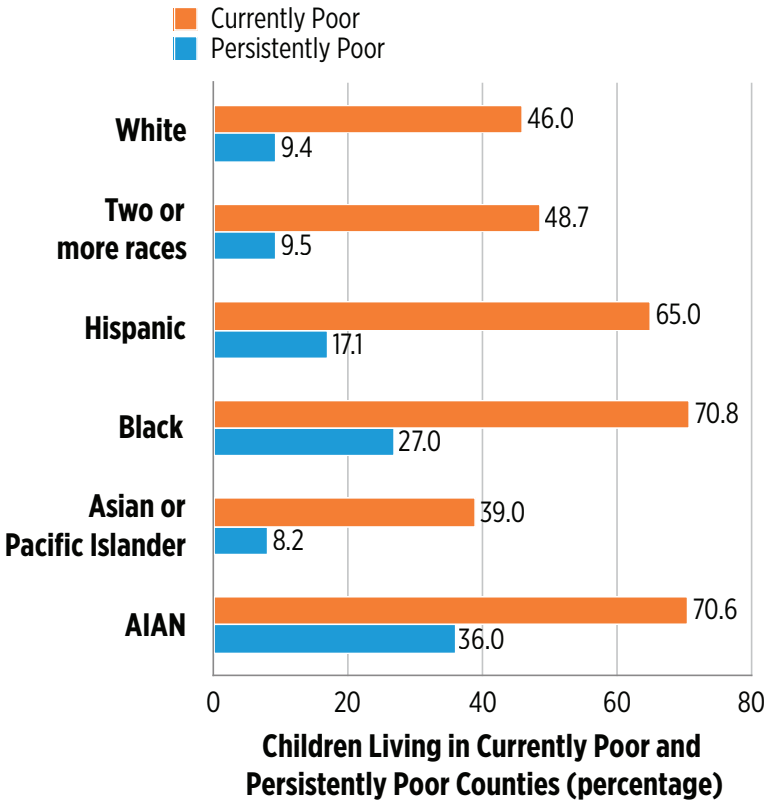

FIGURE D2-7 Percentage of children living in currently poor and persistently poor counties by race/ethnicity.
SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015; U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

currently poor non-metro counties, those groups make up 39.1, 19.3, and 33.1 percent of the child population, respectively (Figure D2-10). At 39.8 million, the number of children residing in point-in-time poor counties in 2015 was considerably larger than the number in persistently poor counties, which is not surprising given the much larger number of counties that are poor at a point in time (Table D2-8). Persistent poverty is more prevalent outside of metropolitan areas than point-in-time poverty. While 27 percent of children residing in persistently poor counties live outside a metro area, only 18 percent of children residing in currently poor counties do (Tables D2-7 and D2-8).

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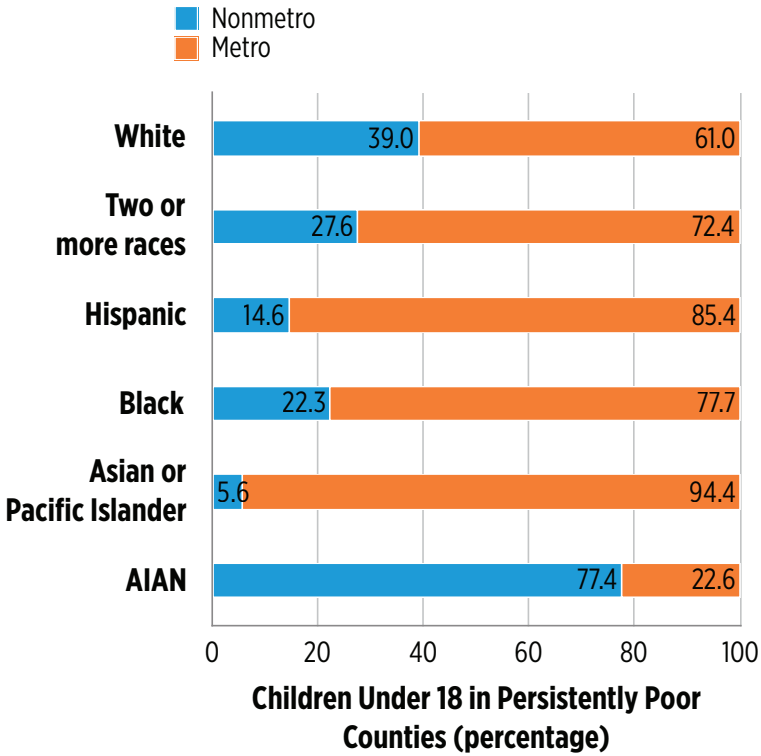

FIGURE D2-8 Percentage of children under 18 in persistently poor counties, by metro status of counties and race/ethnicity.
SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015.

The racial/ethnic composition of children living in persistently poor counties differs from that of children living in point-in-time poor counties (see Tables D2-9 and D2-10). While white children accounted for 35 percent of children living in persistently poor counties, they make up 44 percent of poor children in point-in-time poor counties (Tables D2-8 and D2-9). Relative to the total number of children of a given race/ethnicity, the risk of residing in a point-in-time poor county is highest among Black children (70.8%), followed by AIAN (70.6%), Hispanic (65.0%), and (non-Hispanic) White children (46.0%) (Figure D2-7).

The percentage of children under 18 living in persistently poor counties varies across U.S. regions. In the South, 22.1 percent of children live in persistently poor counties. In the Northeast, the corresponding figure is 17.3 percent (Figure D2-11). Together, the South and Northeast account

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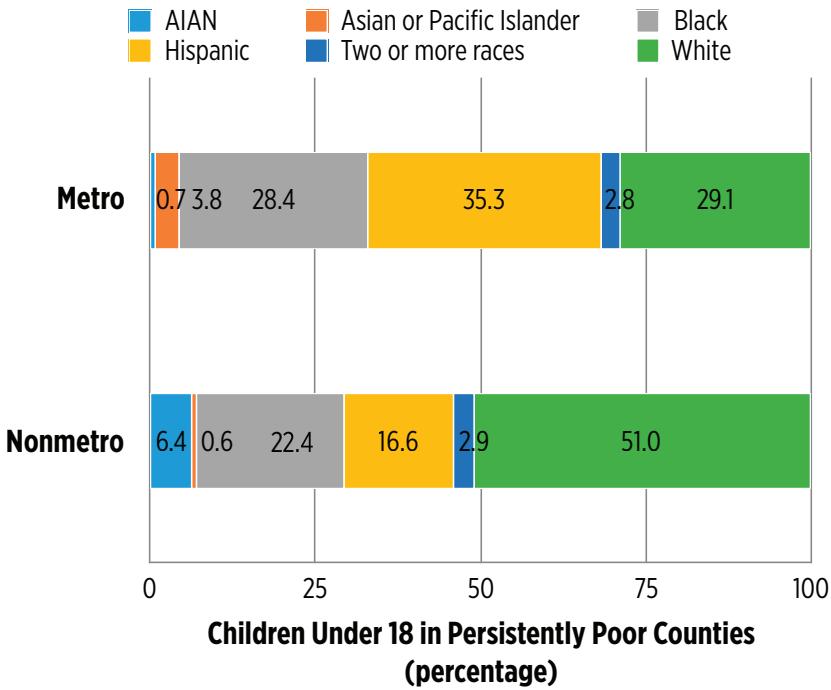

FIGURE D2-9 Percent of children under 18 in persistently poor counties by race/ethnicity, by metro status of counties, race, and ethnicity.
SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015.

for most of the child population living in persistently poor counties (Table D2-11). Of the 10.2 million children living in persistently poor countries, 81.2 percent reside in the Northeast and South (Table D2-11). In 10 states and the District of Columbia, more than a quarter of the child population lives in persistently poor counties (Figure D2-13). In Mississippi, nearly two-thirds of the child population live in persistently poor counties. In Alabama, Louisiana, and New Mexico, more than 40 percent of the child population live in persistently poor counties (Figure D2-12).

While there are a large number of White children living in persistently poor counties across the United States (Figures D2-12 and D2-13), AIAN, Black and especially Hispanic children residing in persistently poor counties are more geographically concentrated. Black children in persistently poor counties reside in certain states in the South and Northeast, especially Alabama, Georgia, Louisiana, Mississippi, and New York. Hispanic children in persistently poor counties reside especially in California, New York, and

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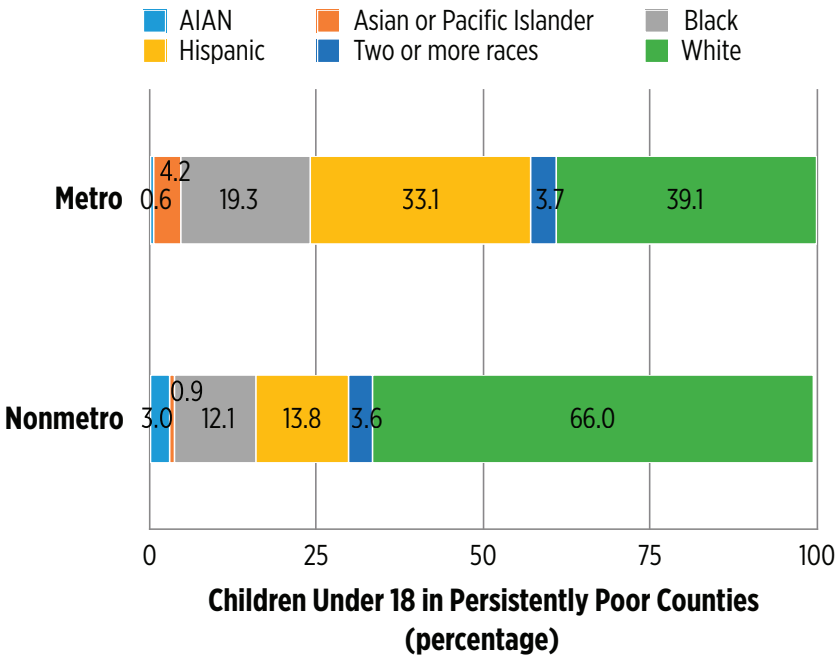

FIGURE D2-10 Race/ethnic distribution (%) of children under 18 in currently poor counties, by metro status of counties.
SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

TABLE D2-8 Distribution of Children Under 18 Across Point-in-Time Poor and Nonpoor Counties, by County Metro Area Status

	Nonpoor	Poor	Total
Nonmetro	3,230,445 (9.6%)	7,038,671 (17.7%)	10,269,116 (13.9%)
Metro	30,564,379 (90.4%)	32,783,264 (82.3%)	63,347,643 (86.1%)
Total	33,794,824 (100%)	39,821,935 (100%)	73,616,759 (100%)

SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

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TABLE S2-9 Distribution of Children Under 18 Across Persistently Poor and Nonpoor Counties, by Race and Ethnicity

	Nonpoor	Poor	Total
American Indian and Alaska Native	402,969	226,752	629,721
Asian or Pacific Islander	3,404,450	302,707	3,707,157
Black	7,416,904	2,739,431	10,156,335
Hispanic	15,060,545	3,096,243	18,156,788
Two or More Races	2,748,639	290,052	3,038,691
White	34,359,541	3,568,526	37,928,068
Total	63,393,048	10,223,711	73,616,759

SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. Hispanics may be of any race. Other racial groups exclude Hispanics.

TABLE D2-10 Distribution of Children Under 18 Across Point-in-Time Poor and Nonpoor Counties, by Race and Ethnicity

	Nonpoor	Poor	Total
American Indian and Alaska Native	185,122	444,599	629,721
Asian or Pacific Islander	2,261,132	1,446,025	3,707,157
Black	2,963,092	7,193,243	10,156,335
Hispanic	6,350,141	11,806,647	18,156,788
Two or More Races	1,559,633	1,479,058	3,038,691
White	20,475,704	17,452,363	37,928,068
Total	33,794,824	39,821,935	73,616,760

SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

Texas, which jointly account for 70 percent of Hispanic children living in persistently poor counties; Texas alone accounts for 43.5 percent. Arizona, New Mexico, North Carolina, and Oklahoma account for 60 percent of Native American children living in persistently poor counties.

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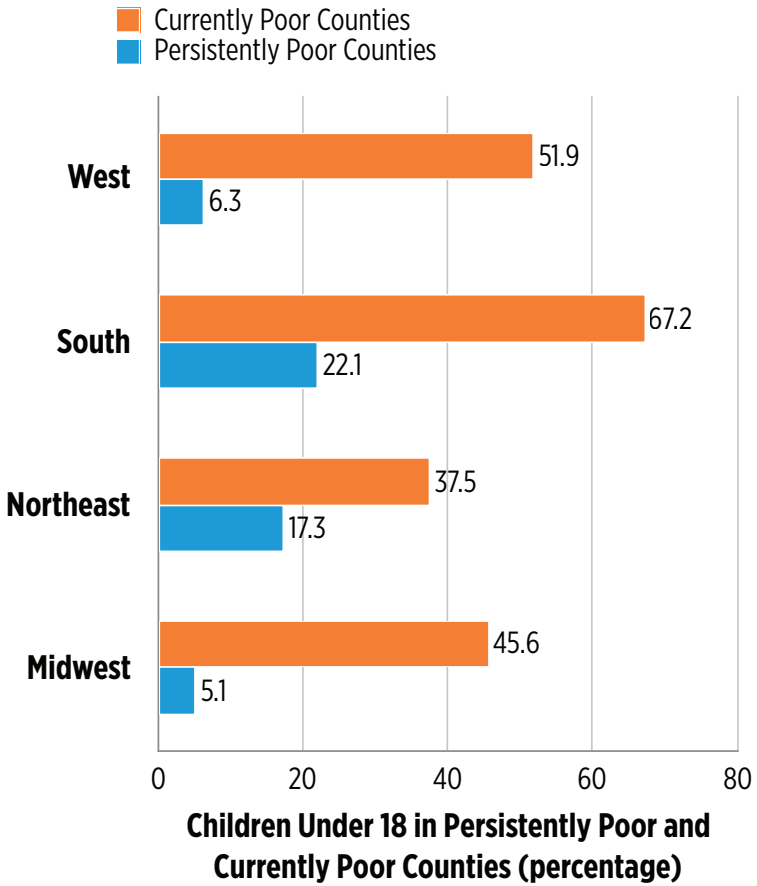

FIGURE D2-11 Percentage of children under 18 living in persistently poor and currently poor counties in each region.
SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau; U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

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TABLE D2-11 Child Population Living in Persistently Poor and Currently Poor Counties, by Region

	Number of Children (Millions)	Percentage of Children
Persistently Poor Counties		
Midwest	0.8	7.7
South	6.2	61.1
Northeast	2.1	20.2
West	1.1	11.0
Point-in-time Poor Counties		
Midwest	7.1	17.9
South	19.0	47.7
Northeast	4.5	11.2
West	9.3	23.2

SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

APPENDIX D, 2-10
ANCHORED AND UNANCHORED METHODS OF CALCULATING SPM POVERTY OVER TIME

Changes in poverty measured using the SPM could be in part due to changes in poverty thresholds. The SPM was designed to be a relative measure of poverty with poverty thresholds increasing over time as living standards at the 33rd percentile of the American income distribution increased. Some observers such as Wimer et al. (2013, 2016) and Fox et al. (2015) have suggested that an *anchored* measure may be more useful for measuring poverty over time because it applies a single threshold over the entire time period. An anchored measure of poverty does not take into account changes in living standards when assessing changes in poverty over time (Wimer et al., 2013). Rather, it uses a fixed benchmark for living standards, making it arguably more useful for establishing how the amount of families' resources has changed over time. Like the OPM, the anchored SPM is an absolute measure of poverty. (Also see discussion of absolute versus relative poverty measures in Appendix D, 2-2.)

The anchored SPM used in the text backdates and updates the poverty threshold from 2012 to reflect today's consumption norms while adjusting only for inflation. The result is an absolute poverty measure that shows poverty trends over time in relation to contemporary consumption patterns and inflation. Figure D2-15 shows the difference in trends between the anchored and unanchored or absolute and relative SPM measures.

The relative, unanchored SPM shows less progress against child poverty than the absolute, anchored SPM poverty measure. This is because

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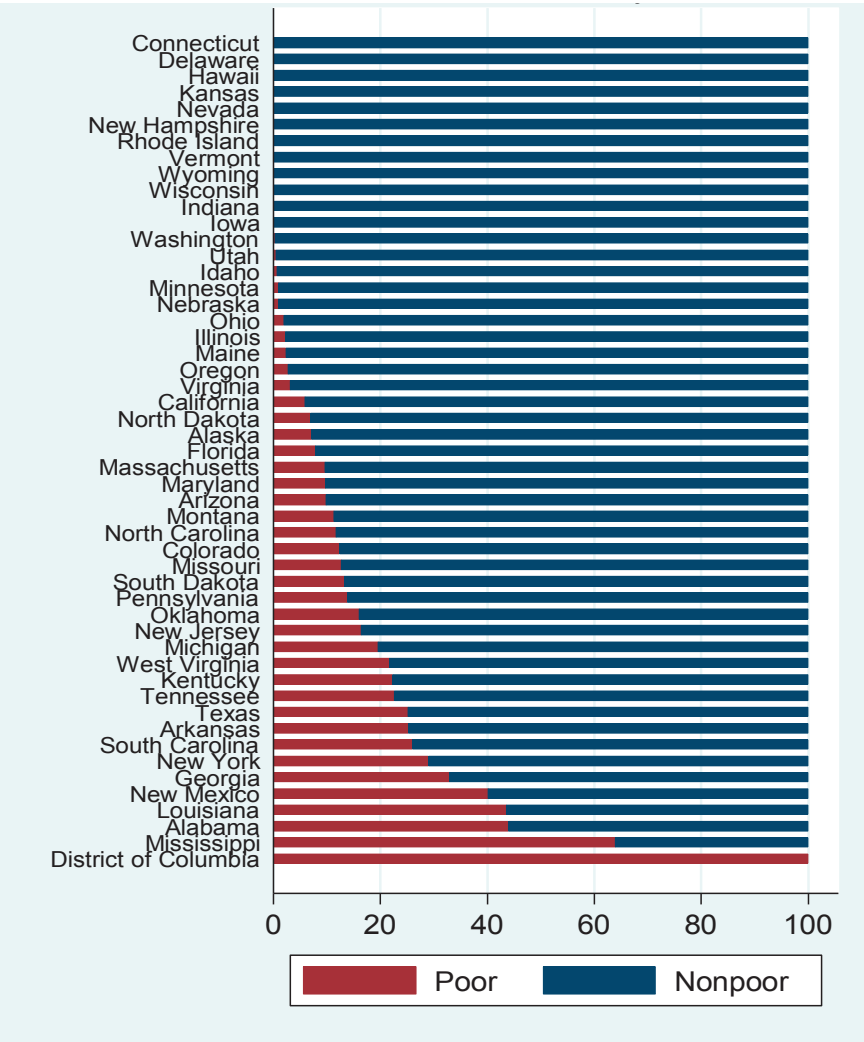

FIGURE D2-12 Children under 18 in persistently poor and nonpoor counties (%), by state.
SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015.

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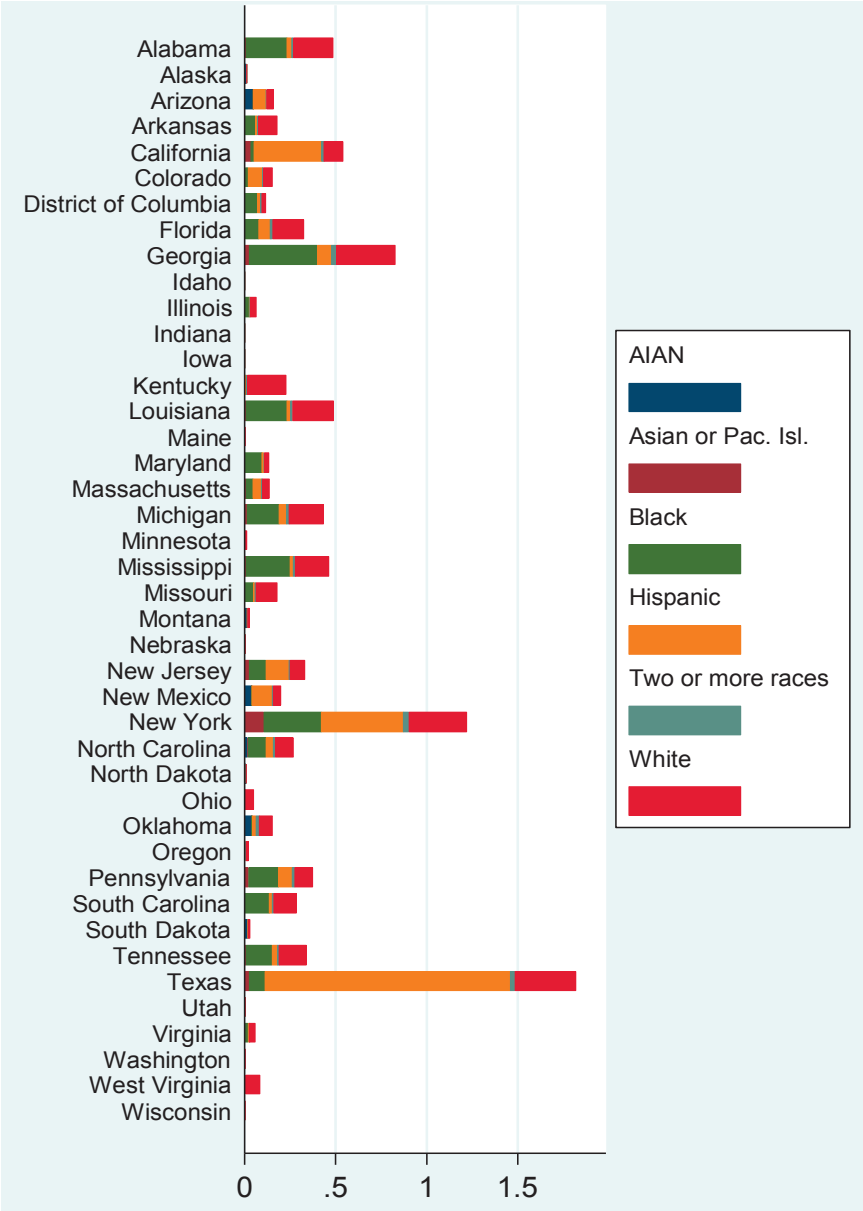

FIGURE D2-13 Number of children under 18 in persistently poor counties (millions), by state and race/ethnicity.
SOURCE: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015.

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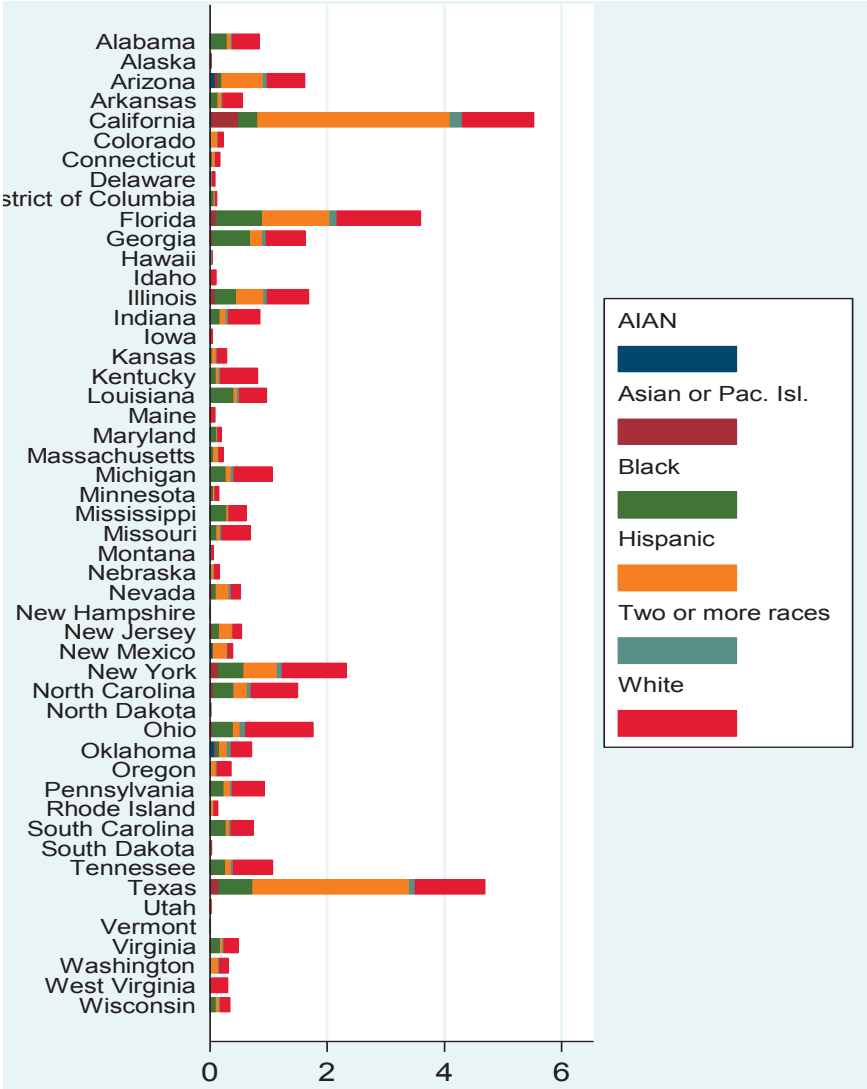

FIGURE D2-14 Number of children under 18 in currently poor counties (millions), by state and race/ethnicity.
SOURCES: U.S. Population Estimates, 2016 Vintage, Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates (SAIPE) Program data.

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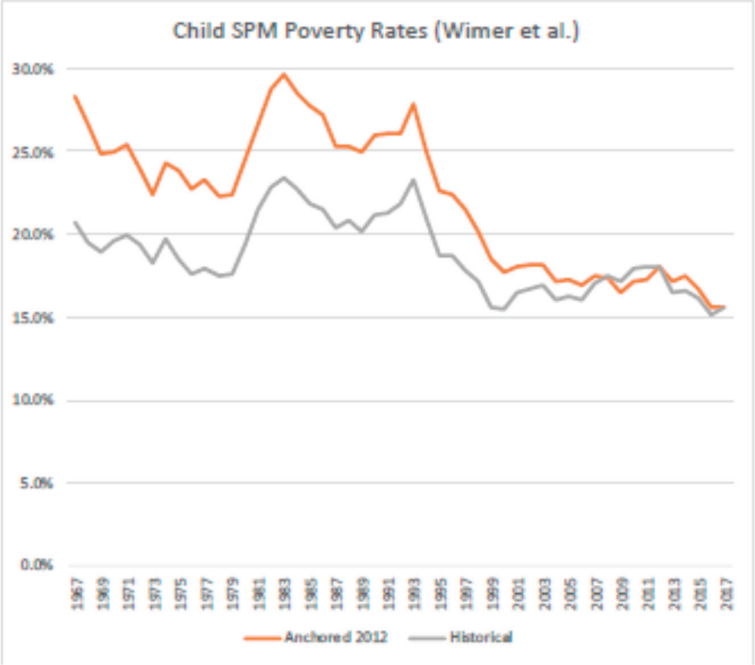

FIGURE D2-15 Anchored and historical SPM child poverty rates, 1967–2012. SOURCE: Wimer et al. (2013).

living standards at the 33rd percentile of the income distribution increased somewhat more rapidly than inflation. The poorest families with children were better off in an absolute sense—the anchored poverty rate dropped by nearly one-half. But when compared to the progress of lower middle class families—those at the 33rd percentile—the progress of the poorest families is less impressive—only a 25 percent cut in poverty.

As described in the text, the committee chose to focus on the anchored poverty measure because it wished to isolate the effects of income transfers from the effects of changes in living standards. This is especially salient for comparisons of the OPM to the SPM. A comparison of the OPM to unanchored SPM mixes together differences in counting key transfers with differences between an absolute and relative poverty measure. Whether the absolute or relative SPM is a superior measure remains an open question. For further discussion see Wimer et al. (2013, 2016) and Garfinkel, Rainwater, and Smeeding (2010). Future research should address this issue by comparing the two time series with other measures of economic deprivation such as food insecurity and other forms of material hardship.

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APPENDIX D, 2-11
POVERTY MEASUREMENT ACROSS COUNTRIES: CROSS-COUNTRY POVERTY LINES AND CHILD POVERTY RATES

To understand child poverty in the United States relative to peer nations, the committee commissioned analyses comparing child poverty measures in the United States to four Anglophone nations: Australia, Canada, Ireland, and the United Kingdom. Data from the Luxembourg Income Study (LIS) and the Organisation for Economic Co-operation and Development (OECD) poverty and income database were used to compare child poverty across the five nations. The results of these analyses are discussed in Chapter 2.

The common international standards and measurement methods for poverty statistics are different from those of the SPM measure in several ways. For this reason, comparisons of poverty across countries are problematic. Both LIS and OECD calculate poverty based on *disposable income*. The SPM definition of disposable income largely follows the LIS and OECD but differs in a number of ways. Specifically, it

- subtracts medical out-of-pocket expenses and work-related costs;
- adjusts for cost-of-living differences within the nation;
- separates poverty lines for owners with and without mortgage and renters; and
- uses cohabiter units and families who meet income-sharing rules, not households.

The SPM also takes a different approach to equivalence scales. Poverty measurement typically adjusts income for family size using an equivalence scale (as described in Appendix D, 2-1), reflecting a less-than-proportional increase in expenses as the number of family members increases. For example, considering the resource needs of a family with a given number of children, one can express the spectrum of possible adjustments through the exponent X in the following simple equation:

$$\textit{Needs} = (\textit{Number of children})^{X}$$

where $X = 1$ in the case of equal needs for all family members and $X = 0$ if needs do not increase at all with increases in family size. As detailed in Appendix D, 2-1, the SPM sets X at 0.7 for families with children, which effectively assumes that having two children generates the need for an income that is 62 percent greater than having one child, and that having three children generates 2.2 times the need of one. The equivalence scale in the LIS sets X at 0.5, which differs from both the OECD scale and the

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SPM scale. Finally, the LIS and OECD statistics do not include adjustments for underreporting for benefits or other income sources.

Cross-Country Relative Poverty

Figure 2-13 (in the body of Chapter 2) first presents child poverty rates using the *OECD-50* for the United States and the four anglophone comparison countries in 2015. This poverty measure indicates that the child is poor if the equivalized income is less than one-half of the median. The United States is the clear outlier in terms of relative poverty rates: 19.9 percent of children in the United States are classified as poor compared to 15 percent in Canada, 13 percent in Australia, and less than 12 percent in the United Kingdom and Ireland according to *OECD-50*. The qualitative results compare well with similar measures from LIS (see *LIS-50* in Figure D2-16) as well as the existing literature (e.g., Smeeding and Thevenot, 2016; Gornick and Nell, 2017).

To understand differences in child poverty across countries with an SPM-type poverty threshold, the committee attempted to adjust the SPM to the international standards. To construct an SPM-based relative poverty measure, we took the four-person U.S. SPM poverty threshold and compared it to the median income for a family of four in the United States in the LIS. Ignoring health care costs and work expenses and other adjustments, the SPM poverty line cuts the LIS U.S. income distribution at the 40th percentile. Based on this, we then define relative poverty lines across all five countries at the 40th percentile of their respective income distributions. The resulting child poverty rates, shown as *LIS-SPM-40* in Figure 2-13 in Chapter 2 and Figure D2-16, produce a country ordering similar to that based on the OECD poverty measures, with U.S. poverty rates (12.3%) much higher than those in all other countries, including the second- highest ranked, Canada (10.1%).

Cross-Country Absolute Poverty

In addition to relative poverty comparisons, it is also useful to compare countries based on absolute poverty differences. It is not possible to implement all of the SPM adjustments in LIS data, nor can the OECD data be changed to accommodate an absolute poverty line. Instead, the committee adjusted the SPM to be comparable to the LIS. Building on the analysis above, the SPM poverty line, ignoring health care costs, work expenses and other adjustments for COLAs and housing status, is about 40 to 41 percent of U.S. median adjusted income (Short, 2013; Wimer and Smeeding, 2017). The committee used these and set the poverty line for two adults and two children as $25,551, which was 40.2 percent of LIS median household

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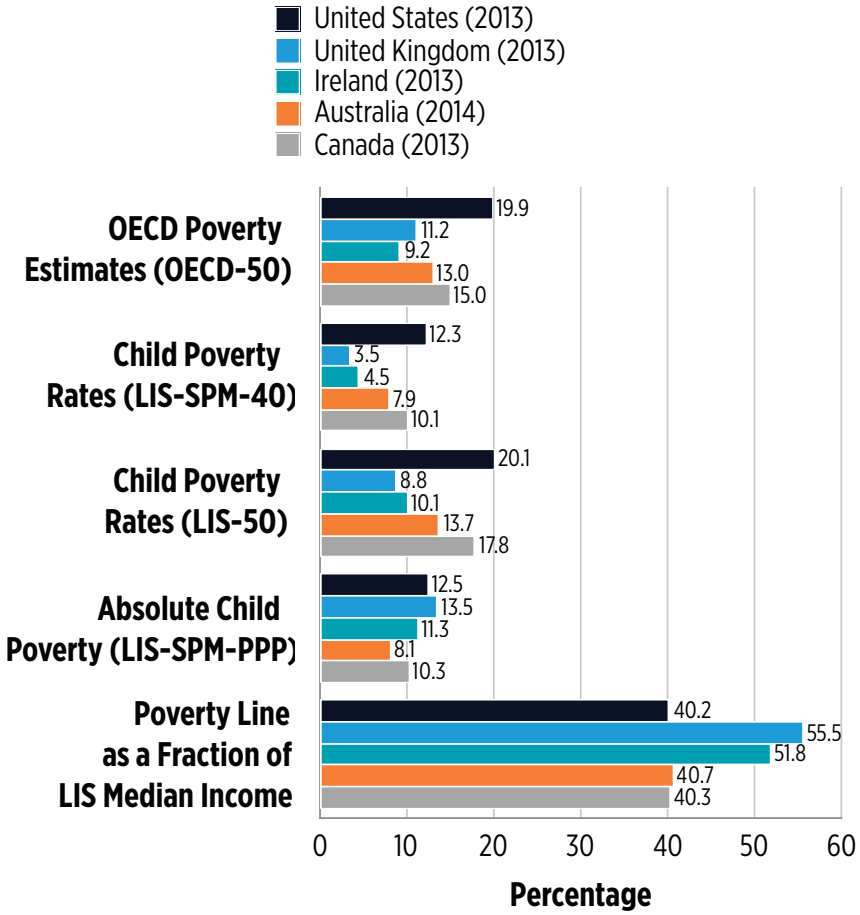

FIGURE D2-16 Child poverty in the U.S. and other anglophone countries.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

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income (bottom panel of Figure D2-16). The LIS team converted this line to other nations' incomes using purchasing power parities (PPPs) and national price indices where years differ (Gornick and Jantti, 2013; Gornick and Nell, 2017; Rainwater and Smeeding, 2003).[34]

Using these PPP-adjusted poverty thresholds, we can compare child poverty rates in the five countries in terms of absolute poverty; this is shown in Figure D2-16 and labeled *LIS-SPM-PPP*. Reflecting higher average income in the United States compared to our peer English-speaking nations, using an absolute poverty line *across* countries rather than a relative poverty line *within* each country leads to a different cross-country ranking. In particular, as shown in the bottom panel of Figure D2-16, the absolute poverty line is about 40 percent of median income in the United States, Canada, and Australia, but it is 52 percent of median income in Ireland and almost 56 percent of median income in the United Kingdom. The resulting absolute child poverty rates (fourth panel of Figure D2-16, *LIS-SPM-PPP*) are highest in the United Kingdom (13.5%), followed by the United States (12.5%), Ireland (11.3%), and Canada (10.3%)—and are quite a bit lower in Australia (8.1%).

We see where the *LIS-SPM-PPP* poverty line cuts the distributions in other nations at the bottom of Figure D2-16. In contrast, we could take the official U.S. poverty line used by others to make absolute comparison across nations (Gornick and Nell, 2017) and see where it cuts the other nations' distributions. The comparison of these approaches for the United States and United Kingdom indicates the sensitivity of absolute poverty measures in an international context. In Figure D2-16 we compare the two absolute poverty lines for a family of four (both in PPP 2013 prices): the $25,551 LIS-SPM-PPP poverty line and the $23,306 U.S. official poverty line.

We converted the lines to adjusted income per adult equivalent to assure the same LIS square-root equivalence scale in both comparisons (Figure D2-17). This resulted in equalized poverty lines of $12,348 per equivalent adult for the SPM PPP line and $11,518 per equivalent adult for the U.S. official line. These lines are drawn vertically and compared to the cumulative distributions of real PPP adjusted income per equivalent adult for families with children in the United States (blue) and the United Kingdom (orange). At the U.S. official line, child poverty is slightly higher in the United States, at 10.5 percent, than in the United Kingdom, at 10.0 percent. But at the SPM line, the opposite is true: the U.S. child poverty

[34] The 2013 U.S. SPM translates into about $25,550 for two parents and two children. These are converted to other currencies first using 2011 PPP and then using national consumer price changes when the LIS years differ from 2013. See Pinkoyskiy and Sala-i-Martin (2018) for more information about using PPPs.

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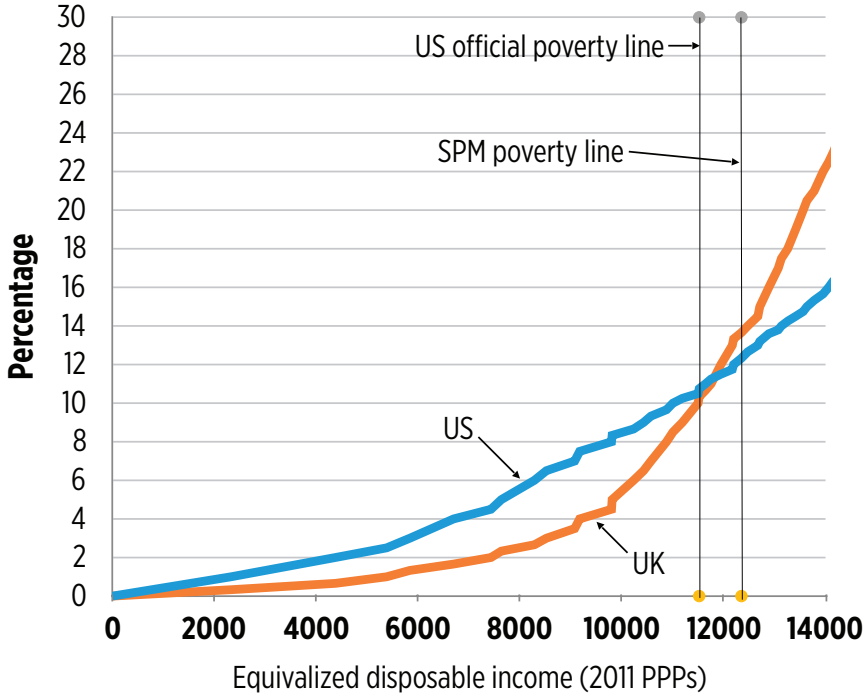

FIGURE D2-17 Comparing the distributions of real PPP adjusted income per equivalent adult and two U.S. absolute poverty lines in the U.S. and the UK.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

rate of 12.5 percent is below the UK child poverty rate of 13.5 percent, as shown in Figure 2-13 in Chapter 2 and Figure D2-16.[35]

Using these LIS-based absolute poverty measures, we can extend this analysis to make a fuller comparison of poverty rates for the United States and the four comparison countries. Figure D2-18 compares absolute poverty at the deep poverty line (one-half the U.S. SPM-PPP line in absolute terms) and near poverty (using 150% of the U.S. SPM-PPP poverty line). As the figure shows, the highest rates of absolute deep poverty are in the United States (3.6%, far above the next highest, which is in Australia at 1.9%) but the highest rates of near-poverty are found in the United Kingdom (46.4%).

Figure D2-19 shows the absolute child poverty rates among single-parent families, families with one or more full-time worker, and immigrant

[35] These results are comparable to those found in Gornick and Nell (2017), who used 2011 data to make the same calculations.

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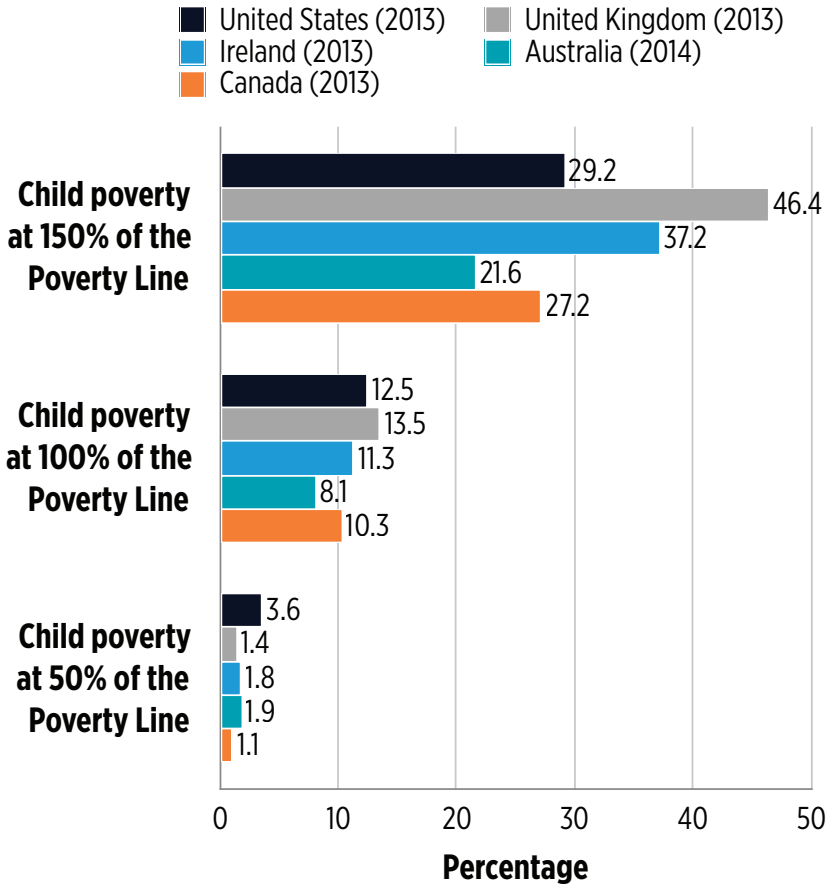

FIGURE D2-18 Child poverty rates by level of poverty in the U.S. and other anglophone countries.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

families using the same absolute measure (*LIS-SPM-PPP*). Children in single-parent families are considerably poorer in the United States (30.6%) than in other nations in absolute poverty terms, even comparing the United Kingdom with its lower living standards as well as Australia (19.1%) and Canada (26.3%) with similar living standards. In contrast, child poverty rates in two-parent families are only 6.4 percent in the United States. Only Australia has a lower rate, at 5.9 percent (not shown here). But the low-wage United States has the second highest absolute poverty rate for children in families with at least one full-time worker, 7.0 percent, with only

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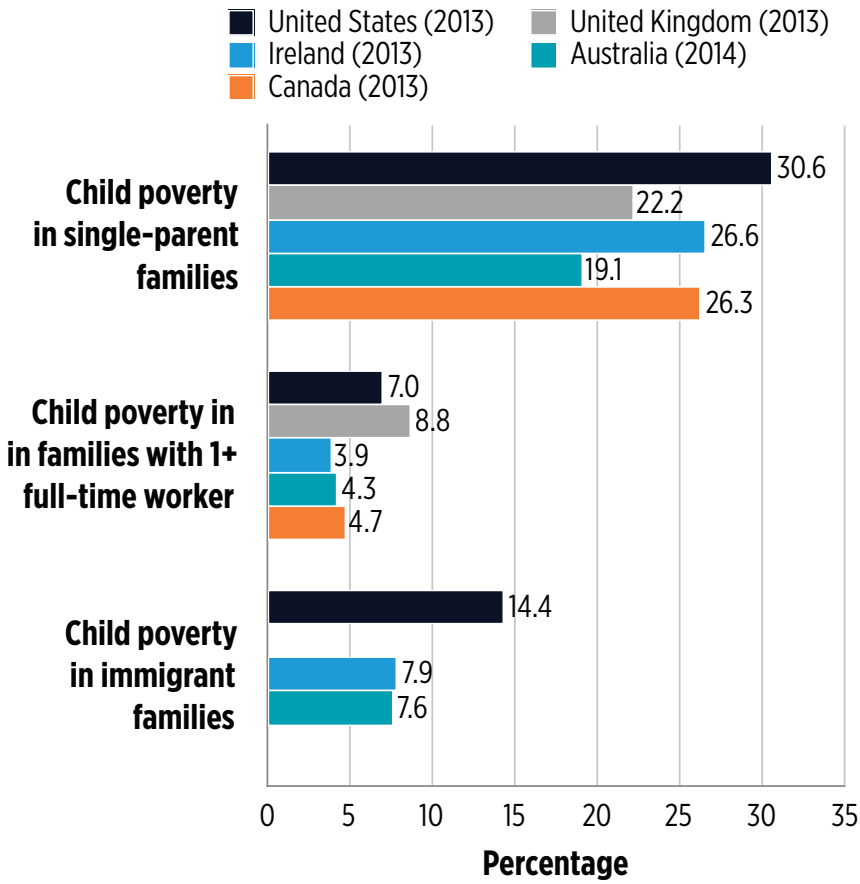

FIGURE D2-19 Real child poverty (LIS-SPM-PPP) in the U.S. and other anglophone countries for families with single parents, full-time workers, and immigrant families.
NOTE: A family in which any adult is an immigrant (based on citizenship and country of origin) is categorized as an immigrant family.
SOURCE: Original LIS analyses commissioned by the committee from the LIS Cross-National Data Center.

the United Kingdom higher, at 8.8 percent, while all the other nations fall below 4 percent (Figure D2-19).

Another important dimension to compare across countries is with respect to immigrant status (bottom panel of Figure D2-19). However, in the LIS, comparable data on immigrant status is available only for Australia

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and Ireland.[36] In these two countries, absolute immigrant child poverty rates are below 8 percent, compared to 14.4 percent in the United States. Finally, the LIS estimated absolute child poverty excluding non-Hispanic Blacks in the United States, lowering the U.S. absolute poverty rate from 12.5 to 10.3 percent. Racial differences therefore make an almost 20 percent difference in the U.S. poverty rate compared to other English-speaking rich nations without a significant racial minority.

Cross-Country Comparisons of Income

Given the differences in country rankings of absolute and relative poverty measures, we conclude this appendix with a discussion of disposable household income and other real income concepts to get a better understanding of living standards across the five English-speaking nations of interest. In the LIS results, different equivalence scales, different years and different PPPs may all produce different results in terms of median incomes. Further, there is underreporting in all household income surveys. These are corrected for in the TRIM3 simulations, but not in LIS or OECD surveys.

And so, here we explore differences in living standards across countries by comparing three series of real PPP adjusted income indexes to the United States. These results are shown in Table D2-12. The first column shows the LIS-SPM-PPP poverty lines as a fraction of median incomes, as seen in Figure D2-16. The second column shows ratios of median equivalized income from the LIS database. The third column shows OECD household disposable income per capita (adjusted to National Income and Product Account totals). And the fourth column shows GDP per capita from the International Monetary Fund. For each measure, the four comparison countries are presented relative to the United States (so the value for the United States equals 100 for each).

There are several things to take away from this table. First, all of the numbers are less than 100 for each of the four comparison countries, indicating that on a range of measures the United States is on average richer than our peer English-speaking countries. Second, across all measures, Australia and Ireland come closest to the U.S. values. Third, the magnitude of the disparities across countries varies significantly across the measures.

Based on the LIS median equivalized income, Australia and Canada are nearly identical to the United States (98.7 for Australia and 99.7 for Canada). However, based on disposable income per capita or GDP per capita, the disparities are much larger. The opposite pattern is present in Ireland, although the Ireland LIS data (from 2010) are probably showing lower incomes due to the Great Recession. Finally, the United Kingdom

[36] The Canadian and UK LIS datasets suppress immigrant status.

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TABLE D2-12 Income Comparisons Across Anglophone OECD Countries Using Different Measures of Real Income, Indexed to USA = 100

	SPM Poverty Line as a Fraction of Equivalized LIS Median Income, Using 2011 PPP $	2013 LIS Real Median Equivalent Income/US Median Equiv. Income	2013 OECD Real Disposable Household Income Per Capita/USA Value	2013 Real GDP Per Capita/USA GDP Per Capita
Australia, 2014	40.7	98.7	82.0	86.0
Canada, 2013	40.3	99.7	70.5	83.1
Ireland, 2010	51.8	79.1	85.0	89.9
United Kingdom, 2013	55.5	72.4	66.1	73.8
United States, 2013	40.2	100.0	100.0	100.0

NOTES: LIS from Figure D2-16; Poverty line as a fraction of equivalized LIS median income, using 2011 PPP and domestic CPI changes to correct year; LIS: by division, Real 2013 LIS ratio of median equalized incomes in each country to USA 2013, using 2011 PPP and domestic CPI changes to correct year.
SOURCES: Analyses commissioned by the committee from the LIS Cross-National Data Center; OECD real NIPA adjusted household income per capita from https://data.oecd.org/hha/household-disposable-income.htm, using 2011 PPP; IMF Real GDP per capita from http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/index.aspx, using 2011 PPP.

has the lowest real income compared to the United States using all three aggregate income measures, as shown in columns two, three, and four of Table D2-12. Hence the SPM poverty line, at 55 percent of LIS median adjusted income in the United Kingdom in the first column, reflects the lower real UK living standards (evident using three different measures).

REFERENCES

Advisory Commission to Study the Consumer Price Index. (1996). *Toward a More Accurate Measure of the Cost of Living. Final Report to the Senate Finance Committee*. Washington, DC.

Akee, R., and Simeonova, E. (2017). *Poverty and Disadvantage among Native American Children: How Common Are They and What Has Been Done to Address Them?* Paper commissioned by the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years.

Attanasio, O.P., and Pistaferri, L. (2016). Consumption inequality. *Journal of Economic Perspectives, 30*(2), 3–28.

Bee, A., Meyer, B.D., and Sullivan, J.X. (2012). *The Validity of Consumption Data: Are the Consumer Expenditure Interview and Diary Surveys Informative?* Working Paper No. 18308. Cambridge, MA: National Bureau of Economic Research.

Berndt, E.R. (2006). The Boskin Commission Report after a decade: After-life or requiem? *International Productivity Monitor 12*: 61–73. Available: http://www.csls.ca/ipm/12/IPM-12-Berndt-e.pdf?q=boskin.

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Bitler, M., Hoynes, H., and Kuka, E. (2017). Child poverty, the Great Recession, and the social safety net in the United States. *Journal of Policy Analysis and Management 36*(3), 358–389.

Bureau of Economic Analysis. (2017). *Real Personal Income for States and Metropolitan Areas*. Washington, DC. Available: https://www.bea.gov/newsreleases/regional/rpp/rpp_newsrelease.htm.

Capps, R., and Fortuny, K. (2006). *Immigration and Child and Family Policy: Paper 3*. Washington, DC: The Urban Institute and Child Trends.

Curran, L.B., Wolman, H., Edward, W., and Furdell, K. (2008). *Poverty, Programs, and Prices: How Adjusting for Costs of Living Would Affect Federal Benefit Eligibility*. Washington, DC: The Brookings Institution. Available: https://www.brookings.edu/wp-content/uploads/2016/06/0317_costofliving_curran.pdf.

Federal Interagency Forum on Child and Family Statistics. (2017). *America's Children: Key National Indicators of Well-Being, 2017*. Washington, DC: Government Printing Office.

Fisher, G.M. (1992). The development and history of the poverty thresholds. *Social Security Bulletin*, *55*(4). Washington, DC: Social Security Administration.

Fitzpatrick, K., and Thompson, J.P. (2010). The interaction of metropolitan cost-of-living and the federal Earned Income Tax Credit: One size fits all? *National Tax Journal*, *63*(3), 419–445.

Fox, L. (2018). *The Supplemental Poverty Measure: 2017*. Washington, DC: U.S. Census Bureau. Available: https://www.census.gov/content/dam/Census/library/publications/2018/demo/p60-265.pdf.

Fox, L., Wimer, C., Garfinkel, I., Kaushal, N., and Waldfogel, J. (2015). Waging war on poverty: Poverty trends using a historical Supplemental Poverty Measure. *Journal of Policy Analysis and Management, 34*(3), 567–592.

Garfinkel, I., Rainwater, L., Smeeding, T. (2010). *Wealth and Welfare States: Is America a Laggard or Leader?* New York, NY: Oxford University Press.

Garner, T. (2010). *Supplemental Poverty Measure Thresholds: Laying the Foundation*. Washington, DC: Bureau of Labor Statistics.

Gornick, J.C., and Jantti, M. (Eds). (2013) *Income Inequality: Economic Disparities and the Middle Class in Affluent Countries*. Stanford, CA: Stanford University Press.

Gornick, J.C., and Nell, E. (2017). *Children, Poverty, and Public Policy: A Cross-National Perspective*. LIS Working Paper No. 701. Luxembourg: LIS Cross-National Data Center. Available: http://www.lisdatacenter.org/wps/liswps/701.pdf.

Hausman, J. (2003). Sources of bias and solutions to bias in the Consumer Price Index. *Journal of Economic Perspectives 17*:23–44.

Hurst, E. (2012). *Comment: Winning the war: Poverty from the Great Society to the Great Recession*. Washington, DC: The Brookings Institution. Available: https://www.brookings.edu/bpea-articles/winning-the-war-poverty-from-the-great-society-to-the-great-recession.

Interagency Technical Working Group. (2010). *Observations from the Interagency Technical Working Group on Developing a Supplemental Poverty Measure*. Available: https://www.federalregister.gov/documents/2010/05/26/2010-12628/developing-a-supplemental-poverty-measure.

Johnson, N. (2017). *A Comparison of PCE and CPI: Methodological Differences in U.S. Inflation Calculation and their Implications*. Paper presented at the 2016 Joint Statistical Meetings of the Bureau of Labor Statistics, Chicago, IL. Available: https://www.bls.gov/osmr/pdf/st170010.pdf.

Martin, J.A., Hamilton, B.E., Osterman, M.J., Driscoll, A.K., and Drake, P. (2018). *Births: Final Data for 2016*. Hyattsville, MD: National Center for Health Statistics.

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A Roadmap to Reducing Child Poverty

Meyer, B.D., and Mittag, N. (2015). *Using Linked Survey and Administrative Data to Better Measure Income: Implications for Poverty, Program Effectiveness, and Holes in the Safety Net*. Working Paper No. 21676. Cambridge, MA: National Bureau of Economic Research.

Meyer, B.D., and Sullivan, J.X. (2003). Measuring the well-being of the poor using income and consumption. *Journal of Human Resources, 38*, 1180–1220.

_____. (2011). *The Material Well-Being of the Poor and Middle Class Since 1980*. Working Paper No. 2011-04. Washington, DC: American Enterprise Institute. Available: http://www.aei.org/wp-content/uploads/2011/10/Material-Well-Being-Poor-Middle-Class.pdf.

_____. (2012a). Identifying the disadvantaged: Official poverty, consumption poverty, and the new supplemental poverty measure. *Journal of Economic Perspectives 26*(3), 111–136.

_____. (2012b). *Winning the War: Poverty from the Great Society to the Great Recession*. Washington, DC: The Brookings Institution.

_____. (2017). *Annual Report on U.S. Consumption Poverty: 2016*. Washington, DC: American Enterprise Institute.

_____. (2018). *Annual Report on U.S. Consumption Poverty: 2017*. Washington, DC: American Enterprise Institute.

Meyer, B.D., and Wu, D. (2018). *The Poverty Reduction of Social Security and Means Tested Transfers*. Working Paper No. 24567. Cambridge, MA: National Bureau of Economic Research.

Meyer, B.D., Mok, W.K.C., and Sullivan, J.X. (2009). *The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences*. Working Paper No. 15181. Cambridge, MA: National Bureau of Economic Research.

_____. (2015). Household surveys in crisis. *Journal of Economic Perspectives, 29*(4), 199–226.

Moffitt, R.A., and Scholz, J.K. (2009). *Trends in the Level and Distribution of Income*. Working Paper No. 15488. Cambridge, MA: National Bureau of Economic Research. Available: http://www.nber.org/papers/w15488.

National Research Council. (1995). *Measuring Poverty: A New Approach*. Washington, DC: National Academy Press.

_____. (2013). *Measuring What We Spend: Toward a New Consumer Expenditure Survey*. Washington, DC: The National Academies Press.

Norris, T., Vines, P.L., and Hoeffel, E.M. (2012). *The American Indian and Alaska Native Population: 2010*. 2010 Census Briefs. Washington, DC: U.S. Census Bureau.

Pinkovskiy, M., and Sala-i-Martin, X. (2018). *Shining a Light on Purchasing Power Parities*. Working Paper No. 24419. Cambridge, MA: National Bureau of Economic Research.

Rainwater, L., and Smeeding, T.M. (2003). *Poor Kids in a Rich Country: America's Children in Comparative Perspective*. New York, NY: Russell Sage Foundation.

Renwick, T., Aten, B., Figueroa, E., and Martin, T. (2014). *Supplemental Poverty Measure: A Comparison of Geographic Adjustments With Regional Price Parities vs. Median Rents from the American Community Survey.* Washington, DC: Bureau of Economic Analysis. Available: https://www.bea.gov/papers/pdf/BEAWP_PovertyMeasure.pdf.

Schaefer, A., Mattingly, M.J., and Johnson, K.M. (2016). *Child Poverty Higher and More Persistent in Rural America*. Durham, NH: University of New Hampshire, Carsey School of Public Policy. Available: https://scholars.unh.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1265&context=carsey.

Short, K. (2001). *Experimental Poverty Measures: 1999*. Washington, DC: U.S. Government Printing Office.

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Short, K.S. (2013). *The Supplemental Poverty Measure: Examining the Incidence and Depth of Poverty in the U.S. Taking Account of Taxes and Transfers in 2012*. U.S. Census Bureau: Washington, DC. Available: https://www.census.gov/content/dam/Census/library/working-papers/2013/demo/kshort-sea2013.pdf.

Tax Foundation. (2017). *What is the Real Value of $100 in Your State?* Washington, DC. Available: https://taxfoundation.org/real-value-100-state-2017.

Tax Policy Center. (2017). *EITC Parameters, 1975 to 2017*. Washington, DC. Available: https://www.taxpolicycenter.org/statistics/eitc-parameters.

U.S. Department of Agriculture. (2013). *Supplemental Nutrition Assistance Program, July 2013*. Available: http://www.fns.usda.gov/snap/applicant_recipients/eligibility.htm#employment.

U.S. Census Bureau. (2016). *Fertility: 2016 American Community Survey 1-year Estimates*. Washington, DC.

_____. (2018a). *Annual Estimates of the Resident Population by Sex, Age, Race, and Hispanic Origin for the United States and States: April 1, 2010 to July 1, 2017*. Washington, DC: U.S. Census Bureau, Population Division.

_____. (2018b). *Race by Hispanic Origin: Main Projections Series for the United States, 2017-2060* Washington, DC: U.S. Census Bureau, Population Division.

Urban Institute. (2018). *Data from the Integrated Public Use Microdata Series Datasets Drawn from the 2014 and 2015 American Community Survey.* Washington, DC.

Wheaton, L. (2008). Underreporting of Means-Tested Transfer Programs in the CPS and SIPP. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/underreporting-means-tested-transfer-programs-cps-and-sipp.

Wimer, C., and Smeeding, T. (2017). USA child poverty: The impact of the Great Recession. In Y.C.B. Cantillon, S. Handa, and B. Nolan (Eds.), *Children of Austerity: The Impact of the Great Recession on Child Poverty in Rich Countries* (pp. 297–331). Oxford: Oxford University Press.

Wimer, C., Fox, L., Garfinkel, I., Kaushal, N., and Waldfogel, J. (2013). *Trends in Poverty With an Anchored Supplemental Poverty Measure*. Columbia University Academic Commons.

_____. (2016). Progress on poverty? New estimates of historical trends using an anchored Supplemental Poverty Measure. *Demography, 53*(4), 1207–1218.

Winship, S. (2016). *Poverty After Welfare Reform*. New York: Manhattan Institute. Available: https://www.manhattan-institute.org/sites/default/files/R-SW-0816.pdf.

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APPENDIX D, 3-1
ASSOCIATIONS BETWEEN POVERTY AND CHILD OUTCOMES

A large literature documents strong and consistent associations between child poverty and a broad range of negative outcomes for child health and well-being. In Chapter 3, the committee elected to focus on studies that estimated a causal relationship between poverty and child outcomes. In this appendix, we try to give a broader overview of some of the correlational literature, in order to show the pervasiveness of the relationship across many different types of outcomes. This appendix section is not intended as an exhaustive review of the literature. The bulk of this review is organized by domains of child outcomes into the following 10 topical sections: (1) family functioning, child maltreatment, domestic violence, and adverse childhood experiences; (2) material hardship; (3) physical health; (4) fetal health and health at birth; (5) brain development; (6) mental health; (7) educational attainment; (8) risky behaviors, crime, and delinquency; (9) the timing of poverty; and (10) severity of poverty. We also touch upon how these factors can contribute to the intergenerational transmission of poverty.

In addition to the narrative overview, we also offer summary tables of the material treated in the text, one for each section. These tables enable readers to quickly scan the findings, or to locate particular studies. This appendix ends with a consideration of the literature about the relationships between child outcomes and the timing and severity of poverty. The literature is also summarized in companion tables.

FAMILY FUNCTIONING, CHILD MALTREATMENT, DOMESTIC VIOLENCE, AND ADVERSE CHILDHOOD EXPERIENCES

A number of studies have linked child poverty to Adverse Childhood Experiences (ACEs) (Anda et al., 2006) (see Table D3-1). ACEs include abuse or neglect, the death of a parent, divorce or separation of parents, domestic violence, neighborhood violence, family mental illness or substance abuse, and incarceration of a family member. Poor and near-poor children are more than twice as likely to have experienced three or more ACEs than their more affluent peers (Anda et al., 2006; Figure D3-1). Experiencing ACEs early in life has been shown to be predictive of long-lasting negative outcomes in adulthood, such as increased risk for cardiovascular disease, obesity, smoking, drug and alcohol abuse, risky sexual behavior, and early mortality (Anda et al., 2006). It is thought that these life events cause high levels of biological stress on the developing brain, as well as on neurological, hormonal, and immune-response systems, leading to lifelong changes (Shonkoff et al., 2012). Moreover, ACEs have a "dose-response"

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TABLE D3-1 Adverse Childhood Experiences

Author and Year	Source of Data	Findings
Sedlak et al., 2010	National Incidence Study (Survey data), 2005 to 2006	– Children in low socioeconomic status (SES) families were five times more likely than those in higher income families to experience maltreatment of any kind, three times more likely to be physically or sexually abused, and seven times more likely to be neglected.
Paxson and Waldfogel, 2003	National Center for Child Abuse and Neglect, 1990 to 1998	– Higher poverty rates are associated with significantly more substantiated cases of child maltreatment, cases of physical abuse, and cases of neglect. – An increase in the fraction of children who are in extreme poverty from 0.05 to 0.06 is predicted to increase the number of cases of substantiated maltreatment by 3.8%.
Macomber, 2006	House Committee on Ways and Means, 2004; National Survey of America's Families, 2002; The National Intimate Partner and Sexual Violence Survey, 1993 to 1998	– Almost one-half of children placed in out-of-home foster care come from homes that are eligible for welfare. – 26% of children living in low-income families have a parent with poor mental health as compared with 10-11% of children from higher-income families. – Women living in households with annual incomes of less than $7,500 are seven times more likely to be victims of domestic violence than those with an income of at least $75,000. [Aizer (2011) finds that these women are more likely to have poor birth outcomes such as low birth weight infants, fetal death, and increased infant mortality. On average, infants born to mothers hospitalized for assault weigh 163 grams less at birth.]
Cancian, Yang, and Slack, 2013	Child Support Demonstration Evaluation (CSDE); Wisconsin Statewide Automated Child Welfare Information System, 1997 to 1999	– Children who received a pass-through of child support were 10 to 12% less likely to have a report of child maltreatment.
Anda et al., 2006	Adverse Childhood Experiences Study, 1995 to 1996	– Adverse Childhood Experiences (ACEs) increase risk for cardiovascular disease, obesity, smoking, drug and alcohol abuse, risky sexual behavior, and early mortality. – These ACEs have a "dose-response" effect, with those who experienced larger numbers of ACEs experiencing worse outcomes.

continued

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TABLE D3-1 Continued

Author and Year	Source of Data	Findings
National Survey of Children's Health, 2017	National Survey of Children's Health, 2011 to 2012	– Poor children and near-poor children are more than twice as likely to have three or more ACEs than children living above 200% of federal poverty line (FPL). – 14% of children living below the poverty level, 12% of children living between 100% and 200% of FPL, and 6% of those living above 200% of FPL experience three or more ACEs.
Health Resources and Services Administration, 2015	Adverse childhood experiences data (U.S. Department of Health and Human Services), 2014	– There is a clear income gradient for ACEs, with 35% of children below the FPL, 29% of children between 100% and 199% of the FPL, 21% of children between 200% and 399% of the FPL, and 10% of children above 400% FPL experiencing two or more ACEs.

SOURCES: Health Resources and Services Administration, Maternal and Child Health Bureau; and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health. Analyzed by the Health Resources and Services Administration's Maternal and Child Health Bureau. See https://mchb.hrsa.gov/chusa14/special-features/adverse-childhood-experiences.html#sourcef2.

effect, with children who experienced larger numbers of ACEs experiencing worse outcomes (Anda et al., 2006).

More recently, researchers have suggested adding two additional ACEs: chronic economic hardship and being treated unfairly due to race/ethnicity. These nine ACEs have been added to the National Survey of Children's Health (NSCH), allowing analysis of association of ACEs with poverty. Since poverty is now one of these ACE questions asked of parents, analysis by poverty levels excludes the experience of economic hardship. Analysis of data from the 2011/12 NSCH documents the significant association of ACEs with child poverty. There is a clear income gradient for ACEs, as shown in Figure D3-1 (National Survey of Children's Health, 2017). We explore two ACEs, child maltreatment and intimate partner violence, below.

Researchers have repeatedly documented the association between poverty and the risk of child maltreatment, especially in cross-sectional studies of the general population. Children in low socioeconomic status (SES) families were five times more likely than those in higher income families to experience maltreatment of any kind, three times more likely to be physically or sexually abused, and seven times more likely to be neglected (Sedlak et al., 2010). In a study looking at the impact of welfare reform, higher poverty rates were associated with significantly more substantiated cases of child

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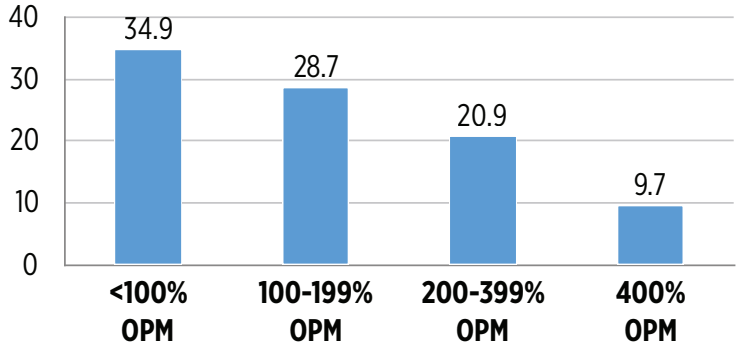

FIGURE D3-1 Percentage of children (0-17 years) with two or more adverse childhood experiences, by poverty status, 2011–2012.
NOTES: Based on the U.S. Department of Health and Human Services poverty guidelines, poverty was $23,050 for a family of four in 2012. OPM = Official Poverty Measure.
SOURCES: Health Resources and Services Administration, Maternal and Child Health Bureau; and Centers for Disease Control and Prevention, National Center for Health Statistics, National Survey of Children's Health. Analyzed by the Health Resources and Services Administration's Maternal and Child Health Bureau. See https://mchb.hrsa.gov/chusa14/special-features/adverse-childhood-experiences.html#sourcef2.

maltreatment, cases of physical abuse, and cases of neglect (Paxson and Waldfogel, 2003). Almost one-half of children placed in out-of-home foster care come from homes that are eligible for welfare (Macomber, 2006).

There is some evidence that increasing family income reduces risk of child maltreatment. Cancian and her colleagues (2013) took advantage of the random assignment evaluation of child support during welfare reform in Wisconsin to distinguish the causal effect of income from other causes of child maltreatment. The experimental group received a pass-through of child support and the control group did not. Mothers received additional income, on average, of $81 to $164 per year for 2 years, although some mothers received substantially more. Despite this modest increase in income, children in the experimental group were 10 to 12 percent less likely to have a report of child maltreatment.

Low-income families also experience intimate partner violence at higher rates than other families. For example, women living in households with annual incomes of less than $7,500 are seven times more likely to be victims of domestic violence than those with an income of at least $75,000 (Macomber, 2006). Furthermore, the rate of hospitalizations for domestic assault while pregnant is three times as high for mothers who are on

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Medicaid than for those on private insurance (Aizer, 2011). These women are more likely to have poor birth outcomes such as low birth weight infants, fetal death, and increased infant mortality (Aizer, 2011). On average, infants born to mothers hospitalized for assault weigh 163 grams less at birth (Aizer, 2011). The lower birth weights of these infants are likely to lead to poorer heath, lower academic achievement, and reduced income in adulthood, thereby contributing to intergenerational poverty (Almond and Currie, 2011).

The causal relationships between poverty, child maltreatment, and intimate partner violence have been less clear. It is unknown if the higher rates of child maltreatment and domestic violence in low-income families reflect the increased stress of material and economic hardship, preexisting conditions (such as mental illness and substance abuse), the increased contact with mandatory reporters of child maltreatment, or attribution bias among mandatory reporters. For example, the material and economic hardships associated with poverty may lead to increased parenting stress and impact parents' mental health and family relationships, which, in turn, may lead to violence or maltreatment of the child (for more on this process, see the section on mental health, below). Alternatively, conditions that can lead to poverty and to child maltreatment, such as parental mental health problems and substance abuse, are causing correlations between poverty and child maltreatment that are not causal. Children in low-income families are more likely to have a parent with poor mental health compared with children in higher income families (Macomber, 2006). As is often the case with a physical health problem, mental health problems can detract from the care and attention that a parent can provide their child. And finally, it is possible that the disparities in rates of child maltreatment and intimate partner violence between poor and higher-income families are a product of reporting bias. Poor families are more likely to come into contact with mandated reporters of child maltreatment through their participation in government systems, such as welfare. This increased visibility may lead to greater attention to problems in these families than in families with higher incomes, who are less likely to use welfare and other assistance programs.

MATERIAL HARDSHIP

Material hardship—broadly defined as the inability to meet basic needs—is associated with poverty. Many, but not all, of the negative impacts of poverty on child outcomes may be mediated through those material hardships. Measures of material hardship use indicators of consumption and physical living conditions that are directly related to whether families can meet basic needs, starting with needs for physiological functioning and survival (Ouellette et al., 2004). Therefore, measures of shelter

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(housing, utilities), medical care, food security, and ability to pay for essential expenses are always included when researchers measure material hardship. Sometimes durable goods such as refrigerators, and neighborhood characteristics are also included (Ouellette et al., 2004).

The eighth wave of the 1996 panel of the Survey of Income and Program Participation (SIPP), a household survey conducted by the U.S. Census Bureau in 1998, included questions on material hardships and provided researchers the ability to look at the relationship of level of income poverty, as well as other characteristics of poverty (such depth and persistence) with various categories of material hardship. Across the board, all individual measures of material hardship were significantly associated with poverty, level of poverty, and measures of persistence and multiple "spells" of poverty (Iceland and Bauman, 2007; Figure D3-2; Table D3-2). The deeper the poverty, the more time in poverty, and the more "spells" of poverty, the stronger the relationship. Particularly strong relationships were seen for food insecurity, difficulty meeting basic needs (including paying for housing and other expenses, as well as medical care), and lack of durable goods (Iceland and Bauman, 2007). Even short spells of poverty seem to put families at greater risk for material hardships

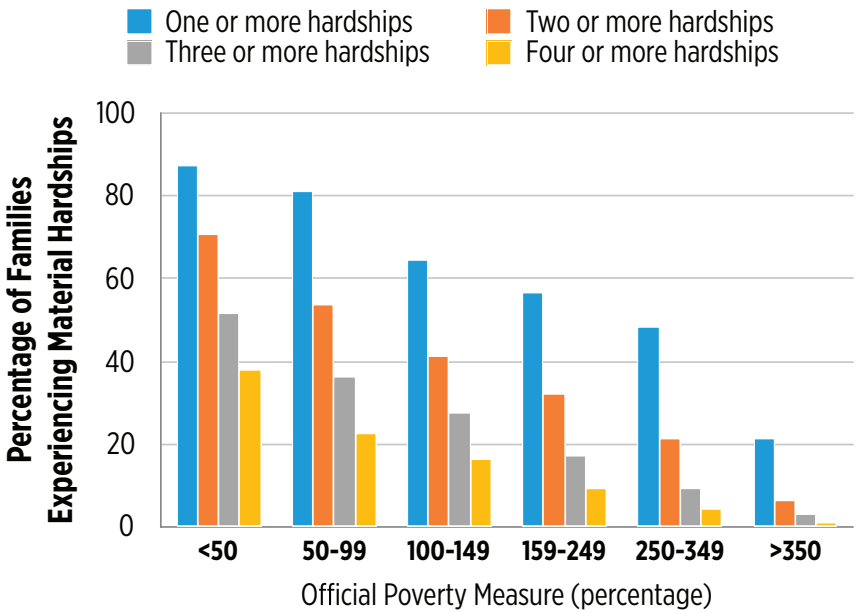

FIGURE D3-2 Number of material hardships by family federal poverty level, 1983–1985.
SOURCE: Mayer and Jencks (1989).

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TABLE D3-2 Material Hardship

Author and Year	Source of data	Findings
Iceland and Bauman, 2007	Survey of Income and Program Participation, 1996 to 1998	– Across the board, all individual measures of material hardship were significantly associated with poverty, level of poverty, and measures of persistence and multiple "spells" of poverty. – The deeper the poverty, the more time in poverty, and the more "spells" of poverty, the stronger the relationship. – Particularly strong relationships were seen for food insecurity, difficulty meeting basic needs (including paying for housing and other expenses, as well as medical care), and lack of durable goods.
Mayer and Jencks, 1989	Survey Research Laboratory, Northwestern University, 1983 to 1985	– Hardships are also likely to coexist for poor families, with 71% of families below 50% of the federal poverty level (FPL) and 54% of families between 50% and 99% of FPL having two or more material hardships, and 38% of those below 50% of FPL and 23% of those between 50% and 99% of FPL having four or more hardships.
Gershoff et al., 2007	Early Childhood Longitudinal Study, 1998 to 1999	– Material hardship is highly correlated with parenting stress, which negatively impacted parenting behaviors leading to worse outcomes in child social emotional competence. – Material hardship explained most of the impact of family income on social-emotional outcomes. – Family income had its strongest direct effects on parent investment in their children, which in turn impacted child cognitive skills very strongly.
Ratcliffe and McKernan, 2012	Panel Study of Income Dynamics, 1968 to 2009	– Nearly one-half of children born to poor parents remain poor for one-half or more of their childhoods.

compared with families who experienced no poverty. Hardships are also likely to coexist for poor families, with 71 percent of families below 50 percent of the federal poverty level (FPL) and 54 percent of families between 50 percent and 99 percent of FPL having two or more material hardships, and 38 percent of those below 50 percent of FPL and 23

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percent of those between 50 percent and 99 percent of FPL having four or more hardships (Mayer and Jencks, 1989).

Poverty is significantly correlated with material hardship, which is an important mediator of poverty's impact on childhood outcomes, at least in early childhood. For example, Gershoff and colleagues (2007) used a nationally representative sample of children developed by the U.S. Department of Education to look at the relationship of income poverty with childhood cognitive skills and social-emotional competence at kindergarten. They also examined the mediating effects of material hardship as well as those of parenting stress, positive parenting, and parental investment in their children. All of these mediators, including material hardship, were partial, meaning that there were still direct effects of poverty on child outcomes. However, material hardship was highly correlated with parenting stress, which negatively impacted parenting behaviors leading to worse outcomes in child social emotional competence. In fact, material hardship explained most of the impact of family income on social-emotional outcomes. Family income had its strongest direct effects on parent investment in their children, which in turn impacted child cognitive skills very strongly (Gershoff et al., 2007).

PHYSICAL HEALTH

Poor children face significant threats to their physical health compared with nonpoor children, starting at birth. They are more likely to be born at a low birth weight and to die during their first year of life; to experience an injury or poisoning requiring medical attention; to have elevated levels of lead in their blood; to experience a chronic disease such as asthma and obesity; and to experience food insecurity (Brooks-Gunn and Duncan, 1997; Chaudry and Wimer, 2016; Moore et al., 2009) (Table D3-3).

Researchers have documented a "gradient" between income and health status, both in children and adults: those with higher income have better health and in the case of adults, longevity (Case, Lubotsky, and Paxson, 2002). In adulthood, the direction of this gradient is difficult to determine. Does poor health lead to low income or does low income lead to poor health? In children, the direction of causality is clearer since children do not contribute to family income in the United States. Researchers have documented an inverse relationship between children's health and family income, which becomes more negative as the child gets older (Case, Lubotsky, and Paxson, 2002). Even when controlling for parents' education, the gradients remain strong, so that a doubling of family income increases the likelihood that the child is in very good or excellent health by 4 to 7 percent depending on the age of the child. The U.S. gradient is largest in those children with the most severe chronic conditions (Case, Lubotsky, and Paxson, 2002).

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TABLE D3-3 Physical Health

Author and Year	Source of Data	Findings
Case, Lubotsky, and Paxson, 2002	National Health Interview Survey, the 1988 child health supplement to the NHIS, the Panel Study of Income Dynamics with its associated 1997 Child Development Supplement, the Third National Health and Nutrition Examination Survey, 1988 to 1994	– There is an inverse relationship between family income and children's health status for children of all ages. – The correlation becomes progressively more negative with age—a phenomenon that holds throughout childhood and adulthood. – Even when controlling for parents' education, the gradients remain strong, so that a doubling of family income increases the likelihood that the child is in very good or excellent health by 4 to 7% depending on the age of the child. – For almost every chronic condition, children from wealthier families experience better health. – The U.S. gradient is largest in those children with the most severe chronic conditions. – Children with poorer health spend less time in school and have fewer years of education, especially if they live in families with lower income. – Poorer children, due to the income-child health gradient, enter adulthood with poorer health and lower educational attainment, likely leading to lower adult earnings.
Currie and Stabile, 2003	National Longitudinal Survey of Children and Youth, 1994 to 1998	– There is an inverse relationship between income and child health in Canada and the gradient steepens as children get older . – Poor children are subject to more health shocks due to chronic diseases as they get older, which explains the steepening gradient with child age in Canada.
Khanam, Nghiem, and Connelly, 2009	Longitudinal Study of Australian Children, 1999 to 2004	– There is an inverse relationship between income and child health in Australia.
Condliffe and Link, 2008	Medical Expenditure Panel Survey, Panel Study of Income Dynamics, 1996 to 2002	– Poor children experience more new chronic health conditions than children in wealthier families. – Poorer families are less able to respond effectively to these chronic conditions. – Poor children with asthma in the U.S. were almost 12% more likely to be in poor health 5 years later, whereas children with asthma from a higher-income family were only 4% more likely to be in poor health in that same time period.

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TABLE D3-3 Continued

Author and Year	Source of Data	Findings
Ekono, Jiang, and Smith, 2016	American Community Survey (ACS), the National Health and Nutrition Examination Survey (NHANES), the National Health Interview Survey (NHIS), and the National Survey of Children's Health (NSCH), 2011 to 2013	– Young children growing up in deep poverty have higher rates of obesity, and three times the rate of elevated blood lead levels compared with other poor children. – Compared with poor children not in deep poverty, children in deep poverty are more likely to have parents reporting poor or fair health and mental health, more parental stress, less social support and living in unsafe neighborhoods.

Family income's relationship to children's health is in part due to its protection of children's health on arrival of chronic diseases. In the United States, researchers using the Medical Expenditure Panel Survey (MEPS) as well as the Panel Study of Income Dynamics (PSID) have confirmed that poor children experience more new chronic health conditions than children in wealthier families, but also found that poorer families are less able to respond effectively to these chronic conditions (Case, Lubotsky, and Paxson, 2002). Parental income buffers children from the impacts of chronic diseases, and for almost every chronic condition, children from wealthier families experience better health (Case, Lubotsky, and Paxson, 2002). For example, poor children with asthma in the United States were almost 12 percent more likely to be in poor health 5 years later, whereas children with asthma from a higher-income family were only 4 percent more likely to be in poor health in that same time period (Condliffe and Link, 2008).

Studies from peer English-speaking nations with universal health care have documented a similar relationship between family income and child health, although the magnitude of the relationship is not as pronounced. For example, Currie and Stabile (2003), using a panel of Canadian children, found a flatter gradient between income and child health, although it also steepens as children get older. The data indicate that poor children are subject to more health shocks due to chronic diseases as they get older, which explains the steepening gradient with child age in Canada (Currie and Stabile, 2003). A study of Australian children also confirmed the existence of an income-child health gradient that is flatter than the U.S. gradient (Khanam, Nghiem, and Connelly, 2009). These studies from countries with universal health care indicate that availability of health insurance is not sufficient to eliminate the income gradient in child health, although it appears to reduce it. A more general look at the relationship between income and child health is provided in Institute of Medicine (2013, pp. 2-3).

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Children with poorer health also spend less time in school and have fewer years of education, especially if they live in families with lower income (Currie, 2009). Poorer children, due to the income-child health gradient, enter adulthood with poorer health and lower educational attainment, likely leading to lower adult earnings (Case, Lubotsky, and Paxson, 2002). Thus, at least part of the intergenerational transmission of poverty may be due to the impact of family income on children's health.

FETAL HEALTH AND HEALTH AT BIRTH

There is extensive research indicating that maternal poverty and disadvantage during the prenatal period has an especially significant impact on infant health, one that lasts and affects long-term outcomes (Table D3-4). We know that there are large inequalities in infant health at birth (which can be crudely measured by the incidence of low birth weight) and that these inequalities are associated with socioeconomic factors such as race, maternal education, marital status and income. Defining maternal disadvantage in this way, the incidence of low birth weight is more than three times higher among disadvantaged mothers compared with highly advantaged mothers (Aizer and Currie, 2014).

Maternal health behaviors during pregnancy can impact birth outcomes, and health behaviors during pregnancy are better among mothers with higher incomes. For example, smoking during pregnancy—which has been shown to increase risk of low birth weight and premature birth—is 18 times more prevalent among poor mothers than those who are highly advantaged, and randomized controlled trials of smoking cessation interventions show that reductions in smoking during pregnancy are associated with higher birth weights and less prematurity. Sibling studies (where the mother smoked during one pregnancy and not the other) show similar impact on low birth weight (Aizer and Currie, 2014).

Harmful environmental factors also impact infant health at birth. Studies have consistently shown that poor women are more likely to live near various sources of pollution, such as Superfund hazardous waste sites, factories emitting toxic substances, and water districts with poor drinking-water quality (Currie, 2009). They are also less likely to be able to move to cleaner areas (Currie, 2009; Currie et al., 2013). Natural experiments that change the level of pollution due to policy changes have been shown to reduce the incidence of low birth weight by more than 10 percent (Currie and Walker, 2011).

Maternal health and nutritional status also impact fetal and infant health. Poor women are more likely to have preexisting obesity, diabetes, hypertension, and asthma when they become pregnant (Aizer and Currie, 2014). They are also more likely to be exposed and to be susceptible

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TABLE D3-4 Fetal Health and Health at Birth

Author and Year	Source of data	Findings
Aizer and Currie, 2014	U.S. National Individual-Level Natality Data, 2011	– The incidence of low birth weight is more than three times higher among disadvantaged mothers compared with highly advantaged mothers. – Smoking during pregnancy is 18 times more prevalent among poor mothers than those who are highly advantaged. (Reductions in smoking during pregnancy are associated with higher birth weights and less prematurity.)
Currie, 2011	Environmental Protection Agency's Toxic Release Inventory, 1989 to 2009	– Children born to less educated and minority mothers are indeed more likely to be exposed to pollution in utero. – Poor women are more likely to live near various sources of pollution, such as superfund hazardous waste sites, factories emitting toxic substance, and water districts with poor drinking-water quality.
Currie et al., 2013	New Jersey vital statistics natality records, records of drinking water violations for New Jersey, 1997 to 2007	– There are small effects of drinking water contamination on all children, but large and statistically significant effects on birth weight and gestation of infants born to less-educated mothers. – Mothers who were most affected by contamination were the least likely to move between births in response to contamination
Ludwig and Currie, 2010	Vital Statistics Natality, 1989 to 2003	– Disadvantaged mothers are also about one-half as likely to gain the recommended weight during pregnancy compared with more advantaged mothers. (Nutritional interventions during pregnancy have been show to increase infant birth weight.)

(through lack of immunization for example) to contagious diseases like influenza (Currie and Schwandt, 2013). Using data from flu epidemics researchers have shown that influenza during pregnancy has negative effects on infant birth weights, primarily for mothers who have other indicators of poor health. Disadvantaged mothers are also about one-half as likely to gain the recommended weight during pregnancy compared with more advantaged mothers and nutritional interventions during pregnancy have been shown to increase infant birth weight (Ludwig and Currie, 2010).

In summary, there are many reasons that poor women are at increased risk for infants born with lower birth weight, prematurity, and poorer health. Maternal behaviors such as smoking, increased exposure to pollution, and violence, and worse maternal health and nutrition all have negative impacts on infant health at birth. Some studies have also explored the long-term impacts of insults occurring prenatally on infants' health,

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child and adolescent academic achievement, and on adult earnings (Currie and Rossin-Slater, 2015). Finally, we know that nutritional programs such as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and Supplemental Nutritional Assistance Program (SNAP), home visiting programs, and poverty-reduction programs all have proven evidence and/or potential promise to ameliorate these negative outcomes.

BRAIN DEVELOPMENT

Poor children are more likely than other children to have developmental, behavioral, and academic problems, such as serious emotional or behavioral difficulties and learning disabilities (Bradbury et al., 2015; Chaudrey and Wimer, 2016; Heckman, 2006; Moore et al., 2009; Yoshikawa, Aber, and Beardslee, 2012; Table D3-5). It is possible that these outcomes reflect structural brain changes in poor children. Children in poor families have recently been documented to have reduced volumes in the cerebral cortex and hippocampus in areas that are key for school readiness and academic achievement (National Scientific Council on the Developing Child, 2011). These areas are associated with executive function, language development, and memory. Other studies have shown that parental income is related to the surface area of the frontal, temporal, and parietal cortex of children (Noble et al, 2015).

Children growing up in poverty are often exposed to "toxic stress," which can lead to permanent changes in brain structure and function. Toxic stress is characterized by strong, prolonged activation of the body's stress response systems (Shonkoff et al., 2012). Poverty causes increased exposure to ACEs and material hardship, as described above, which may induce toxic stress. In addition, parental stress can increase the child's experience of chronic unbuffered strong stress, which can be especially harmful in the period of rapid brain development that occurs in early childhood (National Council on the Developing Child, 2014; Shonkoff et al., 2012). Toxic stress activates the hormonal systems that respond to stress, especially the hypothalamic-pituitary-adrenocortical (HPA) system, causing sustained high levels of cortisol and corticotropin-releasing hormone, as well as of inflammatory cytokines (Shonkoff et al., 2012). These sustained high levels of stress hormones alter the size and neuronal architecture of the amygdala, hippocampus, and prefrontal cortex, which can lead to functional differences in learning, memory, executive functioning, and to an increased potential for long-term fear and anxiety (Shonkoff et al., 2012).

Elevated exposure to stress appears to modify the physiologic response to stress in ways that alter neuroendocrine activity and neural activity, and ultimately brain development and function, in ways that adversely affect the regulation of emotion and attention (Blair and Raver, 2016). Poor children

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TABLE D3-5 Brain Development

Author and Year	Source of data	Findings
Noble et al., 2015	Experimental data	– Income was logarithmically associated with brain surface area. – Among children from lower- income families, small differences in income were associated with relatively large differences in surface area, whereas, among children from higher-income families, similar income increments were associated with smaller differences in surface area. – These relationships were most prominent in regions supporting language, reading, executive functions, and spatial skills.
Mitchell et al., 2014	Fragile Families and Child Wellbeing Study, 1998 to 2000	– Growing up in a disadvantaged environment is associated with a 19% shorter telomere, whereas a doubling of family income is associated with a 5% increase in telomere length. – Maternal education is also highly associated with telomere length. – Mothers graduating from high school was associated with more than 30% increase in telomere length in their 9-year-old sons compared with those children with mothers who didn't graduate from high school. – Multiple changes in family structure was associated with a 40% decline in telomere length. (One biomarker for chronic stress is telomere length).
Theall et al., 2013	Collected by author, 2010	– In children, telomeres are associated with social deprivation and violence. – Telomere length is an early indicator of health inequities. – Children in high-disordered neighborhoods had significantly shorter telomeres.

experience more chronic stressors and generally manifest higher cortisol and other physiological stress markers than economically advantaged children (Blair et al., 2011; Chen, Cohen, and Miller, 2010; Evans, 2003; Evans and English, 2002; Evans et al., 2005). Exposure to chronic stressors is associated with more externalizing problems and a higher level of behavior problems in children (e.g., Coley, Lynch, and Kull, 2015). Given these connections, it is highly plausible that poverty affects children's mental health through its effects on brain development (Blair and Raver, 2016).

There is increasing evidence that toxic stress in the prenatal period and early childhood can influence long-term child outcomes by chemically altering the structure and function of genes. These epigenetic changes alter gene expression without altering the genetic code itself, and effectively turn the gene "on" or "off." These epigenetic changes may be permanent (and some

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may be transferred intergenerationally). They may lead to impairments in learning abilities, and increased risk of mental illness, asthma, hypertension, heart disease and diabetes as adults. Not all epigenetic changes are harmful. Research has also shown that positive epigenetic changes in brain cells occur as cognition and memory develop, and repeated stimulation of these brain circuits through positive interactions with the environment and supportive adults (e.g., positive parenting), as well as good prenatal nutrition, enhance these important epigenetic changes (Institute of Medicine, 2000).

One biomarker for chronic stress is telomere length. Telomeres are DNA-protein complexes at the end of chromosomes. Telomeres shorten with age, and toxic stress is believed to accelerate shortening (Mitchell et al., 2014). A study of 9-year-old African American boys compared telomere length in children raised in disadvantaged environments and those in advantaged environments. Growing up in a disadvantaged environment is associated with a 19 percent shorter telomere, whereas a doubling of family income is associated with a 5 percent increase in telomere length (Mitchell et al., 2014).

In addition, severe psychosocial stress in pregnancy has been shown to be associated with shorter telomeres in young adult offspring, and young children exposed to violence have increased telomere shortening when tested at age 10 compared with telomere length when they were 5 (Price et al., 2013). A study of children growing up in poor neighborhoods with a high concentration of poverty, unemployment, and physical disorder documented the association of neighborhood level factors with reduced telomere length as well (Theall et al., 2013). Taken together, these studies provide evidence that chronic stress associated with socioeconomic disadvantage leads to accelerated telomere shortening, especially when experienced early in life. Since telomere length is a proxy for cellular aging, and is associated with diseases like diabetes, cancer, and heart disease, and with psychiatric conditions such as depression, this accelerated telomere shortening associated with poverty puts these children at risk for serious health and mental health problems as they move into adulthood.

MENTAL HEALTH

Numerous correlational studies based on community and national samples and various sources of information about children's mental health (parent reports, teacher reports, self-reports) show that family-level economic resources are related to children's mental health, although the associations are generally weaker than for children's cognitive development and school achievement (e.g., Dubow and Ippolito, 1994; Brooks-Gunn and Duncan, 1997; Pagani, Boulerice, and Tremblay, 1997; Wadsworth et al., 2016; Table D3-6). Children from poor families are at increased risk of

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TABLE D3-6 Mental Health

Author and Year	Source of Data	Findings
Currie and Tekin, 2015	Panel Study of Income Dynamics, RealtyTrac, 2005 to 2009	– Increases in home foreclosures within zip codes were associated with increases in hospital and emergency room visits for mental health problems among all ages, including children and adolescents.
Gassman-Pines, Ananat, and Gibson-Davis, 2014	Youth Risk Behavior Survey, Bureau of Labor Statistics, 1997 to 2009	– Statewide job losses due to mass closing and mass layoffs were associated with an increase in the following year in girls' probability of suicidal ideation and suicide plans, and in non-Hispanic Black adolescents' probability of suicide attempts.
Golberstein, Gonzales, and Meara, 2016	National Health Interview Survey, 2001 to 2013	– Increases in state-level unemployment rates is associated with greater prevalence of mental health problems among children, controlling for parental mental health.
Gershoff et al., 2007	Early Childhood Longitudinal Study, 1998 to 1999	– Higher family income predicted decreased material hardship (e.g., less food insecurity, residential instability, and inadequacy of medical care) and decreased parent stress (i.e., lower levels of marital conflict, parenting stress, depressive symptomatology), which in turn predicted increased positive parenting (i.e., more warmth and cognitive stimulation, less physical punishment) and reduced child problem behaviors.
Mistry et al., 2002	New Hope Project, 1994 to 1995	– Lower income and increased perceptions of economic pressure affected parenting behavior through an adverse impact on parents' psychological well-being. – Distressed parents reported feeling less effective and capable in disciplinary interactions with their child and were observed to be less affectionate in parent-child interactions. – In turn, less than optimal parenting predicted lower teacher ratings of children's positive social behavior and higher ratings of behavior problems.

experiencing mental health problems, including depression, difficulties in peer relations, low self-esteem, antisocial behavior, and drug use compared with children in more socioeconomically advantaged families (Bolger et al., 1995; Currie and Lin, 2007; Evans and English, 2002; Gershoff et al., 2007; Goodman, 1999; Goosby, 2007; Strohschein, 2005; Wadsworth et al., 2005; Yoshikawa, Aber, and Beardslee, 2012). Generally, family poverty and other family-level economic indicators are more strongly related to children's externalizing symptoms (e.g., disobedience, fighting, difficulty

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getting along with others, impulsivity) than internalizing symptoms (e.g., anxiety, sadness-depression). Both externalizing symptoms and internalizing symptoms become more prevalent the longer children have been living in poverty (Bolger et al., 1995; Duncan et al., 1994; Goosby, 2007; Hanson, McLanahan, and Thomson, 1997; Korenman, Miller, and Sjaastad, 1995; McLeod and Shanahan, 1993; Pagani, Boulerice, and Tremblay, 1997).

In addition to differences in their income, parents and families who are poor differ in a variety of measured and unmeasured ways. Thus, the links between family income and children's mental health may reflect these unmeasured differences rather than income differences (Morris and Gennetian, 2003). In virtually all of the studies reviewed here, investigators take some of these differences into account by including control variables (e.g., family structure, maternal education, ethnicity, maternal age at first birth) in their model estimates, which typically reduces the association between income and child mental health. Such studies provide better estimates of the effects of poverty on children than studies without such controls. Nonetheless, these correlational studies are insufficient to establish a causal link between poverty and children's mental health.

Children's mental health is related not only to family-level economic indicators, but to area-level economic conditions. These area-level studies focus on economic stressors outside the family, and may help to establish a causal relationship between economic conditions and mental health. However, they generally lack the data necessary to explore processes that account for these associations. In Currie and Tekin's (2015) study based on administrative hospital data from four states between 2005 and 2009, increases in home foreclosures within zip codes were associated with increases in hospital and emergency room visits for mental health problems among all ages, including children and adolescents. Gassman-Pines and colleagues' (2014) analysis of data between 1997 and 2009 indicated that statewide job losses due to mass closings and mass layoffs were associated with an increase in the following year in girls' probability of suicidal ideation and suicide plans, and in non-Hispanic Black adolescents' probability of suicide attempts. Research also links increases in state-level unemployment rates to greater prevalence of mental health problems among children, controlling for parental mental health (Golberstein, Gonzales, and Meara, 2016).

Correlational studies that link family income and child mental health have produced evidence suggestive of several mediating mechanisms. Most attention has been given to family-based processes that involve material deprivation, parents' psychological distress, and parenting behavior—processes encapsulated in what is widely known as the "family stress model" (Elder, 1974; Elder and Conger, 1994; for a review of these studies, see Conger, Conger, and Martin, 2010). This model hypothesizes that economic hardship induces strain and pressure in parents. The strain

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associated with the daily hassles of making ends meet in turn takes a toll on parents' mental health, increases interparental conflict and discord, and ultimately interferes with positive parenting, which in turn undermines the child's mental health.

As examples of empirical support for this model, Gershoff and colleagues' (2007) investigation based on a representative national sample of kindergarteners showed that higher family income predicted decreased material hardship (e.g., less food insecurity, residential instability, and inadequacy of medical care) and decreased parent stress (i.e., lower levels of marital conflict, parenting stress, depressive symptomatology), which in turn predicted increased positive parenting (i.e., more warmth and cognitive stimulation, less physical punishment) and reduced child problem behaviors. In their ethnically diverse, low-income sample, Mistry and colleagues (2002) found that lower income and increased perceptions of economic pressure affected parenting behavior through an adverse impact on parents' psychological well-being. Distressed parents reported feeling less effective and capable in disciplinary interactions with their child and were observed to be less affectionate in parent-child interactions. In turn, less than optimal parenting predicted lower teacher ratings of children's positive social behavior and higher ratings of behavior problems.

Other research into the links between poverty and children's mental health point to children's perceptions of family economic difficulties (Dashiff et al., 2009) and their cumulative exposure to stressors (e.g., psychosocial stressors such as family turmoil and community violence, and physical stressors such as substandard housing, high levels of noise, and crowding) (Evans and English, 2002).

Mental health problems in childhood and adolescence, especially externalizing behavior problems, warrant efforts aimed at prevention or early treatment because of their high costs to individuals, families (e.g., costs of treatments), and society (e.g., higher levels of delinquent behavior, crime, and addiction into adulthood) (Golberstein, Gonzales, and Meara, 2016). Their consequences for outcomes in adulthood include lower educational attainment, higher rates of unemployment, and reduced earnings (for a review of these studies, see Currie, 2009). Mental health problems in childhood and adolescence tend to foreshadow mental health problems in adulthood, as data indicate that roughly one-half of all lifetime cases of mental health disorders start in childhood or adolescence (Kessler et al., 2005). Children's mental health appears to play a significant role in the intergenerational transmission of poverty (Currie, 2009), given evidence linking poverty and low socioeconomic status to parents' mental health (Lorant et al., 2003, 2007) and children's mental health and the association between child mental health, future education, and labor market outcomes (Currie, 2009).

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EDUCATIONAL ATTAINMENT

Innumerable studies have documented a gap in the average achievement levels of students from low-income families relative to high-income families (Table D3-7). This gap appears in virtually all measures of achievement including grades, standardized test scores, high school graduate rates, college attendance, and college graduation rates (Bradbury et al., 2015; Chaudry and Wimer, 2016; Haveman and Wolfe, 1995; Heckman, 2006; Moore et al., 2009; Yoshikawa, Aber, and Beardslee, 2012).

Alarmingly, Reardon (2013) documents the fact that this income-achievement gap is not stable, but has been increasing steadily over the past 50 years. He shows that the gap in achievement between a child at the 90th percentile of the family income distribution and a child at the 10th percentile of the family income distribution is almost twice as big as the gap in achievement between white and African-American students—while 50 years ago the situation was reversed.

This gap in achievement is present when children enter kindergarten and stays relatively stable over time, indicating that the gap has its origins in the preschool period. Indeed Hair et al. (2015) suggest that differences in brain volume in the frontal and temporal cortex can explain 15–20 percent of the difference in scores between poor and nonpoor children, suggesting that intervention during periods of peak brain development in early childhood may be key.

RISKY BEHAVIORS, CRIME, AND DELINQUENCY

Poverty is linked to adolescent delinquency independent of other familial factors such as maternal education, family configuration status, and earlier childhood behavior patterns (Pagani et al., 1999; Table D3-8). In general, this link is stronger when the dependent variable is serious delinquency (Bjerk, 2007; Farnworth et al., 1994; Jarjoura, Triplett, and Brinker, 2002), if youth live in persistent poverty (Duncan et al., 1994; Farnworth et al., 1994; Jarjoura, Triplett, and Brinker, 2002), and if adolescents experienced poverty during early childhood or during adolescence (Brooks-Gunn and Duncan, 1997; Duncan et al, 1998; Jarjoura, Triplett, and Brinker, 2002).

Bjerk's (2007) systematic analyses suggest that the association between income and delinquency can be obscured because of its nonlinearity and because of error in the measurement of household economic resources. Dividing household income into quintiles, he found a negative relationship between household income and participation in serious crime (e.g., assault, stealing with a weapon or use of force, selling "hard drugs") only when comparing adolescents at the lowest end of the income distribution

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TABLE D3-7 Educational Attainment

Author and Year	Source of Data	Findings
Reardon, 2013	National Center for Education Statistics (NCES), the Long-Term Trend and Main National Assessment of Educational Progress (NAEP) studies, 1943 to 2001	– The achievement gap between children from high- and low-income families is roughly 30 to 40% larger among children born in 2001 than among those born 25 years earlier. (In fact, it appears that the income achievement gap has been growing for at least 50 years.) – The gap in achievement between a child at the 90th percentile of the family income distribution and a child at the 10th percentile of the family income distribution is almost twice as big as the gap in achievement between white and African-American students—while 50 years ago the situation was reversed. – From the perspective of poor families, the increase in the income achievement gap is mainly driven by what is happening in the top one-half of the income distribution where children of the richest parents are now outstripping children in families with median incomes.
Hair et al., 2015	National Institutes of Health Magnetic Resonance Imaging Study of Normal Brain Development, 2001 to 2007	– Differences in brain volume in the frontal and temporal cortex can explain 15-20% of the difference in scores between poor and nonpoor children.
Votruba-Drzal, 2006	National Longitudinal Survey of Youth, 1986 to 2000	– The reading and math skills of children experiencing poverty in early life diverge over time from the skills of more advantaged children during the school years.
Brooks-Gunn and Duncan, 1997	National Longitudinal Survey of Youth, Infant Health and Development Program, 1997	– Children in deep poverty had scores 6 to 13 points lower on standardized tests of IQ, verbal ability, and achievement compared with nonpoor children. – Scores for children living in poverty but above deep poverty were also lower than those who were nonpoor, but the differences were not as large.
Ratcliffe and McKernan, 2012	Panel Study of Income Dynamics, 1968 to 2009	– Children who are poor from birth to age 2 are 30% less likely to graduate from high school. – Experiencing persistent poverty (for one-half or more of childhood years) is associated with not graduating from high school. – The longer the duration of poverty, the more likely the child will have these negative outcomes.

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TABLE D3-8 Risky Behaviors, Crime, and Delinquency

Author and Year	Source of Data	Findings
Pagani et al., 1999	Montreal Longitudinal-Experimental Study, 1984 to 1993	– Poverty is linked to adolescent delinquency independent of other familial factors such as maternal education, family configuration status, and earlier childhood behavior patterns.
Bjerk, 2007	National Longitudinal Survey of Children and Youth, 1997	– Dividing household income into quintiles, there is a negative relationship between household income and participation in serious crime (e.g., assault, stealing with a weapon or use of force, selling "hard drugs") only when comparing adolescents at the lowest end of the income distribution with those at the highest end of the income distribution. – In addition, the relationship was much stronger if the measure of family economic well-being included other family economic indicators in addition to income (e.g., savings, debts owed, inheritances). – Household income and participation in minor crime (e.g., stealing without force or threat of force, property destruction) were unrelated.
Jarjoura, Triplett, and Brinker, 2002	National Longitudinal Survey of Children and Youth, 1979 to 1992	– The level of exposure to poverty (both length of longest spell in poverty or percent of youth's life spent in poverty) is positively associated with the likelihood of delinquent involvement. – Living in poverty during the first 5 years of life makes involvement in delinquency significantly more likely.
Blum et al., 2000	National Longitudinal Survey of Children and Youth	– Lower family income was associated with less alcohol use (among 9th–12th graders) but higher weapon-related violence, and greater likelihood of sexual intercourse, controlling for demographic variables related to family income. – However, family income, family structure, and race/ethnicity, taken together, explained very little of the variance in these outcomes.

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TABLE D3-8 Continued

Author and Year	Source of Data	Findings
Bartlett, Holditch-Davis, and Belyea, 2005	National Longitudinal Study of Adolescent Health	– Three clusters of youth (mean age 15.8 years) based on 14 problem behaviors, including delinquency (e.g., stealing, weapon use, property damage), alcohol and marijuana use, sexual behavior (e.g., multiple sex partners, sex without birth control), and truancy where identified. – Youth in the "normal" cluster reported few, if any, problem behaviors. – Those in the "deviant" cluster had high means for most of the behaviors and the largest number of problem behaviors reflecting deviant, conduct-type problems like selling drugs and weapon use. – Youth in the "problem" cluster had higher means than those in the "normal" cluster for most problems, but lower means than youth in the "deviant" cluster. – Family socioeconomic status was a significant predictor of cluster membership, with adolescents in the "normal" cluster having significantly higher socioeconomic status than adolescents in the "deviant" and "problem" clusters.
Ratcliffe and McKernan, 2012	Panel Study of Income Dynamics, 1968 to 2009	– Children who are three times more likely to have a teen premarital pregnancy. – Experiencing persistent poverty (for one-half or more of childhood years) is associated with having teen nonmarital births and nonmarital births as adults for females, and with higher arrest rates by young adulthood for males. – The longer the duration of poverty, the more likely the child will have these negative outcomes.

with those at the highest end of the income distribution. In addition, the relationship was much stronger if the measure of family economic well-being included other family economic indicators in addition to income (e.g., savings, debts owed, inheritances). Household income and participation in minor crime (e.g., stealing without force or threat of force, property destruction) were unrelated.

Family poverty in middle childhood appears to be less important as an antecedent to serious delinquency than poverty during early childhood or adolescence (Jarjoura, Triplett, and Brinker, 2002). Several studies show that much of the increased risk of delinquency associated with poverty is mediated through negative parenting and family conflict (e.g., harshness, inconsistency, low monitoring and involvement) (Conger et al., 1994, 1995;

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Rutter, Giller, and Hagell, 1998; Sampson and Laub, 1994), though this mediation is not found in some studies (e.g., Pagani et al., 1999).

Several studies have found that official intervention (e.g., being arrested or convicted) during adolescence is negatively associated with employment in early adulthood (Aizer and Doyle, 2015). Moreover, analyses of panel data suggest that official intervention increases involvement in crime in early adulthood by adversely affecting educational attainment and employment. Declines in educational progress following official intervention may be triggered by stigma and exclusion from school. Increases in crime in response to official intervention appear to be especially pronounced among African American males and males who come from poor family backgrounds (Bernburg and Krohn, 2003).

Delinquency is one of a group of adolescent risky behaviors that are correlated and tend to co-occur (Gruber, 2001; Jessor, Turbin, and Costa, 1998). This co-occurrence has stimulated research on domains and profiles of adolescent risky behavior and their antecedents and outcomes in early adulthood (e.g., Bartlett, Holditch-Davis, and Belyea, 2005; Hair et al., 2009; Zweig, Lindberg, and McGinley, 2001). Blum et al. (2000) focused specifically on health-compromising behaviors among 7th–12th graders (e.g., alcohol use, cigarette smoking, suicidal thoughts or attempts, weapon-related violence, sexual intercourse) in the National Longitudinal Study of Adolescent Health (Add Health). Lower family income was associated with less alcohol use (among 9th–12th graders), but higher weapon-related violence, and greater likelihood of sexual intercourse, controlling for demographic variables related to family income. However, family income, family structure, and race/ethnicity, taken together, explained very little of the variance in these outcomes.

Using data from over 12,500 adolescents from Add Health, Bartlett, Holditch-Davis, and Belyea (2005) identified three clusters of youth (mean age 15.8 years) based on 14 problem behaviors, including delinquency (e.g., stealing, weapon use, property damage), alcohol and marijuana use, sexual behavior (e.g., multiple sex partners, sex without birth control) and truancy. Youth in the "normal" cluster reported few, if any problem behaviors; those in the "deviant" cluster had high means for most of the behaviors and the largest number of problem behaviors reflecting deviant, conduct-type problems like selling drugs and weapon use; youth in the "problem" cluster had higher means than those in the "normal" cluster for most problems, but lower means than youth in the "deviant" cluster. Family SES was a significant predictor of cluster membership, with adolescents in the "normal" cluster having significantly higher SES than adolescents in the "deviant" and "problem" clusters. Other research distinguishing profiles of risky behavior among adolescents (based on delinquency, smoking, drug use, drinking, sexual behavior, etc.) finds worse adult outcomes (e.g., increased

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probability of arrest, not having a high school diploma or GED, not being employed) among those in higher-risk groups, compared with those in lower-risk groups (Hair et al., 2009).

Early timing of events beyond sexual debut has been conceptualized as a marker of risky behavior (e.g., parenthood) because these early transitions often create demands and conditions that place individuals at increased risk for low education and enduring occupational, financial, and attendant stressors that compromise psychological health (McLoyd, Purtell, and Hardaway, 2015). Research confirms that family poverty and low socioeconomic status increase the probability of early timing of transition events (e.g., sexual intercourse by age 14; pregnancy, parenthood, cohabitation, marriage, or leaving the parental home by age 17) partly by increasing the occurrence of negative life events experienced by parents or the family (e.g., getting laid off, taking wage cuts, moving to worse residences or neighborhoods). In turn, early timing of transition events has been found to predict significant growth in depressive symptoms in early adulthood (Wickrama, Merten, and Elder, 2005; Wickrama et al., 2008).

THE TIMING OF POVERTY

The timing of poverty is important. Early childhood is a period when brain development is rapid, and children are very sensitive to the impacts of family poverty (Blair and Raver, 2016). Language development diverges for poor and nonpoor children almost as soon as expressive language emerges at 15 or 16 months of age, and by 3 years of age poor children are markedly behind in their language acquisition (Hart and Risley, 1995). One recent study indicated that differences in language development between poor and nonpoor children can be seen as early as 7 months of age (Betancourt, Brodsky, and Hurt, 2015). Another study looking at EEG[37] patterns found decreased electrical activity in the frontal cortex, the part of the brain that controls executive function, in poor 6- to 9-month-olds compared with those living in families with higher income (Tomalski et al., 2013). The impacts of poverty experienced early in childhood last into adulthood. Poverty in early childhood has been shown to be a very significant negative predictor of academic performance in school in middle childhood and beyond. The reading and math skills of children experiencing poverty in early life diverge over time from the skills of more advantaged children during the school years (Votruba-Drzal, 2006). Children who are poor from birth to age 2 are 30 percent less likely to graduate from high school and are three times more likely to have a teen premarital pregnancy (Ratcliffe and

[37] An EEG, or electroencephalogram, is a neurological test that detects abnormalities in the brain's electrical activity.

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McKernan, 2012). These outcomes are likely to lead to less employment as adults and to intergenerational poverty. And poverty in early childhood is likely to persist. Nearly one-half of children born to poor parents remain poor for one-half or more of their childhoods (Ratcliffe and McKernan, 2012).

Nevertheless, poverty experienced later in childhood is also associated with negative outcomes in adolescence and adulthood, perhaps in part because the length of time a child spends in poverty is also important. Experiencing persistent poverty (for one-half or more of childhood years) is associated with not graduating from high school, having teen nonmarital births and nonmarital births as adults for females, and with higher arrest rates by young adulthood for males (Ratcliffe and McKernan, 2012). As with poverty experienced in early childhood, these outcomes lead to lower earnings as adults and an increased likelihood of long-term adult poverty and poorer adult health (Chaudry and Wimer, 2016; Ratcliffe and McKernan, 2012). The longer the duration of poverty, the more likely the child will have these negative outcomes.

SEVERITY OF POVERTY

In 2015, 2.9 percent of children in the United States, or 2.1 million children,[38] lived in deep poverty, that is, had family income less than 50 percent of the Supplemental Poverty Measure. Families living in deep poverty experience even greater material hardship and parenting stress than those who are poor but living between 50 percent and 99 percent of the federal poverty level (Mayer and Jencks, 1989). Young children growing up in deep poverty have higher rates of obesity, and three times the rate of elevated blood lead levels compared with other poor children (Ekono, Jiang, and Smith, 2016). One study showed that children in deep poverty had scores 6 to 13 points lower on standardized tests of IQ, verbal ability, and achievement compared with nonpoor children. Scores for children living in poverty but above deep poverty were also lower than those who were nonpoor, but the differences were not as large (Brooks-Gunn and Duncan, 1997).

Children in deep poverty also are more likely to grow up in families with significant additional risk factors. Compared with poor children not in deep poverty, they are more likely to have parents reporting poor or fair health and mental health, more parental stress, less social support, and living in unsafe neighborhoods (Ekono, Jiang, and Smith, 2016). These factors predict poor health and development outcomes in children. The combination of deep poverty and family adversity is particularly toxic (Ekono, Jiang, and Smith, 2016).

[38] Per TRIM3 weighted estimates commissioned for the committee.

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REFERENCES

Aizer, A. (2011). Poverty, violence and health: The impact of domestic violence during pregnancy on newborn health. *Journal of Human Resources, 46*(3), 518–538.

Aizer, A., and Currie, J. (2014). The intergenerational transmission of inequality: Maternal disadvantage and health at birth. *Science, 344*(6186), 856–861.

Aizer, A., and Doyle, J.J. (2015). Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. *Quarterly Journal of Economics, 130*(2), 759–803.

Almond, D., and Currie, J. (2011). Killing me softly: The fetal origins hypothesis. *Journal of Economic Perspectives, 25*(3), 153–172.

Anda, R.F., Felitti, V.J., Bremner, J.D., Walker, J.D., Whitfield, C., Perry, B.D., Dube, S.R., and Giles, W.H. (2006). The enduring effects of abuse and related adverse experiences in childhood: A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience, 256*(3), 174–186.

Bartlett, R., Holditch-Davis, D., and Belyea, M. (2005). Clusters of problem behaviors in adolescents. *Research in Nursing and Health, 28*(3), 230–239.

Bernburg, J.G., and Krohn, M.D. (2003). Labeling, life chances, and adult crime: The direct and indirect effects of official intervention in adolescence on crime in early adulthood. *Criminology, 41*(4), 1287–1318.

Betancourt, L.M., Brodsky, N.L., and Hurt, H. (2015). Socioeconomic (SES) differences in language are evident in female infants at 7 months of age. *Early Human Development, 91*(12), 719–724.

Bjerk, D. (2007). Measuring the relationship between youth criminal participation and household economic resources. *Journal of Quantitative Criminology, 23*(1), 23–39.

Blair, C., and Raver, C.C. (2016). Poverty, stress, and brain development: New directions for prevention and intervention. *Academic Pediatrics, 16*(3 Suppl), S30–36.

Blair, C., Raver, C.C., Granger, D., Mills-Koonce, R., and Hibel, L. (2011). Allostasis and allostatic load in the context of poverty in early childhood. *Developmental Psychopathology, 23*(3), 845–857.

Blum, R.W., Beuhring, T., Shew, M.L., Bearinger, L.H., Sieving, R.E., and Resnick, M.D. (2000). The effects of race/ethnicity, income, and family structure on adolescent risk behaviors. *American Journal of Public Health, 90*(12), 1879–1884.

Bolger, K.E., Patterson, C.J., Thompson, W.W., and Kupersmidt, J.B. (1995). Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship. *Child Development, 66*(4), 1107–1129.

Bradbury, B., Corak, M., Waldfogel, J., and Washbrook, E. (2015). *Too Many Children Left Behind: The U.S. Achievement Gap in Comparative Perspective*. New York, NY: Russell Sage Foundation.

Brooks-Gunn, J., and Duncan, G.J. (1997). The effects of poverty on children. *Future Child, 7*(2), 55–71.

Cancian, M., Yang, M.Y., and Slack, K.S. (2013). The effect of additional child support income on the risk of child maltreatment. *Social Service Review, 87*(3), 417–437.

Case, A., Lubotsky, D., and Paxson, C. (2002). Economic status and health in childhood: The origins of the gradient. *American Economic Review, 92*(5), 1308–1334.

Chaudry, A., and Wimer, C. (2016). Poverty is not just an indicator: The relationship between income, poverty, and child well-being. *Academic Pediatrics, 16*(3 Suppl), S23–29.

Chen, E., Cohen, S., and Miller, G.E. (2010). How low socioeconomic status affects 2-year hormonal trajectories in children. *Psychological Science, 21*(1), 31–37.

Coley, R.L., Lynch, A.D., and Kull, M. (2015). Early exposure to environmental chaos and children's physical and mental health. *Early Childhood Research Quarterly, 32*, 94–104.

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Condliffe, S., and Link, C.R. (2008). The relationship between economic status and child health: Evidence from the United States. *American Economic Review, 98*(4), 1605–1618.

Conger, R.D., Conger, K.J., and Martin, M.J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family, 72*(3), 685–704.

Conger, R.D., Ge, X., Elder, G.H., Jr., Lorenz, F.O., and Simons, R.L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development, 65*(2 Spec No), 541–561.

Conger, R.D., Patterson, G.R., and Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66*(1), 80–97.

Currie, J. (2011). Inequality at birth: Some causes and consequences. *American Economic Review, 101*(3), 1–22.

Currie, J. (2009). Healthy, wealthy, and wise: Socioeconomic status, poor health in childhood, and human capital development. *Journal of Economic Literature, 47*(1), 87–122.

Currie, J., and Lin, W. (2007). Chipping away at health: More on the relationship between income and child health. *Health Affairs (Millwood), 26*(2), 331–344.

Currie, J., and Rossin-Slater, M. (2015). Early-life origins of life-cycle well-being: Research and policy implications. *Journal of Policy Analysis and Management, 34*(1), 208–242.

Currie, J., and Schwandt, H. (2013). Within-mother analysis of seasonal patterns in health at birth. *Proceedings of the National Academy of Sciences, 110*(30), 12265–12270.

Currie, J., and Stabile, M. (2003). Socioeconomic status and child health: Why is the relationship stronger for older children? *American Economic Review, 93*(5), 1813–1823.

Currie, J., and Tekin, E. (2015). Is there a link between foreclosure and health? *American Economic Journal: Economic Policy, 7*(1), 63–94.

Currie, J., and Walker, R. (2011). Traffic congestion and infant health: Evidence from E-ZPass. *American Economic Journal-Applied Economics*, *3*(1), 65–90.

Currie, J., Zivin, J.G., Meckel, K., Neidell, M., and Schlenker, W. (2013). Something in the water: Contaminated drinking water and infant health. *Canadian Journal of Economics*, *46*(3). https://doi.org/10.1111/caje.12039.

Dashiff, C., DiMicco, W., Myers, B., and Sheppard, K. (2009). Poverty and adolescent mental health. *Journal of Child and Adolescent Psychiatric Nursing, 22*(1), 23–32.

Dubow, E.F., and Ippolito, M.F. (1994). Effects of poverty and quality of the home-environment on changes in the academic and behavioral-adjustment of elementary school-age-children. *Journal of Clinical Child Psychology, 23*(4), 401–412.

Duncan, G., Brooks-Gunn, J., and Klebanov, P. (1994). Economic deprivation and early childhood development. *Child Development, 65*, 296–318.

Duncan, G.J., Yeung, W.J., Brooks-Gunn, J., and Smith, J.R. (1998). How much does childhood poverty affect the life chances of children? *American Sociological Review, 63*(3), 406.

Ekono, M.M., Jiang, Y., and Smith, S. (2016). *Young Children in Deep Poverty*. New York: National Center for Children in Poverty, Columbia University. Available: https://files.eric.ed.gov/fulltext/ED578993.pdf.

Elder, G.H. (1974). *Children of the Great Depression*. Chicago: University of Chicago Press.

Elder Jr., G.H., and Conger, R.D. (1994). *Families in Troubled Times: Adapting to Change in Rural America. Social Institutions and Social Change*. Piscataway, NJ: Aldine Transaction.

Evans, G.W. (2003). A multimethodological analysis of cumulative risk and allostatic load among rural children. *Developmental Psychology, 39*(5), 924–933.

Evans, G.W., and English, K. (2002). The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development, 73*(4), 1238–1248.

Evans, G.W., Gonnella, C., Marcynyszyn, L.A., Gentile, L., and Salpekar, N. (2005). The role of chaos in poverty and children's socioemotional adjustment. *Psychological Science, 16*(7), 560–565.

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Farnworth, M., Thornberry, T., Krohn, M., and Lizotte, A. (1994). Measurement in the study of class and delinquency: Integrating theory and research. *Journal of Research in Crime and Delinquency,* 31(1), 32–61.

Gassman-Pines, A., Ananat, E.O., and Gibson-Davis, C.M. (2014). Effects of statewide job losses on adolescent suicide-related behaviors. *American Journal of Public Health, 104*(10), 1964–1970.

Gershoff, E.T., Aber, J.L., Raver, C.C., and Lennon, M.C. (2007). Income is not enough: Incorporating material hardship into models of income associations with parenting and child development. *Child Development, 78*(1), 70–95.

Golberstein, E., Gonzales, G., and Meara, E. (2016). *Economic Conditions and Children's Mental Health*. Cambridge, MA: National Bureau of Economic Research.

Goodman, E. (1999). The role of socioeconomic status gradients in explaining differences in US adolescents' health. *American Journal of Public Health, 89*(10), 1522–1528.

Goosby, B.J. (2007). Poverty duration, maternal psychological resources, and adolescent socioemotional outcomes. *Journal of Family Issues, 28*(8), 1113–1134.

Gruber, J. (2001). *Risky Behavior Among Youths*. Chicago: University of Chicago Press.

Hair, E.C., Park, M.J., Ling, T.J., and Moore, K.A. (2009). Risky behaviors in late adolescence: Co-occurrence, predictors, and consequences. *Journal of Adolescent Health, 45*(3), 253–261.

Hair, N.L., Hanson, J.L., Wolfe, B.L., and Pollak, S.D. (2015). Association of child poverty, brain development, and academic achievement. *JAMA Pediatrics, 169*(9), 822–829.

Hanson, T., McLanahan, S., and Thomson, E. (1997). Economic resources, parental practices, and children's well-being. In G. Duncan and J. Brooks-Gunn (Eds.), *Consequences of Growing Up Poor*. New York: Russell Sage Foundation.

Hart, B., and Risley, T.R. (1995). *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: Paul H Brookes Publishing.

Haveman, R., and Wolfe, B. (1995). The determinants of children's attainments: A review of methods and findings. *Journal of Economic Literature, 33*(4), 1829–1878.

Heckman, J.J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science, 312*(5782), 1900–1902.

Iceland, J., and Bauman, K.J. (2007). Income poverty and material hardship: How strong is the association? *The Journal of Socio-Economics, 36*(3), 376–396.

Institute of Medicine. (2013). *U.S. Health in International Perspective—Shorter Lives, Poorer Health* Report Brief, January. Washington, DC: The National Academies Press. Available: http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2013/US-Health-International-Perspective/USHealth_Intl_PerspectiveRB.pdf.

Institute of Medicine (2000). *From Neurons to Neighborhoods: The Science of Early Childhood Development*. Washington, DC: National Academy Press.

Jarjoura, G.R., Triplett, R.A., and Brinker, G.P. (2002). Growing up poor: Examining the link between persistent childhood poverty and delinquency. *Journal of Quantitative Criminology, 18*(2), 159–187.

Jessor, R., Turbin, M.S., and Costa, F.M. (1998). Risk and protection in successful outcomes among disadvantaged adolescents. *Applied Developmental Science, 2*(4), 194–208.

Kessler, R.C., Berglund, P., Demler, O., Jin, R., Merikangas, K.R., and Walters, E.E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62*(6), 593–602.

Khanam, R., Nghiem, H.S., and Connelly, L.B. (2009). Child health and the income gradient: Evidence from Australia. *Journal of Health Economics, 28*(4), 805–817.

Korenman, S., Miller, J.E., and Sjaastad, J.E. (1995). Long-term poverty and child development in the United States: Results from the NLSY. *Children and Youth Services Review, 17*(1), 127–155.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., and Ansseau, M. (2003). Socio-economic inequalities in depression: A meta-analysis. *American Journal of Epidemiology, 157*(2), 98–112.

Lorant, V., Croux, C., Weich, S., Deliege, D., Mackenbach, J., and Ansseau, M. (2007). Depression and socio-economic risk factors: 7-year longitudinal population study. *British Journal of Psychiatry, 190*, 293–298.

Ludwig, D.S., and Currie, J. (2010). The association between pregnancy weight gain and birthweight: A within-family comparison. *Lancet, 376*(9745), 984–990.

Macomber, J. (2006). *An Overview of Selected Data on Children in Vulnerable Families*. Washington, DC: Urban Institute.

Mayer, S.E., and Jencks, C. (1989). Poverty and the distribution of material hardship. *Journal of Human Resources, 24*(1), 88–114.

McLeod, J.D., and Shanahan, M.J. (1993). Poverty, parenting, and children's mental health. *American Sociological Review,* 351–366.

McLoyd, V.C., Purtell, K.M., and Hardaway, C.R. (2015). Race, class, and ethnicity in young adulthood. In *Handbook of Child Psychology and Developmental Science*. Hoboken, NJ: John Wiley and Sons.

Mistry, R.S., Vandewater, E.A., Huston, A.C., and McLoyd, V.C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73*(3), 935–951.

Mitchell, C., Hobcraft, J., McLanahan, S.S., Siegel, S.R., Berg, A., Brooks-Gunn, J., Garfinkel, I., and Notterman, D. (2014). Social disadvantage, genetic sensitivity, and children's telomere length. *Proceedings of the National Academy of Sciences, 111*(16), 5944–5949.

Moore, K.A., Redd, Z., Burkhauser, M., Mbwana, K., and Collins, A. (2009). *Children in Poverty: Trends, Consequences, and Policy Options*. Washington, DC: Child Trends.

Morris, P.A., and Gennetian, L.A. (2003). Identifying the effects of income on children's development using experimental data. *Journal of Marriage and Family, 65*(3), 716–729.

National Scientific Council on the Developing Child (2011). *Building the Brain's "Air Traffic Control" System: How Early Experiences Shape the Development of Executive Function*. Cambridge, MA: Harvard University.

National Scientific Council on the Developing Child (2014). *Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper 3 Updated Edition*. Cambridge, MA: Harvard University. Available: https://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf [August 30, 2018].

National Survey of Children's Health 2011/12. (2017). Adverse Childhood Experiences. Data query from the Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health website. Retrieved September 28, 2018 from www.childhealthdata.org.

Noble, K.G., Houston, S.M., Brito, N.H., Bartsch, H., Kan, E., Kuperman, J.M., Akshoomoff, N., Amaral, D.G., Bloss, C.S., Libiger, O., Schork, N.J., Murray, S.S., Casey, B.J., Chang, L., Ernst, T.M., Frazier, J.A., Gruen, J.R., Kennedy, D.N., Van Zijl, P., Mostofsky, S., Kaufmann, W.E., Kenet, T., Dale, A.M., Jernigan, T.L., and Sowell, E.R. (2015). Family income, parental education and brain structure in children and adolescents. *Nature Neuroscience, 18*(5), 773–778.

Ouellette, T., Burstein, N., Long, D., and Beecroft, E. (2004). *Measures of Material Hardship: Final Report*. Washington, DC: US Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.

Pagani, L., Boulerice, B., Tremblay, R. (1997). The influence of poverty on children's classroom placement and behavior problems. In G.J. Duncan and J. Brooks-Gunn (Eds.), *Consequences of Growing Up Poor* (pp. 311–329). New York: Russell Sage Foundation.

Pagani, L., Boulerice, B., Vitaro, F., and Tremblay, R.E. (1999). Effects of poverty on academic failure and delinquency in boys: A change and process model approach. *Journal of Child Psychology and Psychiatry, 40*(8), 1209–1219.

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Paxson, C., and Waldfogel, J. (2003). Welfare reforms, family resources, and child maltreatment. *Journal of Policy Analysis and Management, 22*(1), 85–113.

Price, L.H., Kao, H.T., Burgers, D.E., Carpenter, L.L., and Tyrka, A.R. (2013). Telomeres and early-life stress: An overview. *Biological Psychiatry, 73*(1), 15–23.

Ratcliffe, C.E., and McKernan, S.M. (2012). *Child Poverty and Its Lasting Consequence.* Washington, DC: Urban Institute. Available: https://www.urban.org/sites/default/files/publication/32756/412659-Child-Poverty-and-Its-Lasting-Consequence.PDF.

Reardon, S.F. (2013). The widening income achievement gap. *Educational Leadership, 70*(8), 10–16.

Rutter, M., Giller, H., and Hagell, A. (1998). *Antisocial Behaviour by Young People.* New York, NY: Cambridge University Press.

Sampson, R.J., and Laub, J.H. (1994). Urban poverty and the family context of delinquency: A new look at structure and process in a classic study. *Child Development, 65*(2 Spec No), 523–540.

Sedlak, A.J., Mettenburg, J., Basena, M., Petta, I., McPherson, K., Greene, A., and Li, S. (2010). *Fourth National Incidence Study of Child Abuse and Neglect (NIS-4): Report to Congress: Executive Summary.* Washington, DC: U.S. Department of Health and Human Services. Available: https://www.acf.hhs.gov/sites/default/files/opre/nis4_report_congress_full_pdf_jan2010.pdf [August 30, 2018].

Shonkoff, J.P., Garner, A.S., Committee on Psychosocial Aspects of Child and Family Health, Committee on Early Childhood, Adoption and Family Care, and Section on Developmental and Behavioral Pediatrics. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics, 129*(1), e232–e246.

Strohschein, L. (2005). Household income histories and child mental health trajectories. *Journal of Health and Social Behavior, 46*(4), 359–375.

Theall, K.P., Brett, Z.H., Shirtcliff, E.A., Dunn, E.C., and Drury, S.S. (2013). Neighborhood disorder and telomeres: Connecting children's exposure to community level stress and cellular response. *Social Science and Medicine, 85*, 50–58.

Tomalski, P., Moore, D.G., Ribeiro, H., Axelsson, E.L., Murphy, E., Karmiloff-Smith, A., Johnson, M.H., and Kushnerenko, E. (2013). Socioeconomic status and functional brain development—associations in early infancy. *Developmental Science, 16*(5), 676–687.

Votruba-Drzal, E. (2006). Economic disparities in middle childhood development: Does income matter? *Developmental Psychology, 42*(6), 1154–1167.

Wadsworth, M.E., Evans, G.W., Grant, K., Carter, J.S., and Duffy, S. (2016). Poverty and the development of psychopathology. In D. Cicchetti (Ed.), *Developmental Psychopathology* (pp. 136–179, 3rd edition). Hoboken, NJ: Wiley.

Wadsworth, M.E., Raviv, T., Compas, B.E., and Connor-Smith, J.K. (2005). Parent and adolescent responses to poverty related stress: Tests of mediated and moderated coping models. *Journal of Child and Family Studies, 14*(2), 283–298.

Wickrama, K.A.S., Merten, M.J., and Elder, G.H. Jr. (2005). Community influence on precocious transitions to adulthood: Racial differences and mental health consequences. *Journal of Community Psychology, 33*(6), 639–653.

Wickrama, K.A.S., Conger, R.D., Lorenz, F.O., and Jung, T. (2008). Family antecedents and consequences of trajectories of depressive symptoms from adolescence to young adulthood: A life course investigation. *Journal of Health and Social Behavior, 49*(4), 468–483.

Yoshikawa, H., Aber, J.L., and Beardslee, W.R. (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth: Implications for prevention. *American Psychologist, 67*(4), 272–284.

Zweig, J.M., Lindberg, L.D., and McGinley, K.A. (2001). Adolescent health risk profiles: The co-occurrence of health risks among females and males. *Journal of Youth and Adolescence, 30*(6), 707–728.

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APPENDIX D, 4-1
DEFINITIONS PERTAINING TO CHAPTER 4 FROM THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

Definition of OECD Family Benefits Public Spending[39]

Figure 4-12 in Chapter 4 of this report presents data on public spending on families and children as a percent of the Gross Domestic Product (GDP). This is based on an indicator known as OECD Family Benefits Public Spending, which refers to public spending on family benefits, including financial support that is exclusively for families and children. Spending on health and housing also assists families, but not exclusively, and it is not included in this indicator. Broadly speaking, there are three types of public spending on family benefits:

1. Public spending on *child-related cash transfers* to families with children, including child benefits (or child allowances) that in some countries are income-tested; public income support payments for single-parent families; and income support issued during periods of parental leave.
2. Public spending on *services* (benefits in kind) for families with children, including direct financing and subsidizing of providers of child care and early education facilities; public child care support through earmarked payments to parents; public spending on assistance for young people and residential facilities; public spending on family services, including center-based facilities; and home help services for families in need.
3. Financial support for families provided through the *tax system*, including tax exemptions (e.g., income from child benefits that is not included in the tax base); child tax allowances (amounts for children that are deducted from gross income and are not included in taxable income); and child tax credits, amounts that are deducted from the tax liability.

This indicator can be broken down by cash benefits and benefits in kind and is measured in percentage of GDP.

[39] See https://data.oecd.org/socialexp/family-benefits-public-spending.htm.

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APPENDIX D, 4-2
GOVERNMENT POLICIES AFFECTING CHILD POVERTY IN AUSTRALIA AND IRELAND

The Australian Family Tax Benefit, Parts A and B

The Australian government provides a family tax benefit to families with children based on specific eligibility criteria. This family benefit is intended to assist with the cost of raising children and consists of two parts, A and B. Overall eligibility criteria include these: (1) the parent(s) have a dependent child or full-time student under the age of 20 who does not receive a pension, payment, or other benefits; (2) the parent(s) are providing care for the child at least 35 percent of the time; and (3) the family meets a specific income test.[40] The income test for this program, and for Australian transfer programs in general, is designed to eliminate eligibility only for very-high-income families. Consequently, it is a near universal benefit and is classified by OECD as such. Part A is given for each child in families that meet the eligibility criteria, and Part B is intended to provide additional assistance to single parents, nonparental caregivers, and couples with one earner. In order to receive Part A, children must also meet immunization requirements.

According to a United Nations Children's Fund (UNICEF) report on the impact of the worldwide financial/economic crisis on child well-being in 41 high-income countries (Fanjul, 2014), based on an anchored poverty line Australia experienced the third-best improvement over the 2008–2012 period, with its child poverty rate falling from just over 19 percent to 13 percent. During this 4-year period, Australia moved from having the 19th-lowest rate to the 7th-lowest rate of child poverty. The UNICEF report highlights that Australia had a multipronged approach, which included countercyclical policies to alleviate the effects of the economic downturn as well as stimulus packages that were targeted to low-income families with children.

However, there is concern that going forward, Australia's outcomes may not be as positive. In 2009, the indexation of Family Tax Benefit Part A was made less generous, leading to a decline in the number of children benefiting from it, which fell from about 80 percent of all dependent children in 2009 to about 69 percent in 2012 (Whiteford, 2014).

[40] Australian Government Department of Human Services, https://www.humanservices.gov.au/individuals/services/centrelink/family-tax-benefit.

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A Roadmap to Reducing Child Poverty

Ireland's National Policy Framework for Children and Young People

In 2014, Ireland's government established the goal of lifting 70,000 children out of poverty by the year 2020, part of its National Policy Framework for Children and Young People, also known as the Better Outcomes, Brighter Futures (BOBF) Framework (Ireland, Department of Employment Affairs and Social Protection, 2017). This is based on 2013 guidance from the European Commission that set out a three-pronged framework to address child poverty. These prongs were "access to adequate resources; access to affordable quality services; and children's right to participate." (Ireland, Department of Employment Affairs and Social Protection, 2017, p. 11).

With regard to adequate resources, Ireland provides a number of different income supports for families with children. The government offers a Child Benefit, which is a monthly payment payable to the parents or guardians of children under the age of 16, or under the age of 18 if the child is in full-time education, full-time training, or with a disability and cannot support themselves (Ireland, Department of Employment Affairs and Social Protection, 2018). Ireland also offers:

- Increases in some social welfare payments for each qualified child,
- Family Income Supplement,
- Back to School Clothing and Footwear Allowance,
- School Meals,
- Back to Work Family Dividend (allowing parents to combine welfare and work),
- Domiciliary Care Allowance (for children under age 16 with a severe disability),
- Fuel Allowance, and
- Exceptional Needs Payments (Ireland, Department of Employment Affairs and Social Protection, 2017).

The Irish government also has programs intended to make quality child care more affordable and accessible. A detailed report provided by Ireland's Department of Employment Affairs and Social Protection (2017) describes in depth how the Irish government is tackling child poverty and reports that in 2015, the country saw its first reduction in the number of children in consistent poverty since 2008.

REFERENCES

Autor, D. H. (2014). Skills, education, and the rise of earnings inequality among the "other 99 percent." *Science, 344* (6186), 843–851.

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Fanjul, G. (2014, September). *Innocenti Report Card 12*. Florence, Italy: United Nations Children's Fund.

Ireland, Department of Employment Affairs and Social Protection. (2017, October). *Better Outcomes, Brighter Futures: Whole of Government Approach to Tackling Child Poverty*. Available: https://www.welfare.ie/en/downloads/WholeOfGovernmentApproachToTacklingChildPoverty_BOBF_Final.pdf [April 19, 2018].

Ireland, Department of Employment Affairs and Social Protection. (2018, April). *Your Guide to Our Schemes and Services: Families and Children*. Available: https://www.welfare.ie/en/pdf/DK6.pdf [April 19, 2018].

Isaacs, J. B., Lou, C., Hahn, H., Ovalle, J., and Steuerle, C.E. (2018). *Kids' Share 2018: Report on Federal Expenditures on Children Through 2017 and Future Projections*. Washington, DC: Urban Institute. Available: https://www.urban.org/sites/default/files/publication/98725/kids_share_2018_0.pdf [August 30, 2018].

Nichols, A. (2013). *Explaining Changes in Child Poverty Over the Past Four Decades*. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/explaining-changes-child-poverty-over-past-four-decades [August 29, 2018].

Whiteford, P. (2014). Australia bucks child poverty trend but the future looks a lot bleaker. *The Conversation*, October. Available: https://theconversation.com/australia-bucks-child-poverty-trend-but-the-future-looks-a-lot-bleaker-33456 [November 8, 2017].

Wimer, C. (2017). *Original Analyses Commissioned for the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years*.

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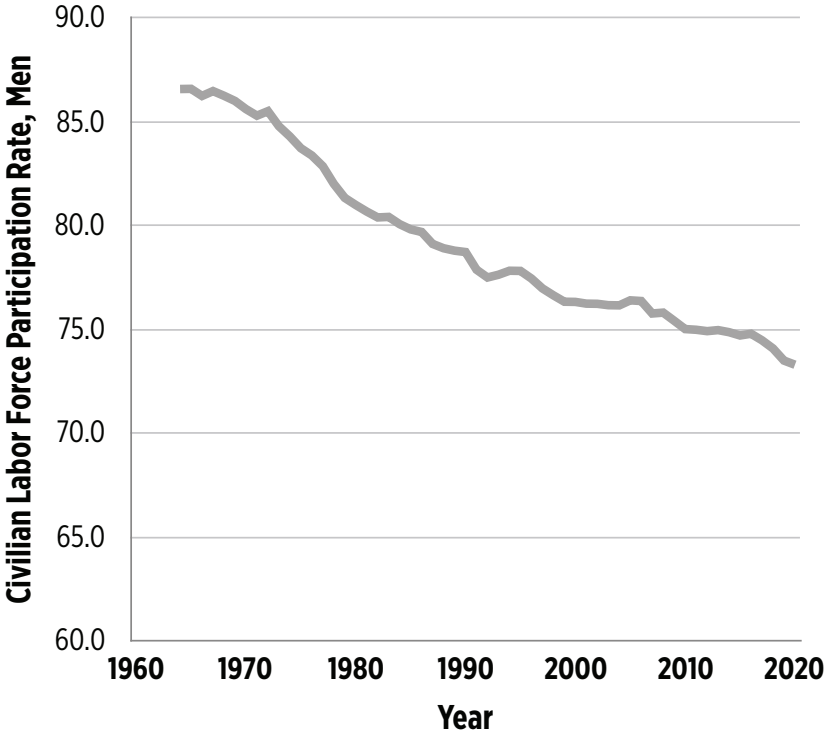

FIGURE D4-1 Trend in male labor force participation rate, 1960–2016.
NOTE: Civilian labor force participation rate for men, annual, seasonally adjusted.
SOURCE: U.S. Bureau of Labor Statistics, *Civilian Labor Force Participation Rate: Men* [LNS11300001], retrieved from FRED, Federal Reserve Bank of St. Louis. Available: https://fred.stlouisfed.org/series/LNS11300001 [April 12, 2018].

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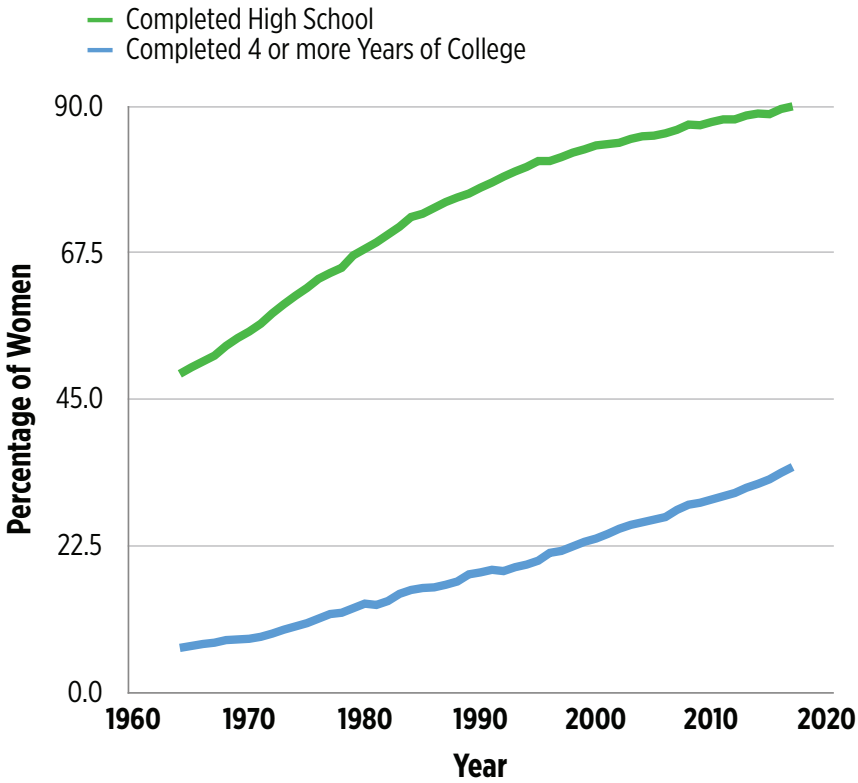

FIGURE D4-2 Trends in educational attainment of women by completed schooling, 1962–2017 (selected years).
NOTE: Percent of women 25 years and over who have completed high school or college.
SOURCES: Data for 1952 to 2002 from March Current Population Survey; data for 2003 to 2017 from Annual Social and Economic Supplement to the Current Population Survey (noninstitutionalized population, excluding members of the Armed Forces living in barracks); 1950 Census of Population and 1940 Census of Population (resident population).

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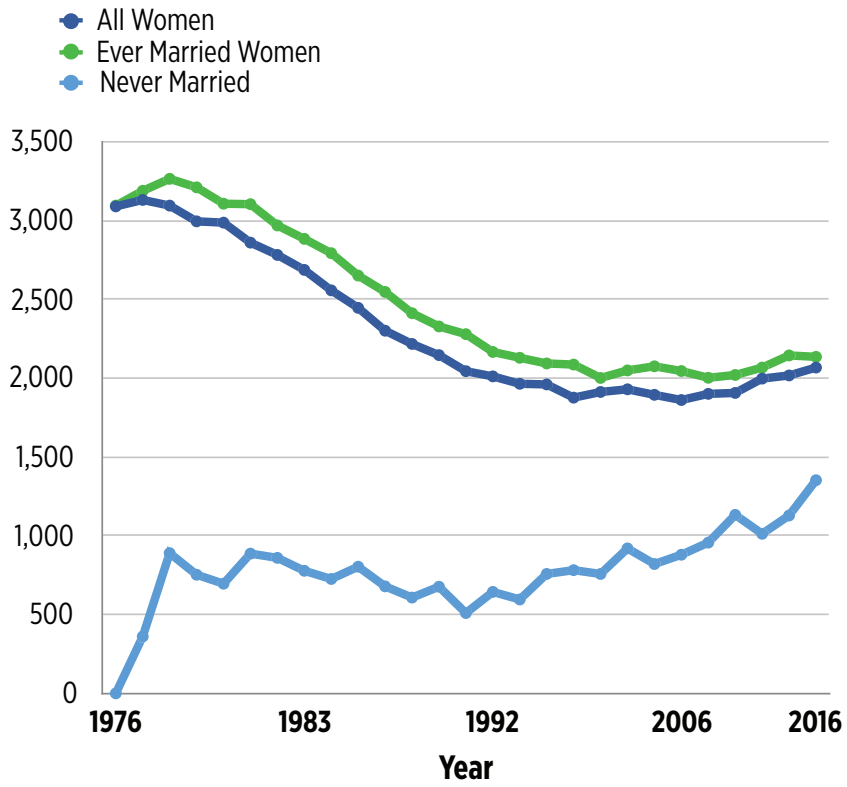

FIGURE D4-3 Total Fertility Rate, by marital status, 1976–2016.
NOTE: Fertility rate for children born per 1,000 women aged 40–44 by marital status from 1976 to 2016. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see the technical documentation available at https://www.census.gov/programs-surveys/cps/technical-documentation.html.
SOURCE: U.S. Census Bureau, Current Population Survey, June 1976–2016.

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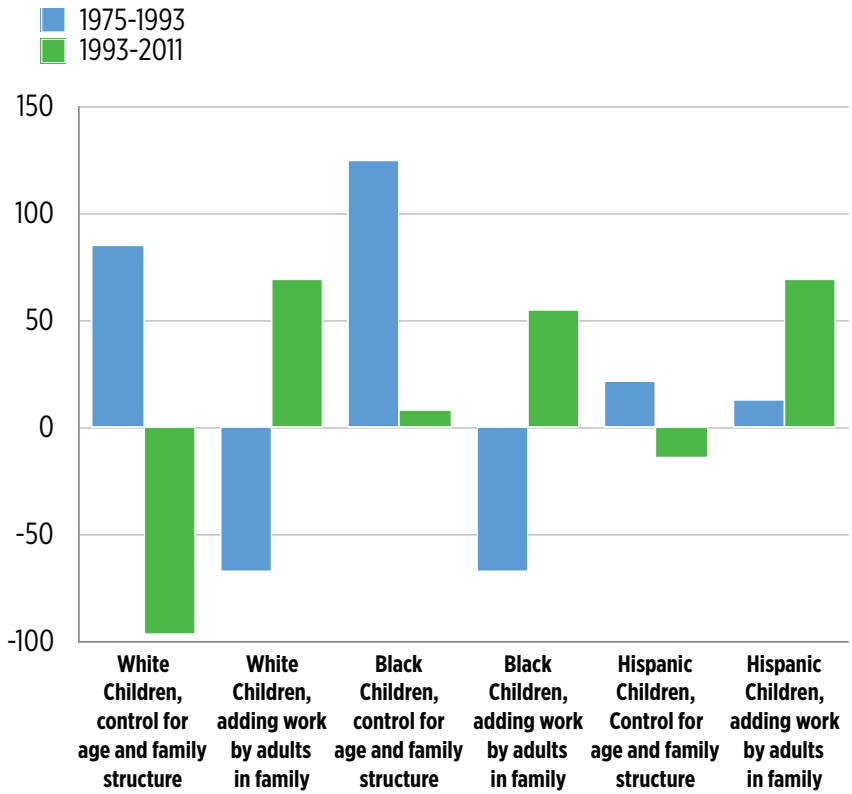

FIGURE D4-4 Explaining changes in child poverty over the past four decades. SOURCE: Adapted from Nichols (2013).

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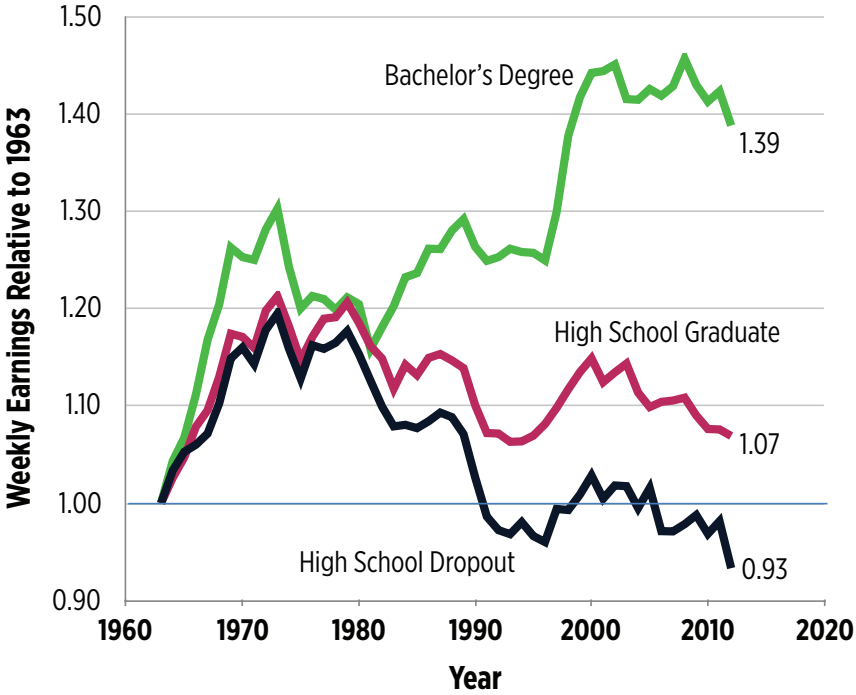

FIGURE D4-5 Changes in real median weekly earnings of full-time, full-year male workers, 1963–2012.
NOTE: Conversion to real 2012 dollars using CPI-U-RS price series.
SOURCE: Autor (2014).

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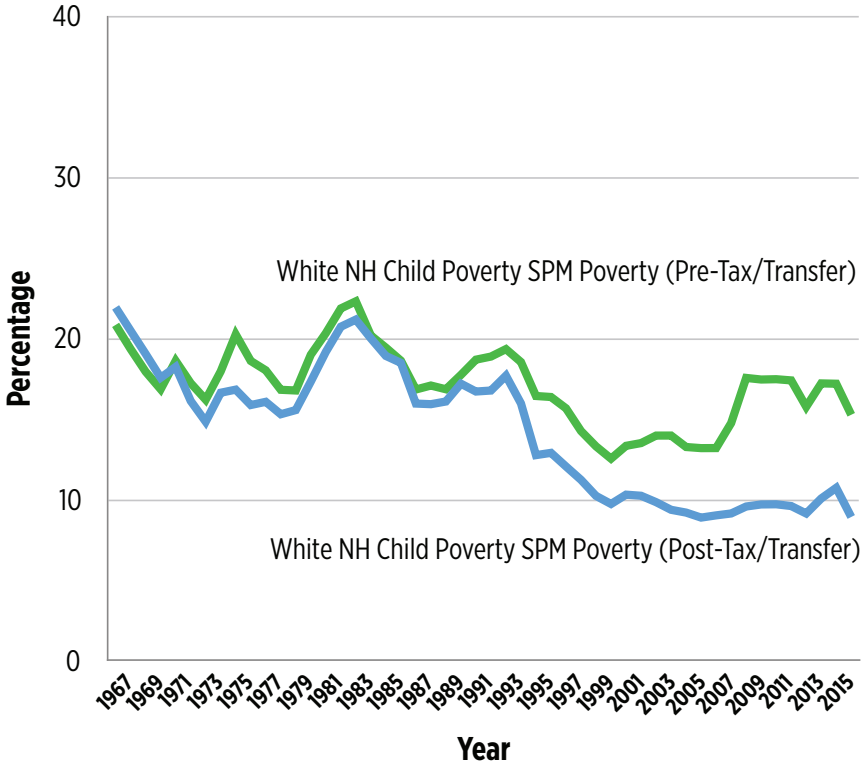

FIGURE D4-6 White non-Hispanic child poverty trends, 1967–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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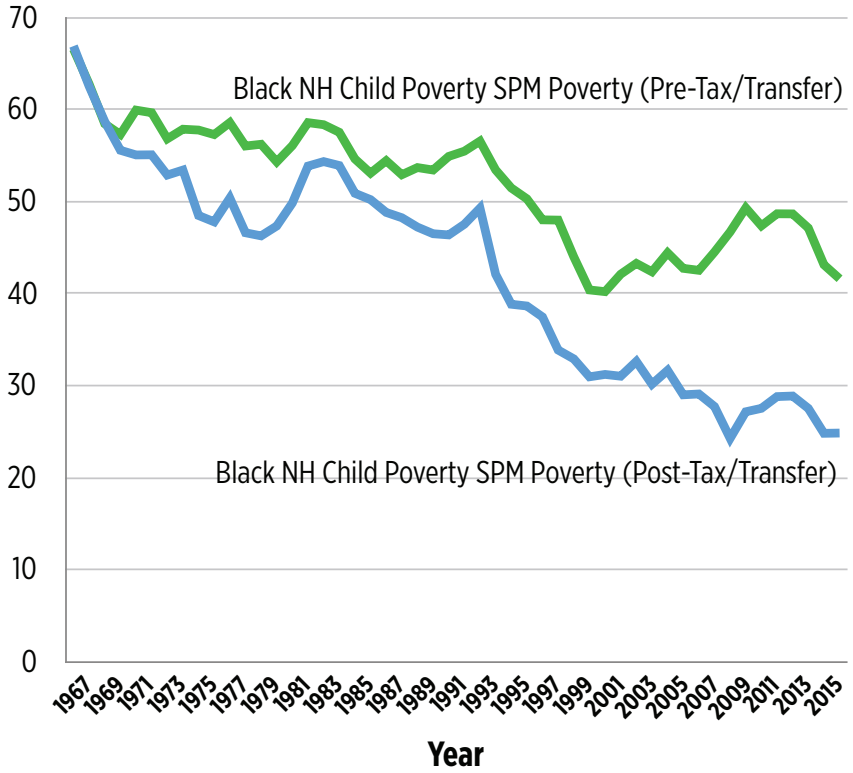

FIGURE D4-7 Black non-Hispanic child poverty trends, 1967–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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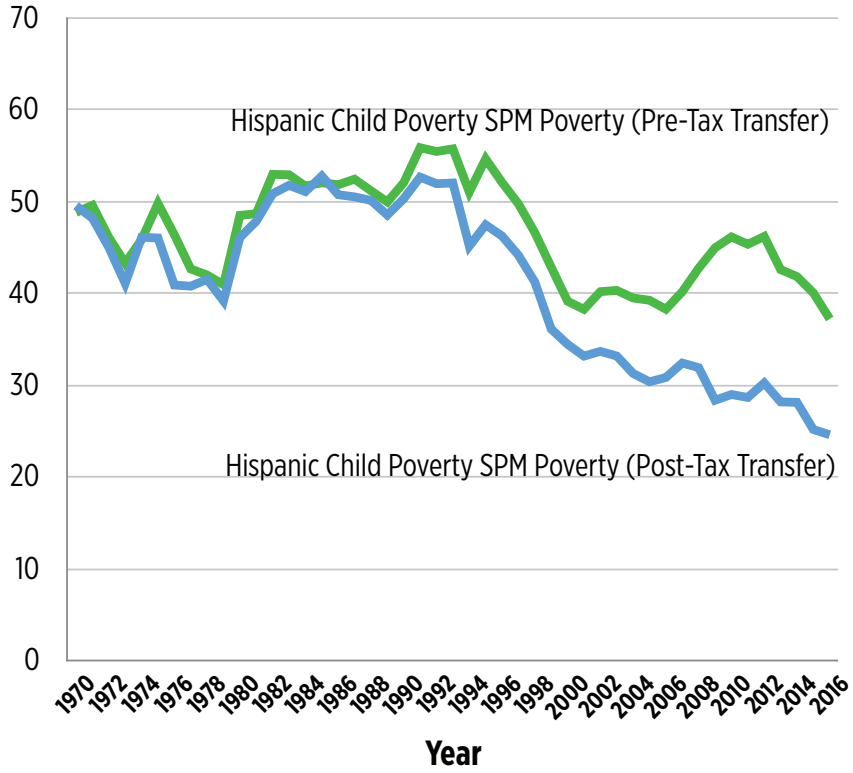

FIGURE D4-8 Hispanic child poverty trends, 1970–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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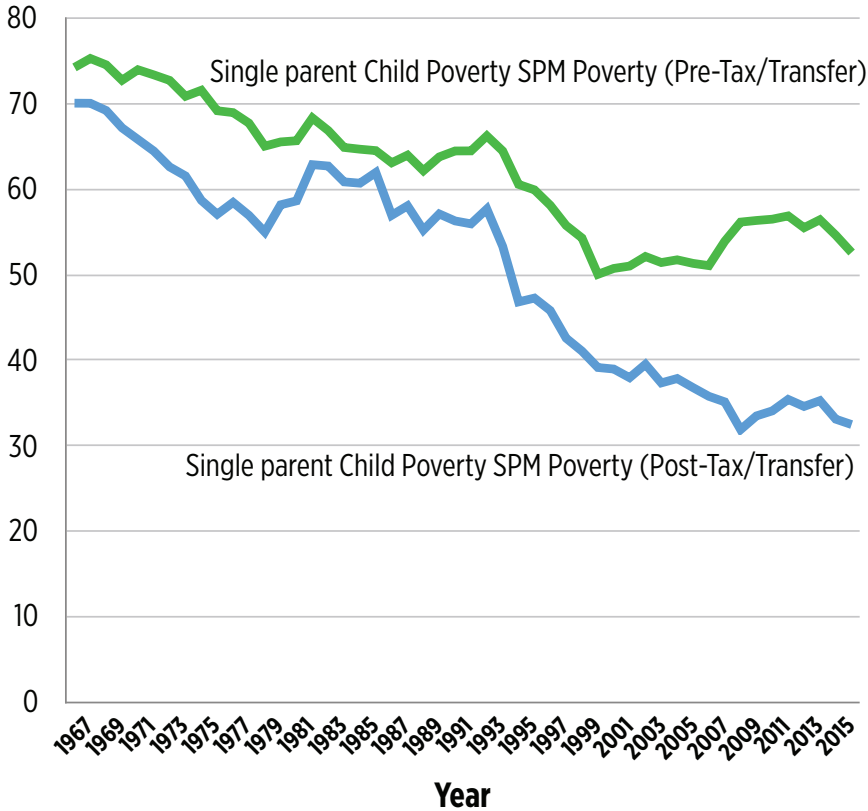

FIGURE D4-9 Single-parent child poverty trends, 1967–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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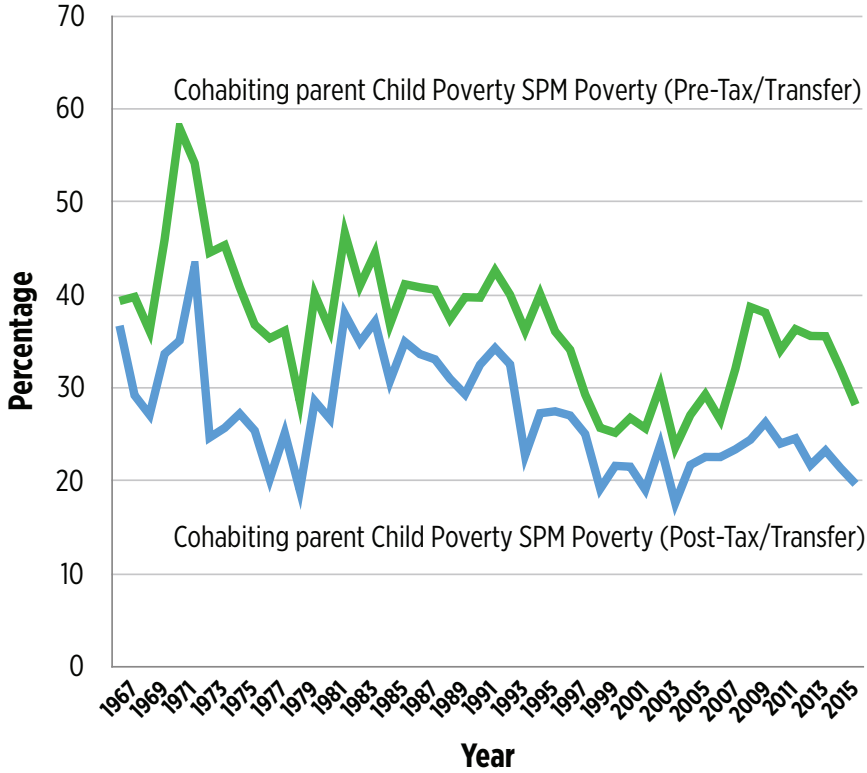

FIGURE D4-10 Cohabiting-parent child poverty trends, 1967–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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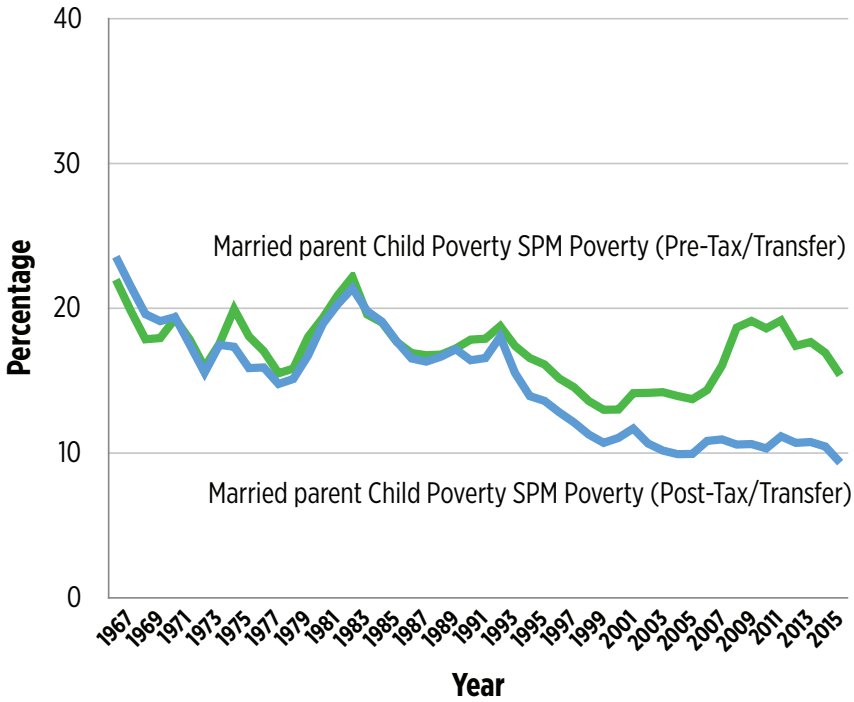

FIGURE D4-11 Married-parent child poverty trends, 1967–2016.
NOTE: "Pretax/Pretransfer" income was calculated by taking the total SPM resources and removing total taxes (tax credits and taxes paid), SNAP, WIC, School Lunch, LIHEAP, housing subsidies, TANF, SSI, Social Security, Unemployment Insurance, and a few smaller government insurance payments such as veteran's assistance.
SOURCE: Wimer (2017).

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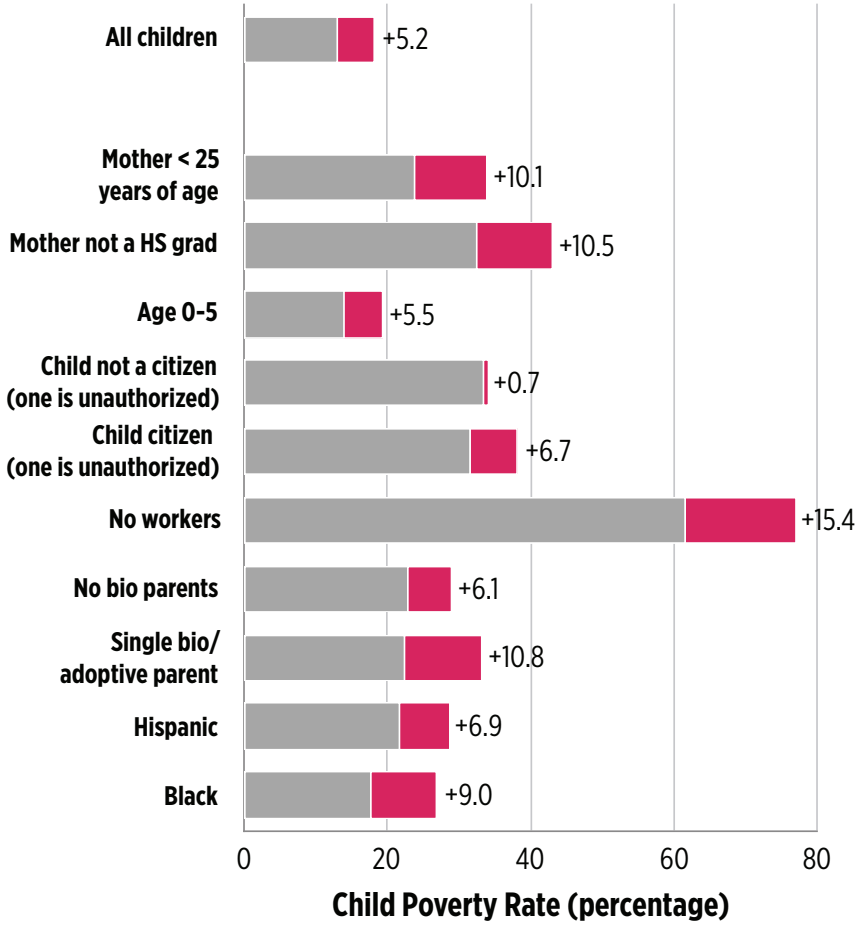

FIGURE D4-12 Child poverty rates using <100 percent TRIM3 SPM if SNAP program benefits were eliminated, by demographic focal group.
NOTE: Family incomes are adjusted for underreporting.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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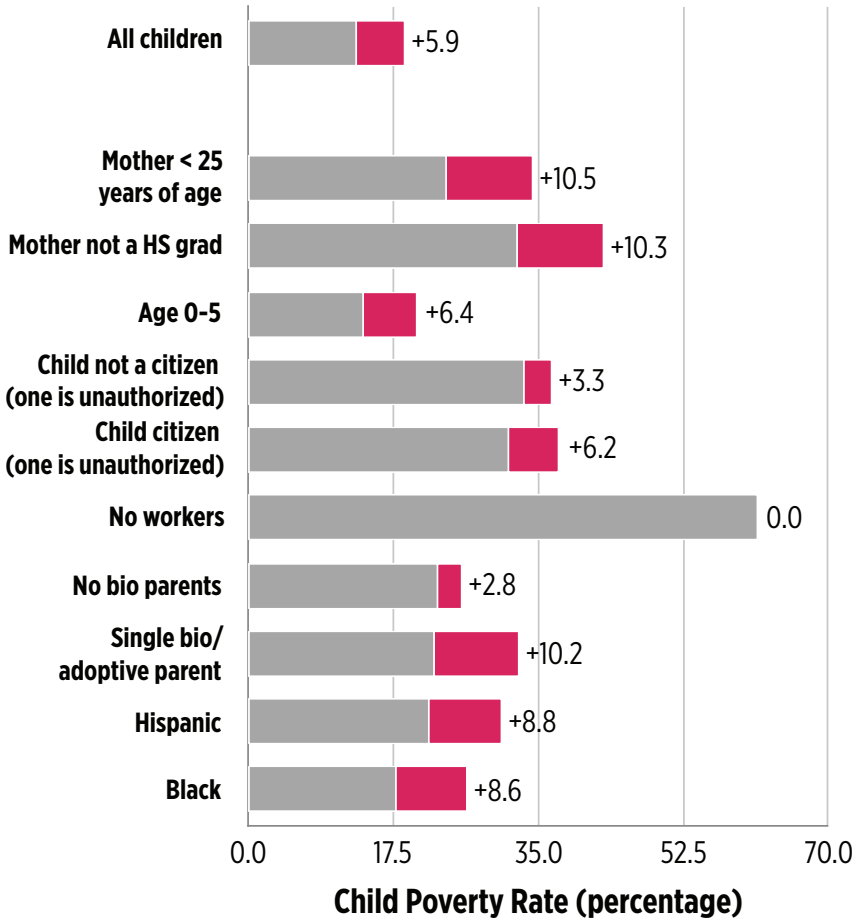

FIGURE D4-13 Child poverty rates using <100 percent TRIM3 SPM if EITC and ACTC program benefits were eliminated, by demographic focal group.
NOTE: Family incomes are adjusted for underreporting.
SOURCE: Estimates from TRIM3 commissioned by the committee.

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TABLE D4-1 Federal Expenditures in the United States on Children by Program, Selected Years, 1960–2017 (in billions of 2017 dollars)

	1960	1980	2000	2010	2017
Nutrition	1.5	22.5	30.9	60.8	58.0
SNAP (Food Stamps)	—	11.7	13.4	36.1	30.6
Child Nutrition	1.5	9.1	12.7	18.3	22.3
WIC	—	1.6	4.8	6.4	5.0
Income Security	14.6	33.6	46.4	58.0	54.3
Social Security	7.0	17.7	18.6	22.3	20.8
AFDC/TANF	4.8	11.0	15.9	17.2	12.8
Supplemental Security Income	—	0.9	6.7	11.0	10.5
Veterans Compensation (Disability Compensation)	2.5	3.5	2.1	3.5	6.8
Child Support Enforcement	—	0.9	4.4	4.9	4.1
Other Income Security	0.3	-0.4	-1.3	-1.0	-0.6
Housing	—	2.8	8.3	10.7	9.5
Section 8 Low-Income Housing Assistance	—	1.4	6.5	8.0	7.7
Low-Rent Public Housing	—	0.6	1.1	1.3	1.0
Other Housing	—	0.8	0.8	1.4	0.7
Refundable Portions Of Tax Credits	—	3.1	34.5	81.8	74.0
Earned Income Tax Credit	—	3.1	33.3	54.8	53.1
Child Tax Credit	—	—	1.1	25.4	19.4
Premium Tax Credit	—	—	—	—	0.6
Other Refundable Tax Credits	—	—	—	1.6	0.8
Tax Reductions	41.2	50.1	93.1	105.1	106.2
Dependent Exemption	40.6	42.3	39.7	36.0	37.8
Exclusion for Employer-Sponsored Health Insurance	NA	4.1	13.7	21.5	22.9
Child Tax Credit (Non-Refundable Portion)	—	—	26.8	33.4	29.9
Earned Income Tax Credit (Non-Refundable Portion)	—	1.8	5.9	5.3	7.0
Dependent Care Credit	—	—	3.2	3.8	3.3
Other Tax Reductions	0.7	1.9	3.7	5.1	5.3
Health	0.2	7.6	36.8	95.1	111.9
Medicaid	—	6.9	32.8	80.7	89.9
Chip	—	—	1.7	8.5	15.4
Vaccines for Children	—	—	0.7	4.0	4.4
Other Health	0.2	0.8	1.6	1.9	2.1

NOTE: CHIP = Children's Health Insurance Program; WIC = Special Supplemental Nutrition Program for Women, Infants, and Children.
SOURCE: Adapted from Isaacs et al. (2018).

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TABLE D4-2 Estimated Change in Child Poverty If Current Programs Were Eliminated

	Social Security[a]	UC, WC, other	Federal EITC, ACTC	SNAP	Housing Subsidies	SSI	Other benefits[b]
Change in number of children by poverty level (thousands)							
< 100%	1,715	524	4,375	3,829	1,328	1,346	1,917
< 50%	1,095	240	615	2,049	300	779	716
50% to <100%	620	285	3,760	1,780	1,028	568	1,201
100% to <150%	-357	80	-1,311	-2,361	-958	-709	-514
Percentage point change in children in each poverty range							
< 100%	2.3	0.7	5.9	5.2	1.8	1.8	4.1
< 50%	1.5	0.3	0.8	2.8	0.4	1.1	1.0
50% to < 100%	0.8	0.4	5.1	2.4	1.4	0.8	1.6
100% to < 150%	-0.5	0.1	-1.8	-3.2	-1.3	-1.0	-0.7

NOTE: ACTC = Additional Child and Dependent Care Tax Credit; EITC = Earned Income Tax Credit; Other = Veterans Benefits (non means-tested), State Temporary Disability Benefits, and Black Lung Miner Benefits; SNAP = Supplemental Nutrition Assistance Program; SSI = Supplemental Security Income; UC = Unemployment Compensation; WC = Worker's Compensation.

[a] Social Security includes Social Security Income (including Social Security Retirement, Social Security Disability, Social Security Survivors, and Railroad Retirement).

[b] Other benefits include Temporary Assistance for Needy Families (TANF), Solely State-Funded Assistance, Other public assistance, means-tested veterans' benefits, means-tested education assistance, Low Income Home Energy Assistance Program (LIHEAP), National School Lunch Program, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

SOURCE: Original analyses commissioned by the committee from TRIM3.

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APPENDIX D, 5-1
ADJUSTING ESTIMATES OF POVERTY REDUCTION FOR BEHAVIORAL EFFECTS

As discussed at the beginning of Chapter 5, tax and transfer programs may change behaviors in ways that could magnify or moderate program impacts on poverty. Key behaviors involve labor market (employment and hours of work) and family structure choices (marriage and fertility). For example, evidence consistently suggests that the Earned Income Tax Credit (EITC) increases employment and earnings among single mothers (Nichols and Rothstein, 2016). This strong pro-work effect (coupled with little evidence of earnings reduction for those already in the labor market) strengthens the anti-poverty effect of the program over what it would be if family income only increased by the amount of the initial benefit. On the other hand, that benefits phase out at higher income levels in income-tested programs like the Supplemental Nutrition Assistance Program (SNAP), public housing, and the Supplemental Security Income (SSI) program can lead to reductions in employment and/or hours worked. Earning reductions weaken the anti-poverty effects of the programs over what they would be if family income only increased by the amount of the benefit.

A large volume of scholarly research on behavioral effects of policies over the last 40 years has shown that policies can and sometimes do affect employment and hours of work, although the magnitude of the impacts vary across studies and often appear only for some population groups. However, while transfer programs frequently affect the employment and hours of work of their recipients, a given program's caseload is often too small to change the aggregate poverty rate very much, leading one recent review to conclude that, while there are significant behavioral side effects of many programs, they have little effect on the aggregate poverty impact of the safety net system (Ben-Shalom, Moffitt, and Scholz, 2012). Nevertheless, because behavioral effects on employment and hours of work can be nonnegligible if the caseload is large and if the impact on recipients is significant, the committee's judgments regarding consensus estimates of these behavioral effects are incorporated in the poverty estimates reported in Chapters 5 and 6. Program-by-program details on our behavioral assumptions are provided in this appendix, with additional implementation details provided in Appendix F.

A smaller research literature attempts to estimate behavioral effects of programs and policies on family structure and childbearing. As described in Chapter 7, estimates from this research are much more tenuous and variable than those for the effects of programs and policies on labor market behavior. More often than not, no statistically significant responses are found. As a result, the committee did not simulate behavioral responses on family structure and childbearing. We refer to this evidence selectively below.

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APPENDIX D, 5-2
MODIFICATIONS TO THE EARNED INCOME TAX CREDIT

The committee simulated the impacts of two policy options for the EITC:

EITC Policy #1: Increase payments along the phase-in and flat portions of the EITC schedule.

This option was proposed in Giannarelli et al. (2015) and based on 2011 data. We adapt their proposal to our 2015 data. Specifically, the revised credit would phase in at a greater rate, reach the "plateau" region (where the credit does not increase with earned income) at an earlier point, and begin decreasing the credit at a lower level of income (but at the same marginal tax rate).

EITC Policy #2: Increase payments by 40 percent across the entire schedule, keeping the current earnings eligibility range.

Appendix F provides the details of these two proposed policy changes.

Behavioral Responses to Expanding the EITC

A central feature of the EITC is that it requires earned income to be eligible. The credit is phased in at low earnings levels and then phased out at higher earnings levels. For single earner families, the EITC leads to increases in employment (Eissa and Liebman, 1996; Grogger, 2003; Hoynes and Patel, 2018; Meyer and Rosenbaum, 2000, 2001). The effects are large—the 1993 expansion led to a 7 percentage point increase in employment for low educated single women (Hoynes and Patel, 2018), consistent with the high subsidy rate in the phase-in region of the credit (40% for single parents with two or more children).

The credit is predicted to reduce labor supply for those in the labor market for all but the lowest-earning single parent workers (e.g., those in the phase-in region have negative income effects but positive substitution effects). However, there is little empirical support for this prediction other than some evidence that self-employed workers adjust to maximize the credit along the phase-in region (Chetty, Friedman, and Saez, 2013; Chetty and Saez, 2013; Saez, 2010). Theory is more complicated for two earner couples, but we expect secondary earners to reduce work effort at the extensive (employment) and intensive margin (hours of work) of labor supply. The research shows small reductions in employment and intensive margin responses for secondary earners and little effect on primary earners (Eissa and Hoynes, 2004, 2006).

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The EITC may affect *pretax* wages. To the extent that the EITC increases labor force participation, tax incidence models suggest that the earnings subsidy in the EITC will be shared between the employers and employees. The implication is a reduction in the pretax wage, allowing employers of EITC recipients to capture a portion of the money spent on the EITC. There is limited evidence on the magnitude of the wage effects (Leigh, 2010; Rothstein, 2008, 2010) yet a recent review concluded "Although none of the evidence is airtight, it appears that employers of low-wage labor capture a meaningful share of the credit through reduced wages and that this comes to some extent at the expense of low-skill workers who are not eligible for the credit (due, e.g., to not having children)" (Hoynes and Rothstein, 2017, p. 214).

The EITC also creates incentives for low-income one-earner couples to marry and creates incentives for low-income two-earner couples to avoid marriage or separate. Therefore, the EITC, like ordinary income taxes, creates marriage penalties for some and marriages bonuses for others; these incentives are inherent in a family-based tax system. Because the credits increase with the number of children, they may incentivize additional births. For marriage, the evidence is largely inconclusive and any effects appear to be quite small (Ellwood, 2000; Herbst, 2011; Michelmore, 2018; Rosenbaum, 2000). There is less evidence on the effects of the EITC on fertility (Baughman and Dickert-Conlin, 2009) but again the results suggest small effects.

To incorporate behavioral adjustments into the TRIM3 model, we start by identifying estimates from the literature. Based on the research papers we have referenced above, we make the following assumptions:

- *Single mothers / Extensive margin:* We assume that a $1,000 in EITC payments (in 2013 dollars) will generate a 7 percent (5.6 percentage point) increase in employment for women with some college or less (all education groups). [Source: Hoynes and Patel, 2018]
- *Single mothers / Intensive margin:* We assume no adjustment in hours or earnings.
- *Single fathers:* We assume no adjustment of labor supply.
- *Married couples / Extensive margin:* We assume that there is no adjustment for married men and that the magnitude of the 1984–1996 increase in the EITC leads to a 1.1 percentage point reduction in employment for married women. [Source: Eissa and Hoynes, 2004]
- *Married couples / Intensive margin:* We assume that there is no adjustment for married men and that the magnitude of the 1984–1996 increase in the EITC leads to a 46 annual hours reduction in employment for married women. [Source: Eissa and Hoynes, 2004]

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TABLE D5-1 Behavioral Assumptions for the Two EITC Policy Options

	Single Mother Extensive Margin	Married Mother Extensive Margin	Married Mother Intensive Margin
Policy #1: Increase Payments Along Phase-in and Flat Portions of the EITC Schedule	+3 ppt	No Change	No Change
Policy #2: Increase Payments by 40% Across the Entire Schedule	4 Times Policy A	4 Times Policy A	4 Times Policy A

Given these estimates from the literature, Table D5-1, shows the behavioral assumptions that we implement in TRIM3, for each of the policy simulations. Appendix F provides the details of how these assumptions about the magnitude of the behavioral response are implemented in TRIM3.

The employment effects of both EITC-based policies are large. Policy #1 results in an additional 270,000 workers in the economy and is estimated to increase aggregate earnings by $4.9 billion.[41] Policy #2 generates a net increase of 541,000 workers and an earnings increase of $9.0 billion. These effects constitute a significant contribution to the poverty reduction of the policies. Policy #1 reduces child poverty from 13.0 percent to 12.2 percent without employment effects but down to 11.8 percent with those effects; for Policy #2, the reduction is to 12.1 percent without employment effects but 10.9 percent with them.

[41] As with all of the policy simulations in the report, data on earnings and employment changes are restricted to individuals living in families with incomes below 200 percent of the SPM poverty thresholds.

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APPENDIX D, 5-3
MODIFICATIONS TO CHILD CARE SUBSIDIES

The committee simulated the impacts of two policy options for expanding child care subsidies.

Child Care Policy #1: Convert the Child and Dependent Care Tax Credit (CDCTC) to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5.

This policy proposal expands the CDCTC along the lines suggested by Ziliak (2017) in his memo to the committee. Specifically, it would:

- Convert the CDCTC from a nonrefundable credit to a refundable credit;
- Cap the eligibility for CDCTC at $70,000;
- Make the CDCTC credit a progressive function of adjusted gross income (AGI) and age of child (based on the fact that the cost of child care is higher for infants and toddlers than older children). For families with children under the age of 5 and an AGI less than or equal to $25,000, the credit rate would be 100 percent up to $4,000 in qualifying child care expenses for the first child, with maximum allowable expenses of $6,000 for two or more children. The credit rate declines by 10 percent for each additional $5,000 in AGI, and is set to zero for an AGI above $70,000. For families with children ages 5-12, the credit rate would be 70 percent for families with an AGI below $25,000 and decline by 7 percent for each additional $5,000 in AGI above $25,000; and
- Keep the definition of "qualifying child care expenses" the same as current policy; both formal and informal child care expenses would qualify if the child care provider has a tax identification number.

The ceilings for qualifying child care expenses stipulated above derive from two sources: (1) Ziliak's (2014) calculations of data on out-of-pocket child care costs pooled across the 2012–2013 waves of the Current Population Survey, and (2) estimates of child care costs from the National Association of Child Care Resource and Referral Agencies. Calculations based on the Current Population Survey indicated that for single working mothers with a child under age 5, median family earnings was $19,200 and median out-of-pocket child care costs was $3,000, with an interquartile range of $4,400 in out-of-pocket child care costs (interquartile range is the difference between the 75th percentile and the 25th percentile of out-of-pocket child care costs). For single working mothers with a child under age 13, median

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family earnings was $23,088 and median out-of-pocket child care costs was $2,600, with an interquartile range of $3,800.[42]

Child Care Policy #2: Guarantee assistance from the Child Care and Development Fund (CCDF) for all eligible families with incomes below 150 percent of the poverty line.

This policy option was proposed in Giannarelli et al. (2015) and would expand CCDF subsidies to guarantee assistance for all eligible families with incomes below 150 percent of poverty who want subsidies, with no limitations based on available funds (Giannarelli et al., 2015). States that currently use an income limit for child care subsidies that is higher than 150 percent of poverty were assumed to continue using those higher limits. This option does not include any changes to the states' other eligibility policies—such as the definition of family units—or to the states' methods for computing copayments.

Behavioral Responses to Expanding Child Care Subsidies

A large body of research indicates that government child care subsidy programs increase employment rates among mothers in low-income families. Blau (2003) and Blau and Tekin (2007) report findings from several local-area reforms in the 1980s and early 1990s showing positive impacts on employment. Studies of the impact of the CCDF, one of the programs in our proposal, have also been conducted or reviewed by Blau and Tekin (2007), Fang and Keane (2004), and Tekin (2007). The CCDF was found to increase employment of single mothers by 0.1 to 1.3 percentage points between 1997 and 2002 in one study and by a much larger 13 percentage points in another.

We base our estimated employment responses to both the CDCTC and the CCDF on a review by Blau (2003) of the general impacts of child care subsidies on maternal labor supply. Blau reviewed a large number of studies that had provided estimates of the elasticity of employment with respect to a change in the net hourly cost of child care (the latter defined as the out-of-pocket cost of care per hour of work). The studies he reviewed showed elasticities ranging from -0.34 to 0.07. We take the midpoint of this range, equal to -0.20, implying that a 10 percent reduction in the hourly cost of child care will increase the employment rate by 2 percent. We apply this elasticity to the percentage decrease in aggregate out-of-pocket child care spending due to the policy change to compute the targeted employment

[42] See http://www.hamiltonproject.org/assets/legacy/files/downloads_and_links/child_care_credit_ziliak.pdf.

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increase. The additional employment is then distributed randomly across women who, if they began to work, would benefit from the policy. Further implementation details can be found in Appendix F. The research literature focuses almost exclusively on the impacts of child care costs on employment rather than on hours of work conditional on employment. We therefore lacked sufficient research evidence to simulate effects at the intensive margin.

Both policy options have significant impacts on employment and earnings and these are responsible for essentially all of the poverty reduction. Child Care Policy #1 results in an additional 518,000 low-income workers in the economy and a net earnings increase in the economy is $9.3 billion. Child Care Policy #2 generates an additional 236,000 low-income workers and an aggregate net earnings increase of $4.2 billion. In the absence of any employment effects, the two policy options reduce child poverty from its initial 13.0 percent level to 12.7 percent and 12.9 percent, respectively. The employment effects reduce these rates down to the 11.8 percent and 12.4 percent reported in the text.

APPENDIX D, 5-4
MODIFICATIONS TO THE MINIMUM WAGE

The committee simulated two increases in the federal minimum wage:

Minimum Wage Policy #1: Raise the current $7.25 per hour federal minimum wage to $10.25 (moving from current level in 3 years 2017-2020) and index it to inflation after that.

Minimum Wage Policy #2: Raise the federal minimum wage to $10.25 *or* the 10th percentile of the state's hourly wage distribution, whichever is lower, and index it to inflation after that.

Policy #1 imposes this increase in all states. The $10.25 amount for 2020 is recommended in order not to disrupt the labor market in low wage states as measured by their wages at the 25th percentile of the wage distribution. It is similar to but below the Congressional Budget Office's (CBO's) (2014) and Sawhill and Karpilow's (2014) proposed minimum wage of $10.10 for 2017. Policy #2 follows Dube (2014), who recommends setting minimum wages to take account of local prevailing wages. We note below that all states have minimums below the 25th percentile of their wage distribution and that that percentile of their wage distribution is above the proposed $10.25 minimum wage for 2015 and 2016. But the 2015 and 2016 10th percentile wages would be affected in many states; hence the

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second simulation showed some increase from the $7.25 federal minimum wage, but a lesser increase in low wage states.[43]

The implementation of the increases follows the methodology of the CBO (2014) as closely as possible. For example, a tolerance of 25 cents below the minimum wage is used to identify individuals in the Current Population Survey who report a wage slightly below the minimum but who may have simply been misreporting. They are considered to be paid the minimum wage. Also, the CBO models a ripple effect of an increase in the minimum wage for workers above the new minimum, with the assumption that the wages of workers up to 50 percent more than the minimum wage also increase. Separate tipped minimum wages were assumed for tipped workers, and their minimums were increased by the same amounts as the overall minimums. More implementation details can be found in Appendix F.

Behavioral Responses to Raising the Minimum Wage

By raising the cost of labor, increases in the minimum wage are expected to reduce employment (while raising earnings for those receiving the minimum wage). For modeling this behavioral adjustment of the increase in the minimum wage, we again follow CBO (2014) as closely as possible. The CBO considered -0.075 for teenagers as a best estimate of the employment elasticity with respect to an increase in the minimum wage. This implies that a 10 percent increase in the minimum wage would reduce teen employment by 0.75 percent. CBO divided this elasticity by the fraction of teenagers who are likely be affected by the minimum wage increase, which they estimated to be one-third. This generates an elasticity of -0.225 for those teenagers actually affected. The CBO then adjusted the elasticity upward by 50 percent of its value because the change in actual wages was typically about that percent greater than the wage change that was necessary for compliance with the new minimum wage. The resulting elasticity for teenagers is -0.3375.

The CBO assumed the elasticity for adults would be one-third of that, or -0.1125. In its simulations, the TRIM3 model was used to calculate employment effects for each person in the model, using the actual change in wages for each individual and multiplying those by the relevant elasticities. No employment losses were assumed to occur for the spillover group. The

[43] The Bureau of Labor Statistics (BLS) Occupational Employment and Wage Statistics series has the 10th percentile of the wage distribution by state. See https://www.bls.gov/oes/2015/may/oessrcst.htm for the 2015 data. A summary of the statistics for other years has been compiled from BLS data by http://www.governing.com/gov-data/wage-average-median-pay-data-for-states.html.

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TRIM simulation indicated that 28 percent of families with children with incomes under 200 percent Supplemental Poverty Measure (SPM) poverty had at least one worker who was affected by the minimum wages. Simulations of the first policy show a loss of 42,000 jobs among individuals living in families with incomes below 200 percent of SPM poverty. The net increase in earnings for those who continued to work is $3.5 billion.[44] For the second policy, 28,000 jobs were lost and net earnings increased by $1.9 billion.

APPENDIX D, 5-5
SCALING UP WORKADVANCE

Based on an MDRC program evaluation (Hendra et al., 2016), the committee simulated the impacts of two policy options involving WorkAdvance.

> **WorkAdvance Policy #1:** All men heading families with children and income below 200 percent of the poverty line would be eligible for WorkAdvance programming and training slots would be created for 10 percent of them.

> **WorkAdvance Policy #2:** All men heading families with children and income below 200 percent of the poverty line would be eligible for WorkAdvance programming and training slots would be created for 30 percent of them.

We begin by restating a point made in Chapter 5: The evaluations of WorkAdvance enrolled men in all four of the evaluation sites but significant numbers of women in only one of them. Consequently, we considered results for women to be too statistically unreliable. We have no evidence-based reason to want to limit the program options for men but were forced to do so owing to the nature of the evidence. Also, our use of the term family "head" refers to individuals the U.S. Census Bureau defines as "householder" or spouses of "householders."

The 10 percent and 30 percent scale-up assumptions in our two policy proposals would both lead to large programs (487,000 and 1,464,000 enrollees, respectively, for the two programs) compared with the 2,564 enrollees in the MDRC experiment (Hendra et al., 2016) but still considerably less than the numbers of families affected by our other proposals.

[44] As might be expected, both job losses and net earnings changes are several times larger than these amounts in simulations based on the entire population as opposed to just those individuals living in families with incomes below 200 percent of SPM poverty. Of all of the program and policy options we consider, our minimum wage proposals are least targeted to children living below or near the poverty line.

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Nevertheless, the difference in impacts for our two proposals provides a sense of how the poverty impact would vary with program size. The enrollees in the MDRC experiment also had higher levels of education than the average in the population because a minimal level of skills was judged necessary to make the training program effective—56 percent of the MDRC study enrollees had at least some college and 44 percent had a high school degree or less. The proportions of enrollees simulated to receive training were therefore adjusted to meet this ratio. Our proposals therefore affect a more highly skilled population, with higher earnings, than most of our other policies.

The MDRC experimental results showed an average impact across all four sites of $1,900 per year in 2015 dollars, but the impacts varied by initial employment status. Those unemployed for 7 or more months experienced a gain of $1,933, those unemployed for 1 to 6 months experienced a gain of $3,112, and those unemployed for less than 1 month or who were employed experienced a loss of $327. The Current Population Survey data on which the TRIM3 model is based has information on the employment status of individuals and the length of time they have been unemployed, so the simulated earnings impacts were conducted separately for each of these three groups. The MDRC experiment enrolled participants in the three employment-status groups in these rough proportions: 40 percent, 30 percent, and 30 percent, respectively. The simulations selected men for the program in these same proportions.

Behavioral Responses to WorkAdvance

The nature of the program is such that no behavioral responses need be simulated on top of the direct creation of additional earnings. The simulation simply randomly selects men in the eligible category and in the proportions noted above, and assigns them the earnings levels just noted. The number of enrollees in the 10 percent and 30 percent programs is simulated to be 487,000 and 1,464,000, respectively. Aggregate earnings increase by $817 million per year for the first program and by $2.4 billion for the second. The direct administrative cost is $2.99 billion and $8.99 billion, respectively, for the two programs, but the increased earnings of enrollees results in additional tax revenues and reduced benefits from other programs, for savings of $271 million for the first program and $801 million for the second program.[45] The resulting net costs are $2.72 billion and $8.19 billion, respectively.

[45] MDRC reports the direct administrative cost of WorkAdvance as $5,950 per enrollee in 2012 dollars, or $6,142 in 2015 CPI-U dollars.

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APPENDIX D, 5-6
MODIFICATIONS TO THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP)

The committee simulated two SNAP policy options:

SNAP Policy #1: Increase SNAP benefits by 20 percent and make adjustments for the number of children greater than or equal to 12 years of age in the home ($360 more per each teenager per year) plus Summer Electronic Benefit Transfer for Children (SEBTC) ($180 more per child in pre-kindergarten through 12th grade per year).

SNAP Policy #2: Increase SNAP benefits by 30 percent and make adjustments for the number of children greater than or equal to 12 years of age in the home ($360 more per each teenager per year) plus Summer Electronic Benefit Transfer for Children (SEBTC) ($180 more per child in pre-kindergarten through 12th grade per year).

Both the general benefit increase and the teen adjustment were implemented by increasing the Thrifty Food Plan (TFP) allotments by these amounts.

In formulating these options, the committee reviewed memos received from several experts and used these as the basis for formulating its policy options that were simulated using the TRIM3 model (Allen, 2017; Sherman, 2017; Ziliak, 2017). The first two memos recommended that the SNAP benefit, currently set at the U.S. Department of Agriculture's (USDA's) TFP level, be increased to the USDA's Low-Cost Food Plan level, a 30 percent increase, which Allen and Sherman estimate to reduce poverty by 16 percent. For a family of three, this would amount to an increase of about $1,896 per year in SNAP benefits, according to Sherman (2017). Ziliak (2017) proposed a 20 percent increase, based on a completely different rationale. He argued that the TFP does not take into account the amount of time necessary for food preparation. Ziliak cites research indicating that 13 to 16 hours per week of food preparation time is needed to achieve the TFP, which is impossible for adults who are working full time and, in fact, almost no parents currently spend anywhere close to that amount of time in food preparation. Adults who work must instead economize on their time and purchase more expensive food. He cites research that valued the time that must be given up to prepare food at the hourly wage rate; the results suggest about a 20 percent increase in the SNAP benefit.

Another issue examined in the policy simulations was an adjustment to SNAP benefits to account for the age of the children in the home. Currently, SNAP benefits do not account for the age of children (USDA assumes, for the TFP calculation, that there are two children under the age of 12

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in the home). Ziliak (2017) mentions this as an issue, noting that dietary requirements for teenagers are almost as high as those for adults. Further, food insecurity has been repeatedly shown to be higher among families with teenagers (Nord, 2009). Anderson and Butcher (2016) demonstrated that families with teenagers have higher unmet food needs and suggested that an additional $30 SNAP benefit per month per capita would eliminate that need.

A third issue that the committee considered was the addition of the Summer Electronic Benefit Transfer for Children (SEBTC). This benefit is designed to address food gaps for children during the summer when they lack access to school-based food assistance programs. USDA has piloted this in five states, in three of which benefits were distributed via the SNAP model. In 2013, they used an experimental design to test two levels of support, $60 or $30 per month per child in pre-kindergarten through 12th grade. The $60 per month amount was found to reduce very low food security for children by 26 percent and also helped improve food security for the entire family. The $30 per month amount yielded similar impacts on children, but was less effective for the household (Collins et al., 2016).

TRIM3 Implementation

The implementation of the increase in SNAP benefits and the increase in the teen increment in the TRIM3 model was implemented by increasing the TFP allotment. This increases benefits for SNAP recipients at all income levels and also increases the income eligibility point in SNAP, although only in cases where the maximum income limit was not hit first. All other features of the SNAP benefit formula were left unchanged. The TRIM3 model has a participation equation which predicts how many eligible families participate in the program as a function of the benefit level and family characteristics. This equation was used to simulate families who would begin to receive program benefits after the benefit increase. For the SEBTC, since all children participating in the School Breakfast Program (SBP) or National School Lunch Program (NLSP) are eligible for SEBTC, and since SNAP receipt makes a family eligible for SBP or NLSP, SNAP receipt was used as the criterion for receiving the SEBTC. An SEBTC of $60 was added as a lump sum to the SNAP benefit for each of the three summer months a family with a child in school received SNAP. Since the SEBTC is also provided to children in pre-school, those families were also simulated to receive SEBTC, using a 40 percent takeup rate for 3-year-olds in poor families, a 50 percent takeup rate for 4-year-olds in poor families, a 35 percent takeup rate for nonpoor families with 4-year-olds, and a 66 percent takeup rate for families with a 5-year-old (all based on studies of preschool enrollment rates of children of different ages and poverty statuses).

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Behavioral Responses to Expanding SNAP

A handful of studies estimate the effects of the SNAP program and its predecessor, the Food Stamp Program, on employment, earnings, and labor supply (see reviews by Currie, 2003; Hoynes and Schanzenbach, 2016). Most studies have found very modest negative effects of the program, possibly because the rate at which benefits are phased out as income increases (30%) is fairly modest. We rely on the estimates of Hoynes and Schanzenbach (2012) which used the rollout of the Food Stamp Program in the 1970s to assess the effects of the program on work effort. Those authors found that the program reduced the employment rate of single mothers from 11 to 27 percentage points, with a midpoint estimate of 19 percentage points. They also found a reduction in annual hours of work from 281 to 505, with a midpoint of 393. The 20 percent increase in benefits in the committee's proposal is about one-fifth of the rollout benefit increase, which would amount to a 3.8 percentage point reduction in employment and a reduction in annual hours of 78.6. Because the rollout is relatively old and occurred when there were few other programs, we posit a lower bound estimate of 1 percentage point reduction in employment and a 50-hour reduction in annual hours. For cost reasons, we conduct only one simulation and use the midpoint of our upper and lower bound estimates for single mothers, for a 2.4 percentage point reduction in employment and a 64.3 reduction in annual hours. For single mothers made newly eligible for SNAP because of the higher income eligibility level (and hence lower benefits), we assume no employment reduction but a 25-hour-per-year hours reduction.

There is much less research on effects of the program on work effort of married men and married women with children. We assume no employment reduction for men and an upper bound of 0.5 percentage point reduction employment for married women, with a lower bound of 0 and hence an average of 0.25 percentage points. We assume no response for those made newly eligible.

The simulations show a reduction of 139,000 workers for the first SNAP reform and 157,000 for the second. The aggregate earnings reduction is $3.2 billion for the first SNAP reform and $3.6 billion for the second. Benefits increase modestly from other programs but the main cost of the reforms is the direct cost of additional SNAP benefits. The child poverty rate after implementation of the first policy would have been 11.0 percent in the absence of employment effects instead of the 11.3 percent we report in the text. For the second policy, the rate would have been 10.4 percent instead of the 10.7 percent we report.

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APPENDIX D, 5-7
MODIFICATIONS TO HOUSING PROGRAMS

The committee simulated two expansions of the Housing Choice Voucher Program, both aimed at increasing the share of eligible families that are able to access and use the vouchers.

Housing Voucher Policy #1: Increase the number of vouchers directed to families with children so that 50 percent of eligible families not currently receiving subsidized housing would use them.

Housing Voucher Policy #2: Increase the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving subsidized housing would use them.

The TRIM3 model uses estimates of income eligibility in local areas to determine who is eligible for voucher programs, and then applies an approximate rent formula to determine how much the household pays in rent. It identifies who currently resides in subsidized housing programs from questions asked in the Current Population Survey. The simulations for the expansion of vouchers were conducted by randomly selecting either 50 percent or 70 percent of all families eligible for vouchers but not currently receiving them, and assigning those randomly selected a housing unit.

A drawback of the TRIM3 model for subsidized housing program participation is that it relies on a small number of questions on the Current Population Survey that have significant error and do not accurately identify the type of subsidized housing program in which the respondent participates. There are dozens of local and federal housing programs in addition to the best known and largest three, discussed in Chapter 5. When responses to questions on the American Housing Survey are matched to administrative data from the U.S. Department of Housing and Urban Development (HUD) from program records, it is apparent that there are significant reporting errors. In particular, participation in housing voucher and public housing programs is underreported, and significant overreporting occurs as respondents say they are in those housing programs but are really in different housing programs.[46] The committee had neither the time nor the resources to improve the accuracy of the Current Population Survey questions (e.g., by matching to HUD administrative records or by statistical imputation).

[46] Personal communication from Dr. Edgar Olsen to the committee (September 2017).

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Background to the Policy Proposals

Several of the memos the committee received suggested that housing policy reforms had the potential to reduce child poverty. For instance, Olsen (2017) proposed to increase the number of vouchers, funded either by new expenditure or by reductions in the Low-Income Housing Tax Credit (LIHTC), with the option of making the new vouchers go either to all families or just to those with children. He also suggested reducing the generosity of individual vouchers and increasing their number for revenue neutrality. Desmond (2016) recommended expanding public housing, vouchers, or LIHTC, with the second being lowest cost, and he also recommended emergency rental assistance to reduce evictions, publicly-funded legal representation for renters in housing court, and joint programs with schools to ensure that children in subsidized housing attend school. Allen (2017) recommended the Children's Defense Fund proposal to make housing vouchers universally available to all families with income less than 150 percent of the poverty line (in all areas, independent of median income, which is currently used for local eligibility) and to those who live in areas where the Fair Market Rent (FMR) is more than 50 percent of their family income. They assumed a 70 percent takeup rate among newly eligible families and their simulations showed a 21 percent reduction in child poverty (from 14.6% to 11.5%) for about $23 billion. Sherman (2017) also recommended the Children's Defense Fund plan, plus a proposal from the Bipartisan Policy Center's Housing Commission that recommended making vouchers available to all households with incomes at or below 30 percent of the area median income (which, on average, is roughly equal to the poverty line). Heymann and Sprague (2017) proposed extending the mortgage interest rate deduction in the federal income tax to renters, making it refundable, and making it a flat percent independent of income bracket.

Behavioral Responses to Expanding Housing Programs

As with other programs, most research on the behavioral effects of subsidized housing programs has concerned their impact on employment and earnings. A particularly strong research design was used by Jacob and Ludwig (2012), who made use of an expansion of housing vouchers in Chicago where those on the waiting list were randomly offered a voucher. Comparisons of the earnings levels of those in the experimental group to those in the control group showed employment and earnings reductions that sometimes differed by gender and headship status. Based on their results, we assumed no employment response for male heads but a 3.3 percentage point reduction in the employment rate for female heads and married women, and a 7.3 percent reduction in annual hours for all heads and spouses regardless

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of gender, for those in the labor market. These effects were applied to those families simulated to be new voucher recipients, and who have children in the household, were under 65, were not disabled, and were not students.

The TRIM3 simulations showed that about 66,000 individuals transitioned from employment to nonemployment for the 50 percent program (Housing Voucher Policy #1) and about 93,000 for the 70 percent program (Housing Voucher Policy #2). Aggregate earnings losses were estimated to total $4.1 billion and $5.9 billion, respectively. On the cost side, the earnings reductions generated increases in benefits from other programs and therefore costs (except for the EITC and child care subsidies, which were reduced and therefore resulted in government cost savings), but the cost changes induced by these indirect changes were extremely small relative to the direct cost (or benefit from the perspective of the recipients) of the new housing subsidies. The impact on poverty rates of the employment effects were modest, for the child poverty rate after implementation of Housing Voucher Policy #1 would have been 10.8 percent in the absence of employment effects instead of the 10.9 percent we report in Chapter 5, whereas for Housing Voucher Policy #2, the rate would have been 9.8 percent instead of the 10.1 percent we report.

APPENDIX D, 5-8
MODIFICATIONS TO THE SUPPLEMENTAL SECURITY INCOME (SSI) PROGRAM

We propose two child-focused modifications to the SSI program, both of which involve increasing child benefit levels:

SSI Policy #1: Increase by one-third the maximum child SSI benefit (to $977 per month from a current baseline of $733).

SSI Policy #2: Increase by two-thirds the maximum child SSI benefit (to $1,222) from a current baseline of $733).

Implementation of these proposals in the TRIM3 model is discussed in Appendix F. Child disability is not identified in the Current Population Survey but family receipt of SSI and the presence of children are both identified. All families with children receiving SSI are selected for this proposal implementation.[47] The proposal raises the SSI guarantee, called the Federal Benefit Rate (FBR) in program regulations. Benefits in the program are calculated as the FBR minus countable income, where countable income

[47] For a listing of the diagnoses that qualify an individual for SSI, see Appendix D, Table D5-2.

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TABLE D5-2 Recipients Under Age 18, by Diagnostic Group and Age, December 2016

Diagnostic Group	All Ages	Under 3	3-5	6-12	13-17
			Number		
All Recipients Under Age 18	1,213,079	73,451	147,092	559,027	433,509
Congenital Anomalies	66,646	12,993	14,029	26,349	13,275
Endocrine, Nutritional, and Metabolic Diseases	9,114	593	1,862	4,264	2,395
Infectious and Parasitic Diseases	699	28	71	302	298
Injuries	5,800	495	940	2,570	1,795
Mental Disorders					
Autistic Disorders	174,866	1,782	26,682	96,311	50,091
Developmental Disorders	239,215	4,686	43,040	124,954	66,535
Childhood and Adolescent Disorders Not Elsewhere Classified	233,490	46	3,849	117,581	112,014
Intellectual Disability	117,646	472	4,376	46,979	65,819
Mood Disorders	38,412	6	238	11,338	26,830
Organic Mental Disorders	27,211	803	4,229	13,024	9,155
Schizophrenic and Other Psychotic Disorders	3,058	0	11	747	2,300
Other Mental Disorders	31,318	56	747	13,094	17,421
Neoplasms	10,886	777	2,316	4,955	2,838
Diseases of the—					
Blood and Blood-forming Organs	11,557	395	1,610	5,726	3,826
Circulatory System	4,405	627	836	1,699	1,243
Digestive System	15,408	5,123	4,771	3,927	1,587
Genitourinary System	2,945	226	425	1,230	1,064
Musculoskeletal System and Connective Tissue	9,456	783	1,618	3,840	3,215
Nervous System and Sense Organs	95,835	5,590	15,117	45,594	29,534
Respiratory System	24,437	1,889	4,665	11,130	6,753
Skin and Subcutaneous Tissue	2,309	131	377	1,195	606
Other	74,818	34,807	13,397	16,104	10,510
Unknown	13,548	1,143	1,886	6,114	4,405

continued

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TABLE D5-2 Continued

Diagnostic Group	All Ages	Under 3	3-5	6-12	13-17
			Percent		
All Recipients Under Age 18	100.0	100.0	100.0	100.0	100.0
Congenital Anomalies	5.5	17.7	9.5	4.7	3.1
Endocrine, Nutritional, and Metabolic Diseases	0.8	0.8	1.3	0.8	0.6
Infectious and Parasitic Diseases	0.1	(L)	(L)	0.1	0.1
Injuries	0.5	0.7	0.6	0.5	0.4
Mental Disorders					
Autistic Disorders	14.4	2.4	18.1	17.2	11.6
Developmental disorders	19.7	6.4	29.3	22.4	15.3
Childhood and Adolescent Disorders Not Elsewhere Classified	19.2	0.1	2.6	21.0	25.8
Intellectual Disability	9.7	0.6	3.0	8.4	15.2
Mood Disorders	3.2	(L)	0.2	2.0	6.2
Organic Mental Disorders	2.2	1.1	2.9	2.3	2.1
Schizophrenic and Other Psychotic Disorders	0.3	0.0	(L)	0.1	0.5
Other Mental Disorders	2.6	0.1	0.5	2.3	4.0
Neoplasms	0.9	1.1	1.6	0.9	0.7
Diseases of the—					
Blood and Blood-forming Organs	1.0	0.5	1.1	1.0	0.9
Circulatory System	0.4	0.9	0.6	0.3	0.3
Digestive System	1.3	7.0	3.2	0.7	0.4
Genitourinary System	0.2	0.3	0.3	0.2	0.2
Musculoskeletal System and Connective Tissue	0.8	1.1	1.1	0.7	0.7
Nervous System and Sense Organs	7.9	7.6	10.3	8.2	6.8
Respiratory System	2.0	2.6	3.2	2.0	1.6
Skin and Subcutaneous Tissue	0.2	0.2	0.3	0.2	0.1
Other	6.2	47.4	9.1	2.9	2.4
Unknown	1.1	1.6	1.3	1.1	1.0

NOTE: (L) = less than 0.05 percent.
SOURCE: Social Security Administration, Supplemental Security Record, 100 percent data.

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is family income after a number of exclusions and deductions, including a general deduction of 50 percent of earned income in the family (adults and children).

An increase in take-up among eligible families (defined as those with children but with income below the SSI eligibility point) of 5 and 10 percentage points for the two respective proposals is assumed, based on calculations from the American Community Survey (which does have a child disability question as well as family income) of a current participation rate of 66 percent among children with a disability combined with the fraction of all children with a disability. Finally, we assume additional participation from families made newly eligible by the increase in the FBR, since our proposals raise the income eligibility point. An increase of 5 percentage points among those made newly eligible is assumed (the number of families made newly eligible is higher in the second policy than in the first).

Behavioral Responses to Expanding Child SSI Benefits

We use the review of behavioral responses by Duggan, Kearney, and Rennane (2016) and a study by Deshpande (2016) to assess work and employment responses to the SSI program. Since almost all SSI children, including teenagers, have disabilities that prevent them from working, we assume no work response among children to the child SSI program. Duggan, Kearney, and Rennane (2016) report very few rigorous studies of the effect of an increase in SSI benefits on parental work and those that are reviewed find little effect. However, Deshpande, in a study of 18 year olds who transition off the child SSI program, finds that parental earnings increase by almost the same amount as the child SSI benefit falls. The estimates from the Deshpande study are likely overestimates for the population of all families with child SSI receipt, which include children of all ages and parents with young disabled children who are unlikely to be able to work as much as parents of 18 year olds. We therefore assume an offset of 30 percent for our behavioral response and therefore reduce parental earnings by 0.30 times the simulated increase in the SSI benefit for each of the two proposals.

The simulations show that SSI Policy #1 generated an earnings reduction of $434 million, while SSI Policy #2 showed earnings reductions totaling $1.05 billion. However, these reductions were too small to change the child poverty rates after the two policies are implemented (at 12.8% and 12.6%, respectively, both with and without the inclusion of employment effects).

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APPENDIX D, 5-9
INTRODUCING A CHILD ALLOWANCE

The committee simulated two child allowance policies.

Child Allowance Policy #1: Pay a monthly benefit of $166 per month ($2,000 per year) per child to the families of all children under age 17 who have Social Security numbers—that is, all children born in the United States or who are naturalized citizens. At the same time, eliminate the current Child Tax Credit and Additional Child Tax Credit. Phase out child allowance benefits using the same schedule as the current Child Tax Credit.

Child Allowance Policy #2: Pay a monthly benefit of $250 per month ($3,000 per year) per child to the families of all children under age 18 who have Social Security numbers—that is, all children born in the United States or who are naturalized citizens. At the same time, eliminate the current Child Tax Credit and Additional Child Tax Credit. Phase out child allowance benefits between 300 percent and 400 percent of the poverty line.

As part of our fourth program and policy package included in Chapter 6, we also include a $2,700 per child per year child allowance, which has the same parameters as Child Allowance Policy #1 except for the benefit level. For all of our child allowance policies, the child allowance benefit is neither taxable for income tax purposes nor countable for means-tested benefits.

Our first child allowance variant sets the allowance value at $2,000 per year or $166 per month. Our second proposal sets the annual child allowance payments at a higher level: $3,000 per year, or $250 per month per child. To reduce costs, we phase out the $3,000 benefits at lower income levels than under current law—between 300 and 400 percent of the SPM poverty level. In addition, the Child Tax Credit (CTC) and additional CTC would be eliminated. The child allowances we proposed would go to all children under age 18 who have Social Security numbers (SSNs)—that is, all children who were born in the United States or who are naturalized citizens—except for children in very high-income families. The child allowance benefit is neither taxable for income tax purposes nor countable for means tested benefits. It is, however, included in the EITC. We would retain the EITC, which would be paid annually as it is now. The child allowance and EITC programs together combine consistent monthly support with the annual large EITC bonus that is paid to working families every winter or spring.

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Switching from annual to monthly payment of the child benefit, as noted above, effectively converts the CTC into a child allowance. Paying benefits on a monthly basis will help to stabilize incomes for low-income families whose earnings are often irregular as well as low. This and other advantages of regular monthly payments as opposed to one annual payment are described in more detail in Chapter 8. The Social Security Administration (SSA) has experience making monthly payments and for this reason we recommend that SSA administer the program. Paying benefits on a monthly basis would entail some extra administrative costs.

The U.S. federal tax system's current $2,000 CTC can be thought of as a once-a-year child allowance. But benefits from the current CTC are not universal—most low-income families (and the very rich) are not eligible for them. Our Child Allowance Policy #1 proposal amounts to converting the current $2,000 per year partially refundable CTC into a nearly universal CTC by making the credit fully refundable, even to those with no earnings. Our more generous Child Allowance Policy #2 sets the annual child allowance payments at $3,000 per child. To reduce its costs, we phase out the $3,000 benefits at lower income levels than current law—between 300 and 400 percent of the SPM poverty level.

Behavioral Responses to the Child Allowance Proposals

In its simplest form, a universal child allowance with no phase-out simply provides additional income to each family with children in receipt of a benefit. In the conventional static model of labor supply in economics, this corresponds to an income effect. Economic theory predicts that increases in income that do not increase or decrease the marginal return to an extra dollar of earnings will reduce the incentive to work, and empirical work in economics strongly supports this prediction, although the magnitude of the reduction differs across studies.

For the simulation of the effects of this policy on employment and hours of work, estimates of income elasticities were drawn from a comprehensive review of the literature conducted by Blundell and Macurdy (1999). We take the rough midpoint of the estimates reviewed in that study to reach employment elasticities -0.05 for men, -0.12 for married women, and -0.085 for single mothers (e.g., a 10% increase in family income will reduce the male employment rate by 0.5%). The simulation is implemented by multiplying the number of children by the per-child allowance amount, dividing that by each family's income to reach a percent increase in income, and then multiplying that by the pertinent elasticity to reach the percent

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reduction in the employment rate for each demographic group.[48] The Blundell-Macurdy review also reported estimates from the literature on the intensive-margin response, namely, reductions in hours of work among those continuing to work. We also drew from the midpoint of the estimates in the review to use hours-of-work income elasticities of -0.05 for men, -0.09 for married women, and -0.07 for single mothers.

For Policy #2, we computed employment reductions and hours of work reductions for those in the phaseout region, assuming that the income effects would dominate any substitution effects from the phaseout marginal benefit reduction rate. The percent increase in income for each family in this range was computed as the actual percent at this initial income level, which is necessarily below the percent they would have received had their income been lower because the allowance was being phased out. However, our treatment of this group had virtually no effect on any of our simulation results because the fraction of families whose incomes were reduced by these disincentives to a level below 150 percent of the SPM poverty line (and we only examine impacts on fractions of the population below that income) was negligible.

Net changes in earnings associated with Policies #1 and #2 were substantial, totaling $-1.6 billion and $-3.9 billion, respectively. But behavioral responses for Policy #1 were not large enough to change its substantial 3.4 percentage point drop in child poverty. The employment effects for Policy #2 reduced poverty reduction slightly—from 5.4 to 5.3 percentage points.

APPENDIX D, 5-10
A CHILD SUPPORT ASSURANCE PROGRAM

The committee simulated the impacts of two options for a child support assurance policy:

Child Support Assurance Policy #1: Set a guaranteed minimum child support of $100 per month per child.

Child Support Assurance Policy #2: The key program parameter is the same as #1 but with $150 per month minimum child support guarantee.

Simulations of both policies assume that child support payments do not change in response to a government guarantee of a minimum child support payment. In both cases, eligibility is limited to families with a nonresident

[48] If the child allowance is counted against benefits or tax credits in any other tax or cash transfer program, the percent increase in income computed for the purpose of applying the elasticity is the percent increase net of those other changes.

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parent who is legally required to pay child support. Child support income up to the amount of the guarantee (from either the nonresident parent or the government) would not count in determining eligibility and benefits for means-tested programs. In conjunction with a $250 per month child allowance, an assured child support benefit of $150 per month would raise the floor undergirding the economic fortunes of children in single-parent families to $400 per month.

The simulations also make the following assumptions:

- All Current Population Survey–reported child support is legally obligated, with an assigned child support assurance amount equal to the difference between the monthly child support income and the child support assurance guarantee ($150 or $100 per child, depending on simulation).
- Assume these simulations would not capture revisions to the award based on a standard based on the nonresident parent's income. Instead, they would reflect current levels of support as reported in the Current Population Survey Annual Social and Economic Supplement.

Behavioral Responses to a Child Support Assurance Policy

The policy simulation identifies families with a nonresident parent who is legally required to pay child support and determines the amount of monthly child support being received by such families for each child covered by the child support order. The number of such children in the family is multiplied by $100 in the first simulation and $150 in the second simulation. The publicly provided child support payment is then the difference between this total and the actual child support received.

Employment effects are assumed to occur only through the types of income effects discussed above for the child allowance. Only work reductions on the part of the resident parent stemming from that increase in income are calculated. Those reductions are obtained by first calculating the percent increase in family income that the public child support payment represents and then by multiplying that percent by the same employment and hours-of-work elasticities used for the child allowance behavioral responses given above.

The employment and hours effects from the simulation were negligible in size. The percentage point reductions in the poverty rate from these child support assurance policies were not affected at the level of the third significant digit. This is because the percent increases in income from these modest child support assurance amounts are too small to induce any significant reduction in work effort.

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APPENDIX D, 5-11
CHANGES IN IMMIGRANT POLICIES

Given the demographic importance of immigrants and their children, their higher likelihood of living in poverty, an existing policy regime that limits immigrant eligibility and may discourage immigrants from accessing programs even when eligible, and current proposals to further restrict immigrant access to anti-poverty programs, the Committee considered two policy proposals to improve immigrants' eligibility:

Immigrant Policy #1: Restore program eligibility for nonqualified legal immigrants. This option would eliminate eligibility restrictions for nonqualified parents and children in the SNAP, Temporary Assistance for Needy Families (TANF), Medicaid, SSI, and other means-tested federal programs.

Immigrant Policy #2: Expand program eligibility for all noncitizen children and parents. This option would eliminate eligibility restrictions for all noncitizen parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.

Background to the Policy Proposals

Historically, immigration has been an important component of U.S. population and labor force growth. A 2017 National Research Council report shows that overall immigration has contributed to U.S. economic prosperity (e.g., long-run economic growth) and innovation (National Academies of Sciences, Engineering, and Medicine, 2017). Also, immigrants' contributions to the labor force reduce the prices of some goods and services, which benefits consumers.

At the same time, a shorter-run perspective on immigration impacts is less positive. Because immigrant parents are more likely to have lower educational attainment and to live in poverty than their U.S.-born counterparts, immigration may increase child poverty rates in the short run. Moreover, evidence suggests that an influx of low-skilled immigrant workers has a small negative impact on the employment and wages of U.S.-born workers with less than high school education, which may in turn increase the chances that the family incomes of the children of these nonimmigrant workers fall below poverty thresholds. In terms of fiscal impacts, in the short run, first-generation immigrants are more costly to state and local governments than the U.S. born largely due to the costs of educating their children. However, as adults, the children of immigrants (the second generation) contribute more in taxes than either their parents or the rest of the

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native-born population. In the long run, the fiscal impact of immigrants is generally positive at the federal level but negative at the state and local level (with significant geographic variation) (National Academies of Sciences, Engineering, and Medicine, 2017).

Children living in immigrant families (families where at least one parent is foreign born) comprise about one quarter of the U.S. child population (25.2%, 18.2 million, 2015).[49] Despite being more likely to live in poverty than other children (see Chapter 2), their access to anti-poverty programs is limited compared to that of children in nonimmigrant families, primarily because their parents face restricted eligibility due to their immigrant status. Although the vast majority of children in immigrant families are citizens (90.7%, 2015), 40 percent of them live with parents who are not citizens. Around 2011, there were approximately 5.1 million children (79% of whom were U.S. citizens) living with at least one unauthorized immigrant parent (Capps, Fix, and Zong, 2016).

Eligibility rules for federal anti-poverty programs explicitly exclude several classes of immigrants even if they are income eligible (Institute of Medicine and National Research Council, 1998; Singer, 2016). Additionally, the complexity of immigrant eligibility rules creates confusion and fear that may further constrain access (Vargas and Pirog, 2016). Current rules restrict eligibility not only for unauthorized immigrants, but also for several classes of legal immigrants. The Committee's two proposals in Chapter 5 intend to restore the eligibility of legal and unauthorized immigrants for means-tested public programs and simplify eligibility rules to enhance access.

Between the 1930s, with the establishment of federal assistance to the poor, and the 1960s, when federal programs for the poor were considerably expanded, eligibility for programs was not restricted for immigrant families. In the 1970s, in response to concerns about increased immigration, increased cost of public programs, and suspicion that immigrants may be abusing the welfare system, the federal government began to impose restrictions on immigrants' eligibility for federal benefits. New restrictions on immigrants' use of benefits, though, primarily targeted undocumented and temporary immigrants (e.g., students, tourists, and temporary workers). Undocumented immigrants were barred from Aid to Families with Dependent Children (AFDC), SSI, food stamps, and Medicaid (other than emergency medical services). Additionally, deeming was used to effectively limit the eligibility of legal immigrants (except for refugees) for the first 3 years after their arrival in the United States. Deeming resulted in

[49] Data from the Integrated Public Use Microdata Series Datasets Drawn From the 2014 and 2015 American Community Survey using the Urban Institute Children of Immigrants Data Tool available at http://datatool.urban.org/charts/datatool/pages.cfm.

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restricted eligibility by requiring that within this initial period, in addition to the immigrant's income, his/her sponsor's income was included in determining whether the immigrant met income eligibility for programs (Institute of Medicine and National Research Council, 1998).

In the six decades before 1996, lawfully present immigrants were eligible for public benefit programs if they met income eligibility criteria. As discussed above, undocumented immigrants already were—and continue to be—ineligible for federally-funded programs. The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA; P.L. 104-193) established complex restrictions to immigrant eligibility for various categories of immigrants lawfully residing in the United States. For example, PRWORA defines several categories of immigrants as "qualified" to receive public benefits but some "qualified immigrant" categories are not considered eligible unless they meet another condition. Notably, legal permanent residents are not eligible until they have resided in the United States for 5 years (Singer, 2016). Another important change in 1996 was the enactment of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA, P.L. 104-208), which established that immigrants that use public programs may be deemed at risk of becoming a public charge and thus be denied admission or unable to become permanent residents or citizens. Although prior to 1940 the potential of becoming a public charge was common grounds for denying immigrants admission to the United States, it was used infrequently until 1996. However, by defining "public charge" and its consequences more clearly, the 1996 legal changes strengthened the connection between welfare and immigration policy. In turn, this discouraged some immigrants from applying for public programs (Batalova, Fix, and Greenberg, 2018).

Driven by concerns about lack of fairness and negative impacts on immigrant families, several of the eligibility restrictions were eliminated soon after welfare reform but others remain (Singer, 2004). For example, PRWORA initially made all noncitizens ineligible for SSI. However, the Balanced Budget Agreement of 1997 restored eligibility to elderly and disabled immigrants who were receiving SSI benefits at the time PRWORA was enacted or who were already in the United States then and later became disabled. PRWORA originally restricted legal immigrant children's eligibility for SNAP (then food stamps), but their eligibility was restored in 2003. Despite, partial restorations such as the SSI and SNAP examples, above, legal immigrant eligibility remains restricted. The main programs affected are SNAP, TANF, Medicaid, SSI and in general means-tested federal programs (Singer, 2016). Although the eligibility restrictions introduced in PRWORA and subsequent restorations are complex, the spirit of the law can be summarized as a sharp change in the treatment of legal income-eligible immigrants who were banned from receiving means-tested

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programs at least for their first 5 years in the United States, unless they had a significant work history in the United States of at least 10 years (i.e., 40 quarters of Social Security covered earnings) or were in active military duty or honorably discharged veterans. Before 1996, other than lacking the right to vote in federal and state elections, legal immigrants were treated in a comparable way to U.S. citizens and were eligible for public programs (Tienda, 2002).

PRWORA also increased the complexity of immigrant eligibility through variation by immigrant category and public program, and exemptions for certain classes of immigrants, for example, refugees and asylees. Furthermore, PRWORA and subsequent legislation gave states discretion to provide state-only funded benefits to some immigrants ineligible for federal assistance, as well as to decide whether immigrants who entered the United States after 1996 should be eligible for public benefits (e.g., TANF) after the 5-year ban, and whether some subgroups of legal immigrants should be eligible during the 5-year ban (e.g., Medicaid for children and pregnant women). This has led to variation in immigrant eligibility across states (Institute of Medicine and National Research Council, 1998; Singer, 2016). For instance, the 2009 Children's Health Insurance Program Reauthorization Act (P.L. 111-3) allowed states to provide Medicaid to lawfully residing children and pregnant women without a 5-year waiting period (Singer, 2016).

Finally, even if an immigrant was eligible based on the above criteria, stricter deeming provisions introduced with the 1996 changes to welfare and immigration law further restricted immigrant eligibility. As discussed above, factoring in not only the immigrant's income but also that of his/her sponsor in determining income eligibility was in place before 1996. However, the 1996 changes made deeming legally enforceable, extended it until immigrant obtains U.S. citizenship, and included all the sponsor's income (as opposed to only a portion) in the income eligibility determination (Institute of Medicine and National Research Council, 1998; Singer, 2016).

Reduced eligibility for benefits may hurt children in immigrant families even if the children themselves are eligible for anti-poverty programs, for example, by reducing the total amount of benefits available to the household. As an illustration, if a child qualifies for SNAP, the program chooses the lowest benefit between two calculations: benefit excluding the nonqualified immigrant member of the household and the benefit including that person.

In addition to changing eligibility rules, the complexity of PRWORA and its connection to IIRIRA contributed to misinformation, fear and confusion among immigrants regarding use of public benefits. For instance, some immigrants fear that applying for public benefits may prevent them from obtaining U.S. citizenship when they become eligible or put them at risk of deportation because they may be considered a "public charge" for having used public benefits (Batalova, Fix, and Greenberg, 2018; Vargas

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and Pirog, 2016). Confusion about eligibility and the implications of using government programs has likely contributed to deterring some immigrants from applying for benefits, thus hurting children who live in those families (see Chapter 8) (Singer, 2004; Thomas and Collette, 2017). Current proposals under consideration at the time the committee wrote its report would significantly expand the definition of "public charge" to include use of certain previously excluded programs, such as Medicaid, SNAP and housing programs, in public charge determinations. Notably, not only immigrants' use of public assistance but use by any dependents, including U.S.-born citizen spouses and children, would also be considered. These changes would likely result in lower program participation among legal immigrants who may fear jeopardizing their chances to obtain permanent residency or citizenship (Batalova, Fix, and Greenberg, 2018; Henry J. Kaiser Family Foundation, 2018; Perreira, Yoshikawa, and Oberlander, 2018). This would also negatively affect other family members including U.S.-born children. While the committee did not simulate the impact of proposals to expand the definition of public charge, other estimates show that about 10.4 million citizen children with at least one noncitizen parent could have their use of public benefits considered in the public-charge determination (Batalova, Fix, and Greenberg, 2018).

Besides the restrictions established in PRWORA, immigrants face limited access to other anti-poverty programs. Although many working immigrants—included the undocumented—pay taxes, eligibility for the EITC is limited to those with an SSN, while those with only an Individual Tax Identification Number (ITIN) are not eligible. If a primary taxpayer, spouse, or both have ITINs, they are ineligible to receive the EITC, even if their dependents have valid SSNs. In contrast, until the passage of the 2017 Individual Tax Reform and Alternative Minimum Tax Act (P.L. 115–97), the CTC had been available to families with children with both SSNs and ITINs. However, the 2017 Act made those with ITINs ineligible, which may result in about 1 million children losing the CTC (Marr et al., 2017).

Behavioral Response to Immigrant Policies

Both immigrant policies make new groups of families and individuals eligible for benefits in three different programs. We assumed that each program would have the same employment effects that have been estimated for those programs in the general research literature, much of which we have already discussed for other policies such as SNAP and SSI.

We first assessed the importance of behavioral effects by counting the number of immigrants with children who would be newly eligible for, and would participate in, each of the three programs, including counts of how many would be eligible for more than one. Participation rates in each

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program were simulated using the participation rate equations in TRIM3 for these three programs, which do not distinguish between immigrants and nonimmigrants. Some of the participation rates of eligibles are very low, such as that for TANF. Because the employment effects in the research literature are almost always separated by marital status and gender, we conducted our counts separately for male heads with children, married mothers, and single mothers. These tabulations showed that receipt of SNAP, and SNAP alone, dominated the other two programs in terms of the number of immigrant households who would be newly eligible for them, with the SNAP counts 10 or 20 times the number newly eligible for the other two. On this basis, we chose to simulate employment responses only for SNAP.

The tabulations also showed that, while some immigrant households became newly eligible with the change in rules, other families with immigrants already had some nonimmigrants in the household who received benefits and some of those lost eligibility because the immigrant income raised household income above the SNAP eligibility point. Still other families in this category did not lose eligibility but had their SNAP benefits reduced because of the higher income levels.

For behavioral responses, we used the same estimates derived from the research literature which we described above for the committee's SNAP reform proposal, but scaled to fit the immigrant proposals. Those response estimates were appropriate for a 20 percent increase in the SNAP benefit. We therefore used estimates five times larger than those estimates for immigrant households who newly received SNAP benefits. For households that lost eligibility, we assumed that those same response effects would apply but with the opposite sign (i.e., employment would increase). Finally, for households that had a reduction in the SNAP benefit, we calculated the size of the benefit reduction and ratioed the responses relative to a 20 percent benefit change, and applied those scaled behavioral estimates to these families (with benefit reductions increasing employment).

The results for Policy #1 show that a small number of immigrants will begin work (1,000) but a larger number will stop work (40,000). Aggregate net earnings drop by $483 million. These behavioral effects have a very small impact on the overall child poverty rate—the drop to 12.8 percent without them becomes a drop to 12.9 percent once employment changes are factored in. Policy #2 would generate somewhat larger work reductions. Some 4,000 immigrants would begin to work but 90,000 would stop working. Aggregate net earnings drop by $2.2 billion. That said, these behavioral effects have a very small impact on the overall child poverty rate—the drop to 11.7 percent without them becomes a drop to 11.9 percent once employment changes are factored in.

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APPENDIX D, 5-12
REDUCING CHILD POVERTY THROUGH A UNIVERSAL BASIC INCOME

In addition to the program and policy enhancements included in Chapter 5, we simulated two Universal Basic Income (UBI) proposals:

Universal Basic Income Policy #1: Provide $250 per month to all citizen children and adults. These UBI payments would substitute for all personal and dependent deductions and tax credits in the federal income tax. The benefit would be counted as taxable income in the federal income tax.

Universal Basic Income Policy #2: Same as option 1, except UBI benefits would also substitute for SNAP, and would count as income for all other income-tested programs, including TANF, SSI, and public housing and housing subsidies, but not the EITC. In addition, to simulate a crude integration of UBI and Old Age, Survivors, and Disability Insurance (OASDI), UBI benefits would only be paid to OASDI beneficiaries if UBI exceeded the OASDI benefit and would be limited to the difference (UBI-OASDI).

A UBI is a universal cash benefit paid to all citizens. Basic Income Guarantee (BIG) or universal demogrants are other commonly used terms for a UBI. A UBI does not have a work requirement, is universal, not means tested; and is directed at individuals, not households. UBI gives every citizen a check each month and taxes the citizen's earned income (U.S. Basic Income Network, 2018). UBI proposals vary as to the size of the benefit and whether benefits vary by age. In the English-speaking world, the earliest proponent of a UBI was the author of *Common Sense*, Thomas Paine, who proposed a universal endowment for 21-year-olds and a pension for everyone over the age of 50 (Sloman, 2017).

A Negative Income Tax (NIT) is a benefit limited to the poor (Garfinkel and McLanahan, 1986). During the 1960s, Milton Friedman and Robert Lampman proposed different versions of a Negative Income Tax, which found its way into President Richard Nixon's 1969 welfare reform proposal—the Family Assistance Program (FAP). Though FAP failed to pass Congress, the debate led to the enactment of Supplementary Security Income (an NIT for the aged, blind, and disabled), the EITC (an earnings supplement for those with very low earnings and an NIT for those with modest earnings), and the nationalization of the Food Stamp Program (a nationwide NIT in food stamps). Also during the 1960s, James Tobin and Peter Miezkowski proposed a UBI, which found its way into the 1972

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Democratic Party platform and was championed by candidate George McGovern. McGovern's resounding defeat contributed to a marked diminution in interest in a UBI.

The concept of providing a UBI has been around for many years, and most rich nations already distribute unconditional cash transfers to certain subgroups of the population, such as the aged and children. Universal pensions for the aged are, for the most part, earned benefits, but the same cannot be said for child allowances. A UBI may be thought of as a child allowance plus an adult allowance (OECD, 2017). Its attractions include its universality and simplicity. The UBI has been controversial because it aims to reduce not just poverty, but also inequality.

Common arguments against the UBI include concerns that recipients will squander cash grants, that it is too expensive, and that it discourages work (Fleischer and Hemel, 2017). In addition, there are concerns that existing benefits would be reduced and some disadvantaged groups would suffer if existing benefits are replaced with a UBI. A UBI provided to middle- and upper-income families and charging taxes to the same families to pay for the UBI is seen by some as inefficient (OECD, 2017).

Despite these objections, there is growing interest in and modest but growing support for the UBI or variations of the UBI[50] across the political spectrum, including among libertarians (see for example, Fleischer and Hemel, 2017), conservatives (e.g., Baker et al., 2017), and progressives (e.g., Jackson, 2017; Nikiforos, Steinbaum, and Zezza, 2017). In addition, there has been a recent surge in interest in the UBI around the world as evidenced by the introduction of small-scale experiments to test the UBI. Countries that have been experimenting with the UBI include Namibia, India, Finland, Canada, and the Netherlands (Sloman, 2017) and other countries are considering experiments (e.g., France, see OECD, 2017). These smaller scale experiments have raised the visibility of the UBI among organizations such as the OECD (2017). There is also an on-going campaign among European Union countries for an unconditional basic income (Forget, Peden, and Strobel, 2013).

As described in Chapter 5, the committee considered whether to simulate a UBI to meet the goal of reducing child poverty by one-half in the next 10 years. The UBI did not meet all of the committee's criteria laid out in Chapter 1, specifically the cost. At the same time the committee agreed that the UBI could be simulated based on evidence from the NIT experiments and other labor supply research and that these results would be reported in this appendix.

[50] One of the proposed variations of the UBI is a carbon dividend in which proceeds from a carbon tax would be returned to all Americans as individual dividend payments (Baker et al., 2017).

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In North America and Europe, evidence on the effects of the UBI has come primarily in the form of micro-simulation modeling similar to our TRIM simulations, a few smaller-scale natural experiments, and one large natural experiment. Garfinkel, Huang, and Naidich (2006) use a micro-simulation model similar to TRIM without labor supply effects on the Current Population Survey and find that modest income guarantee plans of around $4,000 per adult and $2,000 per child reduce poverty by one-half. The large-scale natural experiment is the Alaska Permanent Fund which since 1982 has paid all Alaska residents a yearly cash dividend of about $2,000 per resident. Jones and Marinescu (2018) use Current Population Survey data and synthetic controls to estimate the aggregate employment effect from receiving around $2,000 per year per person and they find no substantive change in employment. Their methodology captures labor demand as well as labor supply effects, or more generally, general equilibrium effects of these modest, permanent unconditional cash transfers. The World Bank has also been funding impact evaluations of both conditional and unconditional cash transfers in low- and middle-income countries (Forget, Peden, and Strobel, 2013). With regard to natural experiments, Chapter 3 provides examples of studies of casino development on American Indian lands (see Costello et al., 2010) and the impacts of income supplements on Eastern Cherokee children and their families, as well as an examination of cash transfers' impacts on children in Canada (Jones and Marinescu, 2018; Milligan and Stabile, 2007).

Nikiforos, Steinbaum, and Zezza (2017) examined the impacts of cash transfers on the economy using the Levy Institute macroeconomic model. The authors examined three types of unconditional cash transfers—$1,000 per month to all adults; $500 per month to all adults; and a $250 per month child allowance. Nikiforos and colleagues' modeling approach made the assumption that receiving an unconditional cash transfer would not impact labor supply decisions in households.

It is important to note that our simulations of the two UBI proposals do not attempt to account for what some believe are potentially quite substantial reductions in work and earnings that they would likely bring about. That said, UBI impacts on poverty and government spending are shown in Table D5-3.

Policy #1 is estimated to cut poverty by more than one-half, thus meeting its mandated 50 percent poverty reduction. Policy #2, which considers UBI payments as countable income for the determination of benefits from other government programs, cuts child poverty substantially less—by about one-third. Thus, making UBI benefits countable for income-tested programs substantially vitiates its anti-poverty effectiveness. At the same time, Policy #2 costs only two-thirds as much as Policy #1.

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TABLE D5-3 Simulated Reductions in Poverty and Deep Poverty for Children for Two UBI Policies

	Reduction in <100% SPM Poverty		Reduction in <50% SPM Poverty		Total Change in Government Spending (Billions)
	ppt	%	ppt	%	
2015 Tax Law					
BIG Policy #1	7.3	55.9%	1.9	65.5%	$502.0
BIG Policy #2	4.4	33.7%	1.6	55.2%	$332. 1
2018 Tax Law					
BIG Policy #1	7.1	56.7%	1.9	67.9%	$624.9
BIG Policy #2	4.5	35.8%	1.6	57.1%	$437.0

NOTE: Estimates do not include employment effects.
SOURCE: Estimates from TRIM3 commissioned by the committee.

The costs of a UBI are very large—ranging from $332 billion to $624 billion, depending on the policy and tax regime. These figures are more than three times the costs of the packages simulated in Chapter 6. UBI costs are notably higher under 2018 tax law than 2015 tax law. This is because part of the costs of UBI in 2015 are financed by eliminating personal exemptions in the income tax, whereas in 2018 tax law, personal exemptions have already been eliminated. In view of the large costs of a UBI, it is impossible to conduct a full evaluation of a UBI without specifying how the UBI would be financed.

APPENDIX D, 5-13
CONSTRUCTION OF SUMMARY TABLES 5-1 AND 5-2

Background for Table 5-1

Social inclusions proved to be a difficult concept to operationalize with the TRIM3-based data that were available to us. Some writers (e.g., Garfinkel, Smeeding, and Rainwater, 2010) believe universal programs promote and targeted programs reduce social inclusion. Ethnographic accounts of recipients of the work-promoting Earned Income Tax Credit program show that it appears to promote a strong sense of social inclusions (Halpern-Meekin et al., 2015).

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We took a different approach, concentrating on whether a policy or program option reduced poverty across demographic subgroups. Specifically, we constructed a color-coded table (Table 5-1, Chapter 5) showing whether poverty reductions across the various demographic subgroups presented in Chapter 2 were disproportionately large or small. To determine these relative impacts, we first calculated subgroup poverty rates for each of the 20 program and policy options. These are shown in Appendix D, Table D5-4. Because baseline poverty rates differed markedly across subgroups, we opted to focus on relative rather than absolute changes for each policy and subgroup combination. We calculated relative differences by dividing the post-program poverty rate by the pre-program poverty rate. In other words, the relative change in poverty for a group is defined as: $1 - (R_{pp}/R_{baseline})$, where R_{pp} is the post-program poverty rate and $R_{baseline}$ is the pre-program poverty rate for that subgroup. These values are shown in Appendix D, Table D5-5. One way of thinking about these relative changes is that they represent the percentage of the children in a particular group brought out of poverty by the given policy or program option.

For the final step in calculating a group's relative change in poverty, we subtracted the relative poverty reduction for all children taken together from a given group's relative poverty reduction. Results are shown in Appendix D, Table D5-6. So, for example, the "2.0 percent" entry in the top row for Black children means that while the EITC Policy #1 reduced the overall number of poor children by 9.2 percent, the reduction for Black children was 2.0 percent higher—in other words 11.2 percent. Positive entries indicate that the group did better than average. Negative values indicate the group did worse.

To simplify the presentation of these relative changes in subgroup poverty, we color-coded three levels of change based on the distributions for children in a given subgroup compared to the poverty reduction for all children. Subgroup poverty reductions greater than 1 percent of the reduction for all children were coded as disproportionally benefiting the subgroup (coded as green). Continuing with the example of EITC Policy #1 for Black children, because their poverty reduction (11.2%) was more than one percentage point greater than the 9.2 percent average, it is coded in Table 5-1 with a green circle. A red circle denotes cases where subgroup poverty levels failed to decline as much as the change for all children and the gap was greater than one percentage point. Poverty reductions within +/ 1 percent of the reduction for all children were coded with a clear symbol. It is important to keep in mind that even though a group might have benefited less than average for a given policy, in almost all cases their absolute rates of poverty fell. (Exceptions are indicated by negative entries in Table D5-5.)

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TABLE D5-4 Baseline and Post-program Poverty Rates by Demographic Group

	All Children	Black	Hispanic	Mother Not a HS Graduate	No Bio Parents	Single Bio/ Adoptive Parent	No Workers	Child Not a Citizen*	Child Citizen*	Mother < 25 Years Old
Baseline Poverty Rate	13.0%	17.8%	21.7%	32.5%	22.9%	22.4%	61.5%	33.3%	31.5%	23.8%
Post-program Rate										
EITC 1	11.8	15.8	19.9	29.4	21.6	19.6	61.0	33.3	31.3	20.3
EITC 2	10.9	14.2	18.7	27.4	21.3	17.1	59.0	33.0	30.6	19.7
Child Care 1	11.8	15.9	19.7	29.2	21.4	18.8	59.6	32.6	29.2	20.7
Child Care 2	12.4	17.0	20.7	31.0	22.3	20.7	60.1	31.7	30.2	23.0
Minimum Wage 1	12.8	17.5	21.4	32.1	22.6	22.1	61.7	31.6	31.2	23.4
Minimum Wage 2	12.9	17.7	21.5	32.2	22.9	22.2	61.7	32.9	31.2	23.6
WorkAdvance 1	13.0	17.8	21.6	32.4	22.7	22.4	61.1	33.3	31.5	23.8
WorkAdvance 2	12.9	17.8	21.6	32.2	22.2	22.3	59.7	33.3	31.6	23.5
SNAP 1	11.3	15.3	18.9	28.3	19.6	20.2	55.8	32.7	27.2	20.8
SNAP 2	10.7	14.6	18.2	26.7	18.9	19.1	53.1	31.8	26.2	19.0
Housing Vouchers 1	10.9	14.7	17.2	25.9	20.4	18.6	52.6	32.1	26.4	19.6
Housing Vouchers 2	10.1	13.3	15.5	23.6	18.9	17.0	50.0	31.9	24.3	17.7
SSI 1	12.8	17.5	21.3	32.0	22.1	22.0	60.2	33.3	31.2	23.4
SSI 2	12.6	17.3	20.9	31.4	21.8	21.6	59.0	33.3	30.5	23.2
Child Allowance 1	9.6	11.8	17.3	23.9	16.6	15.9	44.7	34.8	24.9	17.1
Child Allowance 2	7.7	9.7	13.4	18.6	14.3	12.6	36.6	34.2	18.6	14.1
Child Support 1	12.8	17.4	21.4	32.1	22.9	21.5	60.1	33.3	31.5	23.6
Child Support 2	12.4	17.0	20.7	31.0	22.3	20.7	60.1	32.7	30.2	23.0
Immigration 1	12.9	17.7	21.4	31.9	22.8	22.4	61.5	34.3	31.5	23.9
Immigration 2	11.9	17.2	17.9	27.4	22.2	21.9	61.8	20.3	19.7	22.9

*One member in the household is an unauthorized citizen.
SOURCE: Analyses commissioned from TRIM3 by the committee.

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TABLE D5-5 Relative Poverty Reductions by Demographic Subgroup

	Black	Hispanic	Mother Not a HS Graduate	No Bio Parents	Single Bio/ Adoptive Parent	No Workers	Child Not a Citizen*	Child Citizen*	Mother < 25 Years Old
EITC 1	0.112	0.083	0.095	0.057	0.125	0.008	0.000	0.006	0.147
EITC 2	0.202	0.138	0.157	0.070	0.237	0.041	0.009	0.029	0.172
Child Care 1	0.107	0.092	0.102	0.066	0.161	0.031	0.021	0.073	0.130
Child Care 2	0.045	0.046	0.046	0.026	0.076	0.023	0.018	0.041	0.034
Minimum Wage 1	0.017	0.014	0.012	0.013	0.013	-0.003	0.051	0.010	0.017
Minimum Wage 2	0.006	0.009	0.009	0.000	0.009	-0.003	0.012	0.010	0.008
WorkAdvance 1	0.000	0.005	0.003	0.009	0.000	0.007	0.000	0.000	0.000
WorkAdvance 2	0.000	0.005	0.009	0.031	0.004	0.029	0.000	-0.003	0.013
SNAP 1	0.140	0.129	0.129	0.144	0.098	0.093	0.018	0.137	0.126
SNAP 2	0.180	0.161	0.178	0.175	0.147	0.137	0.045	0.168	0.185
Housing Vouchers 1	0.174	0.207	0.203	0.109	0.170	0.145	0.036	0.162	0.176
Housing Vouchers 2	0.253	0.286	0.274	0.175	0.241	0.187	0.042	0.229	0.256
SSI 1	0.017	0.018	0.015	0.035	0.018	0.021	0.000	0.010	0.017
SSI 2	0.028	0.037	0.034	0.048	0.036	0.041	0.000	0.032	0.025
Child Allowance 1	0.337	0.203	0.265	0.275	0.290	0.273	-0.045	0.210	0.282
Child Allowance 2	0.455	0.382	0.428	0.376	0.438	0.405	-0.027	0.410	0.408
Child Support 1	0.022	0.014	0.012	0.000	0.040	0.023	0.000	0.000	0.008
Child Support 2	0.045	0.046	0.046	0.026	0.076	0.023	0.018	0.041	0.034
Immigration 1	0.006	0.014	0.018	0.004	0.000	0.000	-0.030	0.000	-0.004
Immigration 2	0.034	0.175	0.157	0.031	0.022	-0.005	0.390	0.375	0.038

NOTE: Relative change in poverty for a group is defined as: 1 - ($R_{pp}/R_{baseline}$), where R_{pp} is the post-program poverty rate and $R_{baseline}$ is the pre-program poverty rate.

*One member in the household is an unauthorized citizen.

SOURCE: Analyses commissioned from TRIM3 by the committee.

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TABLE D5-6 Relative Changes in Poverty Rates by Demographic Group

	All Children	Black	Hispanic	Mother Not a HS Graduate	No Bio Parents	Single Bio/ Adoptive Parent	No Workers	Child Not a Citizen*	Child Citizen*	Mother < 25 Years Old
EITC 1	9.2%	2.0%	-0.9%	0.3%	-3.6%	3.3%	-8.4%	-9.2%	-8.6%	5.5%
EITC 2	16.2%	4.1%	-2.3%	-0.5%	-9.2%	7.5%	-12.1%	-15.3%	-13.3%	1.1%
Child Care 1	9.2%	1.4%	0.0%	0.9%	-2.7%	6.8%	-6.1%	-7.1%	-1.9%	3.8%
Child Care 2	4.6%	-0.1%	0.0%	0.0%	-2.0%	3.0%	-2.3%	-2.8%	-0.5%	-1.3%
Minimum Wage 1	1.5%	0.1%	-0.2%	-0.3%	-0.2%	-0.2%	-1.9%	3.6%	-0.6%	0.1%
Minimum Wage 2	0.8%	-0.2%	0.2%	0.2%	-0.8%	0.1%	-1.1%	0.4%	0.2%	0.1%
WorkAdvance 1	0.0%	0.0%	0.5%	0.3%	0.9%	0.0%	0.7%	0.0%	0.0%	0.0%
WorkAdvance 2	0.8%	-0.8%	-0.3%	0.2%	2.3%	-0.3%	2.2%	-0.8%	-1.1%	0.5%
SNAP 1	13.1%	1.0%	-0.2%	-0.2%	1.3%	-3.3%	-3.8%	-11.3%	0.6%	-0.5%
SNAP 2	17.7%	0.3%	-1.6%	0.2%	-0.2%	-3.0%	-4.0%	-13.2%	-0.9%	0.8%
Housing Vouchers 1	16.2%	1.3%	4.6%	4.2%	-5.2%	0.8%	-1.7%	-12.6%	0.0%	1.5%
Housing Vouchers 2	22.3%	3.0%	6.3%	5.1%	-4.8%	1.8%	-3.6%	-18.1%	0.5%	3.3%
SSI 1	1.5%	0.1%	0.3%	0.0%	2.0%	0.2%	0.6%	-1.5%	-0.6%	0.1%
SSI 2	3.1%	-0.3%	0.6%	0.3%	1.7%	0.5%	1.0%	-3.1%	0.1%	-0.6%
Child Allowance 1	26.2%	7.6%	-5.9%	0.3%	1.4%	2.9%	1.2%	-30.7%	-5.2%	2.0%
Child Allowance 2	40.8%	4.7%	-2.5%	2.0%	-3.2%	3.0%	-0.3%	-43.5%	0.2%	0.0%
Child Support 1	1.5%	0.7%	-0.2%	-0.3%	-1.5%	2.5%	0.7%	-1.5%	-1.5%	-0.7%
Child Support 2	4.6%	-0.1%	-0.0%	0.0%	-2.0%	3.0%	-2.3%	-2.8%	-0.5%	-1.3%
Immigration 1	0.8%	-0.2%	0.6%	1.1%	-0.3%	-0.8%	-0.8%	-3.8%	-0.8%	-1.2%
Immigration 2	8.5%	-5.1%	9.0%	7.2%	-5.4%	-6.2%	-8.9%	30.6%	29.0%	-4.7%

NOTES: The first column shows relative poverty reductions for all children for a given policy. Subgroup columns show the difference between subgroup poverty reductions and reductions for all children.

*One member in the household is an unauthorized citizen.

SOURCE: Analyses commissioned from TRIM3 by the committee.

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Background for Table 5-2

To aid in understanding the extent to which a given program and policy change met the various criteria the committee developed, we present in Table 5-2, Chapter 5, a color-coded table to describe the poverty reductions, cost, work encouragements, and social inclusion for each proposed policy. We summarize performance across each of the first six criteria listed in Table D5-7. Reductions in poverty, cost, and work encouragement were derived directly from the TRIM3 output (see Appendix E). However, we created a novel scale to describe social inclusion as the number of subgroups for which poverty gaps decrease. To calculate social inclusion values, we subtracted the number of subgroups with poverty increases by the number of subgroups with poverty decreases such that larger values indicated the policy decreased relative poverty for more subgroups than the policy increased relative poverty. See the previous section detailing the construction of Table 5-1 section and Tables D5-4 to D5-6 for information regarding how social inclusion was defined.

To create Table 5-2, we then specified cutpoints to denote five levels of performance. These cutpoints are given in Table D5-8. Lastly, the strength of the research evidence on policy impacts on child well-being is provided in the final column. These judgments are based on the analysis presented in Chapter 3.

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TABLE D5-7 Values for Table 5-2

	Percentage Point Reduction in 100% SPM Poverty	Percentage Point Reduction in <50% SPM Poverty	Percentage Point Reduction in <150% SPM Poverty	Budget Cost (Billions)	Earnings Change in $ Billions for Individuals With Incomes <200% SPM	Social Inclusion	Research Evidence on Child Impacts?
EITC 1	1.2	0.2	1.2	8.4	4.9	-1	Strong
EITC 2	2.1	0.4	2.5	20.2	9.0	-2	
Child Care 1	1.2	0.3	1.1	5.1	9.3	-1	No Evidence
Child Care 2	0.6	0.2	0.4	6.9	4.2	-3	
Minimum Wage 1	0.2	0.0	0.3	-3.7	3.5	0	No Evidence
Minimum Wage 2	0.1	0.0	0.1	-2.0	1.9	-1	
WorkAdvance 1	0.0	0.0	0.0	-0.3	0.8	0	No Evidence
WorkAdvance 2	0.1	0.1	0.1	-0.8	2.4	1	
SNAP 1	1.7	0.5	1.8	26.4	-3.2	-2	Strong
SNAP 2	2.3	0.7	2.6	37.4	-3.6	-4	
Housing Vouchers 1	2.1	0.6	0.6	24.1	-4.1	1	Some
Housing Vouchers 2	3.0	0.9	0.7	34.9	-5.9	2	
SSI 1	0.2	0.0	0.3	4.2	-0.4	0	No Evidence
SSI 2	0.4	0.1	0.7	9.4	-1.1	0	
Child Allowance 1	3.4	1.1	3.3	32.9	-1.6	2	Some
Child Allowance 2	5.3	1.5	8.2	54.4	-3.9	7	
Child Support 1	0.2	0.1	0.7	5.7	-0.2	-2	No Evidence
Child Support 2	0.4	0.1	0.5	8.9	-0.4	-2	
Immigration 1	0.1	0.0	0.1	3.9	-0.5	-1	No Evidence
Immigration 2	1.1	0.3	0.4	16.9	-2.2	-1	

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TABLE D5-8 Cutpoints for Table 5-2

Criteria	⌄⌄	⌄	|	⌃	⌃⌃
Percentage Point Reduction in <100% TRIM3 SPM Poverty	<0.3	0.3 — 1	1 — 2	2 — 3	3+
Percentage Point Reduction in <50% TRIM3 SPM Poverty	0	0 — 0.3	0.3 — 0.5	0.5 — 1	1+
Percentage Point Reduction in <150% TRIM3 SPM Poverty	0 — 0.5	0.5 — 1	1 — 1.5	1.5 — 3	3+
Low Cost (Billions)	$30+	$20 — 30	$10 — 20	$0 — 10	<$0
Encourages Work (Billions)	$5+ Earnings Loss	$3 — 5 Earnings Loss	< $3 Earnings Loss	$0 — 5 Earnings Gain	$5 + Earnings Gain
Social Inclusion Scale	< -3	-3 — -1	0	1 — 3	3+

NOTE: All of these cutoffs should be mutually exclusive.

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REFERENCES

Allen, M.L. (2017, June). *A Call to End Child Poverty Now.* Memo submitted to the Committee on Building an Agenda to Reduce Child Poverty by Half in 10 Years. Washington, DC: Children's Defense Fund.

Anderson, P.M. and Butcher, K.F. (2016). *The Relationships Among SNAP Benefits, Grocery Spending, Diet Quality, and the Adequacy of Low-Income Families' Resources*. Washington, DC: Center on Budget and Policy Priorities. Available: https://www.cbpp.org/sites/default/files/atoms/files/6-14-16fa.pdf [May 8, 2018].

Baker, J.A., Feldstein, M., Halstead, T., Mankiw, N.G., Paulson, H.M., Shultz, G.P., Stephenson, T., and Walton, R. (2017, February). *The Conservative Case for Carbon Dividends*. Washington, DC: The Climate Leadership Council.

Batalova, J., Fix, M., and Greenberg, M. (2018). *Chilling Effects: The Expected Public Charge Rule and Its Impact on Legal Immigrant Families' Public Benefits Use*. Washington, DC: Migration Policy Institute.

Baughman, R., and Dickert-Conlin, S. (2009). The Earned Income Tax Credit and fertility. *Journal of Population Economics, 22*(3), 537–563.

Ben-Shalom, Y., Moffit, R., and Scholz, J.K. (2012). An assessment of the effectiveness of antipoverty programs in the United States. In P.N. Jefferson (Ed.), *The Oxford Handbook of the Economics of Poverty*. Oxford, United Kingdom: Oxford University Press.

Blau, D.M. (2003). Child care subsidy programs. In R.A. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States*. (pp. 443–516). Chicago: University of Chicago Press.

Blau, D.M., and Tekin, E. (2007). The determinants and consequences of child care subsidies for single mothers in the USA. *Journal of Population Economics*, 20, 719–741.

Blundell, R., and Macurdy, T. (1999). Labor supply: A review of alternative approaches. In O. Ashenfelter and D. Card (eds.), *Handbook of Labor Economics, Volume 3* (pp. 1559–1695). New York: Elsevier.

Capps, R., Fix, M., and Zong, J. (2016). *A Profile of U.S. Children With Unauthorized Immigrant Parents*. Washington, DC: Migration Policy Institute.

Chetty, R., Friedman, J.N., and Saez, E. (2013). Using differences in knowledge across neighborhoods to uncover the impacts of the EITC on earnings. *American Economic Review, 103*(7), 2683–2721.

Chetty, R., and Saez, E. (2013). Teaching the tax code: Earnings responses to an experiment with EITC recipients. *American Economic Journal: Applied Economics 5*(1), 1–31.

Collins, A.M., Briefel, R., Klerman, J.A., Wolf, A., Rowe, G., Logan, C., Envera, A., Fatima, S., Gordon, A., Lyskawa, J., and Fatima, S. (2016, May). *Summer Electronic Benefit Transfer for Children (SEBTC) Demonstration: Summary Report*. Cambridge, MA: Abt Associates Inc. and Mathematica Policy Research. Available: https://fns-prod.azureedge.net/sites/default/files/ops/sebtcfinalreport.pdf [May 8, 2018].

Congressional Budget Office (2014). *The Effects of a Minimum-Wage Increase on Employment and Family Income*. Available: https://www.cbo.gov/publication/44995 [October 15, 2018].

Costello, E.J., Erkanli, A., Copeland, W., and Angold, A. (2010). Association of family income supplements in adolescence with development of psychiatric and substance use disorders in adulthood among an American Indian population. *Journal of the American Medical Association*, *303*(19), 1954–1960.

Currie, J. (2003). U.S. food and nutrition programs. In R.A. Moffitt (Ed.), *Means-Tested Transfer Programs in the United States*. Chicago: University of Chicago Press.

Deshpande, M. (2016). The effect of disability payments on household earnings and income: Evidence from the SSI Children's Program. *Review of Economics and Statistics*, *98*(4), 638–654.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

Desmond, M. (2016). *Evicted: Poverty and Profit in the American City*. New York: Crown.

Dube, A. (2014). *Proposal 13: Designing Thoughtful Minimum Wage Policy at the State and Local Levels*. Washington, DC: The Hamilton Project, The Brookings Institution. Available: http://www.hamiltonproject.org/assets/legacy/files/downloads_and_links/state_local_minimum_wage_policy_dube.pdf [October 15, 2018].

Duggan, M., Kearney, M. S., and Rennane, S. (2016). The Supplemental Security Income (SSI) Program. In R.A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States, Volume II*. Chicago: University of Chicago Press.

Eissa, N., and Hoynes, H. (2004). Taxes and the labor market participation of married couples: The Earned Income Tax Credit. *Journal of Public Economics, 88*(9-10), 1931–1958.

Eissa, N. and Hoynes, H. (2006). Behavioral responses to taxes: Lessons from the EITC and labor supply. In J. Poterba (Ed.), *NBER Book Series Tax Policy and the Economy: Volume 20* (pp. 74–110). Cambridge, MA: The MIT Press.

Eissa, N. and Liebman, J.B. (1996). Labor supply response to the Earned Income Tax Credit. *The Quarterly Journal of Economics, 111*(2), 605–637.

Ellwood, D.T. (2000). The impact of the Earned Income Tax Credit and social policy reforms on work, marriage, and living arrangements. *National Tax Journal, 53*(4 Part 2), 1063–1103.

Fang, H. and Keane, M. (2004). Assessing the impact of welfare reform on single mothers. *Brookings Papers on Economic Activity*, 1–116.

Fleischer, M.P., and Hemel, D.J. (2017). Atlas nods: The libertarian case for a basic income. *Wisconsin Law Review*, 6, 1189–1271.

Forget, E.L., Peden, A.D., and Strobel, S.B. (2013). Cash transfers, basic income, and community building. *Social Inclusion*, *1*(2), 84–91.

Garfinkel, I., and McLanahan, S. (1986). *Single Mothers and Their Children: A New American Dilemma*. Washington, DC: Urban Institute Press.

Garfinkel, I., Smeeding, T., and Rainwater, L. (2010). *Wealth and Welfare States: Is America a Laggard or Leader?* New York: Oxford University Press.

Garfinkel, I., Huang, C.C., and Naidich, W. (2006). The effects of a Basic Income Guarantee (BIG) on poverty and income distribution. In B. Ackerman, A. Alstott, E.O. Wright, and P. Van Parijs (Eds.), *Real Utopias Project, Volume V—Redesigning Distribution: Basic Income and Stakeholder Grants as Cornerstones of a More Egalitarian Capitalism*. New York: Verso.

Giannarelli, L., Lippold, K., Minton, S., and Wheaton, L. (2015). *Reducing Child Poverty in the US: Costs and Impacts of Policies Proposed by the Children's Defense Fund*. Washington, DC: Urban Institute.

Grogger, J. (2003). The effects of time limits, the EITC, and other policy changes on welfare use, work, and income among female-headed families. *Review of Economics and Statistics, 85*(2), 394–408.

Halpern-Meekin, S., Edin, K., Tach, L., and Sykes, J. (2015). *It's Not Like I'm Poor: How Working Families Make Ends Meet in a Post-Welfare World*. University of California Press.

Hendra, R., Greenberg, D.H., Hamilton, G., Oppenheim, A., Pennington, A., Schaberg, K., and Tessler, B.L. (2016). *Encouraging Evidence on Sector-Focus Advancement Strategy.* New York: MDRC.

Henry J. Kaiser Family Foundation. (2018). *Proposed Changes to "Public Charge" Policies for Immigrants: Implications for Health Coverage*. Available: https://www.kff.org/disparities-policy/fact-sheet/proposed-changes-to-public-charge-policies-for-immigrants-implications-for-health-coverage [February 15, 2019].

Copyright National Academy of Sciences. All rights reserved.

Herbst, C. (2011). The impact of the Earned Income Tax Credit on Marriage And Divorce: Evidence from flow data. *Population Research and Policy Review, 30*(1), 101–128. Available: http://www.jstor.org/stable/41487857.

Heymann, J. and Sprague, A. (2017). *Policy Approaches to Address Child Poverty in the United States*. Memo submitted to the Committee on Building an Agenda to Reduce Child Poverty by Half in 10 Years.

Hoynes, H.W., and Patel, A.J. (2018). Effective policy for reducing poverty and inequality?: The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources, 53*(4), 859–890.

Hoynes, H., and Rothstein, J. (2017). Tax policy toward low-income families. In A. Auerbach and K. Smetters (Eds.), *Economics of Tax Policy.* Oxford University Press.

Hoynes, H.W., and Schanzenbach, D.W. (2012). Work incentives and the Food Stamp Program. *Journal of Public Economics*, *96*, 151–162.

_____. (2016). U.S. food and nutrition programs. In R. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the U.S., Volume I*. Chicago: University of Chicago Press.

Institute of Medicine and National Research Council. (1998). *From Generation to Generation: The Health and Well-Being of Children in Immigrant Families*. Washington, DC: National Academy Press.

Jackson, A. (2017). Basic income: A social democratic perspective. *Global Social Policy*, *17*(1), 101–104.

Jacob, B.A., and Ludwig, J. (2012). The effects of housing assistance on labor supply: Evidence from a voucher lottery. *American Economic Review*, *102*(1), 272–304.

Jones, D., and Marinescu, I. (2018). *The Labor Market Impacts of Universal and Permanent Cash Transfers: Evidence from the Alaska Permanent Fund*. Working Paper No. w24312. Cambridge, MA: National Bureau of Economic Research.

Leigh, A. (2010). Who benefits from the Earned Income Tax Credit? Incidence among recipients, coworkers and firms. *B.E. Journal of Economic Analysis and Policy, 10*(1).

Marr, C., Huang, C.-C., Sherman, A., and Horton, E. (2017). *House Tax Bill's Child Tax Credit Increase Excludes Thousands of Children in Low-Income Working Families in Every State*. Washington, DC: Center on Budget and Policy Priorities.

Meyer, B.D., and Rosenbaum, D.T. (2000). Making single mothers work: Recent tax and welfare policy and its effects. *National Tax Journal, 53*(4, part 2), 1027–1062.

_____. (2001). Welfare, the Earned Income Tax Credit, and the labor supply of single mothers. *Quarterly Journal of Economics, 116*(3), 1063–1114.

Michelmore, K. (2018). The Earned Income Tax Credit and union formation: The impact of expected spouse earnings. *Review of Economics of the Household, 16*(2), 377–406.

Milligan, K., and Stabile, M. (2007). The integration of Child Tax Credits and welfare: Evidence from the Canadian National Child Benefit Program. *Journal of Public Economics, 91*(1-2), 305–326.

National Academies of Sciences, Engineering, and Medicine. (2017). *The Economic and Fiscal Consequences of Immigration*. Washington, DC: The National Academies Press.

Nichols, A., and Rothstein, J. (2016). The Earned Income Tax Credit. In R.A. Moffitt (Ed.), *Economics of Means-Tested Transfer Programs in the United States*, *Volume I*. Chicago: University of Chicago Press.

Nikiforos, M., Steinbaum, M., and Zezza, G. (2017, August). *Modeling the Macroeconomic Effects of a Universal Basic Income*. New York: Roosevelt Institute.

Nord, M. (2009). Food insecurity in households with children: Prevalence, severity, and household characteristics. *Economic Information Bulletin* No. EIB-56. Washington, DC: Economic Research Service, U.S. Department of Agriculture.

Copyright National Academy of Sciences. All rights reserved.

A Roadmap to Reducing Child Poverty

Olsen, E.O. (2017). Reducing poverty by reforming housing policy. In R. Doar (Ed.), *A Safety Net That Works: Improving Federal Programs for Low-Income Americans*. Washington, DC: American Enterprise Institute.

Organisation for Economic Co-operation and Development (OECD) (2017). *Basic Income as a Policy Option: Can It Add Up?* Policy Brief on the Future of Work. Paris: OECD Publishing. Available: www.oecd.org/employment/future-of-work.htm [July 18, 2018].

Perreira, K.M., Yoshikawa, H., and Oberlander, J. (2018). A new threat to immigrants' health—the public-charge rule. *New England Journal of Medicine, 379*(10), 901–903.

Rosenbaum, D. (2000). *Taxes, the Earned Income Tax Credit, and Marital Status*. Northwestern University/University of Chicago Joint Center for Poverty Research.

Rothstein, J. (2008). *The Unintended Consequences of Encouraging Work: Tax Incidence and the EITC*. Princeton University and the National Bureau of Economic Research.

_____. (2010). Is the EITC as good as an NIT? Conditional cash transfers and tax incidence. *American Economic Journal: Economic Policy, 2*(1), 177–208.

Saez, E. (2010). Do taxpayers bunch at kink points? *American Economic Journal: Economic Policy, 2*(3), 180–212.

Sawhill, I. and Karpilow, Q. (2014). *Raising the Minimum Wage and Redesigning the EITC*. Washington, DC: The Brookings Institution. Available: https://www.brookings.edu/wp-content/uploads/2016/06/30-Raising-Minimum-Wage-Redesigning-EITC-sawhill.pdf [October 17, 2018].

Sherman, A. (2017, June). *Policy Options for Reducing Child Poverty*. Memo submitted to the Committee on Building an Agenda to Reduce Child Poverty by Half in 10 Years. Washington, DC: Center on Budget and Policy Priorities.

Singer, A. (2004). Welfare reform and immigrants: A policy review. In P. Kretsedemas and A. Aparicio (Eds.), *Immigrants, Welfare Reform, and the Poverty of Policy*. Westport, CT: Praeger.

_____. (2016). *Noncitizen Eligibility for Federal Public Assistance: Policy Overview*. Washington, DC: Congressional Research Service.

Sloman, P. (2017). Universal Basic Income in British politics, 1918–2018: From a 'vagabond's wage' to a global debate. *Journal of Social Policy*, *47*(3), 1–18.

Tekin, E. (2007). Childcare subsidies, wages, and employment of single mothers. *Journal of Human Resources, 42*, 453–487.

Thomas, C.R., and Collette, E. (2017). Unaccompanied and excluded from food security: A call for the inclusion of immigrant youth twenty years after welfare reform. *Georgetown Immigration Law Review*, 31(197), NYLS Legal Studies Research Paper No. 3040215. Available: https://ssrn.com/abstract=3040215.

Tienda, M. (2002). Demography and the social contract. *Demography, 39*(4), 587–616.

U.S. Basic Income Network (2018). *What is a Basic Income Guarantee?* Available: https://usbig.net/about-big [July 13, 2018].

Vargas, E.D., and Pirog, M.A. (2016). Mixed-status families and WIC uptake: The effects of risk of deportation on program use. *Social Science Quarterly, 97*(3), 555–572.

Ziliak, J.P. (2014). Proposal 10: Supporting low-income workers through the refundable child-care credits. In M.S. Kearney and B.H. Harris (Eds.), *Policies to Address Poverty in America*. Washington, DC: The Brookings Institution, The Hamilton Project.

_____. (2017, June). *Proposals to Cut Short-Run Poverty by Half*. Memo submitted to the Committee on Building an Agenda to Reduce Child Poverty by Half in 10 Years.

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Appendix E

TRIM3 Summary Tables

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Appendix F

Urban Institute TRIM3 Technical Specification: Using Microsimulation to Assess the Policy Proposals of the National Academies Committee on Reducing Child Poverty

INTRODUCTION

This report describes the work conducted by the Urban Institute in support of the Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years—a committee established by the National Academies of Sciences, Engineering, and Medicine (the National Academies) in response to a directive in December 2015 legislation. Under contract with the National Academies, Urban Institute staff used the TRIM3 microsimulation model to assess how various policy options could reduce child poverty. Poverty was measured with the Supplemental Poverty Measure (SPM), which captures the impact of changes in noncash benefits and tax credits as changes in cash income. Policies were simulated individually and in combination, and results were provided to the committee members showing anti-poverty impacts for all children and for various subgroups of children. Estimates were also provided for the costs of the policy options.

This report describes the methods used for the work and presents key results. The first section describes the TRIM3 model, explains the procedures used to establish baseline simulations and simulate alternative policies, and presents the "baseline" data for this project—a set of simulations of the key transfer and tax programs as of 2015 (the most recent year of simulations available at the start of this work)—and the associated estimates of child poverty. The second section provides details on the modeling of each of the individual policies considered by the Committee, and the third section describes the modeling of packages of policies. Fourth, we describe the methods for applying the policy changes in the context of the

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recently enacted tax law changes. The final section sums up and provides some overall caveats for the interpretation of the findings.

THE TRIM3 MODEL AND THE 2015 BASELINE

The estimates for the Committee were developed by applying a comprehensive microsimulation model—the Transfer Income Model, version 3, or TRIM3—to data from the Census Bureau's Current Population Survey, Annual Social and Economic Supplement (CPS-ASEC). TRIM3's computer code applies the rules of government tax and benefit programs to each household in the survey data, either mimicking their real-world operations or simulating hypothetical policy changes. Full documentation of TRIM3 is available on the project's website, http://trim.urban.org. In this section, we provide a brief overview of the model, describe the aspects of the data preparation that are most relevant to this project, describe the process of creating baseline simulations, and present the results of the 2015 baseline simulations, in terms of both individual programs and child poverty. Lastly, we comment on some recent research regarding the use of microsimulation to adjust survey data for underreporting.

TRIM3 Overview

TRIM3 is a comprehensive microsimulation model of the tax and benefit programs affecting U.S. households. It has been used for over 40 years to support analyses of income support programs—how they operate currently, how they interact, and how changes to these programs can affect families' economic well-being (Zedlewski and Giannarelli, 2015). The model is funded and copyrighted by the Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (HHS/ASPE); the Urban Institute developed the model, and has held a continuous series of contracts to maintain it, augment it to meet new aspects of the policy environment, and use it in support of ASPE analyses. ASPE also allows the Urban Institute to use TRIM3 for other projects such as this one.

TRIM3 is a microsimulation model, which means that its estimates are developed by applying the rules of benefit and tax programs to each of the households in a survey data file, one by one. The model can simulate either the actual rules of programs ("baseline" simulations) or potential alternative policies. When policy changes are modeled, the results might show that a particular family receives more in benefits under an alternative policy than under the baseline. Aggregate impacts are estimated by adding up the individual-level impacts using the "weights" for each person or household.

Several aspects of TRIM3 are particularly important for this analysis:

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- *Comprehensiveness*: TRIM3 models all the major benefit and tax programs that directly affect the economic well-being of low-income U.S. families. The simulations used in this analysis are:
  - Cash benefits: Supplemental Security Income (SSI) and Temporary Assistance to Needy Families (TANF),
  - Nutrition benefits: Supplemental Nutrition Assistance Program (SNAP), and the Women, Infants, and Children (WIC) program,
  - Other in-kind benefits and subsidies: Public and subsidized housing, child care subsidies through the Child Care and Development Fund (CCDF), and Low Income Home Energy Assistance Program (LIHEAP) benefits, and
  - Taxes: Payroll taxes, federal income taxes and credits, and state income taxes and credits.
- *Detailed modeling*: Baseline simulations capture programs in as much detail as feasible, given the limits of the survey data. When policies vary at the state level—in particular for TANF, CCDF, and state income taxes—the state variations are captured in great detail.
- *Interactions*: TRIM3's simulations are internally consistent, capturing the interactions that occur across programs. For example, benefits from SSI and TANF are counted as income by the SNAP program, so if a change in SSI or TANF is modeled, the secondary impact of that change on SNAP benefits can also be estimated.
- *Ability to capture employment effects*: External estimates of how a policy change would affect employment can be applied to the data (e.g., identifying some people to either start or stop working or to work more or less), and benefit and tax programs can be resimulated including the estimated employment changes.
- *Flexibility*: The system can be used to simulate changes in existing programs and to simulate proposed new programs, such as a national child support assurance system.

CPS-ASEC Data Preparation

The underlying input data file for this analysis was the 2016 CPS-ASEC, which captured families' demographic characteristics as of Spring 2016 and their incomes and employment status during calendar year 2015. This year of data was the most recent for which a full set of baseline simulations was available at the time the work began. The file includes information on about 185,000 people in 69,000 households. When tabulated using the sampling weights developed by the Census Bureau, the file is statistically representative of the civilian noninstitutionalized population of the United States. (The institutionalized population—including people

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in homeless shelters, detention facilities, or residential programs for people with special needs—is not included in the CPS-ASEC and therefore not covered by this analysis.)

The CPS-ASEC provides very detailed information on household demographics, employment, and income. However, the survey is missing some information that is important for simulating benefit and tax programs that affect lower-income families. The two most relevant limitations for this analysis are lack of monthly income data and lack of data on noncitizens' immigrant status.

Monthly Income Data

Monthly income information is required by the simulations in order to capture the changes that may occur during the year in which a family is eligible for a safety net program and, if they are eligible, the amount for which they are eligible. For example, a family may be eligible for SNAP for the first 4 months of a year when a parent is unemployed, but then lose eligibility once that parent finds employment. If eligibility were assessed using only annual income, the family might incorrectly appear to be eligible for the entire year or ineligible for the entire year.

Different methods are used to allocate different types of income across the year, with the most detailed approach taken to allocate earnings and other employment-based income. For individuals who are reported to work fewer than 52 weeks, we first choose a starting-point week and then assign the survey-reported weeks of employment from that point forward ("wrapping" from December to January if needed). The starting point is selected in such a way that the trend in weeks of employment across the months of the calendar year follows the trend from the monthly Bureau of Labor Statistics data (Figure F-1). Similarly, for people who are reported to be unemployed (looking for a job) for part of the year but not the entire year, one or more spells of unemployment is identified (Figure F-2). After the weeks of employment have been identified, earnings are generally assigned evenly across those weeks, implicitly assuming that a person's weekly earnings are unchanged throughout the year. However, for people who report that they worked part time in some weeks and full time in other weeks, the assignment of weekly earnings reflects those differences.[1] Monthly earnings amounts are then generated, treating each month as having 4.333 weeks.

[1] If a person reports usually working full time (35 or more hours per week) but also reports some part-time weeks, we assume he or she works 20 hours per week in the part-time weeks. If a person reports usually working part time, but also reports some full-time weeks, we assume he or she works 40 hours per week in the full-time weeks.

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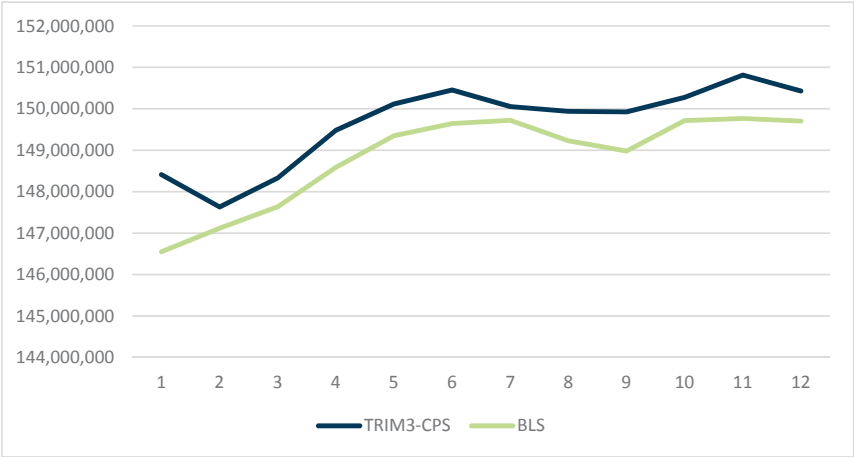

FIGURE F-1 Number of people employed in each month of 2015, TRIM3-CPS data vs. BLS data.

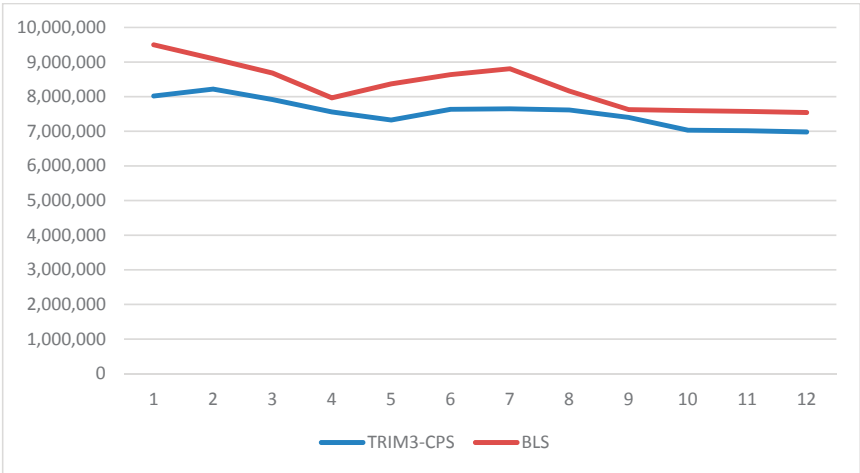

FIGURE F-2 Number of people unemployed in each month of 2015, TRIM3-CPS data vs. BLS data.

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The monthly allocation methods for other types of income are as follows:

- *Unemployment compensation*: The annual survey-reported unemployment compensation (UC) income amount is generally allocated to all or a subset of a person's weeks of unemployment, subject to the constraints that UC is not allocated over more weeks than the maximum possible weeks of benefits in a person's state of residence and that the weekly benefit amount that is assigned falls within the range of minimum and maximum weekly benefit amounts in that state. When people report both UC and earnings during the year, we use state-specific UC rules to estimate a worker's weekly benefit amount, and that information is also used in the assignment.
- *Workers' compensation*: Workers' compensation is generally divided over all weeks in which a person was either unemployed or out of the labor force; but a portion of recipients are simulated to receive their workers' compensation as a lump sum.
- *Child support and alimony*: The number of months over which alimony and child support income amounts are allocated is determined probabilistically based on look-up tables generated from the Survey of Income and Program Participation. Different tables are used for families that do and do not receive TANF; within a subgroup, the probability of a particular number of months of positive child support varies by the annual amount of child support or alimony income, in ranges. Once a number of months is established, the specific months are selected randomly.[2]
- *Other unearned income*: Other unearned income amounts—including Social Security, pension income, interest, dividends, rental income, veterans' payments, regular contributions, educational assistance, black lung/miner benefits, and unspecified "other" income—are allocated evenly across the months of the year.

Note that the above discussion of the monthly allocation of annual values does not mention SSI, TANF, or SNAP amounts, each of which is also reported in the CPS-ASEC in annual terms. Monthly amounts for those programs are developed as part of the baseline simulations, described below.

[2] For people who report both child support and TANF income, and whose annual child support income equals their state's "pass through" amount times their reported months of TANF income, the months of child support receipt is automatically set equal to the months of reported TANF receipt.

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Immigrant Status

The CPS-ASEC asks if people are citizens and, if they are not, asks when they came to the United States. However, the survey does not ask about a noncitizen's legal status—whether she or he is a lawful permanent resident (LPR), refugee/asylee, temporary resident (e.g., residing in the United States with a student or work visa), or unauthorized immigrant. Whether a noncitizen is potentially eligible for various benefits and for some tax credits depends on his/her specific legal status.

To enable detailed modeling of the program rules regarding immigrant eligibility, an immigrant status is assigned to each noncitizen (Table F-1). The methods follow an approach first developed by Dr. Jeffrey Passel and Dr. Rebecca Clark (1998) and further developed by Dr. Passel and coauthors (Passel, VanHook, and Bean, 2006, Passel and Cohn, 2011). In brief, the approach proceeds as follows:

- *Reclassification of some naturalized citizens*: Among people who report being naturalized citizens, 1.9 million are reclassified as noncitizens, based on prior analyses indicating overreporting of naturalization.
- *Temporary residents*: 1.4 million noncitizens are identified as temporary residents, due to having demographic and employment characteristics suggesting that they are in the United States on a work or student visa.
- *Refugees/asylees*: Noncitizens are initially identified as refugees/asylees if, in the year that they entered the United States, more than one-half of the people arriving from their country of origin were refugees or asylees. Some random adjustments are made to the initial determinations as needed to come closer to externally derived targets. The final results include 1.3 million noncitizens imputed to have had an initial status of refugee or asylee.

TABLE F-1 Key Results of Immigrant Status Imputation Procedures, CY 2015 CPS-TRIM Data

Group	Imputation result
Status Modified from Naturalized Citizen to Noncitizen	1.9 million
Total Noncitizens After Adjustment	24.9 million
Imputed to be Temporary Residents	1.4 million
Imputed to be Refugees/Asylees	1.3 million
Imputed to be LPRs	11.5 million
Imputed to be Unauthorized Noncitizens	10.7 million

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- Among noncitizens not already identified as refugees/asylees or temporary residents, people are identified as LPRs if they are in an occupation that would require legal status (e.g., police officer) or if they report a type of benefit that would require legal status.
- Among the remaining noncitizens, people are probabilistically assigned to either LPR status or unauthorized immigrant status based on their characteristics, coming acceptably close to a set of externally derived targets for the number and characteristics of unauthorized immigrants in the CPS-ASEC data.
- Adjustments are made as needed to the person-level imputations to ensure logical intrafamily consistency.

Dr. Passel develops the targets that guide the imputation of unauthorized status using numerous sources of data on legal entrants to the United States over time and adjusting those figures to account for age progression, naturalization, emigration, and death; this results in estimates of people in the country legally. The total noncitizens in the CPS-ASEC data minus the number in the country legally provides the estimate of unauthorized immigrants in the CPS-ASEC data. The final imputations include 10.7 million unauthorized immigrants and 11.5 million LPRs.

Baseline Simulation Methods

Before any use of TRIM3 to assess the potential impacts of changes in policies, a set of baseline simulations must first be completed. The baseline simulations apply the actual rules that were in place in the year of the data being used as input to the households in those data. The simulations create new items of information for each household, telling if they are eligible for various programs, their level of tax liability, and so on. Each simulation follows the same steps that an individual would use to compute his or her income taxes or that a caseworker would use to determine a family's eligibility for benefits. Simulations of benefit programs also identify which of the eligible people or families receive benefits from, and hence participate in the program, in order to create a simulated caseload that comes close to the actual caseload size and characteristics obtained from external administrative and government sources.

In the case of most of the benefit programs discussed here (all except CCDF-funded child care subsidies), the simulated data on program receipt are used to augment, and to some extent replace, the survey-reported CPS-ASEC data on those programs. Specifically, the CPS-ASEC includes annual income and benefit amounts for SSI, TANF, SNAP, and LIHEAP, and includes variables telling whether a household is in public or subsidized housing and whether a family receives benefits from WIC. However, this information is

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not sufficient to support modeling of alternative policies, for a few reasons. First, the reported amounts and caseloads fall substantially short of targets, even after missing survey responses have been adjusted through the Census Bureau's imputation procedures. Second, the survey-reported receipt sometimes does not appear consistent with known program rules. For example, there are cases of families with no young children and no woman of childbearing age who report WIC benefits, or people reporting SSI who are younger than 65 and whose other data show no indications of disability. Third, even when individuals report receiving benefits from a given program appear generally eligible for that program, the specific amounts that are reported are usually not perfectly consistent with what would be computed by applying the program rules to the family's income and demographic data. That is to be expected, since many respondents probably round various dollar amounts, and since some amounts are imputed by the Census Bureau. However, when alternative policies are modeled, the benefits under the new policy are computed based on the rules and the survey-reported household income and demographic data; it is important that the *only* difference between the baseline benefit amount and the alternative benefit amount is that resulting from the policy change, and the only way for that to be the case is for the baseline benefits to be computed with the same methods that will be used in modeling the alternative policies.

Although the CPS-ASEC includes questions about benefit receipt, the survey does not ask respondents about their tax liabilities. The Census Bureau imputes federal and state income tax liabilities to the households in the CPS-ASEC as part of their development of SPM poverty estimates, and they make those imputations available to researchers; however, to ensure complete consistency with other simulated data, the TRIM3 analyses use the baseline tax liability amounts modeled within the TRIM3 system.

The baseline simulations are performed sequentially, so that information from one baseline can be used as input to subsequent simulations, creating an internally consistent picture of families' benefits, tax liabilities, and tax credits. Cash benefits are simulated first, followed by in-kind benefits (which may include cash benefits as part of their income definition). Similarly, federal income taxes are simulated prior to state income taxes, since many states' income tax systems use information from the federal tax form. Additional key points about the baselines are provided below.

Baseline Simulations of Benefit Programs

In general, the simulations of benefit programs proceed in three steps: determining eligibility, computing potential benefits, and determining which eligible families are enrolled in the program. These steps are performed month-by-month, capturing the fact that a family with part-year work

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might be eligible for different benefits during months of employment than during months of unemployment.

The steps in eligibility modeling often include: defining the "filing unit" (the individuals in the household who are considered together in assessing eligibility and benefits); applying immigrant-related restrictions and other restrictions based on demographic characteristics (for example, two-parent families are ineligible for TANF in some states); determining countable income; applying assets tests; and applying income tests. When eligibility policies vary by state, TRIM3 captures the state-by-state variations in eligibility policies with a high degree of detail.

Benefits are computed according to each program's actual policies. Benefit computation formulas often vary by income levels and other characteristics, but may also be flat amounts (for example, in the case of LIHEAP). In the case of housing and child care subsidies, TRIM3 computes the value of the benefit as an assumed full value of what is being provided minus the family's required payment. As with eligibility modeling, state-level variations in benefits-related policies are captured in detail. Benefit amounts are computed for all families and individuals who appear to be eligible, including those for whom there is a benefit amount in the public-use data. This ensures that all the baseline benefit data are completely consistent with the known policies and the reported income and family characteristics, which is an important precondition for assessing the impact of policy changes.

The specific methods for determining which eligible families or individuals are enrolled in a program vary across the programs, but similar principles are followed. They are:

- If an eligible person or family reported receiving a benefit in the CPS-ASEC survey (a true report, not an imputed report), that person or family is automatically included in the program's caseload.
- Among eligible people/families who did not report receipt of a benefit, recipients are selected probabilistically in a way that comes acceptably close to the size and characteristics of the actual caseload—the caseload "targets." Those targets are derived from administrative data, with adjustments as needed for greater consistency with the TRIM3 universe. (For example, targets for SSI exclude the institutionalized recipients, since the CPS-ASEC surveys only noninstitutionalized households.)
- Probabilistic assignments are made by comparing a potential assistance unit's estimated probability of enrollment (based on a variety of characteristics, which vary across programs) to a random number. Specifically, if the unit's probability of participation exceeds the unit's random number for purposes of participation for this program, the unit is simulated to participate.

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- For each benefit program, a unique set of random numbers is used for all probabilistic enrollment assignments for that program for a particular year of data. This ensures that when an alternative simulation results in a change to the unit's probability of participation, any changes in enrollment decisions are logically consistent with the alternative policy change. For example, assume that a hypothetical policy change increases a unit's potential TANF benefit, raising the unit's probability of participation. If the unit participated in TANF in the baseline, the unit will not stop participating; if the probability was previously higher than the random number, the now-higher probability will still be higher than the random number, since the random number did not change. However, if the unit was previously an eligible *nonparticipant*, the unit may start to participate, if the now-higher probability exceeds the unchanged random number.
- Only families and individuals who are simulated to be *eligible* for a program are considered as possible program recipients. Because of that assumption, if an ineligible person or family reports a benefit, we implicitly assume that the report was made in error, and that person or family is not included in the simulated caseload. This simplification avoids complications that would arise from applying policy changes to a simulated baseline caseload that included ineligible participants.[3]

Details of the methods for each simulation are available on the TRIM3 project's website (http://trim3.urban.org). Here, we summarize key points and note some challenges involved in modeling each program.

- SSI:
  - Portion of program modeled: Benefits to individuals in households (not institutionalized).
  - Timeframe: Monthly
  - Policies: Primarily national-level; state-level supplement amounts are obtained from a combination of national and state-level sources.

[3] Future model development could consider some allowance for technically ineligible units being in the caseload, based on administrative estimates of the extent of that type of enrollment error. However, this would require decisions regarding how to handle these cases in alternative simulations. (For example, if an ineligible unit that has been included in the caseload is modeled to receive higher earnings due to a minimum wage increase, it is unclear whether it would be more appropriate to continue to include the unit in the caseload, or whether to assume the unit would lose benefits due to exceeding the eligibility limit by an even greater amount.)

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  - Eligibility and benefits challenges: Assessing potential eligibility based on age (65 or older) is straightforward, but assessing potential eligibility based on disability is complex. For adults, disability is inferred through a combination of the survey-reported reason for not working and survey-reported disability income. Disability cannot be assessed for children.
  - Caseload selection: For adults, the caseload is aligned to targets by reason for eligibility (age vs. disability), type of unit (single or couple), state, and citizenship status. For children, after identifying children whose parents report them as SSI recipients, the rest of the caseload is randomly selected from among children in income-eligible families, to reach targets by family structure (two-parent, single-parent, no-parent) and by state. We also come close to the number of children in multiple-recipient households (about 500,000), according to analysis by the Government Accountability Office (Government Accountability Office, 2016).
- TANF:
  - Portion of program modeled: TRIM3 models cash aid provided through TANF and Separate State Program (SSP) funds. The model also identifies benefits paid through Solely State Funded (SSF) programs; those are separately classified as SSF, not TANF.
  - Timeframe: Monthly
  - Policies: Almost entirely state-level; source of rules is the Welfare Rules Database (for the 2015 policies, see Cohen et al., 2016).
  - Eligibility and benefits challenges: The data do not allow us to directly assess if a family that appears eligible may in fact be ineligible due to previously having reached a time limit. A portion of otherwise-eligible families are treated as ineligible due to time limits, in order to reach estimated state-level targets for time-limited families; the targets are derived from administrative data. Also, the families simulated to be eligible nonparticipants include some who have been excluded due to failure to meet program requirements. Benefits are computed based on family characteristics and detailed state policies, but they do not incorporate the impact of either special-needs payments (additional payments in some states for reasons such as the start of the school year, pregnancy, or a special hardship) or monetary sanctions (reductions of benefits for failure to comply with a requirement).
  - Caseload selection: For the TANF/SSP caseload, key targets include type of unit (single-parent units with and without

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earnings, two-parent units, and child-only units by various reasons for child-only status), state, and presence of noncitizens. An underlying participation function also incorporates varying probabilities of participation by other characteristics, including level of potential benefit, race/ethnicity, and number and ages of children. There is no single source for SSF targets; SSF targets are derived from caseload-reduction reports submitted to the federal government and from various state data systems and reports.

- CCDF:
  - Portion of program modeled: Children subsidized through CCDF funds. (States may combine other funds with CCDF funds to serve more children; however, the baselines for this analysis identify only the children viewed by Health and Human Services' Administration for Children and Families as served by CCDF funds.)
  - Timeframe: Monthly
  - Policies: Almost entirely state-level; source of rules is the CCDF Policies Database (for 2015 policies, see Stevens et al., 2016).
  - Eligibility and benefits challenges: In some cases, the family's required copayment depends in part on the hours that the children require care; that is inferred based on the mother's usual hours of work. The model treats all months of the year the same, without any special treatment of the summer months.
  - Caseload selection: The key target is the average monthly number of children served, by state. Probabilities vary by age of child, single-parent vs. two-parent families, and relative income levels. The simulation also takes into account the survey-reported amount of child care expenses; to the extent feasible, eligible families whose simulated copayment is similar to what they reported spending in child care expense have a higher likelihood of being included in the simulated caseload, and eligible families whose simulated copayment is quite different from what they reported spending (e.g., we simulate that their copayment would be $50/month, but they reported spending $3,600 across the year) have a lower likelihood of being included in the simulated caseload.
- Public and subsidized housing:
  - Portion of program modeled: Public housing and vouchers for obtaining rental housing.
  - Timeframe: Monthly
  - Policies: The same policies are applied nationally for the definition of income and the computation of each assisted

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household's required rent. Fair Market Rents (FMRs) are obtained from the U.S. Department of Housing and Urban Development (HUD), and vary by county and metropolitan area.
  - Eligibility and benefits challenges: Because eligibility policies may vary from one Public Housing Authority to another, baseline simulations do not explicitly model eligibility beyond requiring that household income be below 80 percent of area median income. However, among households reported to be in public or subsidized housing in the CPS-ASEC data, required rents are estimated based on the national-level formulas and the household's income, and each assisted household's subsidy value is estimated as the appropriate FMR (based on the county or metropolitan area and the needed apartment size) minus the required rent.
  - Caseload selection: Unlike other simulated benefit programs, the public and subsidized housing simulation does not include a participation function or alignment to external targets. Among households reported to be in public or subsidized housing in the CPS-ASEC data, if the required rent is less than the assumed FMR (based on location and estimated number of bedrooms), the household is treated as enrolled. If the required rent is greater than the assumed FMR, the household is treated as though it is not in public or subsidized housing.
- SNAP:
  - Portion of program modeled: All recipients except those who are homeless or in institutions.
  - Timeframe: Monthly
  - Policies: Policies are obtained from the Food and Nutrition Service (FNS); some state-level variations are obtained from the SNAP State Options Report (Food and Nutrition Service, 2016) and other sources.
  - Eligibility and benefits challenges: Estimates of SNAP eligibility are very sensitive to assumptions about which members of complex households would jointly file for SNAP. The TRIM3 methods follow the explicit rules about which family members are required to file for SNAP together and make assumptions about other situations.
  - Caseload selection: The key enrollment targets include family structure, presence of cash benefits (SSI or TANF), level of potential SNAP benefit, presence of earnings, state, and citizenship status.

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- WIC:
  - Portion of program modeled: Benefits to infants, their mothers, and young children. (Benefits to pregnant women are captured only to the extent that a childless woman of childbearing age reports WIC in the CPS-ASEC.)
  - Timeframe: Monthly
  - Policies: Policies are obtained from FNS data. Basic policies are national, but there is state variation in the value of the benefit and in the certification period for children.
  - Eligibility and benefits challenges: The WIC program does not explicitly define whose income is counted in determining eligibility; we assume that the eligibility process considers all people related to the children, including both parents in the case of unmarried couples.[4] One aspect of WIC eligibility—nutritional risk—cannot be observed in the CPS data. The simulation assumes that all people who pass the demographic and financial eligibility tests are at nutritional risk.
  - Caseload selection: For infants and children, enrollment is aligned to state-level targets.
- LIHEAP:
  - Portion of program modeled: Heating and cooling help (weatherization help is not modeled).
  - Timeframe: Annual
  - Policies: State-specific eligibility policies are obtained from the LIHEAP Clearinghouse website (https://liheapch.acf.hhs.gov). Because most LIHEAP benefits are provided in the winter, based on eligibility determination in the fall, the simulation uses the eligibility policies in place in the fall of the calendar year; specifically, the CY 2015 LIHEAP eligibility simulation used the FY 2016 eligibility policies (which went into effect in October 2015).
  - Eligibility and benefits challenges: Local programs may differ in their income definitions or the period over which they assess income, at the point that a household applies for help; we assume all places use annual income.
  - Caseload selection: The simulated caseload is aligned to state-specific targets, which are estimates of the unduplicated count of households receiving heating and/or cooling help over that calendar year.

[4] The WIC eligibility estimates produced for the Food and Nutrition Service (Trippe et al., 2018) also use a broad definition of the economic unit. If eligibility was estimated with a narrower unit—considering related subfamilies as separate units—more children would be identified as eligible.

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Baseline Simulations of Tax Programs

The simulations of taxes require the identification of the tax unit and then the computation of the tax amounts. People are assumed to pay all the taxes that they owe, and with only a few exceptions they are assumed to take all available tax credits; therefore, the modeling of taxes does not involve alignment to caseload targets in the same way as the modeling of benefits does. However, modeling of income taxes does require additional imputations to estimate items of information not available in the CPS-ASEC data. Key aspects of the tax simulations are:

- Payroll taxes:
  - Portion of program modeled: Old age, survivors, disability, and health insurance taxes (OASDHI); includes taxes on self-employment earnings and Civil Service Retirement Service (CSRS) contributions.
  - Timeframe: Annual
  - Policies: Social Security website
- Federal income taxes:
  - Portion of program modeled: Most aspects of individual income tax computation. Some tax features that are applicable only to very high-income taxpayers or very rare situations are not modeled.
  - Timeframe: Annual
  - Policies: 1040 (and supporting schedule) forms and instructions
  - Imputations preceding the modeling: Data from the Internal Revenue Service (IRS) Statistics of Income Public Use File are used to impute amounts of itemized deductions, capital gains/losses, and individual retirement account (IRA) contributions.
  - Alignment of usage of selected credits: In general, taxpayers are assumed to take all credits for which they appear eligible. However, the modeling of the child and dependent care expense credit assumes that a portion of the units who appear eligible—based on having working parents, children under age 13, and child care expenses—do not in fact take the credit for some reason (for example, because they are ineligible due to their flexible-spending-account benefits). The take-up of the credit is aligned to data on the actual number of tax units taking the credit.
- State income taxes:
  - Portion of program modeled: Most aspects of states' individual income tax computation. Some tax features that are applicable only to very high-income taxpayers or very rare situations are not modeled.

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- Timeframe: Annual
- Policies: State-by-state tax rules compiled by a team led by Dr. Jon Bakija, Williams College

2015 Baseline Simulation Results vs. Targets

The 2015 simulations of benefit programs were, in almost all cases, very successful at meeting administrative targets. As discussed above, these simulations generally select a simulated caseload from among the households that appear to be eligible in order to meet overall caseload targets (shown in Table F-2) as well as subgroup targets. The simulation of taxes differs from the simulation of benefits in that there is almost no alignment involved. Instead, the results are determined almost entirely by applying the tax rules to the survey data. Results are then compared to administrative data for validation purposes, but overall results are not aligned to come closer to those targets. The result of the TRIM3 baseline simulations is a data file that comes as close as feasible to capturing the real-world incidence and amounts of benefits and taxes in 2015 (Table F-3).

Benefit Program Simulations Compared with Targets

For SSI, TANF, LIHEAP, and CCDF-funded child care subsidies, the simulated caseloads and aggregate benefits all come very close to administrative data figures. For each of these programs, the simulated caseload and the simulated aggregate benefits are no more than 3 percent from total national targets. In addition, the simulations come very close to the actual distribution of the caseload in terms of state of residence and key demographic characteristics. The aggregate amounts of simulated benefits exceed the amounts according to the survey data (including both truly reported amounts and amounts imputed by the Census Bureau) by 11 percent in the case of SSI, 69 percent in the case of TANF, and 56 percent in the case of LIHEAP. (CCDF-funded child care subsidies are not reported in the survey.)

In the case of SNAP, the simulated caseload is very close to the actual figure, but simulated aggregate benefits fall short of the amount, according to administrative data, by 8.5 percent. This pattern of falling short of target for aggregate benefits while hitting the target for the simulated caseload is consistent with other baseline years. TRIM3 finds fewer units eligible for high benefits than are observed in administrative data, and it makes up for the shortfall by exceeding the target for units eligible for lower benefits. The shortfall in high-benefit units is not unique to TRIM3 and is also observed in eligibility estimates produced by Mathematica Policy Research for the FNS. Despite the shortfall in dollars relative to the administrative data, the simulated aggregate SNAP benefit amount of $63.0 billion is much closer

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TABLE F-2 TRIM3-Simulated Benefit and Tax Data versus Targets, 2015

Counts of Persons or Units are in Thousands; Dollar Amounts are in Millions	CPS-ASEC Reported Data[a]	TRIM-Simulated	2015 Admin. Data[b]	TRIM as % of Admin. Data
SSI (Noninstitutionalized)[c]				
Adults with SSI During Year for Self or Child	6,414	—	—	—
Avg. Monthly Adult Recipients (Persons)	—	7,103	6,958	102.1%
Avg. Monthly Child Recipients	—	1,234	1,254	98.5%
Annual Benefits[d]	$50,715	$56,399	$55,569	101.5%
TANF[e]				
Avg. Monthly Caseload (Families)[f]	800	1,325	1,326	99.9%
Annual Benefits	$3,931	$6,646	$6,462	102.8%
SNAP[g]				
Avg. Monthly Units (Households)[f]	12,245	22,367	22,404	99.8%
Annual Benefits	$36,602	$63,039	$68,859	91.5%
Public and Subsidized Housing				
Ever-subsidized Households[h]	5,760	5,165	4,635	111.4%
Annual Value of Subsidy	na	$36,955	na	—
LIHEAP[i]				
Assisted Households	4,205	6,747	6,748	100.0%
Annual Benefits	$1,717	$2,673	2,675	100.0%
WIC				
Families With Any Benefits	3,780	4,071	na	—
Avg. Monthly Recipients, Infants/Children	na	5,861	5,891	99.5%
Avg. Monthly Recipients, Women[j]	na	907	1,865	48.6%
Annual Value of Benefit, Pre-rebate[k]	na	$4,875	na	—
CCDF-funded Child Care Subsidies				
Avg. Monthly Families with CCDF Subsidy	na	834	840	99.4%
Avg. Monthly Children with CCDF Subsidy	na	1,351	1,387	97.4%
Aggregate Value of Subsidy	na	$6,611	$6,585	100.4%

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TABLE F-2 Continued

Counts of Persons or Units are in Thousands; Dollar Amounts are in Millions	CPS-ASEC Reported Data[a]	TRIM-Simulated	2015 Admin. Data[b]	TRIM as % of Admin. Data
Payroll tax				
Workers Subject to OASDI Tax	na	157,185	168,899	93.1%
Taxable Earnings for OASDI	na	$6,748,090	$6,395,360	105.5%
Taxes Paid by Workers (OASDI + HI)	na	$560,877	$541,055	103.7%
Federal Income Taxes				
Number of Positive Tax Returns	na	104,461	99,022	105.5%
Total Tax Liability, Positive Tax Returns	na	$1,312,511	1,435,849	91.4%
Earned Income Tax Credit				
Returns with Credit	na	19,712	28,082	70.2%
Total Credit	na	$41,770	$68,525	61.0%
State Income Taxes				
Number of Positive Tax Returns	na	89,970	na	—
Taxes Paid, Net of Credits[l]	na	$318,089	$340,468	93.4%

NOTE: na = not available; avg. = average; admin. = administrative.

[a] CPS-ASEC reported data included the data that are "allocated" by the Census Bureau in cases of nonresponse. Items not asked in the survey that are imputed by the Census Bureau (such as tax liabilities) are not shown.

[b] Administrative figures are adjusted or combined for consistency with simulation concepts. In particular, fiscal year administrative data are adjusted for greater comparability with calendar year simulated data, and benefits paid to individuals in the territories are excluded. Benefits include both federally-funded and state-funded amounts.

[c] SSI figures include state supplements.

[d] Administrative data for SSI include retroactive payments, which are approximately 9 percent of total payments; TRIM does not simulate retroactive payments.

[e] Includes benefits funded by federal TANF money and separate state programs, but not solely state-funded programs. The administrative figure for aggregate benefits is computed as the average per unit benefit from administrative microdata applied to the actual caseload.

[f] For TANF and SNAP, an average monthly caseload is computed using the CPS-reported number of months that benefits are received.

[g] The administrative figures for SNAP exclude SNAP disaster assistance.

[h] Administrative figure is the number of occupied public and assisted units.

[i] An exact unduplicated number of assisted households is not available; an unduplicated count is estimated using estimates of the overlap between groups receiving heating, cooling, and crisis benefits.

[j] Benefits to pregnant women are not captured in the TRIM simulation.

[k] The TRIM benefit amount includes the pre-rebate value of infant formula. An administrative figure for WIC food costs net of the rebate was not available.

[l] The actual state income tax amount is from the Census Bureau's Annual Survey of State Government Tax Collections, which reflects tax collections during a fiscal year; TRIM3's figures are estimates of tax liability during the tax year.

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TABLE F-3 TRIM3 Benefits and Expenses Incorporated into the 2015 SPM

SPM Benefit or Expense	Notes
SSI	TRIM3 SSI amounts are used instead of the reported amounts.
TANF	TRIM3 TANF amounts are used instead of the reported amounts.
SNAP	TRIM3 SNAP amounts are used instead of the reported amounts.
WIC	TRIM3 simulated amounts are used instead of the Census Bureau values assigned to people who report WIC receipt in the CPS ASEC.
LIHEAP	TRIM3 simulated amounts are used instead of reported amounts.
Public and Subsidized Housing	Uses TRIM3 public and subsidized housing subsidies rather than amounts imputed by the Census Bureau to households reporting receipt of public and subsidized housing assistance. TRIM3 follows the Census Bureau SPM methodology of capping the amount of the subsidy counted for the SPM at the share of the SPM threshold representing shelter and utility expenses, less the household's required rental payment.
Child Care Expenses	Primarily reflects CPS reported amount. However, for families simulated by TRIM3 to receive CCDF child care subsidies, reflects the required copayment amount. Child care expenses are counted as an expense in the SPM.
Payroll Taxes	TRIM3 simulated amounts are used instead of Census Bureau simulated amounts.
Realized Capital Gains/ Loss	Statistically matched from the IRS Public Use File as part of the federal income tax baseline. The Census Bureau tax model does not impute capital gains and so they are not included in the Census Bureau SPM. However, capital gains are included in the TRIM3 SPM because they are included in the calculation of TRIM3 federal and state income taxes.[a]
Federal Income Tax	TRIM3 simulated amounts are used instead of Census Bureau simulated amounts. Includes taxes on capital gains (not included in the Census Bureau estimate). Includes refundable credits (EITC and Additional Child Tax Credit).
State Income Tax	TRIM3 baseline simulated amounts are used instead of Census Bureau simulated amounts. Includes taxes on capital gains. Includes refundable credits. Replaces Census Bureau simulated amounts.

[a] Capital gains are obtained through a statistical match with the IRS Public Use File as part of the TRIM3 federal income tax baseline.

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to the actual figure ($68.9 billion) than the amount captured in the survey data ($36.6 billion).

In the case of public and subsidized housing, TRIM3 includes any households living in public or subsidized housing according to the public-use survey data as long as their income is below 80 percent of the area median income published by HUD and their required rent payment would be lower than the HUD Fair Market Rent based on the number of bedrooms estimated for the household and their county or metropolitan area; these methods overshoot by about 11 percent the number of households in public housing or with housing vouchers for low-income families funded by HUD, probably because some of the identified households are receiving other types of housing help.

The WIC simulation comes very close to targets for the number of infants and children with WIC. However, the simulation is only able to capture WIC receipt by women who are the mothers of infants; benefits received by pregnant women are not fully captured because the CPS does not identify pregnancy.

Tax Simulations Compared with Targets

In simulating payroll taxes, the number of workers observed as subject to OASDI taxes is about 7 percent short of the actual figure. However, the aggregate taxable earnings seen in the data and the resulting simulated payroll taxes are somewhat higher than the administrative data target. This pattern of falling short of the target for the number of workers who are subject to OASDI taxes while exceeding the total amount of taxes is consistent with other baseline years and is driven by reported employment and earnings in the CPS-ASEC. A contributing factor to the excess in OASDI taxes is that CPS-ASEC respondents are likely to report their full earnings, rather than their earnings less nontaxable components such as pretax health insurance premium payments and contributions to medical and dependent care flexible benefits plans. Such reductions to earnings are not captured in the baseline simulation.

The federal income tax simulation counts a number of tax returns with positive income tax liability that is 5.5 percent higher than the actual number of returns for tax year 2015, but the model falls short of the actual amount of tax liability on positive-tax returns by 8.6 percent. The shortfall in taxes is likely due to the CPS-ASEC not capturing all the income in the highest portion of the income distribution. The same issue is observed in the simulation of state income taxes, which identifies an aggregate amount of state income liability that is 6.6 percent below the aggregate target.

The simulation also falls short in the identification of units with the EITC. The shortfall in simulated EITC is not unique to TRIM3 and is commonly observed in other microsimulation estimates based on CPS-ASEC

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data. Some of the shortfall is explained by the fact that TRIM3 does not model noncompliance with EITC rules. CPS-ASEC data issues may also contribute to the shortfall (Wheaton and Stevens, 2016). TRIM3 assigns EITC to all units found eligible according to the CPS-ASEC data. Assigning additional units to receive the EITC would require modeling noncompliant receipt of the EITC or adjusting the earnings and family composition data in the CPS-ASEC, both of which are beyond the scope of this study.

To validate the TRIM3 SPM calculations, we first calculate the SPM following the Census Bureau methodology using unadjusted CPS-ASEC variables and Census Bureau imputed variables obtained from the Census Bureau's SPM research file.[5] We then substitute TRIM3 variables for the CPS ASEC and Census Bureau imputed variables and compare the effects of the TRIM3 variables on the estimates.

The estimates presented here are comparable with the Census Bureau's revised 2015 SPM estimates that are included in the Census Bureau's 2016 SPM report (Fox, 2017). In preparing the 2016 SPM, the Census Bureau revised the EITC, housing subsidy, and work-related expense imputations. For consistency, the Census Bureau re-issued estimates for 2015, using the same methodology, and included the results in the 2016 SPM report. We use the revised 2015 variables for our estimates.

When we use the TRIM3 model to calculate SPM poverty using only the CPS-ASEC and the Census Bureau imputed values, we find that 12.038 million children were in SPM poverty in 2015, compared with 12.026 million according to the Census Bureau (Table F-4).[6] Small differences such as this arise because our calculated results are generated using public-use data rather than internal Census Bureau files and because certain household heads younger than 18 who are living with parents are classified as "children" when calculating the SPM threshold in our calculated results, but not in the published results.[7]

[5] See Fox (2017) for discussion of the Census Bureau's methods. The SPM research file is available at the Census Bureau's website at: https://www.census.gov/data/datasets/2015/demo/supplemental-poverty-measure/spm.html.

[6] See appendix table A-1 of Fox (2017).

[7] The change in the number of children results from TRIM3's restructuring of "inverted households" in the TRIM3 conversion process. These households are ones in which a teen or young adult is reported to be the household reference person, despite having one or both parents present. Many of these households involve immigrants, and it is likely that the teen or young adult was selected as the reference person because of his/her English capability. TRIM3 reorganizes the inverted households, so that a parent is the household reference person. If the teen is under the age of 18, reclassifying the teen from "head" to "child" increases the number of children in the unit, thus affecting the SPM poverty threshold. If the teen is working, then reclassification as a "child" also affects the unit's work expenses, as the SPM methodology does not assign work expenses to children under the age of 18 unless they are the head or spouse of the SPM unit.

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TABLE F-4 Effect of TRIM3 Adjustments on SPM Child Poverty and Deep Poverty Estimates, 2015

	Children in Poverty		Children in Deep Poverty	
	Total (1,000s)	Percent	Total (1,000s)	Percent
Census Bureau (Published)	12,026	16.2%	3,628	4.9%
Census Bureau (Calculated)	12,038	16.3%	3,636	4.9%
TRIM3 Adjustments:				
Correction for *Underreporting*[a]				
SSI	11,462	15.5%	3,388	4.6%
+ TANF	11,205	15.1%	3,138	4.2%
+ SNAP	9,502	12.8%	2,081	2.8%
+ WIC	9,362	12.6%	2,081	2.8%
+ LIHEAP	9,324	12.6%	2,076	2.8%
Other TRIM3 Adjustments[b]				
+ Housing	9,295	12.5%	2,078	2.8%
+ Child Care Expenses	9,378	12.7%	2,106	2.8%
+ Taxes and Tax Credits	9,633	13.0%	2,136	2.9%

[a] The "correction for underreporting" rows show the effects of replacing the CPS ASEC amounts with TRIM3-simulated variables that correct for underreporting. First, TRIM3-simulated SSI is substituted for reported SSI. Starting from that simulation, TRIM3-simulated TANF is then substituted for reported TANF, and so-on. TRIM3 child support income adjustments are incorporated at the same time as TANF.

[b] The "other TRIM3 adjustments" rows show the effects of replacing the CPS ASEC amounts (obtained from the Census Bureau's SPM research file) with TRIM3-simulated variables. Starting from the correction for underreporting simulation that includes LIHEAP, TRIM3-simulated housing subsidies are substituted for the Census Bureau imputed subsidies. Next, TRIM3 child care expenses are substituted for the Census Bureau amounts. Finally, TRIM3 payroll taxes, federal income taxes and credits, and state income taxes and credits are substituted for the Census Bureau values. TRIM3 imputed realized capital gains (and loss) are incorporated at the same time as taxes.

SOURCES: Published Census Bureau estimates are from Fox (2017), Appendix Table A-1. Other estimates are obtained from TRIM3 tabulations of the 2016 CPS ASEC.

We next show the incremental effects of substituting TRIM3 variables for the CPS-ASEC and Census Bureau variables in the poverty calculation, focusing first on TRIM3 correction for underreporting of SSI, TANF, SNAP, WIC, and LIHEAP, and then describing the effects of incorporating other TRIM3 variables. We find that substituting TRIM3-simulated SSI income into the Census Bureau SPM poverty definition lowers the estimated SPM child poverty rate from 16.3 percent to 15.5 percent. If we keep the TRIM3-simulated SSI in the SPM definition and next substitute TRIM3-simulated TANF for the CPS-reported amount, the child poverty rate drops from 15.5 percent to 15.1 percent. Replacing CPS-reported SNAP with TRIM3-simulated SNAP decreases the estimated child poverty rate from 15.1 percent to 12.8 percent. Replacing the Census Bureau's

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WIC value with TRIM3-simulated WIC decreases the child poverty estimate slightly—from 12.8 percent to 12.6. Replacing reported LIHEAP with TRIM3-simulated LIHEAP has little effect on the estimated number of children in poverty. Taken together, the TRIM3 adjustments for underreporting reduce the estimated SPM child poverty rate from 16.3 percent to 12.6 percent.

The remaining rows in Table F-4 show the effects on the SPM poverty estimate as other TRIM3 adjustments (housing subsidies, child care expenses, and taxes) are incorporated into the SPM definition. As noted previously, these adjustments do not replace reported variables but instead replace values imputed by the Census Bureau. They are typically included in TRIM3 poverty estimates and analyses to preserve internal consistency between simulated programs and between baseline and alternative policy scenarios.

Incorporating TRIM3 housing subsidies into the SPM estimate that includes TRIM3 correction for underreporting reduces the estimated child poverty rate by 0.1 percentage points. Incorporating TRIM3 child care expenses into the SPM increases the estimated child poverty rate by 0.2 percentage points.[8] Substituting TRIM3 taxes and tax credits for the Census Bureau amounts and incorporating TRIM3-imputed realized capital gains and losses increases the child poverty rate 0.3 percentage points.[9] Taken together, the TRIM3 corrections for underreporting and other TRIM3 adjustments reduce the child poverty rate from 16.3 percent to 13.0 percent.

The TRIM3 adjustments also affect the deep poverty rate—the share of children below one-half of the poverty threshold. Correction for underreporting reduces the estimated deep poverty rate from 4.9 percent to 2.8 percent for children. Incorporating TRIM3 housing subsidies, child care expenses, and taxes and tax credits has little effect on the deep poverty rate, increasing it by 0.1 percent.

Note that although TRIM3 adjusts for the underreporting of several key elements of family resources, other elements of resources—which may

[8] The TRIM3 SPM estimate allows higher expenses for some families because it does not cap child care expenses (combined with other work-related expenses) at the earnings of the lower earning spouse or partner. As noted previously, TRIM3 does restrict the expenses to parents/guardians who work or are in school. In some cases, the simulated child care copayment may be higher than the reported CPS amount.

[9] One reason that the poverty rate increases when the Census Bureau's tax amounts are replaced with TRIM3-simulated amounts is that the Census Bureau EITC assignment does not prevent unauthorized immigrants from receiving the EITC. Under federal income tax rules, the tax unit head, spouse, and qualifying child must each have a valid Social Security number to claim the EITC. In the absence of this restriction, the TRIM3 SPM child poverty rate would have been 12.3 percent in 2015 (not shown). Thus, if TRIM3 did not deny the EITC to unauthorized immigrants, substituting TRIM3-simulated taxes and tax credits for Census Bureau amounts would have lowered, rather than raised, the SPM child poverty rate.

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also be underreported—are used as they appear in the public-use survey data. Rothbaum (2015) compares CPS-ASEC income amounts to aggregates from the National Income and Product Accounts and finds that the CPS-ASEC data for 2012 captured only 72 percent of interest income, 66 percent of unemployment compensation, 60 percent of self-employment income, 28 percent of workers' compensation income, and 68 percent of total pension income, among other findings. Some poor children are affected by these income amounts. For example, in the CY 2015 CPS-ASEC data used for this analysis, 12 percent of children in SPM poverty (according to our baseline measure) lived in an SPM unit with some self-employment income, and 2 percent lived in a unit with some type of pension income. (These figures include both truly reported amounts and amounts imputed by the Census Bureau when responses are not provided.) To the extent that income amounts that are not adjusted by TRIM3 are underreported by families with children, our estimates of children's poverty could be overstated.

On the other hand, some of the data imputations made by the Census Bureau could be leading us to identify as nonpoor some children who might be poor. For example, while only 8 percent of poor children live in SPM families that truly reported interest or dividend income (compared with 27 percent of all children), the Census Bureau's procedures to "allocate" (fill in) missing data increase that percentage to 24 (compared to 62 percent for all children). Regarding the most common type of income—earnings—research by Bollinger and colleagues (forthcoming) finds that when the Census Bureau imputes amounts of earnings due to nonresponse, the imputed figures are biased upward for low earners (and downward for very high earners). If Census Bureau data imputations are assigning too much income of certain types to low-income families with children, that would operate in the direction of understating child poverty.

Critique of TRIM3 Poverty Estimates

Two recent studies have examined the effect on poverty of TRIM3 SNAP adjustments relative to poverty estimates based on survey data combined with linked SNAP administrative case-level data (Mittag, 2016; Stevens, Fox, and Heggeness, 2018). The studies conclude that TRIM3 overassigns benefits to low-income households, thus underestimating the poverty rate.

This finding contradicts our own distributional comparisons, which find that TRIM3 underassigns benefits to the lowest income households. In 2015 we find that 8 percent of TRIM3 SNAP participating units with children had $0 in monthly gross income, compared with 13 percent according

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to the SNAP Quality Control Data (QC).[10] Twenty-two percent of participating units with children had monthly gross income above $2,000, compared with 12 percent according to the QC. TRIM3's underassignment of SNAP to the lowest income households stems from an apparent shortfall of such households in the survey data.

A possible explanation for these apparently contradictory results is that the linked data analyses take the survey income data as "truth" when examining the distribution of SNAP households by income level. However, survey income may be misreported or imputed by the Census Bureau for nonresponse. In addition, household composition at the time of the survey may not be the same as household composition at the time benefits are received. These factors may distort the true relationship of income and SNAP benefits when benefits obtained from linked administrative data are compared with survey income.

In contrast, TRIM3 assigns SNAP benefits that are consistent with the income and household composition in the survey data, whether these data are accurately or inaccurately reported or imputed by the Census Bureau for nonresponse. Assigning baseline benefits consistently with the income and household composition in the survey data enables alternative simulations that modify program rule parameters to generate internally consistent results. Such consistency is critical for the types of analyses performed in this report.

While analysis of linked administrative data offers opportunities for insights to improve microsimulation, further research is needed before final conclusions can be reached as to the over- or underestimation of poverty in TRIM3.

POLICY CHANGES TO REDUCE CHILD POVERTY

Under this project, alternative policies were modeled in 11 different policy areas: the Earned Income Tax Credit (EITC), child care expenses, the minimum wage, an employment program, SNAP, housing subsidies, SSI, child allowances, child support assurance, immigrant eligibility for safety-net benefits, and a basic income guarantee. For each policy area, two or more variations of the policies were simulated. After each simulation, children's SPM poverty was computed using the modified data.

The impact of each policy is estimated by comparing the alternative policy's results—in terms of child SPM poverty as well as program costs and caseloads—to the baseline results. To capture secondary impacts, the full sequence of benefit and tax programs was modeled for each policy. For example, if earnings increase due to a minimum wage change, the family

[10] The SNAP QC estimates are obtained from table A.3 in Gray, Fisher, and Lauffer (2016).

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could become eligible for lower TANF and SNAP benefits; could have to pay higher contributions toward subsidized housing or subsidized child care; would owe higher payroll taxes; and would likely see a change in federal or state income tax liability or tax credits.[11]

This chapter first reviews assumptions used throughout the simulations, regarding program participation, family expenditures, and employment and earnings impacts. We also summarize some strengths and limitations of these approach. The remainder of the chapter then describes, for each policy area, the specific methods and assumptions used to simulate that option—both the explicit policy changes and any assumed changes in employment status or hours of work. Results are also briefly described.

This work builds on prior work by TRIM3 project staff to assess the anti-poverty impacts of policy changes, individually and as a package. See Giannarelli, Morton, and Wheaton (2007) and Lippold (2015) for projects assessing how policy changes could reduce poverty across the entire population and Giannarelli and colleagues (2015) for a prior project examining the potential for policies to reduce child poverty.

OVERVIEW OF SIMULATION ASSUMPTIONS

Assumptions needed to be made about the extent to which the policy changes would change families' behavior in three areas: program participation, expenditures that impact the SPM, and employment or hours of work. A decision also needed to be made regarding the modeling of benefit programs with fixed budgets.

Program Participation Decisions

Regarding program participation, one type of change happens automatically: If a family becomes ineligible for a program, it stops receiving the benefit. However, assumptions are needed for the treatment of families who become eligible for a different benefit amount due to the policy change or who become newly eligible. We made the simplifying assumption that a family already receiving benefits from a program before the policy change (in the baseline simulation) would continue to participate in the program even if its benefit fell; although in reality a family might decide to stop participating due to a drop in potential benefit, modeling that type

[11] This analysis does not pick up any impacts on a family's SPM poverty level due to changes in medical out-of-pocket spending. Those expenses could be affected by changes in Medicaid or CHIP eligibility or enrollment, enrollment in employer-sponsored health insurance, or eligibility for or use of health insurance exchanges and associated tax credits. Also, this analysis did not capture changes in eligibility for free or reduced-priced school meals.

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of change would complicate the interpretation of the simulation results. In the case when a policy change causes a family to become newly eligible for a program, the model's internal participation methods were generally used to estimate whether or not that family would begin to receive the benefit. Some specific assumptions regarding the program participation decisions are discussed in the sections on the individual policies.

A change in participation in one program can have secondary impacts on other programs or types of income. For example, because SNAP recipients are eligible for WIC even if their income is higher than the WIC eligibility estimates, a change in SNAP enrollment status can affect a family's WIC eligibility. Also, because most states' TANF programs retain all or a portion of the child support paid to TANF recipients, a change in whether a family receives TANF can also change its child support income.

Family Expenditure Decisions

Two key types of expenses affect the program simulations and the SPM poverty calculations and housing and child care expenses. The modeling assumes that changes in a family's income—for example, higher earnings due to a minimum wage increase—do not result in the family moving to a different apartment or child care provider. Like the assumption of constant program participation behavior, this ensures that simulated changes in a family's economic well-being are closely tied to the modeled policy change. Of course, for a family with a housing subsidy or child care subsidy, the required rental payment or copayment could change when income changes, and those changes are modeled.

In the case of child care, the one type of behavioral change that may be modeled is the imputation of new child care expenses for some parents who are modeled to start working. When that possibility is modeled, previously estimated equations are used to estimate the probability that a newly working family will need to pay for nonparental care, and if so, the amount of the child care expense. The equations are calibrated so that, when applied to all the families in the CY 2015 CPS-ASEC data, they approximate the incidence and amount of child care expenses reported in the CPS-ASEC data, overall and by income group. The equations predict that the majority of low-income working families do not have any nonparental child care costs, consistent with what is reported in the survey.

Two other categories of expenses that affect the SPM poverty calculation—out-of-pocket medical expenses and child support payments (when a member of the family is paying child support to someone living elsewhere)—are treated as constant across the simulations. The model is not programmed to estimate changes in out-of-pocket health spending due to the types of programmatic or income changes modeled in this project,

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and it is not currently able to estimate how income or employment changes could affect a noncustodial parent's payment of child support.

Employment and Earnings Changes

Changes in whether individuals were employed and in their hours of work were implemented for almost all the simulations, based on specifications provided by the Committee. These types of changes sometimes involved numeric "targets" for people to start working or stop working, based on the Committee's interpretation of the available econometric evidence. In those cases, the specific people to start or stop working were randomly selected from among those people affected by the policy. In other cases, reductions or increases in hours of work per week were specified for everyone affected by a policy in a certain way. (Details for each policy area are described below.)

Note that the employment and earnings effects were not explicitly restricted to poor families with children. Depending on the specific policy and how the employment and earnings changes were defined and implemented, those changes might have affected nonpoor families, or in some cases might have affected families without children. For example, a minimum wage increase affects low-wage workers even if they live in higher-income families and/or families with children. As another example, EITC employment and earnings changes were restricted to families affected by the EITC changes, meaning that their earnings were low enough to be eligible for the EITC, although only a portion of these individuals are poor. Unless otherwise noted, employment and earnings changes discussed in this Appendix include all of the individuals for whom these changes are modeled, without restriction to poor or low-income families with children.

Changes in employment were assumed to affect unemployment compensation and workers' compensation in some cases. Specifically, if a person selected to start working had either unemployment compensation or workers' compensation, that income was assumed to change to $0 due to the new job. In the case of people selected to *stop* working, unemployment compensation benefits were added only in the case of job loss due to minimum wage increases. In all other simulations with reductions in employment, the job loss was assumed to be voluntary, meaning that no unemployment compensation would be paid.

In all cases, the assumed changes in employment, earnings, and/or other incomes were imposed for the duration of the policy simulation, so that all the simulations of benefit and tax programs for that policy option would consistently treat the person as having the modified employment/earnings/income data. For example, if a person who starts working was previously eligible for safety-net benefits, the levels of potential benefits may decline,

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or he or she might become ineligible for some of the benefits. A new worker might be modeled to start to have child care expenses; but might also become eligible for child care subsidies.

Changes in employment status also affect a person's estimated level of work expenses other than child care. Following the Census Bureau's SPM methods, a family's resources are offset by $40.07 for each week that an adult has earnings to reflect spending on transportation and other work expenses (other than child care). For example, if a mother is simulated to move from no work during the year to 52 weeks of work due to one of the policies, the increase to her resources due to the new earnings is offset by $2,084 for purposes of the SPM calculation; conversely, if a mother is simulated to stop working, the reduction to her resources is partially offset by the fact that she is no longer treated as having those work-related expenses. These changes somewhat mitigate the changes in poverty status produced by changes in employment status.

Programs with Fixed Funding

A final issue regarding the simulation assumptions concerns the modeled benefit programs that operate with fixed amounts of funding: LIHEAP, WIC, TANF, and CCDF-funded child care subsidies. The above procedures resulted in some changes to the simulated total benefits costs of these programs as a secondary impact of other policy changes. We did not attempt to recalibrate caseloads or benefits to hold spending constant.

Strengths and Limitations of this Approach

The use of this type of microsimulation modeling allows us to consider the impacts of the potential policies using consistent methods and a consistent metric—the Supplemental Poverty Measure—for all policies. In effect, microsimulation allows us to "try out" the policies using data on a representative sample of the U.S. population. Given the characteristics of the input data and the assumptions described above, the TRIM3 computer code can compute what would happen to a particular family's economic resources under a proposed policy. The simulations capture not only the direct impacts of policies but also the secondary impacts—for example, the fact that an increase in a child's SSI benefit could affect the family's SNAP benefit, since SSI is considered cash income in determining SNAP eligibility and benefits. These calculations are all simulated by the model's computer code with as much accuracy as possible, given our understanding of the policies and the limitations of the input data.

Of course, there are limitations to these approaches. One overall limitation is the uncertainty in the modeling of behavioral changes, and in

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particular in the modeling of employment and earnings changes. As discussed above, this analysis imposed employment and earnings changes specified by the members of the Committee. Another overall limitation is that TRIM3 focuses on the year represented by the input data; it does not currently include the ability to age the population into the future and to capture how the policy changes could affect individuals in successive years, within the broader context of a changing population and economy. Focusing on this particular analysis, other limitations include the fact that the "baseline" data represent 2015, and the fact that mechanisms to pay for the new policies were not modeled.

Because of these issues, it is quite possible that, even if one of the Committee's policies were put into place exactly as described here, the actual anti-poverty impact could differ from the impact modeled here. However, we do not have a quantitative estimate of the extent of this potential deviation. Looking back at past TRIM3 analyses of the anti-poverty impacts of potential policies, it is almost never the case that a simulated policy is enacted exactly as it was modeled, and without any other policy changes or economic changes occurring at the same time.[12]

Nevertheless, within the assumptions and population data used for this analysis—in the terminology of economics, "all else equal"—microsimulation modeling provides a way to assess the anti-poverty impacts of the different policies, using the same data, computation mechanisms, and assessment metrics for each one.

EITC

The Committee requested exploratory analysis of several changes to the EITC in the federal income tax system. The two options selected for final analysis were these:

- EITC #1: An expansion of the phase-in range of the EITC, based on a proposal from the Children's Defense Fund (Children's Defense Fund, 2015).
- EITC #2: A 40 percent increase in both the credit rate and the phase-out rate.

[12] For example, Zedlewski and colleagues (1996) estimated that the federal welfare reform legislation proposed in early summer of 1996 would increase the number of poor children by 1.1 million. In fact, child poverty declined in the years following welfare reform. However, a major driver of the estimated increase in children's poverty was the expected loss of food stamps by immigrant children; instead, the year following the passage of the initial legislation, a subsequent bill restored benefits for immigrant children who were living in the United States at the time that the first law was enacted. Also, the late 1990s saw very high levels of GDP growth, which was not foreseen or accounted for by the 1996 modeling.

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EITC Policy: Implementation Assumptions

For each policy, we determined the set of EITC parameters consistent with the Committee's requests (Table EITC-1). For each option, the modified policies replaced the baseline EITC policies in the simulation of federal income taxes, with no other changes made in any other aspect of federal income tax law. For example, the simulations of the alternative EITC policies retain the current-law rule that the taxpayer, spouse (if present), and qualifying children must all have a Social Security number (SSN) to claim the EITC for the qualifying children. (Citizens and legal immigrants are assumed to all have SSNs; unauthorized immigrants and temporary residents do not have SSNs.)

Because many states have state EITC policies that use information from the federal EITC, assumptions were needed regarding those interactions. These simulations assume that there would be no explicit changes in states' EITC parameters due to the simulated federal changes. Therefore, in a state computing their state EITC as a percentage of a taxpayer's federal EITC, any increase in the federal EITC will also cause the state EITC to increase.

EITC Policy: Employment and Earnings Effects

Based primarily on econometric analyses conducted by Hoynes and Patel (2017) and Eissa and Hoynes (2004), the Committee specified a set of changes in both employment and hours of work for unmarried and married mothers (Table EITC-2). For unmarried mothers, both EITC policies were assumed to increase employment; for married mothers, the 40 percent EITC increase was assumed to reduce employment and also reduce annual hours of work. (No changes were specified for men's employment status or hours of work.)

The Committee also requested that the new employment among unmarried mothers be assigned in such a way that the educational distribution of EITC recipients remains approximately the same as in the baseline data, and that the characteristics of new jobs (weeks, hours, and hourly rates) be consistent with the job characteristics of current EITC recipients in each of five educational-attainment groups: less than high school, high school, some college, 2-year college degree, and 4-year college degree or more.

To implement the employment effects, we began by counting the numbers of unmarried and married women who are mothers of a child under age 18 who are not students and who do not have a disability; those counts came to 10.144 million unmarried mothers and 25.107 million married mothers. The targeted numbers of women starting jobs and leaving jobs were obtained by applying the percentage point changes (Table EITC-2) to those universes. For example, in modeling EITC Policy #1 (the expanded

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TABLE EITC-1 EITC Parameters for the Two EITC Policy Options

	Credit Rate (Phase-in)	Maximum Earnings to Which Rate Applied	Maximum Credit	Earnings When Phase-out Begins	Phase-out Rate	Earnings When Eligibility Ends
Actual 2015 EITC Policies						
Single, No Children	7.65%	$6,580	$503	$8,240	7.65%	$14,820
Single, One Child	34.00%	$9,880	$3,359	$18,110	15.98%	$39,131
Single, Two Children	40.00%	$13,870	$5,548	$18,110	21.06%	$44,454
Joint, No Children	7.65%	$6,580	$503	$13,760	7.65%	$20,340
Joint, One Child	34.00%	$9,880	$3,359	$23,630	15.98%	$44,651
Joint, Two Children	40.00%	$13,870	$5,548	$23,630	21.06%	$49,974
Single, >= Three Children	45.00%	$13,870	$6,242	$18,110	21.06%	$47,747
Joint, >= Three Children	45.00%	$13,870	$6,242	$23,630	21.06%	$53,267
EITC Policy #1—Expanded Phase-in Range						
Single, No Children	7.65%	$6,580	$503	$8,240	7.65%	$14,820
Single, One Child	68.00%	$6,484	$4,409	$11,541	15.98%	$39,131
Single, Two Children	74.00%	$8,875	$6,567	$13,269	21.06%	$44,454
Joint, No Children	7.65%	$6,580	$503	$13,760	7.65%	$20,340
Joint, One Child	68.00%	$6,484	$4,409	$17,061	15.98%	$44,652
Joint, Two Children	74.00%	$8,875	$6,567	$18,789	21.06%	$49,973
Single, >= Three Children	79.00%	$10,300	$8,137	$15,199	25.00%	$47,747
Joint, >= Three Children	79.00%	$10,300	$8,137	$20,640	24.94%	$53,267

continued

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TABLE EITC-1 Continued

	Credit Rate (Phase-in)	Maximum Earnings to Which Rate Applied	Maximum Credit	Earnings When Phase-out Begins	Phase-out Rate	Earnings When Eligibility Ends
EITC Policy #2—40% Increase in Phase-in and Phase-out Rates						
Single, No Children	10.71%	$6,580	$705	$8,240	10.71%	$14,820
Single, One Child	47.60%	$9,880	$4,703	$18,110	22.37%	$39,131
Single, Two Children	56.00%	$13,870	$7,767	$18,110	29.48%	$44,454
Joint, No Children	10.71%	$6,580	$705	$13,760	10.71%	$20,340
Joint, One Child	47.60%	$9,880	$4,703	$23,630	22.37%	$44,651
Joint, Two Children	56.00%	$13,870	$7,767	$23,630	29.48%	$49,974
Single, >= Three Children	63.00%	$13,870	$8,738	$18,110	29.48%	$47,747
Joint, >= Three Children	63.00%	$13,870	$8,738	$23,630	29.48%	$53,267

TABLE EITC-2 Changes in Mothers' Employment and Earnings Due to EITC Policy Options

	EITC #1	EITC #2
Unmarried Mothers (10.144 million [a])		
Percentage Point Change in Employment Rate	Pos. 3.0	Pos. 7.4
Target Number of New Jobs	304,000	771,000
Married Mothers (25.107 million [a])		
Percentage Point Change in Employment Rate	—	Neg. 0.8
Target Number Stopping Work		0.201 mill.
Change in Annual Hours of Work, if Working and Receiving EITC	—	Neg. 100 hours

[a] Mothers with at least one child under age 18, who are not students and who do not have a disability.

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phase-in range), the Committee selected a 3.0 percentage point increase in the employment rate of unmarried mothers; 3.0 percent of 10.144 million women gives an estimate of 304,000 newly employed unmarried mothers due to the EITC policy.

Before selecting specific women to either start or stop working, preliminary simulations were needed to determine which women would be affected by the EITC changes in ways that might induce labor force changes. Specifically, we do not want to assign a new job to an unmarried mother who, even if she took the job, would be ineligible for the EITC (for example, due to immigrant status, or due to unearned income placing the tax unit above the maximum-allowable adjusted gross income or investment-income limit); and we do not want to simulate a married woman to stop working who, if she stopped working, would no longer be eligible for the EITC (because her husband is not working). To gain this information, we conducted preliminary simulations in which we simulated *all* employed unmarried mothers to start working, and *all* employed married mothers to stop working, and observed which tax units were able to take the EITC under each of the new EITC policies. This identifies the potential universes from which the women starting or leaving jobs can be selected; we also looked at the information on potential new workers by education group. A final preparatory task was to tabulate average job characteristics among unmarried mothers modeled as taking the EITC in the baseline data; average weeks, hours, and wages were computed separately for those working full time and full year vs. those working either part time or part year (Table EITC-3).

The final simulations of the EITC policies used the preparatory information described above.

Increased Employment for Unmarried Mothers

For each policy option, a portion of unmarried women who would gain EITC eligibility by starting to work were randomly selected to start working, with the probabilities varying by educational attainment. Specifically, for the universe of women who would be able to take the EITC if they started to work, the probabilities of starting to work across the education groups have the same relationship to each other as the probabilities that an unmarried employed mother currently takes the EITC across the education groups. Table EITC-4 shows the result of this process for EITC Policy #1. For example, among unmarried employed mothers who are not ineligible due to citizenship/immigrant status, the likelihood of taking the EITC is about two times as high for women with exactly a high school education (81%) as it is for those with at least a 4-year degree (40%); likewise, among unmarried mothers who could gain EITC eligibility by starting to work, the probability of taking a job was about twice as high for the high-school

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TABLE EITC-3 Among Unmarried Mothers Taking the EITC in 2015, Average, by Educational Attainment: Percentage Working Part Time vs. Full Time, and Mean Weeks, Hours, and Wages for Each Group

	Percent by Job Type	Mean of Weeks Worked	Mean Hours/ Week	Mean Hourly Wage
Less Than High School				
Full Time and Full Year	37%	51.9	41	$10.36
Part Time or Part Year	63%	34.6	30	$9.67
Exactly High School				
Full Time and Full Year	53%	52.0	41	$11.78
Part Time or Part Year	47%	38.1	31	$10.64
Some College				
Full Time and Full Year	58%	52.0	41	$12.51
Part Time or Part Year	42%	37.2	31	$12.48
2-Year Degree				
Full Time and Full Year	62%	52.0	41	$13.30
Part Time or Part Year	38%	37.0	32	$13.14
Bachelor's or More				
Full Time and Full Year	62%	52.0	41	$14.46
Part Time or Part Year	38%	39.6	30	$14.22

TABLE EITC-4 Data for Modeling New Jobs for EITC #1

Education Group	Number of Unmarried Mothers Who, If They Start Working, Qualify for the EITC	Percent Who Now Take the EITC, Among Unmarried Working Mothers Not Excluded by Immigration Status	Percent of the potential New Workers to be Simulated to Take a Job	Target Number of New Jobs, EITC #1
Less Than High School	259,549	89.5%	36.0%	93,458
Exactly High School	377,317	80.9%	32.6%	122,849
Some College	186,841	76.3%	30.7%	57,359
2-Year Degree	76,367	64.7%	26.0%	19,876
4-Year Degree+	67,762	39.6%	15.9%	10,791
TOTAL	967,836			304,333

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group (33%) as for the 4-year college group (16%). Note also that the sum of the new jobs figures across the education groups is approximately 304,000—the same as the targeted number of new jobs shown in table EITC-2 for this policy option. Final simulations came close to the targets by education group but did not reach them exactly; the fact that the average weight in the CPS-ASEC data is over 1,000 means that the best possible alignment to a target may still deviate from that target by 1,000 or more in weighted terms.

We also had to make assumptions related to child care for the new workers. We assumed that some portion of the new workers would begin to receive CCDF-funded child care subsidies; the likelihood of a subsidy-eligible family receiving a subsidy was estimated using the same participation probabilities as in the baseline simulation (about 17 percent on average, but with higher probabilities for single-parent families and lower-income families). We assumed that families with young children not obtaining a subsidy would obtain child care at no cost through friends or family; this simplification avoided complications in the determination of whether a mother would become better off by starting to work.

Reductions in Employment for Married Mothers

For EITC Policy #2 (the 40% increase), in addition to modeling increased employment for unmarried mothers, we also modeled the targeted reductions in employment for married mothers. The universe for the reductions is limited to those married women whose families would qualify for the EITC under the new policy, assuming they were not working. (This means that the husband must be working.) We also restricted the population to those married women whose earnings in the baseline data were no higher than their husbands' earnings (to avoid modeling a woman to leave her job when that would cause the family to lose more than one-half of the family's earnings). Because the women who were randomly chosen to leave their jobs were assumed to have done so voluntarily, we did not model any unemployment compensation benefits for these women.

Hours Reductions for Married Mothers

Finally, the simulation of EITC Policy #2 included reductions in hours-worked for all married mothers whose tax units would receive the EITC under the new policy (prior to any changes in weekly hours of work[13]),

[13] This excludes what is likely a very small number of women who, if they did slightly reduce their usual weekly hours, would become newly eligible for the EITC; however, identifying that group would have required additional preparatory work.

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and who were not selected as leaving their jobs. The Committee's desired changes were approximated by reducing the weekly-hours-worked for this group by 2 hours/week. (For each affected woman, the reduction in her annual hours ranged from 2 to 104 hours, depending on her annual weeks of work.)

EITC Simulation Results

The EITC policy changes reduced child poverty to as low as 10.9 percent (with EITC Policy #2, and including employment and earnings changes). The anti-poverty impacts were larger when the employment and earnings changes were included than when they were not included.

Without Employment and Earnings Effects

In the absence of employment and earnings changes (see the columns labeled "No EE" in Table EITC-5), EITC Policy #1 increases the annual amount of federal EITC (and decreases annual federal income tax liability) by $8.2 billion, and EITC Policy #2 increases the amount of federal EITC by $16.7 billion, relative to the simulated baseline level of EITC of $41.8 billion. When these policies are modeled without employment changes, the same families remain eligible for the EITC, and the increase in aggregate credit comes entirely from those families receiving higher credits.

The increased federal EITC results in higher state EITC payments and thus lower state income tax liability in the states that have state EITCs that are calculated as a percentage of the federal credits. The aggregate decline in state income tax liability is about 5 percent of the decline in federal income tax liability. Considering both the federal and state tax liability changes, the cost of the changes to all levels of government, *prior to employment effects*, is $8.7 billion for EITC #1 and $17.6 billion for EITC #2.

As discussed above (and shown in Table F-2), TRIM3's federal tax simulation does not find as many families eligible for the EITC as actually receive it. Therefore, the costs and impacts of the EITC policies may be understated. (Of course, to the extent that the baseline is missing a portion of baseline EITC benefits, that has some impact on the poverty results of all the simulations.)

Prior to implementation of employment and earnings effects, the less-expansive of the Committee's EITC policy changes (EITC #1) reduced SPM child poverty from the 13.0 percent baseline by 0.8 percentage points (to 12.2%) and the more-expansive (EITC #2) reduced it by 0.9 percentage points (to 12.1%).

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TABLE EITC-5 Selected Impacts of EITC Policy Changes, 2015

	Baseline 2015	Changes from the Baseline: EITC Policy #1: Expanded Phase-in		EITC Policy #2: 40% Increase in Credit and Phaseout Rates	
		No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.574	-0.903	-0.692	-1.546
SPM Child Poverty Rate [a]	13.0%	-0.8	-1.2	-0.9	-2.1
Selected Program Results					
Federal Income Taxes					
Federal Earned Income Tax Credit					
Units With Credit (Thousands)	19,712		294		+824
Amount of Credit ($ Millions)	$41,770	+$8,202	+$9,655	+$16,712	+$21,809
Amount of Tax Liability ($ Millions)	$1,254,515	-$8,202	-$10,008	-$16,712	-$23,081
State Income Taxes					
Amount of Tax Liability ($ Millions)	$318,089	-$450	-$483	-$897	-$1,181
Employment and Earnings Changes					
People Who Start Working (Thousands)			+307		+771
People With Decreased Earnings (Thousands, Working in Baseline)					+1545
People Who Stop Working (Thousands)					+198
Net Annual Earnings Change ($ Millions)			+$5,728		+$9,521
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$192,944		-$1,225		-$2,542
Aggregate Taxes: Payroll, Federal, State	$2,588,958	-$8,652	-$9,609	-$17,609	-$22,748
Total Change, Annual Government Spending		+$8,652	+$8,384	+$17,609	+$20,206

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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With Employment and Earnings Effects

For each of the policies, the numbers of women simulated to start and stop working come very close to the targeted number. (See the columns labeled "EE" in table EITC-5.) The total increase in aggregate earnings—the simulated earnings for new workers minus any reductions in earnings for married mothers—is $5.7 billion for EITC #1 and $9.5 billion for EITC #2.

These employment and earnings changes increase the amount of new federal EITC relative to the simulations without the employment and earnings changes. For example, in the case of EITC #1, the increase in the amount of federal EITC credit was $8.2 billion before employment and earnings changes, and is modeled at $9.7 billion with those changes. For both policies, the increase in the number of units with the credit (relative to the simulation without the employment changes) differs somewhat from the number of new jobs that were assigned. In EITC Policy #1, the increase in EITC cases is slightly lower than the number of new jobs, due to cross-unit interactions in some complex households. In EITC Policy #2, the increase in EITC cases exceeds the number of new jobs because some of the married couples in which the wife was simulated to stop working become newly eligible for the EITC.

The employment and earnings changes are also estimated to change net government spending on benefit programs. The aggregate reduction in benefits is $1.2 billion due to EITC Policy #1 and $2.5 billion due to EITC Policy #2. For example, when employment and earnings effects are modeled for EITC #2, SNAP benefits fall by $1.5 billion, TANF benefits fall by $0.9 billion, the value of housing subsidies falls by $0.6 billion, SSI and unemployment compensation benefits each decline by $0.1 billion, and LIHEAP and WIC each decline by smaller amounts, while the value of child care subsidies increases by $0.7 billion. The estimated reductions in benefits offset to some extent the anti-poverty impacts of the EITC increases; in the case of families simulated to newly receive a child care subsidy, that assumption affects their SPM resources only to the extent that they are required to pay a copayment. (*Note that all the aggregate dollar estimates in this report are annual.*)

For both options, the implementation of the employment effects increases the poverty reduction. In other words, even when reductions in employment and earnings are assumed for married women, the poverty-reducing impacts of increased employment for the unmarried women outweigh the potential poverty-increasing impacts of the employment and hours reductions for married women. With the employment and earnings effects included, EITC #2—the 40 percent increase in both the phase-in and phase-out rate—reduces child SPM poverty by 2.1 percentages points, to 10.9 percent.

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CHILD CARE EXPENSES

The Committee requested simulations of two policies directed at reducing the net costs that families pay for child care:

- Child Care Policy #1: Expand the Child and Dependent Care Tax Credit (CDCTC). The proposed credit has a much higher potential value for lower-income tax units and is fully refundable. The credit is eliminated for tax units with an adjusted gross income (AGI) over $70,000.
- Child Care Policy #2: Expand the availability of federally funded child care subsidies through the Child Care and Development Fund (CCDF).

CDCTC Policy: Implementation Assumptions

The current CDCTC provides a nonrefundable tax credit equal to a percentage of a family's child care costs. The amount of expense to which the percentage can be applied is capped at $3,000 for families with one child and $6,000 for families with two or more children. The percentage varies inversely with income, from 35 percent for families with AGI below $15,000 to 20 percent for tax units with AGI over $43,000. Because the credit is nonrefundable, lower-income families with no positive federal income tax liability do not receive any benefit from the credit.

The Committee proposed a substantial expansion of the CDCTC, as follows:

- The CDCTC would become fully refundable.
- Eligibility for the credit would end at AGI of $70,000.
- The credit would become much higher for the lowest income families, especially for those with young children. The maximum expenses to which the percentage is applied would also increase somewhat for families with young children.
- For families with children under age of 5 (and no children ages 5 to 12):
    - The maximum expenses to which the percentages can be applied is $4,000 for the first child, and a total of $6,000 for two or more children.
    - The credit rate increases to 100 percent for tax units with AGI under $25,000. The credit rate would decline by 10 percentage points for each additional $5,000 in AGI, reaching 0 above $70,000.

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- For families with children ages 5 to 12 (and no children under age 5):
  - The maximum expenses to which the percentages can be applied remain at $3,000 for one child and $6,000 for two or more children.
  - The credit rate increases to 70 percent for tax units with AGI under $25,000. The credit rate declines by 7 percentage points for each additional $5,000 in AGI above $25,000, reaching 0 above $70,000.
- For families with exactly one younger child and at least one older child, the young-child rules apply for up to $4,000 in expenses using the young-child rates, and the older-child rules apply for any expenses over $4,000 and up to the two-child maximum expenses ($6,000), using the older-child rates.

Figure CC-1 displays the maximum potential credit for a tax unit with one child and with AGI varying from $15,000 to $100,000. One line shows the baseline (nonrefundable) credit; two other lines show the proposed credit for one child under age 5 and for one child age 5 or over.

TRIM3's simulation of federal income taxes captures the current credit. The child care expenses used to model the credit are primarily the expenses reported in the CPS-ASEC survey;[14] for families simulated to received subsidized child care, the reported expenses are replaced by the family's simulated copayment. The 2015 baseline simulation identified 6.3 million tax returns taking the credit and receiving $3.6 billion in credit, almost exactly matching the actual figures for tax year 2015. To simulate the Committee's proposed policy, we modified the parameters to make the credit refundable and to capture the changes in allowable expenses, credit percentage, income brackets, and refundability as specified by the Committee. Because some states' income tax systems include a child and dependent care tax credit that relies on the federal amounts or calculations in some way, an assumption was needed about how states would respond to the change in the federal credit. We assumed that states would make no changes in their explicit policies but would instead continue to use the federal credit amount (the sum of the younger-child and older-child amounts) in their calculations.

One caveat is necessary in considering the results from the CDCTC simulation—the fact that the total amount of child care expenses captured

[14] The household's respondent provides a single annual amount for all child care expenses paid by the household for purposes of work or school. As part of data preparation, this amount is allocated across months of the year. Also, if the household has more than one subfamily with earnings and with children, the child care expenses are allocated across the subfamilies.

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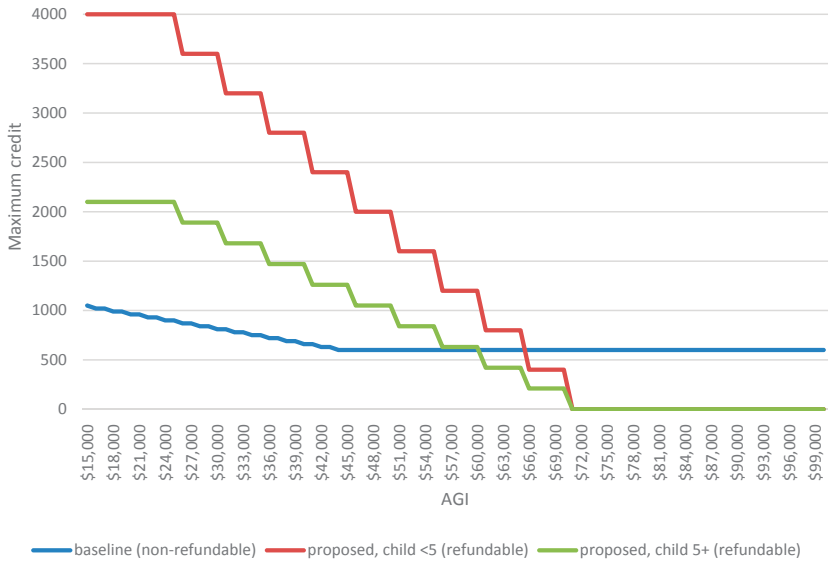

FIGURE CC-1 Maximum child and dependent care tax credit, family with one child, by AGI.

in the CPS-ASEC appears lower than captured in other surveys.[15] For this analysis, we did not impose any procedures to augment the reported amounts. To the extent that the survey underidentifies the incidence or amount of child care expenses for lower-income families, the relative impact of the policy changes could be misestimated.

CCDF Policy: Implementation Assumptions

The federal government's CCDF block grant provides money to states that they use to provide child care subsidies to lower-income families with children who are age 12 or under or who have a special need. The parents or guardians in the families must generally be employed, in school, or looking for work. One key point about the current program is that the eligibility limits vary by state. States may set the limits no higher than 85 percent of state median income; most states' limits are lower. A second key point is

[15] The CY 2015 CPS-ASEC captures $48.2 billion in child care expenses, compared with $59.0 billion in annual expense according to the National Survey of Early Care and Education (NSECE), which was fielded in 2012. (The NSECE figure was tabulated by TRIM3 project staff from the publicly available microdata; it is the average weekly aggregate amount from the data, times 52.)

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that the subsidies are not an entitlement. The number of families receiving a subsidy in the average month of 2015—834,000—is about 17 percent of the total estimated by TRIM3 as being eligible for the subsidies. Some portion of the eligible families who do not receive CCDF-funded subsidies are receiving other types of help, such as TANF-funded child care, Head Start or state-funded pre-kindergarten, and others may not want or feel that they need assistance. However, some portion of the unassisted eligible families may be unable to receive subsidies due to funding constraints in their state or locality.

The Committee's proposed change to CCDF is to guarantee assistance to all families with income below 150 percent of poverty who want the subsidy, implicitly assuming that funding would increase as needed to pay for the additional subsidies. To simulate this policy, we made the following assumptions regarding eligibility, copayments, and the value of the subsidy:

- In states with baseline eligibility limits below 150 percent of the 2015 poverty guidelines, the limits were raised to exactly equal 150 percent of poverty, for each family size. States with baseline eligibility limits higher than 150 percent of poverty were assumed to continue using those higher limits. (The modeling captured the fact that Alaska and Hawaii have higher poverty guidelines than the 48 contiguous states and the District of Columbia.)
- All other eligibility-related policies—such as the definition of the family unit, whether or not specific types of income are considered in determining eligibility, and whether a parent must work a minimum number of hours per week to be considered eligible based on employment—were all assumed to remain at the baseline settings in each state. (These policies vary across the states.)
- All policies related to copayments and reimbursement rates were also assumed to remain at each state's baseline settings.

Assumptions also had to be made regarding enrollment—the extent to which eligible families who are guaranteed a subsidy under the hypothetical policy would choose to receive a subsidy. We assumed that families with income under 150 percent of the poverty guideline who did not receive a subsidy in the baseline simulation would start to receive a subsidy *only* if they reported child care expenses in the CPS-ASEC survey. This conservative assumption regarding take-up ensured that no families would become worse-off financially as measured by the SPM measure. (If a family with no baseline child care expenses had been modeled to begin to receive a subsidy and to owe a positive copayment, the SPM measure would show that family as worse-off financially, since the SPM considers child care expenses as a subtraction from resources, rather than considering the value of the subsidy

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as an addition to resources.) Since many lower-income working families do not report having any child care expenses, this assumption minimized the number of new recipients according to the simulation. No changes in participation were modeled for families with income approximately 150 percent of poverty.

In families simulated to begin receiving a subsidy, assumptions also need to be made about the type of care they would choose for their children (child care center, family day care home, or informal care) since those choices affect the cost of the new subsidies (and in some states also affect the family's copayment). We assumed that the percentage distribution of the newly subsidized children across different types of child care providers would be the same as distribution of currently subsidized children in the same age group and state of residence.

Child Care Expense Policy: Employment and Earnings Effects

The Committee assumed that both of the hypothetical policies related to child care expenses would increase maternal employment by reducing the effective cost of child care. Blau (2003) summarized the results of numerous studies showing the relationship between the price of child care and maternal employment. The Committee chose a price elasticity of 0.2 as being the approximate midpoint across a group of studies viewed as most applicable. With an elasticity of 0.2, a 10 percent reduction in the net price of child care causes a 2 percent increase in the employment rate.

For each of the child care expense simulations, the price elasticity was used to compute a target for increased employment. The first step in this computation was to compute estimates of aggregate net out-of-pocket child care expenses under different assumptions, for the universe of women who are working in the baseline (prior to any policy changes). For both unmarried mothers of children age 12 and under and married mothers of children age 12 and under, three aggregate amounts were computed: aggregate net child care expenses in the baseline, aggregate net child care expenses with the CDCTC policy in place, and aggregate net child care expenses with the CCDF policy in place. Aggregate net child care expenses were defined as aggregate child care expenses (including unsubsidized expenses plus the copayments paid by subsidized families), minus the aggregate amount of federal CDCTC, minus the aggregate amount of state-level CDCTC. For each of the two policies, we compared the aggregate net out-of-pocket expenses with the policy in place to the aggregate net out-of-pocket expenses in the baseline to determine the percentage reduction in net expenses. The absolute value of the percentage change was multiplied by 0.2 to obtain the percent increase in employment for each marital status, for each policy. The percentage

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changes were multiplied by the numbers of currently employed mothers to obtain the targets for increased employment.

The CDCTC policy caused substantial reductions in out-of-pocket child care expenses for unmarried mothers of children age 12 and under, reducing the aggregate level of those expenses by 42.6 percent (see Table CC-1). (For some individual women, expenses were reduced by 100 percent, since the credit percentage was 100 percent for the lowest-income mothers of young children.) For married women, however, the CDCTC policy *increased* aggregate expenses, due to the fact that tax units with AGI above $75,000 lost the CDCTC, and most of those units were married couples. Applying the elasticity to the percentage changes in aggregate expenses and to the baseline numbers of employed mothers resulted in targets of 607,000 newly working unmarried mothers and a decline in employment of 128,000 for married mothers.

The CCDF policy was estimated to have a smaller impact on aggregate child care expenses, reducing expenses by 16.6 percent among currently working unmarried mothers and by 0.6 percent for married mothers. Those changes resulted in estimates of 237,000 newly-working unmarried mothers and 15,000 newly-working married mothers.

To assign the new jobs, it was necessary to identify which women would benefit from the new policies if they began to work. Three preliminary simulations were performed in which currently nonworking women were modeled to begin to work, using the same distribution of job characteristics

TABLE CC-1 Changes in Maternal Employment due to Child Care Expense Policies

	Child Care Policy #1: CDCTC Expansion	Child Care Policy #2: CCDF Expansion
Unmarried Mothers of Children <= 12 (7.119 Million Employed in Baseline)		
Percent Reduction in Aggregate Child Care Costs	42.6 percent	16.6 percent
Multiplied by Elasticity of 0.2	.085	.033
Targeted Increase in Employment	607,000	237,000
Married Mothers of Children <= 12 (13.183 Million Employed in Baseline)		
Percent Reduction in Aggregate Child Care Costs	Neg. 4.9 percent	0.6 percent
Multiplied by Elasticity of 0.2	-.010	.001
Targeted Increase in Employment	-128,000	15,000

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and hourly wages as used for the EITC simulation (Table EITC-3). The three simulations used three different sets of policy rules:

1. Baseline policies for both CDCTC and CCDF. In this simulation, all newly employed mothers are assumed to have to pay for child care. A regression equation predicts the amount of expense based on family characteristics and the children's ages. (The equation was calibrated to produce the same average nonzero expense amounts as reported in the survey data, by AGI level.) We assume none of the new workers can receive CCDF; however, they take the CDCTC if they are eligible.
2. Hypothetical CDCTC policy. This simulation is the same as #1, but the federal CDCTC policy is the Committee's proposed expanded policy.
3. Hypothetical CCDF policy. This simulation is the same as #1, but the CCDF policy is the same as the Committee's proposed expanded policy. This simulation identifies which women, when they start to work, are guaranteed a subsidy.

The new jobs due to the CDCTC policy were assigned randomly among the subset of the unmarried mothers who were identified as better off in the second preliminary simulation (in which they start to work and must pay for child care, but the new policy is in place) compared with the first preliminary simulation (in which they start to work and must pay for child care, but the CDCTC is at baseline levels).

The new jobs due to the CCDF expansion were assigned to a subset of women—both unmarried and married—who are guaranteed a subsidy when they start to work under the new policy.

For the CDCTC policy, the job *reductions* for married women were assigned randomly among the subset of married mothers who were worse-off under the new policy than the baseline policy, when the new CDCTC policy was modeled without employment changes.

Child Care Expense Policy: Simulation Results

In the absence of employment effects, the two policies focused on child care expenses resulted in relatively modest reductions in child poverty. In both cases, the assumptions about employment changes caused additional reductions in poverty.

The CDCTC expansion, prior to employment changes, causes federal tax liability to decline by $1.6 billion (Table CC-2). State tax liability also declines, due to the state income tax credits that are calculated based on the amount of federal credit. The reductions in tax liability reduce children's

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TABLE CC-2 Selected Impacts of Child Care Expense Policy Changes, 2015

		Changes from the Baseline			
		Child Care Policy #1: Expansion of CDCTC		Child Care Policy #2: Expansion of CCDF	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.198	-0.872	-0.109	-0.427
SPM Child Poverty Rate [a]	13.0%	-0.3	-1.2	-0.1	-0.6
Selected Program Results					
Child Care Subsidies					
Families Eligible for Child Care Subsidies (Avg. Mo., Thousands)	5,016		340	303	516
Families Receiving Child Care Subsidies (Avg. Mo., Thousands)	834			807	1,019
Aggregate Annual Value of Subsidy ($ Millions)	$6,611			$6,228	$7,936
Federal income taxes					
Amount of Tax Liability ($ Millions)	$1,254,515	-$1,606	-$7,462	$6	-$1,166
State income taxes					
Amount of Tax Liability ($ Millions)	$318,089	-$210	-$699	$40	-$15
Employment and Earnings Changes					
People Who Start Working (Thousands)			0.600		0.250
People Who Stop Working (Thousands)			0.130		0.000
Net Annual Earnings Change ($ Millions)			$4,699		$4,492
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	$0	-$2,171	$5,891	$6,407
Aggregate Taxes: Payroll, Federal, State	$2,588,958	-$1,816	-$7,313	$46	-$487
Total Change, Annual Government Spending		$1,816	$5,141	$5,845	$6,894

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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SPM poverty rate by 0.3 percentage points. Despite the large increase in the amount of the CDCTC, and the fact that it becomes fully refundable, the policy still only has the potential to raise a family out of SPM poverty if the family has child care expenses, and many lower-income families do not report any child care expenses. For example, in the CY 2015 CPS-ASEC data, among families with employed parents/guardians, children age 12 and under, and AGI of $25,000 or less, only about 30 percent reported any positive child care expenses.

The employment effects increase the anti-poverty impacts of the CDCTC expansion. When the CDCTC policy is modeled together with 600,000 unmarried women starting to work, and 130,000 married women leaving their jobs, the impact of the new jobs predominates, and child SPM poverty falls by 1.2 percentage points from the baseline (to 11.8%). The reduction in federal tax liability relative to the baseline is $7.5 billion, since all of the new workers are benefiting from the CDCTC, and most are also receiving the EITC. Note that although many of the new workers become eligible for CCDF subsidies (increasing the average monthly number of families eligible for CCDF by 340,000), we assumed that none of them would receive CCDF subsidies; instead, we assumed that if CCDF subsidies had actually been an option for these women, they would have begun to work previously.

The CCDF expansion, prior to employment changes, causes 303,000 additional families to be eligible for child care subsidies (because state income limits below 150 percent of poverty in the baseline were raised to that level) and causes 807,000 families to newly receive CCDF subsidies. However, the number of children in SPM poverty was reduced by only 109,000—a drop of 0.1 percentage point in the SPM poverty rate for children. One reason for the limited anti-poverty impact of the CCDF policy is that, in some cases, the family copayment required by the CCDF program was almost as high as the amount of unsubsidized expense the family paid in the baseline. (For a single parent with earnings of $20,000 and a two-year-old child in full-time center-based care, the median copayment in 2015 was $117 per month—or $1,404 per year.[16])

When the CCDF expansion is modeled together with 250,000 new jobs, the number of families eligible for CCDF in the average month of the year increases by 213,000 relative to the simulation without employment increases. (The increase in average monthly eligibility is less than the 250,000 increase in employed mothers because some of the newly employed women are ineligible for CCDF in some months of the year for various reasons, such as a spouse being out of the labor force in those months.) All of the families newly eligible for CCDF take the subsidy. Even though

[16] See Stevens et al., 2016, Table 31.

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most of these families must pay a copayment, the copayment is much less than the amount of their new earnings. Also, most of the new workers can also claim the EITC; federal income tax liability declines by $1.2 billion relative to the baseline when the CCDF expansion is modeled together with the employment increases. Combining all of these changes, children's SPM poverty falls by 0.6 percentage points relative to the baseline.

MINIMUM WAGE

Since 2009, the federal minimum wage for most workers has been set at $7.25 per hour. The federal minimum wage for tipped workers is $2.13. The Committee requested two simulations of minimum wage increases:

- Minimum Wage Policy #1: An increase in the federal minimum wage to $10.25 in 2020 dollars, in all states. The figure of $10.25 was deflated to $9.15 for purposes of the simulations, for consistency with the dollars of the input data.[17] This results in an increase of 26.2 percent in the 2015 minimum wage. The same minimum wage was assumed to be applied in all states, except that states with a minimum higher than $9.15 in 2015 were assumed to keep their 2015 minimum wage. The federal tipped minimum wage is assumed to increase by the same percentage as the regular minimum wage, bringing it to $2.69 per hour. As with the regular minimum wage, states with higher state levels for their tipped workers retain those higher minimums.
- Minimum Wage Policy #2: This policy is the same as Minimum Wage #1, with one exception. In this variation, the new value for the regular minimum wage in each state equals the lesser of $9.15 or the 10th percentile of the hourly earnings distribution in that state.

To model these policies, information was obtained on each state's actual minimum wages in 2015—for most workers and for tipped workers—as well as the 10th percentile of each state's hourly earnings distribution (Table MW-1). Four states—Connecticut, Oregon, Vermont, and Washington—and the District of Columbia had minimum wages higher than $9.15 in 2015, and were therefore largely unaffected by the minimum wage policies.

[17] The most recent Congressional Budget Office estimate of the 2020 Consumer Price Index, All Urban Consumers (CPI-U) at the time this work began (CBO, 2017) was 262.8, 11 percent higher than the actual 2015 CPI-U of 237.0. Applying those estimates to the 2020 minimum wage proposal of $10.25 would result in a 2015 value of $9.24; the Committee specified a slightly lower value of $9.15. (CBO forecasts are available on the CBO website, https://www.cbo.gov/about/products/budget-economic-data.)

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TABLE MW-1 State-level Minimum Wage Data, 2015

State	Regular Minimum Wage ($)	Tipped Minimum Wage ($)	10th Percentile Wage ($)	State	Regular Minimum Wage ($)	Tipped Minimum Wage ($)	10th Percentile Wage ($)
Alabama	7.25	2.13	8.36	Missouri	7.65	3.83	8.63
Alaska	8.75	8.75	10.62	Montana	8.05	8.05	8.91
Arizona	8.05	5.05	8.96	Nebraska	8.00	2.13	8.95
Arkansas	7.50	2.63	8.31	Nevada	7.25	7.25	8.67
California	9.00	9.00	9.48	New Hampshire	7.25	3.26	9.08
Colorado	8.23	5.21	9.21	New Jersey	8.38	2.13	9.33
Connecticut	9.15	5.78	9.63	New Mexico	7.50	2.13	8.62
Delaware	8.25	2.23	9.10	New York	8.75	4.90	9.33
Dist. of Col.	10.50	2.77	11.49	North Carolina	7.25	2.13	8.52
Florida	8.05	5.03	8.82	North Dakota	7.25	4.86	9.70
Georgia	7.25	2.13	8.46	Ohio	7.25	4.05	8.90
Hawaii	7.75	7.25	9.23	Oklahoma	7.25	2.13	8.49
Idaho	7.25	3.35	8.52	Oregon	9.25	9.25	9.71
Illinois	8.25	4.95	9.17	Pennsylvania	7.25	2.83	8.80
Indiana	7.25	2.13	8.57	Rhode Island	9.00	2.89	9.40
Iowa	7.25	4.35	8.70	South Carolina	7.25	2.13	8.38
Kansas	7.25	2.13	8.69	South Dakota	8.50	4.25	9.17
Kentucky	7.25	2.13	8.51	Tennessee	7.25	2.13	8.49
Louisiana	7.25	2.13	8.35	Texas	7.25	2.13	8.55
Maine	7.50	3.75	9.07	Utah	7.25	2.13	8.78
Maryland	8.25	3.63	9.10	Vermont	9.15	4.58	10.05
Massachusetts	9.00	3.00	9.87	Virginia	7.25	2.13	8.83
Michigan	8.15	3.10	8.99	Washington	9.47	9.47	10.63
Minnesota	7.25	7.25	9.28	West Virginia	8.00	2.40	8.63
Mississippi	7.25	2.13	8.26	Wisconsin	7.25	2.33	8.75
				Wyoming	7.25	2.13	9.19

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Twenty-nine states used minimum wages for tipped workers in 2015 that were higher than $2.69; the highest minimum wage for tipped workers was $9.47, in the state of Washington (with the same wage for tipped and nontipped workers). In 33 states, the 10th percentile of the 2015 hourly wage distribution was lower than $9.15; in these 33 states, the simulated minimum wage in the Minimum Wage #2 policy was lower than $9.15. The lowest figure for the 10th percentile of the 2015 hourly wage distribution was $8.26, in Mississippi.

Minimum Wage Policy: Implementation Assumptions Concerning Wage Increases

For a given individual identified as receiving a wage increase due to an increase in the minimum wage, the modeling of the policy is straightforward. For example, if a person works full time, full year at $8.15/hour, the increase to $9.15/hour increases his or her monthly earnings by $173 ($1 times 40 hours per week times 4.333 weeks in a month). Computationally, the model computes the percentage increase from a person's original hourly wage to the new hourly wage, and then it applies that percentage increase to the person's monthly and annual earnings amounts.

However, complications arise in determining current hourly wages, identifying which workers might be affected by the increase, modeling some additional wage increases that might occur even if not legislatively required (sometimes called "spillover" increases), modeling changes for workers receiving the tipped minimum wage, and modeling changes for other tipped workers. Decisions in these areas were reached jointly between Urban Institute and Committee staff.

Computing Current Hourly Wages

The hourly wages we use to implement the minimum wage increase come from two sources: explicitly reported wages from the CPS "earnings sample" (ES) data, and estimated hourly wages computed from annual CPS-ASEC data. The monthly CPS questionnaire asks people to report their exact hourly wage at the time of the survey if they are in the "earnings sample"—people in their 4th or 8th month of participation with the CPS (also referred to as the outgoing rotation group); thus, the CPS-ASEC for CY 2015 includes hourly wages only for those CY 2015 earners who were in their 4th or 8th month of CPS participation in the month in which the ASEC questions were administered, and who were also working in that month. To maximize the number of people with these data, we also obtain the ES data from other monthly CPS files to the extent it is available. However, even after that additional information is obtained, usable ES data

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are not available for many CY 2015 workers, either because the person was working during the CY but not working in the month when the wage question was asked, or because the person's identification number is not located in the monthly CPS when the person should have been asked the ES questions (due to attrition from the sample or due to matching problems).

The second possible source of hourly wage data is to compute the wage from annual ASEC data. Specifically, we compute an hourly wage as (annual earnings) divided by (weeks of work times usual hours per week). Of course, this gives an imperfect hourly wage, since any inaccuracy in the reporting of any of the three pieces of information will mean an inaccurate wage. On net, those inaccuracies tend to result in a distribution with too many very-low-wage workers, relative to wage distributions based solely on outgoing-rotation-group data.

For each person with CY 2015 earnings, the ES hourly wage is generally used when it is available. However, the ES wage is not used in two situations. First, if the ES wage was "allocated" (imputed by the Census Bureau) *and* the annual earnings, weeks of work, and hours per week were all truly reported, then the hourly wage computed from the annual data is used instead. Second, if the person's CY 2015 annual earnings divided by the ES hourly wage indicates that it would take more than two full-time full-year jobs to earn that level of earnings at the given hourly wage, that suggests that the person changed jobs between the calendar year and the outgoing month; in that case, the wage computed from the annual data is used instead of the ES wage. The hourly wage computed from the annual data is also used in all cases when an ES wage is not available.

Identifying Workers Covered By the Regular Minimum Wage

In general, we identify workers covered by the standard minimum wage (not the tipped minimum) as those whose hourly wage (determined as described above) is no more than 25 cents below the larger of the federal minimum wage or their state's minimum wage. (See the first column of Table MW-1 for state-specific minimum wage levels.) This use of a "tolerance" for identifying minimum wage workers compensates for the fact that some people who are true minimum wage workers might have a slightly lower computed wage due to rounding of some element of their annual data. For example, in a state that does not have a minimum wage higher than the federal minimum, workers with hourly wages between $7.00 and $9.14 would be directly affected by an increase in the minimum wage to $9.15. This approach does not attempt to apply the rules regarding jobs exempt from minimum wage laws (including seasonal workers, informal workers, some workers with disabilities, and others); we implicitly assume that those workers would either have an hourly wage below the cutoff that

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is considered affected by the minimum age, or that their wages might be affected even if that would not be legally required. Also, we did not model any wage increases for workers with both wage or salary income and self-employment income, due to challenges in computing hourly wages for individuals with both types of earnings.

Modeling Spillover Increases

Estimates of the impact of minimum wage increases generally assume that employers would increase the wages of some employees beyond what is legislatively required. This could occur when an employer wants to maintain a certain relative ordering of hourly wages across a group of employees. For example, if the employer currently has employees making $7.25, $9.00, and $9.75, and the minimum wage increases to $9.15, the employer would be required to raise the wages of the two lower-paid employees to $9.15. The employer might *choose* to raise the second employee's wages to something higher than $9.15 so that person continues to earn more than the person who previously earned $1.75 less; in that case, the employer might also choose to somewhat raise the wages of the person making $9.75.

The Committee requested that we follow the approach of the Congressional Budget Office's minimum wage analysis (CBO, 2014) in estimating these types of spillover increases. Specifically, in the CBO analysis (CBO, 2014, p. 29), "Ripple effects were included for workers whose wages under current law were projected to be slightly less and slightly more than the minimum wages under each option." Regarding people with baseline wages slightly more than the new minimum wage, CBO assumed (CBO, 2014, p. 21) that a person would get some wage increase if the person's current wage is "up to the amount that would result from an increase that was 50 percent larger than the increase in their effective minimum wage (incorporating both their state minimum and the new federal minimum) under either option." Considering a state that uses the federal minimum wage of $7.25, the effective minimum wage increase being applied in the 2015 data is $1.90; 50 percent of that amount is $0.95, resulting in a wage of $10.10. Thus, spillover increases would occur for workers with baseline wages up to $10.10. The CBO report was not as specific regarding the treatment of workers with baseline wages slightly below the new minimum; in the absence of that information, project staff and Committee members agreed that the spillover area below the new minimum should have the same width. Thus, for a state using the federal minimum wage, spillover increases occur from $8.20 (95 cents below the new minimum) to $10.10 (95 cents above the new minimum). The spillover ranges were modified for states with higher minimum wages. For example, in Arizona, which used an $8.05 minimum wage, the spillover increases occurred from $8.60 to $9.70.

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For workers with a baseline wage above the new minimum, but below the ending point of the spillover range, the new wage equals the new plus an additional amount, computed as follows: the gap between the current wage and the starting point of spillover in their state multiplied by 0.5. For example, in the case of a worker earning $9.00 in a state with a $7.25 minimum, the new wage equals $9.15 plus an additional increase of $0.40—computed as (($9.00-$8.20) * 0.5)—giving a final new wage of $9.55. The relationship between the new required wages and the wages including the spillover assumptions is shown in Figure MW-1 for a state using the federal minimum wage.

Modeling Changes for Workers Who Receive the Tipped Minimum Wage

Workers in some occupations that receive a large portion of their compensation in tips often receive what is known as the "tipped minimum wage," currently set at $2.13 at the federal level and higher in some states. Based on data on median hourly base pay, we treat the following

FIGURE MW-1 New wages with and without spillover, in a state using the federal minimum wage (hourly, in dollars).

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occupations as receiving the tipped minimum wage: waiters, bartenders, gaming service workers, and dining room and cafeteria attendants.[18] Under the tipped minimum wage, the employer is required to pay only that tipped minimum as long as the worker's tips bring his or her total compensation to at least the regular minimum wage; if not, the employer is required to pay additional wages to raise the total to the regular minimum. For example, in a state using the federal levels of $2.13 for the tipped minimum and $7.25 for the regular minimum, as long as the employee receives at least $5.12 per hour in tips, the employer need only pay the tipped wage of $2.13 per hour.

How a worker making the tipped minimum wage is affected by an increase in the tipped and regular minimum wage amounts depends on the worker's current total hourly pay (including tips) relative to the tipped minimum wage, the current regular minimum wage, and the new minimum wage. As mentioned above, values up to 25 cents below the regular minimum are assumed to be at the regular minimum; similarly, values up to 13 cents below the tipped minimum are assumed to be at the tipped minimum. To obtain that total pay, for this group of workers we rely solely on the hourly wages computed from the CPS-ASEC annual data, which include tips as well as base pay. (The ES wages exclude tips.) Wages are modified for workers assumed to be receiving the tipped minimum wage as follows:

- *When total hourly pay is below the current regular minimum wage (range of $2.00 to $7.00 in a state with federal minimum wage values):* If a worker's estimated total hourly pay is within the range from 13 cents below the state's tipped minimum wage to 26 cents below the state's regular minimum, we assume the employer was not complying with the minimum wage law, and would continue to not comply. Therefore, for these workers, wages are increased by only the amount of the tipped minimum wage increase. In a state with the federal values, this is an increase of 56 cents per hour; if the state's tipped minimum already exceeds $2.69, no increase is modeled.
- *When total hourly pay is between the current regular minimum and the new minimum (range of $7.00 to $9.15 in a state with federal minimum wage values):* In this situation, either the employer is bringing the employee's total pay up to the current minimum, or the employee is making more than the current minimum due to

[18] In data developed by the compensation research firm PayScale (https://www.payscale.com/tipping-chart-2012) the median hourly base pay (excluding tips) in these occupations in 2012 was below $8.00 ($5.10 for waiters, $7.60 for gaming services workers, and $7.70 for both bartenders and for dining room and cafeteria workers). For all other occupations identified as receiving substantial levels of tips (e.g., hairdressers), median hourly base pay exceeds $8.00, indicating that these occupations generally receive tips in addition to a regular wage of at least the minimum wage.

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tips. We increase these workers' wages to exactly the regular minimum wage; since we do not have any evidence to the contrary, we assume that the employers in these cases would add sufficient base pay to raise the total hourly pay to the new minimum.

- *When total hourly pay is equal to or higher than the new minimum (hourly pay of $9.15 or above):* We assume workers in one of the tipped-minimum-wage occupations who already have total pay above the new minimum are making substantial tips. However, they would still benefit from the increased tipped minimum. We increase these workers' wages by the amount of the tipped minimum wage increase, which is 56 cents per hour in the states with the federal wage values.

Modeling Changes for Other Workers Who Receive Tips

In addition to workers who receive the tipped minimum wage, many other workers receive tips in addition to receiving a base pay amount that is at least as high as the regular minimum wage. We consider the following occupations as receiving tips, but not the tipped minimum wage: barbers, hairdressers, other personal appearance workers, massage therapists, hosts and hostesses, taxi and chauffer drivers, and all other person care and service workers.[19]

For this group of workers, estimating the impact of the minimum wage increase requires not only an estimate of the total hourly pay including the tips, but also the amount of base pay vs. tips. As with the modeling of the workers receiving the tipped minimum, the modeling for this group uses the hourly wages computed from the annual data rather than the ES wages as the combined amount of base pay and tips. The hourly base pay is estimated as that person's total pay minus the median value of hourly tips for the person's occupation.[20]

The impact of the new minimum wage on this group of workers depends on their estimated hourly wage *without* tips relative to the new minimum wage.

If the estimated wage without tips is more than 25 cents below the current minimum, we assume the person is not covered by the minimum wage law (the same assumption made for nontipped workers) and no changes are made.

[19] This list of occupations includes all those listed as predominantly tipped occupations in an analysis by Allegretto and Cooper (2014) other than those considered to receive the tipped minimum wage.

[20] The median hourly tips for these occupations range from $1.90 for hosts and hostesses to $5.30 for taxi drivers and chauffeurs. The data were collected by the compensation research firm PayScale in a 2012 survey; see https://www.payscale.com/tipping-chart-2012.

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If the estimated wage without tips is between the current minimum (with the 25-cent tolerance) and the new minimum, the new base wage equals the new minimum. (For simplicity, no spillover increases were modeled for this group.) The person's new total wage equals the new base wage plus the estimated value of hourly tips, which are assumed to be unchanged. (If customers reduce their tips when the minimum wage increases, then we are overestimating the total pay increase for this group.)

If the estimated wage without tips exceeds the new minimum, the person's wages are unchanged.

Minimum Wage Policy: Employment Effects

The Committee assumed that increases in the minimum wage would cause some reduction in employment; they requested that the simulations follow the job-reduction approach used by CBO (2014) as closely as possible.

The CBO's approach derives separate targets for the reduction in employment for teenagers and adults. The starting point for the process is the identification of a single estimate for teenagers of the elasticity of job loss due to a minimum wage increase; for an increase of $9.00, the CBO researchers reviewed the literature and identified -0.075 as the most appropriate starting estimate. Since the increase estimated here is very close to $9.00, we begin with the same teen-worker elasticity. This suggests that, across *all* teen workers, employment falls by 0.75 percent due to a 10 percent increase in the minimum wage, or by 1.97 percent due to the 26.2 percent increase in the minimum wage enacted in this policy.

However, the CBO procedures make two adjustments to that estimate so that it is more appropriate to apply in a microsimulation context. First, to make the elasticity applicable to directly affected teenagers—estimated to comprise about one-third of all teen workers in the period covered by the reviewed literature—the figure is divided by one-third; this gives a revised elasticity of -0.225. Second, CBO adjusts the elasticity to apply to the wage change that is required to reach the new minimum—which is less than the full change in the minimum wage since many affected workers are already making above the current minimum wage. Because the full increase was observed by CBO to generally be about 50 percent higher than the wage increases required for compliance, the elasticity is multiplied by 1.5, for a final elasticity of 0.3375. For adults, the CBO estimated that the elasticity would be one-third the size of the elasticity for teens, or 0.1125.

Based on discussion with the Committee members, we used these elasticities to estimate the targeted number of lost jobs, creating separate estimates for teens and adults. For each age group, we calculated the mean percent change in wages for all those directly affected by the wage increase.

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(The directly affected group excludes those whose only increase is due to spillover.) In the simulation of Minimum Wage Policy #1, the average hourly wage increases for this group were 13.8 percent for teens and 11.9 percent for adults (Table MW-2). Multiplying these percentages by the elasticities produces estimates that employment will fall by 4.7 percent among directly affected teens and by 1.3 percent among directly affected adults due to the minimum wage increase. When applied to the universe of directly affected teens and adults, these percentages generate targets for job loss of 28,000 among directly affected teens and 121,000 among directly affected adults due to Minimum Wage Policy #1. For Minimum Wage Policy #2, the estimated average wage increases and targeted job losses are somewhat lower.

The targeted employment reduction was achieved by randomly selecting workers to stop working, from among all those workers who were directly affected by the minimum wage policy. In other words, a teenager with a current hourly wage of $7.25 and a teenager with a current hourly wage of $9.10 both had the same likelihood of job loss. The Committee chose this approach rather than an approach giving different likelihoods of job loss depending on a person's starting wage, since the available evidence does not specifically address the relative likelihoods of job loss depending on a worker's starting wage.

For each age group, the job loss was distributed proportionally across three broad groups of workers—nontipped workers, workers receiving the tipped minimum wage, and other tipped workers—in the same proportions

TABLE MW-2 Key Data for Estimates of Employment Reduction Among Workers Directly Affected by a Minimum Wage Increase

	Minimum Wage Policy #1		Minimum Wage Policy #2	
	Teen Workers	Adult Workers	Teen Workers	Adult Workers
Elasticity, Adjusted to Apply to Average Increase in Wage for Directly Affected Workers	-0.3375	0.1125	-0.3375	0.1125
Average Increase in Wage	13.8%	11.9%	10.5%	9.2%
Average Increase * Elasticity = Estimated Percent Employment Change for Directly Affected Workers	-4.7%	-1.3%	-3.5%	-1.0%
Directly Affected Workers	604,000	9,002,000	556,000	7,038,000
Targeted Employment Change = Percent Change Times Number Directly Affected Workers	-28,000	-121,000	-20,000	-73,000

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as those groups comprised of the entire group of directly affected workers. For example, because about 83 percent of directly affected adults are not in tipped occupations, about 83 percent of the job loss for adults also occurs among nontipped directly affected adults.

Because this job loss was assumed to be involuntary, all the individuals modeled to lose their jobs were assumed to receive unemployment compensation for 26 weeks, offsetting a portion of the impact of the lost wages. Because some portion of people losing their jobs would likely be ineligible for unemployment compensation (due to insufficient work history to meet their state's requirements), the receipt of unemployment compensation in this simulation is probably overstated.

Minimum Wage Policy: Simulation Results

The minimum wage policy changes reduced child SPM poverty slightly—from 13.0 percent to 12.8 percent (Minimum Wage Policy #1) or 12.9 percent (Minimum Wage Policy #2).

Results Prior to Employment Loss

The initial simulations of the minimum wage policies included direct wage increases and spillover effects, but no job loss. (See the columns labeled "No EE" in Table MW-3). Prior to the simulation of any job loss, Minimum Wage Policy #1 provides increased wages for 14.5 million workers, and Minimum Wage #2 increases wages for 10.3 million workers. In aggregate, wages increase by $13.9 billion and $8.0 billion, respectively. The impacts in Minimum Wage #2 are smaller because, in the 33 states in which the 10th percentile of the wage distribution is lower than $9.15, the increase in the minimum wage is not as large as it is in Minimum Wage #1.

Considering the number of people who receive a raise from the simulated increases in the minimum wage, it is initially surprising that the anti-poverty impacts are not larger. The relatively modest anti-poverty impacts are due to two main factors. First, only a portion of the affected workers are in low-income families with children. For example, in the implementation of Minimum Wage Policy #1, among the total 14.5 million workers who receive a raise, only 0.8 million are in families meeting two key criteria—having children under age 18 and having baseline family resources less than 100 percent of the SPM poverty threshold. All the other people who receive a wage increase are either in families without children or in families that are not low-income according to the SPM definition. Second, among the 0.8 million workers receiving a wage increase who are in families in SPM poverty with children under 18, only 42 percent (342,000) work both full time and full year during CY 2015; for the others, the

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TABLE MW-3 Selected Impacts of Minimum Wage Policy Changes, 2015

		Changes from the Baseline			
		Minimum Wage Policy #1: Increase to $9.15 in 2015 Dollars		Minimum Wage Policy #2: Increase to 10th Percentile Wage or $9.15, Whichever Is Less	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.128	-0.121	-0.065	-0.059
SPM Child Poverty Rate[a]	13.0%	-0.2	-0.2	-0.1	-0.1
People With Increased Earnings (Thousands, Working in Baseline)		14.468	14.321	10.345	10.252
People Who Stop Working (Thousands)		0.000	0.147	0.000	0.093
Net Annual Earnings Change ($ Millions)		$13,867	$12,624	$7,997	$7,227
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	-$933	-$78	-$571	$10
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$3,950	$3,609	$2,226	$2,031
Total Change, Annual Government Spending		-$4,883	-$3,688	-$2,797	-$2,021

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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impact of the minimum wage increase on annual earnings is muted by the fact that they work part year and/or part time. Third, the increases in wages have secondary impacts on all the benefit and tax program included in these simulations. In the Minimum Wage Policy#1, for example, aggregate benefits fall by $0.9 billion due to the wage increases, and aggregate taxes increase by $4.0 billion. These secondary impacts lessen the anti-poverty impacts of the minimum wage increase. (For calculations showing how a minimum wage increase could affect a family's benefits and taxes, see Acs et al., 2014.)

Results Including Employment Loss

When employment losses are included in the simulation, in addition to the other minimum wage impacts (the direct impacts, spillover increases, and secondary impacts on benefits and taxes), the reduction in child poverty is lessened by a very small amount, relative to the simulations without job losses. For example, in Minimum Wage Policy #1, the number of children raised out of SPM poverty is 128,000 without any job loss being modeled and 121,000 when job loss is modeled. As mentioned earlier, most of the people affected by the minimum wage increase were either not in families with children or not in families in SPM poverty; job loss has the potential to affect the child poverty results only for job-losers who are in poor families with children that would be raised out of SPM poverty by the minimum wage increase.

EMPLOYMENT POLICY

The Committee requested two simulations to approximate the implementation of a work training program—the WorkAdvance program—that has been implemented as a demonstration project and which appears to increase participants' earnings (Hendra et al., 2016). The simulations assume that the WorkAdvance program has been operational for a number of years with a focus on low-income men who head households with children. The Committee requested two simulations, as follows:

- Work Program Policy #1: Assumes that 10 percent of men in the target group have received training under the program at some point prior to the year of the simulation.
- Work Program Policy #2: Assumes that 30 percent of men in the target group have received training under the program at some point prior to the year of the simulation.

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Employment Policy: Implementation Assumptions

Simulating the WorkAdvance policy involved two initial steps before the earning effects could be imposed: identifying the potential universe and selecting the affected individual from within that universe.

Identifying the Potentially Affected Men

In the simulations, the WorkAdvance program is focused on men meeting all of the following criteria: the man is either unmarried and heading a household with children or part of a married couple heading a household with children; the cash income of the man's family is below 200 percent of the official poverty threshold; the man is age 50 or younger; the man does not have a disability; the man is not a student; and the man is not an unauthorized immigrant. Regarding the last criterion, a report describing the WorkAdvance demonstration project (Tessler et al., 2014) states that participants were required to be legally authorized to work in the United States.

Selecting the Individuals Who Have Been Enrolled in the Program

The specific individuals identified as having received training under the program were selected to mimic the distribution of the demonstration program's actual participants along two dimensions—educational attainment and recent employment history. Regarding education, 56 percent of the demonstration program participants had at least some college education and 44 percent had no more than a high school education or equivalent (see table 3.6 in Tessler et al., 2014).

Regarding recent work experience, men were classified in one of the following groups: either employed or not working for less than 1 month; not working for 1 to 6 months; or either not working for 7 or more months or never employed. These are the groups for which the evaluation provides separate estimates of impacts, as described further below. Based on the characteristics of the actual participants, we determined that among the simulated participants, 22 percent should be employed or have less than 1 month of nonwork during the year; 39 percent should have 1 to 6 months when they were not working during the year; and 39 percent should have 7 or more months during which they did not work during the year.[21]

[21] These percentages are based primarily on table 3.5 in Tessler et al. (2014). However, that table grouped together participants unemployed for less than 3 months (without separate identification of those unemployed less than 1 month). We inferred that about 2 percent of enrollees were unemployed for less than 1 month. With that assumption, when the earnings impacts for the three employment subgroups are weighted by that subgroup's estimated portion of the total (22, 39, and 39 percent), the resulting overall earnings impact equals the overall reported impact.

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To come as close as possible to the desired characteristics, we first tabulated the universe of potential participants by education and by the three employment groups. Then, for each of the two options, we determined a set of probabilities for each combination of characteristics that would come as close as possible to achieving both the desired distribution by educational attainment and the desired distribution by weeks of work vs. nonwork. In the simulation in which 10 percent of the universe is assumed to have participated, the distribution of the simulated participants comes very close to the desired distributions (Table Work-1). For the simulation with 30 percent enrollment, the alignment is not quite as close; the number of men with 1 to 6 months of nonwork was not sufficient to reach the target for this simulation.

Employment Policy: Earnings Effects

According to the available evaluation results, the average impacts of WorkAdvance on participants' annual earnings have been as follows: (1) for participants with less than 1 month of nonwork, a $327 *reduction* in earnings; (2) for participant with 1 to 6 months of nonwork, an annual increase of $3,112; and (3) for those with 7 or more months of nonwork, an annual increase of $1,933. On average, the annual impact was a $1,900 increase in earnings.

The changes were implemented in the simulation by assuming that every person identified as a participant would have the annual earnings change appropriate for his weeks-of-work group (rather than by simulating

TABLE Work-1 Simulated WorkAdvance Participants

	Work Program Policy #1	Work Program Policy #2
Number of Potential Participants	4.879 million men	
Simulated Participants	0.488 million	1.449 million
Distribution by Educational Attainment		
High School Diploma or Less	44.1%	49.5%
Some College or More	55.9%	50.5%
Distribution by Weeks of Work During the Year		
49 or More (< 1 Month of Nonwork)	21.9%	23.0%
27 to 48 (1–6 Months of Nonwork)	39.2%	37.0%
< 27 (More Than 6 Months of Nonwork)	39.0%	40.0%

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a larger change for some individuals and no change for others).[22] The $327 reduction in annual earnings for the nonworker group was achieved by reducing weekly hours of work by 0.5 for every man in that group. For men in the second group, the $3,112 increase in earnings was achieved primarily by either increasing weeks or by increasing hours of work at the current wage rate. However, if those increases were insufficient to reach the needed amount (for example, for a man already working 48 weeks for 40 hours per week at $10 per hour, adding another 4 weeks of full-time work increases earnings by only $1,600) then the remainder of the increase was accomplished by assuming an increase in the hourly wage. The procedures for men in the third group were the same as for those in the second group.

The overall average simulated earnings changes came close to the targeted average change. The average annual earnings change for the 10-percent participation simulation was an increase of $1,891. For the 30-percent participation simulation, the average annual earnings change across the entire affected group was an increase of $1,842; the average was somewhat lower than the desired target because the simulated participants included too many men in the group experiencing a slight reduction in earnings rather than an increase.

Employment Policy: Simulation Results

The WorkAdvance simulations had modest impacts on child poverty. When 30 percent of the potential universe was modeled to have participated, child poverty fell by one-tenth of a percent (Table Work-2). When enrollment was assumed for only 10 percent of the potential universe, only 20,000 children were modeled to be raised out of SPM poverty. The policy does result in substantial impacts in earnings; when 30-percent enrollment is assumed, aggregate earnings increase by $2.7 billion.

There are probably at least three reasons for the relatively small antipoverty impacts. First, while all of the affected men had children, and had low incomes according to the official poverty definition, not all were poor according to the SPM. Second, for over one-fifth of the participants, earnings fell slightly rather than increasing. Third, the earnings increases were offset by benefit reductions and tax increases. In the simulation of 30-percent WorkAdvance enrollment, aggregate benefits fall by $0.5 billion due to the increased earnings, and aggregate tax liabilities increase by

[22] Nonworkers with more than $1,933 in unemployment compensation were excluded from having any change in earnings modeled. Because the standard programming removes unemployment compensation from individuals who are simulated to become unemployed, modeling a nonworker in this situation to move from $0 to $1,933 in earnings would have caused that person's total resources to fall.

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TABLE Work-2 Selected Impacts of WorkAdvance Policy, 2015

	Baseline 2015	Changes from the Baseline: WorkAdvance Policy #1: 10% Participation in Program EE	Changes from the Baseline: WorkAdvance Policy #2: 30% Participation in Program EE
Number of Children in SPM Poverty (Millions)	9.633	-0.020	-0.096
SPM Child Poverty Rate[a]	13.0%	0.0	-0.1
Employment and Earnings Changes			
People with Increased Earnings (Thousands, Working in Baseline)		0.245	0.700
People Who Start Working (Thousands)		0.136	0.416
People with Decreased Earnings (Thousands, Working in Baseline)		0.107	0.333
Net Annual Earnings Change ($ Millions)		$923	$2,669
Spending and Tax Summary ($ Millions)			
Aggregate Benefits Paid[b]	$197,816	-$137	-$504
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$135	$297
Total Change, Annual Government Spending		-$271	-$801

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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$0.3 billion. Together, the benefit and tax changes offset 30 percent of the increase in aggregate earnings under this scenario.

SNAP

The Committee requested several simulations increasing benefits from the Supplemental Nutrition Assistance Program (SNAP) and also from two other enhancements: a Summer Electronic Benefit Transfer to Children (SEBTC) program and an adjustment for children ages 12 and older. Under SEBTC, additional funds are transmitted to families with children during the summer months to help compensate for the loss of school-based food assistance. SEBTC has been piloted in 10 states and tribal organizations, some of which have used SNAP as the mechanism for transmitting benefits.[23] The simulations initially requested by the Committee included:

- SNAP Policy #1: A 20-percent increase in SNAP benefits combined with two other changes:
  - an adjustment for the number of children in the home who are 12 years of age or older ($360 for each qualifying-age child per year).
  - an SEBTC benefit ($180 per child in pre-kindergarten through 12th grade per year).
- SNAP Policy #2: Same as #1, but SNAP benefits are increased by 30 percent relative to the baseline.

As part of one of the final packages of policies (as described in a later section of this report) a third variant was modeled:

- SNAP Policy #3: Same as #1 and #2, but the SNAP benefit is increased by 35 percent from the baseline values.

SNAP Policy Implementation Assumptions

The SNAP policies involved three separate types of change—increases in the regular SNAP benefits, the adjustment for children ages 12 and over, and the SEBTC benefit.

[23] See https://fns-prod.azureedge.net/sites/default/files/ops/sebtcfinalreport.pdf.

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Increases in SNAP Benefits

We simulated the percentage increases in SNAP benefits by increasing the maximum SNAP allotment by the specified percentage.[24] SNAP benefits are calculated by subtracting 30 percent of the SNAP unit's net income (gross income after various deductions) from the maximum SNAP allotment, which varies by family size.

Families without any net income receive the maximum SNAP allotment, and therefore experience an increase in their benefit equal to the stated percentage. For example, if the maximum SNAP allotment increases by 20 percent, families with no net income (who receive the maximum allotment) will all receive a 20-percent increase in their SNAP benefit. Families with positive net income receive a smaller SNAP benefit but, in these scenarios, the percentage increase in their SNAP benefit relative to the baseline is higher than the percentage increase in the maximum allotment (Table SNAP-1). For example, a three-person SNAP unit without any net income would receive $511 in SNAP benefits per month in the 2015 baseline, which would increase by 30 percent to $664 when the maximum SNAP allotment is increased by 30 percent. If the same family had $600 in net income, then the 30 percent increase in the maximum SNAP allotment would cause their SNAP benefit to rise from $331 in the baseline (computed as the $511 maximum minus 30 percent of $600) to $484 (computed as $664 minus 30 percent of $600)—an increase of 46 percent.

Additional Benefits for Children Ages 12 -17

To adjust SNAP benefits for SNAP units with children ages 12 to 17, we added $30 per month to the unit's maximum SNAP allotment for each child in the unit between the ages of 12 and 17 who is not the head or spouse of the SNAP unit. For example, when simulating a 30-percent increase in the maximum SNAP allotment plus a $30 supplement for children ages 12 to 17, the maximum SNAP benefit for a married couple with one teenager was increased from $664 to $694 (Table SNAP-1).

SEBTC Benefits

We assigned $60 per month in SEBTC benefits to each eligible child receiving SNAP benefits in June, July, and August. Children receiving SNAP benefits in all 3 months received a total of $180 in benefits for the summer.

[24] We made a corresponding adjustment to the minimum SNAP allotment guaranteed to 1 and 2 person households so that the value continued to equal 8 percent of the maximum SNAP allotment for a 1-person SNAP assistance unit.

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TABLE SNAP-1 Monthly SNAP Benefit Under Alternative Policy Scenarios, by Monthly Net Income and Family Size, 2015[a]

		SNAP Policy #1 20% Increase in Maximum Allotment		SNAP Policy #2 30% Increase in Maximum Allotment		SNAP Policy #3 30% Increase in Maximum Allotment Plus $30 for Each Child 12-17	
	Baseline Benefit	SNAP Benefit	% Increase in Family's Benefit	SNAP Benefit	% Increase in Family's Benefit	Benefit if One Teen[b]	Benefit if Two Teens[b]
Family Net Income = $0							
Two Person	$357	$428	20%	$464	30%	$494	$524
Three Person	$511	$613	20%	$664	30%	$694	$724
Four Person	$649	$779	20%	$844	30%	$874	$904
Five Person	$771	$925	20%	$1,002	30%	$1,032	$1,062
Family Net Income = $600							
Two Person	$177	$248	40%	$284	61%	$314	$344
Three Person	$331	$433	31%	$484	46%	$514	$544
Four Person	$469	$599	28%	$664	42%	$694	$724
Five Person	$591	$745	26%	$822	39%	$852	$882

[a] Values shown in the table assume that the assistance unit lives in one of the contiguous 48 states or DC. (Benefits are higher in Alaska and Hawaii.)

[b] Monthly benefits during the school year are shown, not including additional SEBTC benefits paid during the summer months.

If the child's SNAP unit only participated in SNAP in one of the summer months, the SNAP unit would receive $60 in SEBTC benefits for each child.

The intention of the policy is that children are eligible for SEBTC based on age and school attendance. Specifically, children are eligible for SEBTC in the summer months following a year of school (even if it was their last year of school). The CPS-ASEC does ask about school attendance, but that question applies to the survey month rather than the calendar year, and it is only asked about people ages 16 and older; therefore, additional assumptions were needed. Following the committee's specifications, we assigned SEBTC to children receiving SNAP as follows:

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- Ages 0 to 2: no children are assumed to be eligible for SEBTC
- Age 3: 40 percent of poor 3-year-olds (to reflect school lunch participation while in Head Start or preschool); no nonpoor 3-year olds
- Age 4: 50 percent of poor 4-year olds and 35 percent of nonpoor 4-year-olds (to reflect a combination of Head Start and preschool attendance)
- Age 5: 66 percent of children, regardless of family income (to reflect a combination of preschool and kindergarten attendance)
- Ages 6 to 15: all children
- Ages 16, 17, and 18:
    - If a child aged 16 to 18 is attending school full time in the month of the survey, we assume he or she also attended school in the prior calendar year and was therefore eligible for SEBTC in the summer months.
    - If a child aged 16 to 18 is *not* attending school full time in the month of the survey, but the child is age 16 and the highest grade completed is 11th, or the child is 17 or 18 and the highest grade completed is 12th, we assume she or he was in school during the prior calendar year and eligible for SEBTC in the summer.

Participation Assumptions

The simulations increase potential benefits for units already eligible for SNAP—some of which were not simulated to be enrolled in the program in the baseline—and cause some families to become newly eligible for SNAP. Using the same participation probabilities determined during the development of the baseline SNAP simulation for 2015, which increase for higher ranges of potential benefits, some previously eligible units are modeled to enroll in SNAP (due to the now-higher potential benefits) and some of the newly eligible units are also modeled to enroll. The enrollment decision is based on the amount of the SNAP benefit including the additional amount for children ages 12 through 17. SEBTC is then assigned for eligible children modeled to receive SNAP in the summer months.

SNAP Policy: Employment and Earnings Effects

The Committee assumed there would be reductions in both employment and hours of work due to the expanded nutrition benefits. Changes were estimated only for employed mothers; no changes were estimated for women who are not mothers or for any men.

The Committee first derived upper-bound and lower-bound estimates of the employment and earnings effects of the SNAP increase (Table SNAP-2).

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TABLE SNAP-2 Changes in Maternal Employment and Earnings Due to a 20-Percent SNAP Increase—Upper and Lower Bound Estimates

	Upper Bound Estimates	Lower Bound Estimates
Unmarried Mothers (5.524 Million Have SNAP in Baseline[a])		
Reduced Employment		
Percentage Point Change in Employment Rate	Neg. 3.8	Neg. 1.0
Target Number of Mothers to Stop Working	-210,000	-55,000
Average Change in Annual Hours (People Remaining Employed)		
People With SNAP in Baseline	-78.6	-50
People Who are Newly Eligible for SNAP	-25	-25
Married Mothers (3.091 Million Have SNAP in Baseline[a])		
Reduced Employment		
Percentage Point Change in Employment Rate	Neg. 0.5	(no chg.)
Target Number of Mothers to Stop Working	15,000	(no chg.)
Average Change in Annual Hours (People Remaining Employed)		
People With SNAP in Baseline	-25	(no chg.)
People Who are Newly Eligible for SNAP	(no chg.)	(no chg.)

[a] Mothers who receive SNAP in at least 1 month of the year in the baseline simulation.

The key study used to derive the assumptions is Hoynes and Schanzenbach (2012), which analyzes the employment and earnings impacts of the initial implementation of the SNAP program. The Committee extrapolated from those findings to estimate the impacts of increasing benefits in the already-existing program. For example, the upper-bound employment and earnings impacts of a 20-percent SNAP benefit increase on unmarried mothers are derived by starting a Hoynes and Schanzenbach estimate of the impacts of the initial roll-out of SNAP and multiplying by 0.2. (Since SNAP benefits are indexed annually for inflation, the impact of a 20-percent benefit increase is assumed to be approximately one-fifth as large as the impact of starting the program.) The upper-bound estimates assume that employment and earnings will decline for both unmarried and married mothers; the lower-bound estimates assume changes only for unmarried mothers. The estimated impacts on hours of work (for mothers who remain employed) are assumed to vary between those newly eligible for SNAP and those already receiving SNAP in the baseline simulation.

To model employment and earnings effects due to each of the SNAP policies, the starting-point impacts were the midpoints of the employment

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and earnings changes shown in Table SNAP-2. However, adjustments were made to account for the fact that SNAP Policy #2 and SNAP Policy #3 increased SNAP benefits by a larger percentage than SNAP Policy #1, and to account for SEBTC.

SNAP Policy #1

For families not affected by SEBTC, the employment and earnings effects of SNAP Policy #1 (Table SNAP-3, first column) are the midpoint of those shown in Table SNAP-2. To capture the impact of SEBTC, we computed that for households with at least one child receiving a SEBTC payment when the SNAP Policy #1 is modeled (prior to employment and earnings effects) the average annual benefit (including regular SNAP benefits, SEBTC, and the increment for teens) is 11.0 percent higher than if the SNAP increase is modeled without the additional child and teen benefits (and without employment and earnings effects). Therefore, the impacts

TABLE SNAP-3 Changes in Maternal Employment and Earnings Due to SNAP Policies #1 and #2

	SNAP Policy #1		SNAP Policy #2	
	No SEBTC	With SEBTC	No SEBTC	With SEBTC
Unmarried Mothers				
Reduced Employment				
Percentage Point Change in Employment Rate	Neg. 2.4	Neg. 2.6	Neg. 2.7	Neg. 3.0
Average Change in Annual Hours (People Remaining Employed)				
People With SNAP in Baseline	-64.3	-71	-73	-80
People Who are Newly Eligible for SNAP	-25	-28	-29	-31
Married Mothers				
Reduced Employment				
Percentage Point Change in Employment Rate	Neg. 0.25	Neg. 0.28	Neg. 0.28	Neg. 0.31
Average Change in Annual Hours (People Remaining Employed)				
People With SNAP in Baseline	-12.5	-14	-14	-16
People Who are Newly Eligible for SNAP	(no change)	(no change)	(no change)	(no change)

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for households affected by SEBTC were increased by 11.0 percent (see the second column of Table SNAP-3).[25]

For example, among unmarried mothers not eligible for SEBTC (primarily mothers whose children are all under age 3) the employment rate was estimated to fall by 2.4 percentage points (the midpoint of the estimates of 3.8 percentage points and 1.0 percentage point shown for a 20-percent SNAP benefit increase in Table SNAP-1). For mothers in families receiving SEBTC, the impacts were estimated to be 11 percent larger.

Implementing Job Reductions

To implement the reduction in jobs, we first identified all married and unmarried mothers receiving SNAP in the baseline simulation. We applied the percentage point changes in the employment rate selected by the Committee to these counts. Using the upper-bound effects, this produced targets of 210,000 unmarried mothers and 15,000 married mothers choosing to stop working; with the lower-bound effects, 55,000 unmarried mothers and no married mothers are assumed to stop working (Table SNAP-2). Not considering the impacts of SEBTC, the midpoints of those estimates are job reductions of 132,500 for unmarried mothers and 7,500 for married mothers.

Next, we identified the group at-risk of leaving their jobs as those employed mothers who, in additional to receiving SNAP in the baseline, also met these criteria: They had earnings in some or all the months in which they received SNAP, and they had no earnings during months when SNAP was not received. (This definition of the group avoided the possibility of modeling job-leaving for women whose employment fell entirely or primarily in months separate from their SNAP receipt.) About 2.6 million unmarried mothers and 0.6 million married mothers were identified as at-risk of a change in employment or earnings due to the SNAP increase. Meeting those targets prior to consideration of SEBTC would require that 5.3 percent of at-risk unmarried mothers would stop working and 1.2 percent of at-risk married mothers would stop working. Therefore, we randomly chose 5.3 percent of the at-risk unmarried mothers without SEBTC and 1.2 percent of the at-risk married mothers without SEBTC to stop working. For at-risk mothers with SEBTC, the probability of leaving their job was increased by 11 percent (to 5.8 percent and 1.3 percent for

[25] The households benefiting from SEBTC also included almost all of the households benefiting from the increment for teenagers. A small number of additional households benefited from the teen increment, if the household included someone age 16 or 17 who was not in school and not identified as having recently left school, or if the household only received SNAP in nonsummer months.

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unmarried and married women, respectively). Because all these women are assumed to have left their jobs voluntarily, they are not modeled to begin to receive unemployment compensation.

Implementing Reductions in Hours of Work

To implement the changes in hours of employment, the Committee requested that the reductions be spread as widely as possible over the women at-risk of employment or earnings changes who were not modeled in the prior step to stop working. We identified the smallest change in weekly hours that would achieve the desired average when applied to all or most of the at-risk group, and imposed the following changes:

- Employed mothers receiving SNAP in the baseline, with earnings only in SNAP months
  - Unmarried mothers:
    - No SEBTC (average reduction=64.3 hours): Hours reduced by 2 hours per week for 77 percent of the group[26]
    - With SEBTC (average reduction=71 hours): Hours reduced by 2 hours per week for 85 percent of the group
  - Married mothers:
    - No SEBTC (average reduction=12.5 hours): Hours reduced by 1 hour per week for 31 percent of the group
    - With SEBTC (average reduction=14 hours): Hours reduced by 1 hour per week for 34 percent of the group
    - Employed mothers newly eligible for SNAP (before employment/earnings changes), with earnings only in SNAP months
  - Unmarried mothers:
    - No SEBTC (average reduction=25 hours/week): Hours reduced by 1 hour per week for 48 percent of the group
    - With SEBTC (average reduction=28 hours/week): Hours reduced by 1 hour per week for 53 percent of the group
  - Married mothers—no changes in hours

SNAP Policy #2 and SNAP Policy #3

To obtain the estimated employment and earnings impacts of SNAP Policy #2, we took into account both the greater increase in the basic

[26] At the point these simulations were conducted, hours could be reduced only in whole-hour increments. Subsequently, the model was modified to be able model fractional changes in hours-per-week.

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SNAP benefit (an increase of 30 percent in the maximum allotments, rather than the 20-percent increase in SNAP Policy #1) as well as the impact of SEBTC. We calculated that when the SNAP Policy #2 was implemented without employment and earnings effects, the average annual benefit increased by 13.8 percent for households without SEBTC and by 23.9 percent for households with SEBTC, relative to the average annual benefits simulated for those groups of households when a 20-percent SNAP benefit increase is modeled without the teen or SEBTC benefits, and without employment and earnings effects. Those percentage increases were applied to the midpoints of the estimates shown in Table SNAP-2 to obtain estimated employment and earnings effects for SNAP Policy #2 (right-side columns of Table SNAP-3). The procedure was the same to obtain the (slightly larger) employment and earnings impacts under SNAP Policy #3.

SNAP Policy: Simulation Results

In the absence of employment effects, increasing the maximum SNAP allotment by 20 percent and also adding teen benefits and SEBTC benefits (SNAP Policy #1) decreases the child poverty rate from 13.0 to 11.0 percent (Table SNAP-4). When the teen supplement and SEBTC are combined with a 30-percent increase in the maximum SNAP allotment (SNAP Policy #2), the child poverty rate falls to 10.4 percent. A 35-percent increase in the maximum SNAP allotment combined with the additional benefits reduces child poverty by an additional percentage point, to 10.0 percent.

Simulation of employment effects—including some people leaving their jobs and others reducing their hours—somewhat reduces the estimated anti-poverty effect of the policy scenarios. For example, SNAP Policy #2, which reduces child poverty by 2.6 percentage points without employment and earnings effects, reduces it by 2.3 percentage points when employment and earnings effects are included.

Without employment effects, total estimated SNAP benefits increase by $22.8 billion (36%) when the 20-percent increase in the maximum SNAP allotment is combined with a teen supplement, by $33.7 billion (54%) when a 30-percent increase in the maximum SNAP allotment is combined with a teen supplement, and by $39.4 billion (62%) when the SNAP benefit increase is 35 percent. The increases are due to higher benefits for current SNAP recipients and to units beginning to receive SNAP who were not enrolled in the baseline. For example, in SNAP Policy #1, the number of units eligible for SNAP in the average month of the year increases by 0.8 million (2%), and the number of units receiving SNAP increases by 1.5 million (7%). SEBTC benefits total $3.0 billion under the SNAP Policy #1. The SNAP Policy #2 produces slightly higher aggregate SEBTC benefits ($3.1 billion) because more children receive SNAP (and thus SEBTC) under

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TABLE SNAP-4 Selected Impacts of SNAP Policy Changes, 2015

		Changes from the Baseline					
		SNAP Policy #1: 20% Increase, SEBT, Teenage Allotment		SNAP Policy #2: 30% Increase, SEBT, Teenage Allotment		SNAP Policy #3: 35% Increase, SEBT, Teenage Allotment	
	Baseline 2015	No EE	With EE	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-1.469	-1.251	-1.950	-1.686	-2.205	-1.950
SPM Child Poverty Rate[a]	13.0%	-2.0	-1.7	-2.6	-2.3	-3.0	-2.6
Selected Program Results							
Supplemental Nutrition Assistance Program (SNAP)							
Units Eligible for Benefits (Avg. Mo., Thousands)	36,721	766	766	996	995	1,076	1,075
Units Receiving Benefits (Avg. Mo., Thousands)	22,367	1,462	1,463	2,010	2,010	2,263	2,263
Aggregate Annual Benefits ($ Millions)	$63,039	$22,873	$23,464	$33,732	$34,417	$39,370	$40,098
SEBTC Value ($ Millions)	$0	$3,033	$3,033	$3,107	$3,107	$3,130	$3,130
Employment and Earnings Changes							
People With Decreased Earnings (Thousands, Working in Baseline)			2.243		2.541		2.716
People Who Stop Working (Thousands)			0.142		0.160		0.168
Net Annual Earnings Change ($ Millions)			-$3,376		-$3,740		-$3,963

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Spending and Tax Summary ($ Millions)							
Aggregate Benefits Paid[b]	$197,816	$25,908	$26,642	$36,842	$37,647	$42,503	$43,342
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$1	$228	$1	$257	$1	$267
Total Change, Annual Government Spending		$25,908	$26,414	$36,841	$37,390	$42,503	$43,075

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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that scenario. Employment effects somewhat increase the estimated costs of the policies, due to higher SNAP benefits received by families with a person who stops working or reduces her hours.

HOUSING

The Committee requested two simulations to increase the number of households receiving assistance through the Housing Choice Voucher Program:

- Housing Policy #1: Increase vouchers so 50 percent of eligible households with children who do not currently receive housing assistance begin to receive vouchers.
- Housing Policy #2: Increase vouchers so 70 percent of eligible households with children who do not currently receive housing assistance begin to receive vouchers.

Housing Policy: Implementation Assumptions

The simulations assign additional vouchers to households meeting all of the following criteria: (1) the household meets the income eligibility limit (i.e., has income below 80 percent of area median income); (2) the household has one or more children; (3) the household reports paying rent; (4) the household includes at least one citizen, legal permanent resident, or refugee/asylee; and (5) the household does not report receiving housing assistance in the CPS-ASEC survey data. To simulate Housing Policy #1, one-half of the households meeting these criteria are randomly assigned housing vouchers. In Housing Policy #2, that share is increased to 70 percent. The probability of an eligible household being selected as a new subsidy recipient does not vary by income, poverty level, ages of children, or any other characteristics.

The value of the housing subsidy for the households simulated to begin to receive vouchers is calculated in the way it is calculated for the baseline caseload—as the difference between a household's required rental payment (under the rules of the Housing Voucher Program) and the Fair Market Rent (FMR) for the apartment size that the household is calculated to need and in the place where the household lives. For example, if a household is computed to owe $200 toward the rent, and the FMR is estimated to be $800, the value of the monthly subsidy equals $600.

The value of the housing subsidy is used in determining resources for purposes of the SPM, but that value is not necessarily fully counted. Instead, the value of the subsidy is capped at the housing portion of the SPM threshold minus the required rent contribution. In other words, the housing subsidy

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is counted as a resource to the extent that it helps the household meet its need for shelter, but the housing subsidy is not considered available to meet needs for food, clothing, or other purposes.

Housing Policy: Employment and Earnings Effects

The Committee assumed that among households newly receiving a housing subsidy, some people would either stop work or reduce their work hours. Changes were assumed to occur only for household heads. Based on analysis by Jacob and Ludwig (2012), the Committee specified the following changes:

- A drop of 3.3 percentage points in the employment rate for women who start to receive a subsidy and who are the head of their household.
- A drop of 7.3 percent in the earnings of new subsidy recipients who are household heads, including both male and female household heads.[27]

To model the reduction in employment, we tabulated the number of women meeting all of these criteria: new recipients of a housing subsidy, head of a household, and neither a student nor a person with a disability. Also, since the simulated policy increased housing subsidies only for households with children, all of the new subsidy recipients are living in a household with a child. We applied the 3.3-percentage-point increase to the tabulated numbers of women, resulting in an estimate of 69,000 women leaving their jobs under Housing Policy #1 and 96,000 leaving their jobs under the Housing Policy #2 (Table Housing-1). Among women in the identified group who were employed, we randomly selected sufficient women to leave their jobs to reach the target for each simulation. Because these women were assumed to leave their jobs voluntarily, we assumed that none of them would receive any unemployment insurance benefits.

The reduction in earnings was implemented by reducing individuals' hours of work. The Committee requested that the average reduction be applied across the entire at-risk group. In each household gaining a subsidy, if the head of that household was employed, his or her hours of work were reduced by 7.3 percent; there were no reductions for people classified as the spouse of the household head, or for any other individuals in the affected households.

[27] The 3.3-percentage-point estimate is the weighted average across separate estimates provided in the Jacob and Ludwig (2012) analysis for households with one, two, or three or more children.

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TABLE Housing-1 Changes in Employment Due to Housing Subsidy Expansions

	Housing Policy #1	Housing Policy #2
Female heads of household who begin to receive a housing subsidy, excluding students and people with disabilities		
Total number	2.077 million	2.902 million
Reduction in number employed (3.3%)	69,000	96,000

Housing Policy: Simulation Results

In the absence of employment effects, assigning housing vouchers to one-half of eligible households with children not currently receiving housing assistance reduces the estimated child poverty rate from 13.0 to 10.8 percent (Table Housing-2). Increasing the share assigned vouchers to 70 percent reduces the child poverty rate further to 9.8 percent. Simulating employment effects slightly reduces the estimated anti-poverty effect of the policy scenarios, due to reduced employment among some of the families assigned vouchers. With employment effects, the child poverty rate is 10.9 percent in the first scenario and 10.0 percent in the second scenario.

Total rent subsidies increase by $23.8 billion under Housing Policy #1 and $33.7 billion under the Housing #2 assumption, without modeling employment and earnings changes. Simulating those changes increases the estimated new subsidies to $24.8 billion and $35.5 billion, respectively, due to reduced earnings among some of the recipient households.

The new vouchers would reduce SNAP benefits in some households due to a reduction in the SNAP excess shelter expense deduction. The SNAP excess shelter expense deduction is equal to the amount by which a household's shelter expenses exceed one-half of its net income after other deductions. The deduction lowers a household's net income, thus increasing its SNAP benefit. In a household in which shelter costs fall due to receipt of a housing voucher, the value of that deduction may also fall, increasing the household's net income for purposes of the SNAP program and decreasing their SNAP benefit. For some households, the reduction or loss of the deduction causes a loss of SNAP eligibility. Due to a small estimated reduction in enrollment as well as reduced benefits for some units who retain their SNAP benefits, aggregate SNAP benefits are estimated to fall by $1.9 billion in Housing #1 and $2.7 billion in Housing #2, when each is modeled without employment effects. When employment effects are modeled, this reduction in SNAP benefits is offset by the fact that some households are now modeled to have lower earnings, increasing their SNAP benefits.

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TABLE Housing-2 Selected Impacts of Housing Policy Changes, 2015

		Changes from the Baseline			
		Housing Subsidy Policy #1: Increase Vouchers with 50% Participation		Housing Subsidy Policy #2: Increase Vouchers with 70% Participation	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-1.663	-1.542	-2.350	-2.187
SPM Child Poverty Rate[a]	13.0%	-2.2	-2.1	-3.2	-3.0
Selected Program Results					
Public and Subsidized Housing					
Number of Households (Any Subsidy During Year, Thousands)	5,165	3,466	3,466	4,907	4,907
Aggregate Tenant Payments ($ Millions)	$21,492	$23,551	$22,797	$33,308	$32,160
Aggregate Rent Subsidies ($ Millions)	$36,955	$23,797	$24,836	$33,744	$35,471
Supplemental Nutrition Assistance Program (SNAP)					
Units Eligible for Benefits (Avg. Mo., Thousands)	36,721	-98	-12	-121	49
Units Receiving Benefits (Avg. Mo., Thousands)	22,367	-60	20	-71	92
Aggregate Annual Benefits ($ Millions)	$63,039	-$1,916	-$1,477	-$2,692	-$1,981
Employment and earnings changes					
People With Decreased Earnings (Thousands, Working in Baseline)			2.267		3.235
People Who Stop Working (Thousands)			0.068		0.095
Net Annual Earnings Change ($ Millions)			-$4,268		-$6,088
Spending And Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	$21,881	$23,422	$31,053	$33,502
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$0	-$712	$0	-$1,414
Total Change, Annual Government Spending		$21,881	$24,134	$31,053	$34,916

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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Without employment and earnings effects, total government spending increases by $21.9 billion under Housing #1 and $31.1 billion under Housing #2—the value of the increased housing benefits offset by the SNAP reduction. With employment and earnings changes, the government cost increases are $24.1 billion and $34.9 billion, respectively.

SSI

The Committee requested exploratory simulations of increases in SSI benefits for children and increases in SSI benefits for adult recipients who are caring for dependent children. The Committee settled on two options for full analysis:

- SSI Policy #1: Increase by one-third the SSI benefit guarantee for children who are SSI recipients.
- SSI Policy #2: Increase by two-thirds the SSI benefit guarantee for children who are SSI recipients.

SSI Policy Implementation Assumptions

Both of these policies were implemented as percentage increases in the SSI "income guarantee"—the dollar amount that determines a person's financial eligibility for a benefit and that determines the amount of the benefit. In 2015, the SSI income guarantee was $733 per month for one-person units, including children. A one-third increase raised the one-person guarantee to $977.33, and a two-thirds increase raised the one-person guarantee to $1,221.67. The increases in the guarantee were assumed to apply to all children potentially eligible for SSI.

The increases in the guarantees affect both current SSI recipients and nonrecipients. People who are currently receiving SSI and who are in the group affected by the policy will begin to receive a higher benefit. For affected children with no countable income for SSI purposes, the new benefit will be exactly the same as the new benefit guarantee. For affected children with some amount of countable income (either the child's own income, or income deemed available from a parent), the new benefit will equal the new benefit guarantee minus the countable income. For example, considering a child with $100 in monthly countable income who is receiving SSI, his or her baseline benefit is $633/month (computed as $733 minus $100); under the assumption of a one-third increase in the guarantee, his or her benefit increases to $877.33 (computed as $977.33 minus $100); this child's monthly benefit increases by 38.6 percent.

The policies also affect some children who are not currently receiving benefits. Some children already eligible for SSI but not receiving it will

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become eligible for a higher benefit, and some children whose families have too much income for the child to be eligible for SSI will begin to be eligible. In both of those situations, children could start to participate who did not previously receive SSI. However, modeling these changes in children's SSI participation is more challenging than modeling participation changes for other programs (or for adult SSI participation), due to the lack of children's disability information in the CPS-ASEC. TRIM3 identifies a likely children's SSI caseload from among children in financially eligible families, but does not identify nonenrolled children as being eligible for SSI. Thus, modeling increased caseload due to the hypothetical policies requires establishing targets for the increases, and then selecting additional financially eligible children into the caseload in order to reach those targets.

To estimate the extent to which the caseload would increase due to increased enrollment by currently eligible children, we began by estimating the current participation rate for this group. We used the 2015 ACS data combined with the SSI caseload data to estimate that 67 percent of children ages 5 and over who are eligible for SSI receive the benefit.[28] However, if the income guarantee is increased by either one-third or two-thirds, the participation rate would be expected to increase. Based on discussion with the Committee, we estimate that the participation rate would increase by 5 percentage points due to a one-third increase in the guarantee and by an additional 5 percentage points (a total of 10 points from baseline) due to a two-thirds increase in the guarantee. This would result in a total participation rate for children currently eligible for SSI (in both demographic and financial terms) of 72 percent or 77 percent, respectively. (Participation rates of that level or higher were computed for the Aid to Families with Dependent Children [AFDC] program using eligibility estimates developed with the TRIM model [see figure 8 in Crouse and Macartney, 2018] and participation rates over 80 percent are observed in some states in the case of SNAP benefits [Cunnyngham, 2018a].) Specifically, we assumed that the children's SSI caseload would rise from the baseline level by 7.5 percent (72 vs. 67%) due to the one-third increase and by 15 percent (77 vs. 67%) due to the two-thirds increase; the numerical targets for the increase in the children's SSI caseload are 95,000 for simulation SSI Policy #1 and 190,000 for simulation SSI Policy #2. These numbers of additional children were randomly selected to receive SSI from among all children in families that are financially eligible for SSI in the baseline.

[28] The ACS asks about functional limitations for children ages 5 and older. The 2015 ACS suggests that 1.624 million children ages 5 and over have a disability that might result in SSI eligibility and are in families that appear financially eligible for SSI. Dividing the number of children ages 5 and over who received SSI in 2015 by the ACS eligibility estimate gives a participation rate of 66.8 percent.

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To estimate increased children's SSI caseload due to new families becoming eligible, we started from the observed relationship between the children's SSI caseload and all income-eligible children. In 2015, 1.234 million children received SSI, comprising 7.3 percent of children in financially eligible families in the average month of the year, and 6.7 percent of children in financially eligible families at any point during the year. In other words, about 7 percent of all children in financially eligible families appear to be disabled and to be in families that choose to participate. Because the policy changes would result in somewhat higher-income families being eligible, the Committee chose to use a lower percentage—5 percent—for the simulations. Thus, in policies #3 and #4, among children who become financially eligible for SSI due to the higher guarantee, we assume that 5 percent start to receive SSI; this gives estimates of 94,000 for SSI Policy #1 and 174,000 for SSI Policy #2. The additional children were randomly selected from among all children in families that are financially eligible in the policy option who were not financially eligible in the baseline.

Combining the increases in the children's caseload from previously eligible children starting to participate and newly eligible children beginning to participate, the total increase in the children's SSI caseload was estimated at 189,000 for SSI Policy #1 and 364,000 for SSI Policy #2. The simulations came close to these targets, increasing the numbers of children receiving SSI at some point during the year by 180,000 in simulation for SSI Policy #1 and by 348,000 for SSI Policy #2.[29]

SSI Policy: Employment and Earnings Effects

The Committee assumed that increasing children's SSI benefit levels could reduce the earnings of their parents or guardians. The Committee specified that for each adult (or couple) with a child receiving SSI and with earnings, earnings should fall by an amount equal to 30 percent of the increment in the SSI income guarantee. In annual terms, the earnings reduction is $878 for SSI Policy #1 (computed as $244 times 12 months times 30%) and $1,757 for SSI Policy #2. The earnings reductions are achieved by reducing each parent's hours by whatever number of hours per week was needed to reduce annual earnings by the desired amount.[30] In the case of married couples, earnings were reduced for only one spouse.

[29] The full targeted increase was achieved for children ages 15 and younger. For children ages 16 and older, enrollment is assigned only to those whose survey data shows some indication of disability; there were an insufficient number of noncitizen teenagers with indications of disability to reach the targeted caseload increase for this portion of the children's caseload.

[30] Parents/guardians were excluded from the earnings changes if the targeted reduction exceeded 50% of their annual earnings.

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SSI Policy: Simulation Results

The one-third increase in the children's SSI guarantee reduces the child poverty rate by 0.2 percentage points, and the two-thirds increase for children reduces the child poverty rate by 0.4 percentage points (Table SSI-1).

Prior to modeling parental earnings reductions, the one-third benefit increase for child recipients was modeled to increase aggregate SSI benefits by $5.0 billion, an increase of 8.9 percent from the baseline. The two-thirds increase raises aggregate SSI benefits by $10.6 billion. The increases come from a combination of higher benefits for existing recipients and for new recipients.

When parental earnings reductions are modeled, the simulation identifies 0.7 million employed parents with a child receiving SSI in simulation SSI Policy #1, and 0.8 million employed parents with a child receiving SSI in simulation SSI Policy #2. The aggregate amount of earnings reduction was $603 million for simulation SSI Policy #1 and $1.5 billion for simulation SSI Policy #2. The earnings reductions increased SSI benefits by reducing the amount of income deemed from parents to children, thereby raising their benefits. The earnings reductions also cause slight increases in the numbers of adults seen as eligible for SSI, mostly in cases when a child with SSI lives with one employed parent and one who has a disability.

CHILD ALLOWANCES

The Committee requested exploration of numerous versions of a child allowance policy, varying in terms of maximum amount, phase-out for higher-income families, and other policy parameters. After considering preliminary results from numerous options, the Committee chose two variants for detailed analysis:

- Child Allowance Policy #1: Maximum allowance of $2,000 per year for each dependent child age 16 or younger, phased out according to the same schedule used to phase out the Child Tax Credit (CTC) in 2015 federal income tax law.
- Child Allowance Policy #2: This policy differs from policy #1 in three ways. The maximum annual allowance per dependent is higher, at $3,000; the allowance is available for each dependent child age 17 or younger (rather than age 16 or under); and the value is phased out linearly between 300 percent of poverty and 400 percent of poverty.

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TABLE SSI-1 Selected Impacts of SSI Policy Changes, 2015

		Changes from the Baseline			
		SSI Policy #1: Increase SSI Guarantee by 1/3 for Children		SSI Policy #2: Increase SSI Guarantee by 2/3 for Children	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.160	-0.151	-0.286	-0.278
SPM Child Poverty Rate [a]	13.0%	-0.2	-0.2	-0.4	-0.4
Selected Program Results					
Supplemental Security Income					
Adult Units Eligible for SSI (Avg. Monthly Number, Thousands)	11,067		7		7
Adult Units Receiving SSI (Avg. Monthly Number, Thousands)	6,770		4		3
Disabled Children Receiving SSI (Avg. Monthly, Thousands)	1,234	174	174	330	332
Aggregate Annual Benefits ($ Millions)	$56,399	$4,989	$5,108	$10,627	$10,869
Employment and Earnings Changes					
People with Decreased Earnings (Thousands, Working in Baseline)			0.687		0.838
Net Annual Earnings Change ($ Millions)			-$603		-$1,474
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	-$2,661	$3,967	$4,092	$8,742	$9,030
Aggregate Taxes: Payroll, Federal, State	$0	-$1	-$143	$1	-$356
Total Change, Annual Government Spending		$3,968	$4,235	$8,741	$9,386

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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As part of one of the final packages of policies (as described in a later section of this report) a third variant of a child allowance was used:

- Child Allowance Policy #3: Same as #1, but the maximum annual per-dependent allowance is $2,700.

Child Allowance Policy: Implementation Assumptions

The initial exploration of child allowance policies included simulations that varied in numerous ways—in terms of the maximum per-child amount, the phase-out of the maximum amount (if any) for higher-income families, the maximum age at which a child is eligible for the allowance, whether children who are not dependents are eligible for the allowance, restrictions on eligibility based on citizenship or immigration status, whether the allowance can exceed a family's tax liability and by how much, how the allowance interacts with other aspects of the federal income tax system (e.g., personal exemptions), and whether the value of the allowance is counted as income for determining a family's eligibility for safety-net programs

After considering preliminary results from numerous options, the Committee chose to focus on policies sharing several key features:

- The child allowances are implemented as a replacement of the current CTC and Additional Child Tax Credit (ACTC). As of 2015, the CTC/ACTC provided a maximum credit of $1,000 for dependents ages 0 through 16. The CTC is the amount of credit up to the amount of tax liability, and the ACTC allows a portion of the credit to be refunded, but only up to 15 percent of the tax unit's earnings in excess of $3,000. Tax units with no tax liability and no earnings did not benefit from the CTC/ACTC in 2015.
- Like the CTC/ACTC credits, the simulated child allowances are only available to individuals who are dependents; the small number of older teens who are not dependents do not receive the allowance.
- The simulated child allowances are phased out for upper-income tax units; Child Allowance Policies #1 and #3 use the same phase-out as the current CTC. The phase-out starts at AGI of $75,000 for unmarried taxpayers and $110,000 for married couples, and the maximum amount is reduced by $50 for every $1,000 (or portion of $1,000) in AGI over those limits. (With this approach, the higher the maximum amount, the higher the income at which the allowance phases out completely to zero.) Child Allowance Policy

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#2 phases out the allowance between 300 percent and 400 percent of poverty.[31]

- The simulated child allowances are fully available to lower-income units regardless of their amount of tax liability or earnings. Unlike with the current CTC/ACTC, there is no limitation on how much of the total amount can be provided as a refund, beyond the portion needed to offset tax liability.
- The simulated child allowances are not counted as income by any safety-net programs.
- For all of the final child allowance simulations applied to the baseline (2015) data, dependent exemptions are disallowed for all dependents aged 18 and younger (regardless of whether the child allowance was taken on behalf of that child).
- When applying the child allowances as separate policies, they are available only for children who are citizens (either native or naturalized). This is more restrictive than 2015 law for the CTC/ACTC, which allows the credit to be taken on behalf of any child with either a Social Security number (SSN) or an Individual Taxpayer Identification Number (ITIN); legal immigrants might have an SSN or ITIN, and unauthorized or temporary residents might have an ITIN.

As with the modeling of the EITC changes, it was necessary to make an assumption about how state income tax systems would respond to the hypothetical changes in federal income taxes. Many states use the number of federal exemptions for determining exemptions for state income tax purposes, so a reduction in the number of federal exemptions reduces state exemptions. A small number of states have credits that use the federal CTC as a starting point for a state credit, so becoming eligible for more or less in CTC could also affect a family's state income taxes. We assumed that for purposes of *numbers of individuals*, states would continue to use the baseline concepts; for example, if a state's tax code allowed an exemption for each child, we assumed she or he would continue to do so even if child exemptions were disallowed as part of a child allowance policy. However, we assumed that states would make no changes in their policies for the use of *dollar amounts* from the federal income tax computations.

[31] Poverty was assessed using the Official Poverty Measure—family cash income relative to the poverty threshold. In practice, an administrative procedure such as a benefit phase-out would most likely use the poverty guidelines rather than the more-complex poverty thresholds.

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Child Allowance Policy: Employment and Earnings Effects

Based on their review of estimates provided by Blau and Kahn (2007) and Blundell and MaCurdy (1999), the Committee identified a set of elasticities to use in determining employment and earnings changes in response to a child allowance policy (Table CA-1). Child allowances are assumed to cause some women (but not men) to stop working, and they are assumed to cause both men and women to reduce their hours of work.

In modeling women to leave their jobs due to the child allowance income, we did not develop any particular "target" for employment reduction. Instead, for each employed adult in a tax unit benefiting from the child allowance, we computed the percentage increase in income due to the child allowance, and then applied the appropriate elasticity to determine the probability that person would leave her job. If a random number was less than the probability, the person was modeled to stop working. The cash income for the computation was defined as the gross cash income of the family unit (a narrow definition, with related subfamilies considered separately from the primary family) minus the tax liability (where tax liability is negative if the tax unit receives credits exceeding their positive liability). For example, if a married couple's cash income net of taxes is increased from $40,000 to $42,000 due to one of the child allowance policies, that is a 5 percent increase in income, and the mother's probability of leaving her job is (0.05 * 0.120 = 0.006 = 0.6%).

In modeling the employment reductions, no restrictions were applied based on amount of earnings, or earnings relative to the child allowance. In other words, some of the women randomly selected to stop working had earnings greater than the new child allowance income, and the family's net income was lower after the policy change (due to the combined effect of the new child allowance offset by earnings loss) than before the policy change. Because all of the employment changes were assumed to be voluntary, none of the women modeled to stop working were assumed to receive unemployment compensation.

TABLE CA-1 Income Elasticities of Parents' Employment and Work-Hours

	Income Elasticity of Employment	Income Elasticity of Hours
Men (Married and Single)	0	-0.05
Married Women	-0.12	-0.09
Unmarried Women	-0.085	-0.07

SOURCE: Assumptions provided by the Committee based on Blau and Kahn (2007) and Blundell and MaCurdy (1999).

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To model the reductions in hours, we began by computing the aggregate reduction in hours that would occur if the elasticities in Table CA-1 were applied to the annual hours-of-work of all parents benefiting from child allowances and still employed after the simulated reductions in employment. These aggregates were computed separately for men, married women, and unmarried women. For most parents, the predicted change was a very small number of annual hours—less than 1 hour per week. We determined the portion of each group to reduce their hours by 1 hour per week in order to exactly reach the targeted hours reduction (see Table CA-2).[32] The selection of the specific parents to reduce their hours was random among all those benefitting from the child allowance, and not conditioned on their family's relative income increase due to the allowance.

Child Allowance Policy: Simulation Results

The hypothetical child allowances, when modeled with employment and earnings effects, reduced child poverty from the baseline of 13.0 percent to as low as 7.7 percent (with Child Allowance Policy #2). The antipoverty impacts were slightly smaller when the employment and earnings changes were included than when they were not included.

TABLE CA-2 Percentages of Parents Simulated to Reduce Hours Due to Child Allowance, and Aggregate Reduction in Hours

	Child Allowance Policy #1	Child Allowance Policy #2	Child Allowance Policy #3
Percentage of Earners With Child Allowance Who Reduce Hours by 1 Hour Per Week			
Men	6.2%	19.4%	10.1%
Married Women	7.3%	24.3%	11.2%
Unmarried Women	16.6%	34.8%	25.6%
Aggregate Reduction in Hours of Employment	124.2 million	277.4 million	247.6 million

[32] At the point when these simulations were conducted, hours could be reduced only in whole-hour increments. Subsequently, the model was modified to be to able model fractional changes in hours-per-week.

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Without Employment and Earnings Effects

Prior to modeling of employment and earnings reductions, Child Allowance #1—the least-expansive option—resulted in $112.6 billion in child allowances—$67.5 billion more than the $45.1 billion of combined CTC/ACTC in the baseline simulation (Table CA-3). Although the maximum credit doubles, from $1,000 in the baseline to $2,000 in Child Allowance #1, the aggregate amount of credit more than doubles, due to the fact that the allowance (unlike the baseline credit) is fully refundable. The total reduction in federal income tax liability is $31.9 billion—much lower than the increase in credit amount—because of the fact that these simulations assume that dependent exemptions would no longer be available. Due to the loss of exemptions, some units see their precredit tax liability increase, and the number of tax units using this child allowance to offset tax liability is 4.4 million higher than the number who used the baseline CTC to offset tax liability. The number of tax units for whom Child Allowance #1 generates a refund (in excess of tax liability) is 4.8 million higher than the number of tax units with the ACTC in the baseline.

Child Allowance Policy #2, with a maximum allowance of $3,000 and modified phase-out, produces aggregate allowance of $132.6 billion—about $20 billion more than Child Allowance #1. Although tax units unaffected by the phase-out can now receive $3,000 per dependent as old as 17—instead of $2,000 per dependent through age 16—some units that were eligible for the CTC are ineligible for Child Allowance #2 due to phasing out at lower income levels. The number of tax units using Child Allowance #2 to reduce positive tax liability is 3.6 million lower than the number of tax units using the baseline CTC/ACTC to offset positive tax liability.

Child Allowance Policy #3 provides a maximum allowance of $2,700 per dependent—almost as high as the maximum amount in Child Allowance #2—while using the same phase-out approach as Child Allowance #1 and the baseline. This policy also limits the credit to dependents ages 0 through 16. The aggregate amount of allowance is about $110 billion higher than the baseline amount of CTC/ACTC, and the aggregate reduction in federal income tax liability is $74.8 billion—the highest cost of any of the Child Allowance options. The child poverty rate drops by 4.7 percentage points, which is a larger drop than produced by Child Allowance #1 (3.4 percentage points) but not as large as the drop produced by Child Allowance #2 (5.4 percentage points). The fact that the cost of this policy is higher than the cost of Child Allowance Policy #2, while the poverty reduction is not as large, is due to the difference in phase-out.

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TABLE CA-3 Selected Impacts of Child Allowance Policies, 2015

		Changes from the Baseline					
		Child Allowance Policy #1: $2,000; Ages 0-16; Same Phase-out as 2015 CTC		Child Allowance Policy #2: $3,000; Ages 0-17; Phase-out from 300% to 400% Poverty		Child Allowance Policy #3: $2,700; Ages 0-16; Same Phase-out as 2015 CTC	
	Baseline 2015	No EE	With EE	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-2.531	-2.493	-4.013	-3.897	-3.493	-3.439
SPM Child Poverty Rate[a]	13.0%	-3.4	-3.4	-5.4	-5.3	-4.7	-4.6
Selected Program Results							
Federal Income Taxes							
Federal CTC/ACTC or Child Allowance							
Units With Credit Offsetting Liability (Thousands)	21,157	4,368	4,329	-3,616	-3,692	5,254	5,194
Units With Credit as a Refund (Thousands)	12,624	4,809	4,846	7,086	7,144	6,753	6,806
Amount of Credit ($ Millions)	$45,104	$67,462	$67,463	$87,482	$87,464	$110,342	$110,427
Amount of Tax Liability ($ Millions)	$1,254,515	-$31,891	-$32,188	-$51,911	-$52,560	-$74,771	-$75,871
State Income Taxes							
Amount of Tax Liability ($ Millions)	$318,089	-$19	-$104	-$303	-$466	-$520	-$752
Employment and Earnings Changes							
People With Decreased Earnings (Thousands, Working in Baseline)			2,704		6,079		5,275
People Who Stop Working (Thousands)			84		149		140
Net Annual Earnings Change ($ Millions)			-$2,938		-$5,733		-$6,766

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Spending and Tax Summary ($ Millions)							
Aggregate Benefits Paid[b]	$192,944		$180		$494		$343
Aggregate Taxes: Payroll, Federal, State[c]	$2,588,958	-$31,910	-$32,724	-$52,214	-$53,870	-$75,291	-$77,559
Total Change, Annual Government Spending		$31,910	$32,904	$52,214	$54,364	$75,291	$77,901

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

[c] The child allowance benefit is captured as a change in taxes because it is modeled as a replacement of the Child Tax Credit.

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With Employment and Earnings Effects

The Committee's assumptions result in a reduction in employment ranging from 84,000 with Child Allowance #1 to 149,000 for Child Allowance Policy #2. Considering both employment reduction and reductions in hours, total earnings decline by $2.9 billion (#1) to $6.8 billion (#3). Note that while the reduction in number of hours is greatest due to Child Allowance #2 (Table CA-2), the aggregate amount of earnings reduction is largest in Child Allowance #3, because the average wages of affected workers are higher in Child Allowance Policy #3 than in Child Allowance #2.

The employment and earnings effects have a slight negative impact on the anti-poverty results of the policies. In the case of Child Allowance #2—the variant producing the greatest child poverty reduction—the SPM child poverty rate falls by 5.4 percentage points when this policy is modeled without employment and earnings effects, but by 5.3 percentage points when these effects are included (Table CA-2).

CHILD SUPPORT ASSURANCE

A "child support assurance" program would provide a minimum guaranteed child support payment to children with a nonresident parent who is legally required to pay child support. Children who receive child support below the minimum guaranteed amount would receive a payment from the government that is equal to the difference between the child support guarantee and the amount of child support paid. The Committee requested two child support assurance scenarios:[33]

- Child Support Assurance Policy #1: Each child with a legally obligated child support order is guaranteed $100 in child support per month. If a child receives less than $100 in child support, he or she receives the remaining amount as a child support assurance benefit.
- Child Support Assurance Policy #2: Each child with a legally obligated child support order is guaranteed $150 in child support per month. If a child receives less than $150 in child support, he or she receives the remaining amount as a child support assurance benefit.

Child Support Assurance Policy: Implementation Assumptions

Simulating the child support assurance policy requires three types of information as input: identification of custodial children (children under

[33] Initial simulations also included a $50 child support assurance option; those results are not presented in this report.

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21 living with a biological or adoptive parent who also have a nonresident parent living elsewhere); monthly per-child child support amounts; and imputation of whether a child without CPS-reported child support is due support under a legal agreement.[34]

Identification of custodial children was performed using TRIM3's standard methods. TRIM3 uses the CPS ASEC variables that identify each person's mother and father within the household, and whether the mother or father is biological, adoptive, or step. Children are identified as potential custodial children if they are under 21, living with at least one biological/adoptive parent, and do not have two biological/adoptive parents present in the household. A child with only one resident biological/adoptive parent is not necessarily a custodial child—he or she could have been adopted by a single parent, the other parent may be dead, or the parent may have given up his or her legal rights to the child. Therefore, TRIM3 excludes some mothers from custodial parent status based on imputations developed using data from the 2010 CPS Child Support Supplement (CPS-CSS).[35]

Month-by-month child-level child support amounts are developed as part of the baseline modeling procedures; those amounts were used for these simulations without further adjustment. As described earlier, survey-reported annual amounts of child support income are allocated across the months consistent with patterns of monthly child support receipt observed in Survey of Income and Program Participation (SIPP) data. For a family with more than one child who appears to be eligible for child support, the child support income is assumed to be divided equally across the children. The simulated scenarios assume no change to current levels of child support orders and payment. In other words, we assume that nonresident parents would neither stop making payments nor lower their payments in response to knowledge of the child support assurance system.

The simulations assume that all custodial children with survey-reported child support have a legal child support order. We imputed legal order status to additional custodial families and aligned the results so that the total number of children who are due support under a formal order, by custodial mother or father status, comes close to counts obtained from the 2016 CPS-CSS.

The child support assurance policy was then simulated using this information. For each month and for each child imputed to be due child support under a formal order, we set the child support assurance benefit

[34] Although TRIM3 adjusts for underreporting of child support by TANF recipients in some years, this was not included in the 2015 TRIM3 baselines. Therefore, the child support amounts reflect the amounts reported in the CPS ASEC.

[35] The model does not currently include methods to exclude some fathers of children without a biological or adoptive mother in the household from custodial parent status.

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equal to the child support guarantee amount ($150 or $100 depending on simulation) minus the child support income received by that child in that month. Children whose child support in a given month is greater than or equal to the guarantee receive no child support assurance benefit in that month. The child support assurance benefit was computed in the same way regardless of family income; that is, it was computed for middle-income and upper-income families as well as lower-income families, based solely on the amount of child support income being received by children imputed to have a child support order.

The simulations required assumptions about how the child support assurance income would be treated by other programs. To the extent that child support assurance is treated as income by another program, some of the benefit of child support assurance could be offset by reductions in one or more benefits. We assumed that two programs—SNAP and TANF—would institute new policies that would be applied to both child support income and child support assurance income, as follows:[36]

- TANF: The TANF program's treatment of child support income is complex. TANF recipients must assign their child support payments to the state to offset the cost of TANF benefits, although some states transfer (or "pass through") to the family a portion of what is collected, and a few transfer the entire amount. Some states count the full amount of what is collected in determining a family's eligibility, while others disregard it; for purposes of benefit computation, most states disregard whatever portion they transfer. Amounts that are not transferred to the family (amounts retained by the state) are not counted as income by any other benefit program.

We assume that if a child support assurance program was enacted, all states' TANF programs would disregard a portion of a family's total child support and child support assurance income for purposes of eligibility determination, and that they would also transfer that same amount to the family and disregard it for purposes of benefit computation. The amount disregarded and transferred is assumed to be the lesser of (a) the family's combined child support and child support assurance amounts, and (b) if the family has one child, then the amount of the per-child child support assurance guarantee, or if the family has more than one child, then twice the guarantee amount. For example, under a $150 child support assurance policy, $150 would be disregarded for families with one child, $300 for families with two children, and $300 for families with three or more children. States that currently have more generous child support disregard

[36] These decisions were made in part based on existing capabilities of the TRIM3 model.

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policies (such as disregarding all child support income for both eligibility and benefits, which occurs in three states) would maintain those policies.

Considering a family with $0 child support income in the baseline, receiving the full child support assurance amount in the policy simulations, these assumptions mean that the family's TANF benefit will be unaffected by the child support assurance if the family has one or two children; if the family has three or more children, the family's TANF could be affected (since the amount disregarded for eligibility determination will be less than the amount received).

- SNAP: The SNAP program currently counts all child support received by the family as income for purposes of both eligibility and benefits, with no disregards. We assumed that SNAP would begin to disregard child support and child support assurance income on a per-child basis. For each child, the combined value of child support and child support assurance would be disregarded up to the level of the per-child guarantee, for both eligibility determination and benefit determination.

For other programs, we assumed that the program's current treatment of child support would be extended to child support assurance income, as follows:

- SSI: The SSI program disregards 33 percent of child support income; we assume the program would also disregard 33 percent of child support assurance income, but count the remainder as income.
- Child care subsidies: The great majority of states count child support as income for purposes of eligibility and computation of copayments; four states disregard it. We assumed those same state-level policies would be applied to child support assurance income received by the family.
- Public and subsidized housing: The baseline simulation treats child support as fully counted as income for eligibility and benefits. We assume that child support assurance income received by the family would also be fully counted.
- LIHEAP: We assume that all states' LIHEAP programs fully count child support income received by the family, and we assumed they would also fully count child support assurance income.
- WIC: The WIC program fully counts child support as income, and we assumed the program would also fully count child support assurance income received by the family.
- Federal and state income taxes: Child support income is not taxed, and we assumed that child support assurance income received by the family would likewise not be taxed.

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Child Support Assurance Policy: Employment and Earnings Effects

The Committee assumed that the responsiveness of maternal employment and earnings due to a child assurance policy would be the same as the responsiveness of employment and earnings to a child allowance policy. In other words, they specified that the same income elasticities be used to estimate employment reduction and hours reduction as were used in the child allowance simulations (see earlier discussion of Table CA-1).

As in the modeling of employment reductions due to the child allowances, we did not develop any particular "target" for employment reduction due to the child assurance policies. Instead, for each employed woman receiving child support assurance, we computed the percentage increase in income due to the child support assurance, and then applied the appropriate elasticity to determine the probability that she would leave her job. If a random number was less than the probability, she was modeled to stop working. No restrictions were applied based on amount of earnings, or earnings relative to the child allowance. In other words, some of the women randomly selected to stop working had earnings greater than the new child assurance income. Because all the employment changes were assumed to be voluntary, none of the women modeled to stop working were assumed to receive unemployment compensation.

To model the reductions in hours, we began by computing the aggregate reduction in hours that would occur if the elasticities were applied to the annual hours-of-work of all parents benefiting from child support assurance and still employed after the simulated reductions in employment. These aggregates were computed separately for men, married women, and unmarried women. For most parents, the predicted change was a very small number of annual hours—less than 1 hour per week. We determined the portion of each group to reduce their hours by 1 hour per week in order

TABLE CSA-1 Percentages of Parents Simulated to Reduce Hours Due to Child Support Assurance, and Aggregate Reduction in Hours

	Child Support Assurance Policy #1	Child Support Assurance Policy #2
Percentage of Earners With Child Support Assurance Who Reduce Hours By 1 Hour Per Week		
Men	10%	15%
Married Women	7%	11%
Unmarried Women	15%	22%
Aggregate Reduction in Hours of Employment	16.0 million	25.0 million

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to reach the targeted hours reduction (see Table CSA-1).[37] The selection of the specific parents to reduce their hours was random among all those benefiting from the child allowance, and not conditioned on their family's relative income increase due to the allowance.

Child Support Assurance Policy: Simulation Results

We estimate that 4.8 million children would receive a child support assurance benefit in the average month of the year under the $100 child support assurance scenario, and 5.5 million would receive a benefit under the $150 child support assurance scenario (Table CSA-2). Total annual child support assurance benefits would equal $5.1 billion and $8.2 billion, respectively.

In the absence of employment effects, the $100 child support assurance policy would decrease the estimated child poverty rate by about 0.3 percentage points. The $150 child support assurance policy would decrease the child poverty rate by 0.4 percentage points, from 13.0 to 12.6 percent. Simulation of employment effects causes very little change to these estimates, in part because many of the women simulated to stop working or to reduce their hours of work are not poor. (Of the total 530,000 women estimated to either stop work or reduce their hours when $150 of child support is assured, 323,000 have baseline resources below 200 percent of their SPM poverty threshold.)

The total estimated change in government spending would equal $5.6 billion under the $100 scenario without employment effects and $8.7 billion under the $150 scenario without employment effects. These increases exceed the cost of the child support assurance benefits primarily to a substantial increase in SNAP benefits and small increase in TANF benefits offset by reductions in benefits paid by several other programs. Under the $150 scenario, aggregate SNAP benefits rise by about $900 million (1.4%) due to the impact of the new child support disregard. For example, under the $150 child support assurance policy, a family receiving SNAP with one child and $200 in monthly child support income would become eligible for $45 in additional monthly SNAP benefits (30 percent of $150) due to having $150 of the child support disregarded that was previously counted as income. TANF benefits increase by a much smaller amount—about $40 million, about 0.5 percent of the baseline aggregate benefits. Benefits decline in other programs due to the increased income. The largest benefit reduction is in the public and subsidized housing program; the value of

[37] At the point when these simulations were conducted, hours could be reduced only in whole-hour increments. Subsequently, the model was modified to be able to model fractional changes in hours-per-week.

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TABLE CSA-2 Selected Impacts of Child Support Assurance Policies, 2015

		Changes from the Baseline			
		Child Support Assurance Policy #1: $100		Child Support Assurance Policy #2: $150	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.187	-0.181	-0.330	-0.305
SPM Child Poverty Rate[a]	13.0%	-0.3	-0.2	-0.4	-0.4
Selected Program Results					
Supplemental Nutrition Assistance Program (SNAP)					
Units Eligible for Benefits (Avg. Mo., Thousands)	36,721	71	75	108	113
Units Receiving Benefits (Avg. Mo., Thousands)	22,367	88	92	127	134
Aggregate Annual Benefits ($ Millions)	$63,039	$610	$636	$872	$939
Child Support Assurance					
Children With Child Support Assurance (Avg. Mo, Thousands)	0	4,835	4,835	5,450	5,450
Aggregate Annual Child Support Assurance ($ Millions)	$0	$5,163	$5,163	$8,213	$8,213
Employment and Earnings Changes					
People With Decreased Earnings (Thousands, Working in Baseline)			0.307		0.502
People Who Stop Working (Thousands)			0.012		0.028
Net Annual Earnings Change ($ Millions)			-$381		-$773
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	$5,558	$5,596	$8,679	$8,737
Aggregate Taxes: Payroll, Federal, State	$2,588,958	-$1	-$65	-$1	-$106
Total Change, Annual Government Spending		$5,558	$5,660	$8,680	$8,843

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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rent subsidies falls by $260 million—0.7 percent—when the child support assurance policy is simulated without employment effects.

Government spending is somewhat higher when employment effects are simulated, totaling $5.7 billion and $8.8 billion, respectively, due to the additional public assistance benefits received and reduced taxes paid by people who reduce work effort in response to the policy change. (The employment and earnings changes have no impact on the cost of the child support assurance benefits.)

IMMIGRANT ELIGIBILITY POLICIES

The Committee requested two simulations related to the eligibility of noncitizens for transfer benefits:

- Immigrant Eligibility Policy #1: All legal immigrants are potentially eligible for all programs; unauthorized immigrants and noncitizens who are in the country temporarily (e.g., people with student visas or work visas) continue to be ineligible for benefits.
- Immigrant Eligibility Policy #2: There are no eligibility restrictions of any type based on citizenship or legal status. All noncitizens—including legal immigrants, noncitizens with temporary status, and noncitizens in the country without authorization—are potentially eligible for all benefit programs and for the EITC without any additional requirements beyond those imposed on citizens.

Immigrant Eligibility Policy Implementation Assumptions

Most benefit programs, including tax credits, include at least some restrictions on the potential eligibility of noncitizens, beyond the eligibility requirements placed on citizens. (Once a noncitizen becomes a naturalized citizen, there are no differences in eligibility treatment.) Different programs have different restrictions, so an immigrant could be eligible for some programs and not others. TRIM3 uses the imputations of immigrant legal status described earlier in this report, the survey-reported data on number of years in the United States, reported data on current or prior military service, and additional imputations (related to work history and availability of a sponsor) to simulate each program's immigrant-related eligibility policies as closely as possible.

We considered each program's 2015 current law eligibility policies regarding noncitizens to determine the changes needed to model the Committee's intended policies. In brief, Immigrant Eligibility Policy #1 involved changes to SSI, TANF, and SNAP eligibility; Immigrant Eligibility Policy #2 required changes to those three programs and also to the modeling of

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CCDF-funded child care subsidies, housing subsidies, LIHEAP, and the EITC. Program-by-program information regarding the changes in eligibility policies is as follows:

- SSI
  - Baseline: The eligibility of legal immigrants is restricted based on immigration status, years in the United States, presence of a sponsor, and other factors. Unauthorized immigrants and temporary residents are never eligible for SSI.
  - Change modeled for Immigrant Eligibility Policy #1: All restrictions on the potential eligibility of legal immigrants were removed.
  - Change modeled for Immigrant Eligibility Policy #2: All restrictions on the potential eligibility of legal immigrants, unauthorized immigrants, and temporary residents were removed.
- TANF
  - Baseline: The eligibility of legal immigrants to be in a TANF assistance unit is restricted based on immigration status, years in the United States, presence of a sponsor, and other factors; these policies vary across states. Unauthorized immigrants and temporary residents are never eligible for TANF. The eligibility restrictions apply to individuals, not to entire families. For example, in a family with two parents who are unauthorized noncitizens and two children who are citizens, the children are potentially eligible as a "child-only" unit, and income from the parents "deemed" to the children in determining their financial eligibility.
  - Change modeled for Immigrant Eligibility Policy #1: All restrictions on the potential eligibility of legal immigrants were removed.
  - Change modeled for Immigrant Eligibility Policy #2: All restrictions on the potential eligibility of legal immigrants, unauthorized immigrants, and temporary residents were removed.
- SNAP
  - Baseline: The eligibility of legal immigrants to be in a SNAP assistance unit is restricted based on immigration status, years in the United States, presence of a sponsor, and other factors; one key difference from restrictions imposed by SSI and TANF is that children who are legal immigrants are always potentially eligible for SNAP. Unauthorized immigrants and temporary residents are never eligible for SNAP. When a group of people who would normally file for SNAP as one unit includes some

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people excluded due to their immigrant status, a portion of their income is deemed available to the unit.
  - Change modeled for Immigrant Eligibility Policy #1: All restrictions on the potential eligibility of legal immigrants were removed.
  - Change modeled for Immigrant Eligibility Policy #2: All restrictions on the potential eligibility of legal immigrants, unauthorized immigrants, and temporary residents were removed.
- CCDF-funded child care subsidies
  - Baseline: Immigrant-related restrictions apply at the level of the child, not the parents. Any child who is a citizen or legal immigrant is potentially eligible; children who are unauthorized immigrants or temporary residents are not eligible for subsidies.
  - Change modeled for Immigrant Eligibility Policy #1: No change was needed.
  - Change modeled for Immigrant Eligibility Policy #2: Restrictions were removed on the potential eligibility of children who are unauthorized immigrants or temporary residents.
- Public and subsidized housing
  - Baseline: Eligibility policies are not modeled directly; instead, households reporting in the survey that they live in public or subsidized housing are assumed to be enrolled in these programs if it appears that their contribution toward the rent (under subsidized housing policies) would be less than the fair market rent.[38]
  - Change modeled for Immigrant Eligibility Policy #1: No change was needed.
  - Change modeled for Immigrant Eligibility Policy #2: Households in which all members are unauthorized noncitizens or temporary residents were considered potentially eligible for a subsidy.
- LIHEAP
  - Baseline: A household must include at least one person who is a citizen or legal immigrant.
  - Change modeled for Immigrant Eligibility Policy #1: No change was needed.
  - Change modeled for Immigrant Eligibility Policy #2: Households in which all members are unauthorized noncitizens or temporary residents were considered potentially eligible.

[38] The simulation does not capture the policy that, when a subsidized housing includes an ineligible noncitizen, the housing benefit may be prorated.

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- WIC
  - Baseline: The WIC program does not restrict eligibility based on citizenship or legal status. Even under baseline rules, legal immigrants, unauthorized immigrants, and temporary residents are all potentially eligible.
  - Change modeled for Immigrant Eligibility Policy #1: No change was needed.
  - Change modeled for Immigrant Eligibility Policy #2: No change was needed.
- EITC
  - Baseline: In order to take the EITC, the taxpayer, the taxpayer's spouse if the taxpayer is filing jointly, and any children who are counted as qualifying children for the EITC must all be either citizens or legal immigrants. In other words, even if the children are citizens, if the parents are unauthorized immigrants or temporary residents, the tax unit cannot take the EITC.
  - Change modeled for Immigrant Eligibility Policy #1: No change was needed.
  - Change modeled for Immigrant Eligibility Policy #2: The restrictions on federal EITC eligibility for unauthorized immigrants and temporary residents were removed. We also assumed that states that base their own EITCs on the federal EITC would leave those policies unchanged, meaning that units newly eligible for the federal EITC would also become newly eligible for state-level EITCs that use the federal amount in their computations.

Assumptions were also needed regarding the extent to which newly eligible assistance units would begin participating in the programs. In the case of the EITC, we assumed full participation by newly eligible units (the same assumption made in all of our modeling of the EITC). For the benefit programs, based on discussions with Committee members, the simulations assume that a newly eligible assistance unit would have the same probability of participation as a previously eligible unit with similar characteristics, as follows:

- TANF, SNAP, and the adult portion of the SSI program: We used the standard methods used by those simulations to estimate a probability of participation for eligible units. Those standard methods use immigrant status as one factor in determining the likelihood of participation, so a newly eligible immigrant may have a different probability of participation than a newly eligible citizen with otherwise-similar characteristics.

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- Public and subsidized housing: Because the standard modeling does not include the determination of an eligible unit's probability of enrollment, we developed a set of participation probabilities for the policy simulation. The simulation assumes that newly eligible households would have the same likelihood of participation as households headed by an LPR. The probabilities vary by presence of elderly, disabled, or child members, and by income relative to the eligibility limit and were computed by dividing the baseline count of participating LPR households in each category by the count of all income-eligible LPR households in that category.
- CCDF: The participation probabilities vary by other demographic characteristics but not by immigrant status. It was not possible to compute participation rate specific to noncitizen children because the publicly available administrative data do not include information on citizenship status.
- LIHEAP: The participation method assumes all eligible households within a state have the same likelihood of participation. The available administrative data do not include information on the immigrant status of members of assisted households that would support estimation of participation probabilities specifically for such households.

Modeling increased receipt of SSI by noncitizen children posed special challenges. As discussed earlier in this report, disability status cannot be observed for children in the CPS-ASEC data, so we do not have an estimate of the SSI participation rate for program-eligible children. To model an appropriate increase in the children's SSI caseload for each of the two immigrant policies, we computed the percentage increases in the numbers of children meeting both financial eligibility rules and the immigrant restrictions—first in the baseline situation, then under Immigrant Eligibility Policy #1, and finally under Immigrant Eligibility Policy #2. Including all legal immigrants in this group increases the number by 1.5 percent, and allowing all noncitizens in this group increases the number by 3.0 percent (relative to the baseline). To increase the children's SSI caseload for Immigrant Policy #1, the potential universe of new participants consisted of legal immigrant children who were ineligible in the baseline, and in families financially eligible for SSI; we selected a sufficient number to increase the children's SSI caseload by 1.5 percent. For Immigrant Policy #2, we included all of the same new participants included for Immigrant #2, plus additional children selected from financially eligible unauthorized noncitizens and temporary residents, to achieve a total increase of 3.0 percent (from the baseline) in the number of children receiving SSI.

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Changes in immigrant eligibility restrictions can affect families in different ways. In most cases, the impact is that a person or family becomes newly eligible for one or more programs, and if they are selected to receive those benefits, their resources increase. However, in cases when some members of a family are already eligible for a program and the lessening or removal of immigrant restrictions causes an additional family member to be included in the unit, that change in unit composition will have different impacts on the family's potential benefit depending on the person's income and whether the person's income was already being "deemed available" to the unit. As one example, consider an unauthorized immigrant mother with two citizen children whose state deems most of her income as available to the children; assuming that the children are eligible for TANF (as a two-person unit) regardless of the deeming, they will continue to be eligible (as a three-person unit) following the mother's inclusion in the unit, and the potential benefit may rise. The result may be different when a substantial portion of the person's income was *not* being deemed available to the unit; in that case, the addition of the new unit member with all of his or her income could lower the unit's benefit or make the unit completely ineligible for the benefit. Another type of complication is that benefits from one program could reduce benefits in another program; for example, in the case of a legal immigrant who was previously ineligible for SSI but eligible for SNAP, starting to receive SSI could make the person's family ineligible for SNAP due to the increased cash income.

Immigrant Eligibility Policy: Employment and Earnings Effects

The Committee chose to model the employment and earnings changes expected to be caused by changes in benefits from one program: SNAP. Among programs affecting large numbers of children, SNAP was the program showing the largest aggregate benefit changes. When Immigrant Eligibility Policy #2 was modeled without employment effects, 54 percent of the aggregate benefit increases were due to SNAP benefits. An additional 40 percent of aggregate benefit increases were due to increased SSI changes; however, SSI primarily benefits families without children. The employment and earnings assumption took into account that families experienced different types of changes due to the immigrant eligibility policies; while most affected families gained benefits, some families became eligible for lower benefits or even lost eligibility for benefits. Therefore, we modeled some increases in employment and earnings (due to losing benefits) as well as decreases in employment and earnings (due to gaining benefits).

The employment and earnings changes were based on the same assumptions used in modeling the SNAP policies. In the Hoynes and Schanzenbach (2012) analysis of the employment effects of the original implementation

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of SNAP, the midpoints of upper-bound and lower-bound were a 12.0 percentage point decrease in the employment rate for unmarried mothers and a 2.5 percentage point decrease for married mothers. Those impacts were assumed to apply to unmarried and married mothers, respectively, whose households became newly eligible for SNAP due to the immigrant eligibility policy change, and who were modeled to begin taking the benefit. For Immigration Eligibility Policy #1, these assumptions produced job-reduction targets of 15,000 for unmarried mothers and 2,000 for married mothers (see Table IMM-1). For mothers in households newly receiving SNAP who remained employed, hours of work were reduced using the midpoint of the upper-bound and lower-bound estimates of reduced hours of work due to SNAP implementation: 322 for unmarried mothers and 63 for married mothers. Specifically, hours were reduced by 8 hours per week.[39] (As with the modeling of the SNAP policy changes, no changes were modeled for women who are not mothers or for men.) Note that the women affected by these changes were not necessarily noncitizens; however, they were all living in households with at least one noncitizen.

A small number of mothers were in households that lost rather than gained SNAP eligibility due to increased income—for example, due to a unit member's new income from SSI or due to a person becoming a required unit member whose income makes the unit ineligible. For these mothers, the impacts are the opposite of those assumed for mothers gaining SNAP. For example, among unmarried women in this situation, the employment rate is estimated to increase by 12 percentage points, resulting in an estimated 1,000 unmarried mothers starting to work under both Immigration Eligibility Policy #1 and Immigration Eligibility Policy #2.

Large numbers of mothers potentially affected by the policy changes (either the mother was herself a noncitizen or someone else in the household was a noncitizen) received SNAP in the baseline and continued to receive SNAP in the alternative policy simulations. The benefits of the households in this group sometimes stayed the same, but in other cases were either higher (if a new person joined the unit without substantial income, for example) and in other cases benefits were lower in the alternative than in the baseline. On average, household benefits were slightly lower. For example, under the Immigrant Eligibility Policy #1 option, for households including noncitizens, including unmarried mothers, and receiving SNAP in both the baseline and the alternative policy, benefits were on average 1.6 percent lower when the Immigrant Eligibility Policy #1 was modeled without employment effects than in the baseline. We applied the average

[39] The relatively large change in weekly hours was necessary to achieve an average annual reduction of 322; each woman's reduction in hours ranged from 8 to 416 depending on her weeks of work during the year.

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TABLE IMM-1 Changes in Maternal Employment and Earnings Due to Immigrant Eligibility Policies, in Households Including Both Children and Noncitizens

	Type of Change in Household's SNAP Benefit					
	Begins to Receive SNAP		Stops Receiving SNAP		Continues Receiving SNAP	
	Immigrant Eligibility Policy #1	Immigrant Eligibility Policy #2	Immigrant Eligibility Policy #1	Immigrant Eligibility Policy #2	Immigrant Eligibility Policy #1	Immigrant Eligibility Policy #2
Unmarried mothers						
Number	123,000	593,000	8,000	12,000	333,000	328,000
Percentage Point Change in Employment Rate	Neg. 12.0	Neg. 12.0	Pos. 12.0	Pos. 12.0	Pos. 0.19	Pos. 0.49
Employment Change[a]	-15,000	-71,000	+1,000	+1,000	+1,000	+2,000
Average Change in Annual Hours (People Remaining Employed)	-322	-322	+322	+322	+5	+13
Married Mothers						
Number	166,000	905,000	10,000	10,000	452,000	452,000
Percentage Point Change in Employment Rate	Neg. 1.25	Neg. 1.25	Pos. 1.25	Pos. 1.25	Pos. 0.02	Pos. 0.12
Employment Change[a]	-2,000	-11,000	—	—	—	1,000
Average Change in Annual Hours (People Remaining Employed)	-63	-63	+63	+63	—	+6

[a] Targeted employment changes are rounded to the nearest 1,000; targets smaller than 500 were disregarded.

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benefit reductions to the estimated impacts of a full loss of SNAP to estimate the employment and earnings impacts on mothers who continued receiving SNAP.

Immigrant Eligibility Policy: Simulation Results

The removal of restrictions on legal immigrants' eligibility for benefit programs (Immigrant Eligibility Policy #1) had very modest impacts on child SPM poverty, reducing it by 0.1 percentage point when employment and earnings effects were included (see Table IMM-2). Allowing eligibility for all noncitizens, including unauthorized immigrants and temporary residents, reduced poverty by 1.1 percentage points when employment and earnings effects were included.

The two benefit programs responsible for the majority of the changes were SSI and SNAP. SSI benefits increased by $2.5 billion under Immigrant Eligibility Policy #1 and by $3.8 billion under Immigrant Eligibility Policy #2. A portion of the new SSI recipients were children, and others were parents or guardians. However, most of the new recipients were adults age 65 and over, not living with children. SNAP benefits increased by $1.3 billion when Immigration Eligibility Policy #1 was modeled without employment effects, and by $5.2 billion when the Immigration Eligibility Policy #2 was modeled without employment effects. In total, benefits increased by $3.8 and $9.7 billion under the two scenarios, respectively, when modeled without employment effects.

Tax liabilities were unaffected by Immigrant Eligibility Policy #1, but reduced by Immigrant Eligibility Policy #2, because one element of that policy allowed unauthorized immigrants and temporary residents to take the EITC. Total tax liability falls by $6.6 billion in Immigrant Eligibility Policy #2; $6.3 billion of the reduction is from increased federal EITC payments, and the remaining $0.3 billion in reduced tax liability is due to the secondary impacts of the federal income tax changes on state income tax liabilities.

The employment and earnings changes included increases as well as decreases, but the net effect was to decrease earnings. The aggregate reduction was $0.4 billion in Immigrant Eligibility Policy #1 and $2.2 billion in Immigrant Eligibility Policy #2. Due to the lower earnings, benefits are higher and tax liabilities are lower for each policy when modeled with the employment and earnings impacts than when the policies are modeled without those changes.

BASIC INCOME GUARANTEE

The Committee requested two policies that would give a basic income to all citizens of the United States. These two policies were:

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TABLE IMM-2 Selected Impacts of Immigrant Eligibility Policies, 2015

		Changes from the Baseline			
		Immigrant Eligibility Policy #1: Restrictions Lifted for Legal Immigrants		Immigrant Eligibility Policy #2: Restrictions Lifted for All Immigrants	
	Baseline 2015	No EE	With EE	No EE	With EE
Number of Children in SPM Poverty (Millions)	9.633	-0.117	-0.095	-0.935	-0.823
SPM Child Poverty Rate[a]	13.0%	-0.2	-0.1	-1.3	-1.1
Selected Program Results					
Supplemental Security Income					
Adult Units Receiving SSI (Avg. Monthly Number, Thousands)	6,770	264	264	420	420
Disabled Children Receiving SSI (Avg. Monthly, Thousands)	1,234	17	17	37	37
Aggregate Annual Benefits ($ Millions)	$56,399	$2,511	$2,515	$3,807	$3,822
Supplemental Nutrition Assistance Program (SNAP)					
Units Eligible for Benefits (Avg. Mo., Thousands)	36,721	336	342	1,218	1,234
Units Receiving Benefits (Avg. Mo., Thousands)	22,367	449	454	1,584	1,600
Aggregate Annual Benefits ($ Millions)	$63,039	$1,311	$1,392	$5,188	$5,577
Employment and Earnings Changes					
People With Increased Earnings (Millions, Working In Baseline)			0.008		0.013
People Who Start Working (Millions)			0.001		0.004
People With Decreased Earnings (Millions, Working In Baseline)			0.087		0.322
People Who Stop Working (Millions)			0.014		0.090
Net Annual Earnings Change ($ Millions)			-$483		-$2,237

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Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	$3,761	$3,897	$9,663	$10,174
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$0	-$35	-$6,601	-$6,748
Total Change, Annual Government Spending		$3,761	$3,933	$16,265	$16,921

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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- Basic Income Guarantee (BIG) Policy #1: A benefit of $250 per month to every U.S. citizen, including both adults and children. In the federal income tax system, people receiving the new benefit can no longer use personal and dependent exemptions or the Child Tax Credit (CTC). Also, the BIG benefits are counted as income for purposes of federal income tax calculations.
- Basic Income Guarantee Policy #2: Like BIG #1, this policy provides $250 per month to every U.S. citizen, removes personal and dependent exemptions and the CTC for individuals receiving BIG, and counts BIG as income for federal income tax purposes. However, in BIG #2, BIG also counts as income for the purposes of cash and in-kind benefit programs, and the value is reduced or eliminated for Social Security recipients.

Basic Income Guarantee Policy: Implementation Assumptions

The simulation of the policy required computing the initial benefit and then modeling the related changes in income tax computations and in other benefit programs.

Initial Computation

For BIG #1, the initial computation of the benefit was very straightforward. The BIG benefit—$250 per month, or $3,000 annually—was assigned to each U.S. citizen, regardless of age, employment status, or other income. Noncitizens were not eligible for the payment. The payment was given on a person-by-person basis, meaning that a U.S. citizen child in a household headed by a noncitizen parent was eligible for the BIG payment.

For BIG #2, the initial $3,000 amount was reduced or eliminated for Social Security recipients. For people receiving less than $3,000 in Social Security, that amount was subtracted from their BIG payment. For example, a person receiving $200 per month in Social Security would receive an additional $50 per month from BIG. People with $3,000 or more in Social Security benefits (comprising 97 percent of the Social Security recipients in the CY 2015 CPS-ASEC data) were not eligible for BIG.

Interaction with Income Taxes

For both policies, three changes were made in the federal income tax system.

- Exemptions: People receiving a BIG benefit became ineligible for personal and dependent exemptions in the computation of federal

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income tax liability. (People not receiving a BIG benefit could still take personal and dependent exemptions. For example, if a family includes two noncitizen parents and two citizen children, the parents take the personal exemptions because they have not received BIG, but the tax unit is not allowed any dependent exemptions for the children, since the children receive BIG.)

- AGI: BIG benefits were counted as part of federal adjusted gross income (AGI). A taxpayer's AGI was simulated to include any BIG benefits paid to the taxpayer, the taxpayer's spouse, or the taxpayer's dependents. For dependents who also file their own returns, their BIG benefits were counted in the AGI of the tax unit that claims them as dependents, rather than on their own tax return.
- Credits: The federal CTC was eliminated for children eligible for BIG (i.e., children who are citizens). Children not receiving BIG may still qualify for CTC under the standard baseline policies. Although no other explicit changes were made to the federal income tax system, some secondary impacts occurred. For example, because tax units with AGI over a certain level are ineligible for the EITC, some units became ineligible for the EITC due to counting the BIG benefits in AGI, even though no explicit changes were made to EITC policies.

Assumptions were needed regarding how the federal income taxes would affect state income taxes. We assumed that states that rely on federal AGI for their own computations would continue to do so, meaning that a tax unit with higher federal AGI due to BIG might also have higher taxable income for state income tax purposes. Further, in states basing a state-level credit on the amount of the federal CTC amount, the state-level credit would be affected. However, in cases when counts of individuals are currently obtained from the federal tax form—e.g., number of exemptions, or number of children qualifying for the CTC—we assumed that the states would make changes in their forms to derive those counts independently, in the same way as previously defined in federal law prior to the BIG policy. We assumed that there would not be any other changes in state income tax systems.

Interaction with Benefit Programs

In the BIG #1 policy, the BIG benefits were not counted as income by any other benefit program. For example, for a family currently receiving SNAP and child care subsidies, the amount of SNAP and the child care copayment were unaffected by the BIG income. However, for the BIG #2 policy, BIG was counted as unearned income for the purposes of all of

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the simulated safety-net programs: SSI, TANF, CCDF-funded child care subsidies, public/subsidized housing, SNAP, LIHEAP, and WIC. For each program, BIG was counted as income for purposes of both eligibility determination and the computation of the benefit or copayment.

Because the different benefit programs have different filing units, as well as policies that sometimes require including ("deeming") income from people outside a filing unit, assumptions were needed about whose BIG income to count. For each program, we counted the BIG income of each person in the filing unit—including both children and adults. However, the BIG income of people outside the filing unit was counted only to the extent that the unearned income of that person would normally be "deemed available" to the filing unit. The implications of these assumptions can be illustrated by examples for two programs, SSI and TANF.

- SSI: In the case of a single mother who receives SSI due to disability, the mother's BIG benefit is counted for purposes of her SSI eligibility and benefits, with the result that her SSI benefit is reduced. However, her children's BIG benefits are not considered, because the SSI program does not consider a child's income in establishing a parent's SSI benefit. However, following regular SSI rules for a married SSI recipient with a nondisabled non-aged spouse, the SSI benefit of a spouse on SSI would be affected not only by his/her own BIG benefit but also by a portion of the BIG benefit of the spouse.
- TANF: In the TANF program, the BIG benefits of all unit members—adults and children—were counted in determining the unit's TANF eligibility and benefits. The BIG benefit of a parent excluded due to immigrant status is counted to the extent that other unearned income of that parent would normally be counted through the state's income-deeming procedures.

Basic Income Guarantee: Policy Employment and Earnings Effects

The Committee did not request any employment or earnings effects simulations for either of the Basic Income Guarantee policies.

Basic Income Guarantee Policy: Simulation Results

The BIG benefits total $882 billion in BIG Policy #1—which is equal to $3,000 for each of the 294 million citizens (native-born and naturalized) in the country in 2015 (see Table BIG-1). The benefits increase tax liability by $380 billion, resulting in a total government cost of BIG Policy #1 of $502 billion. The SPM poverty rate for children is estimated to decline from

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TABLE BIG-1 Selected Impacts of Basic Income Guarantee (BIG), 2015

		Changes from the Baseline	
	Baseline 2015	BIG Policy #1: $250 per Month per Citizen	BIG Policy #2: $250 per Month per Citizen; Counts as Income for Safety Net Programs
		No EE	No EE
Number of Children in SPM Poverty (Millions)	9.633	-5.381	-3.243
SPM Child Poverty Rate[a]	13.0%	-7.3	-4.4
Selected Program Results			
Basic Income Guarantee			
People With an Allowance (Thousands)	0	294,008	246,045
Annual Amount of Allowance ($ Millions)	$0	$882,024	$735,249
Spending and Tax Summary ($ Millions)			
Aggregate Benefits Paid[b]	$197,816	$882,024	$678,999
Aggregate Taxes: Payroll, Federal, State	$2,588,958	$380,026	$346,918
Total Change, Annual Government Spending		$501,998	$332,081

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, and WIC.

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the baseline level of 13.0 percent to 5.7 percent—a drop of 7.3 percentage points.

BIG Policy #2 is somewhat less expensive, and lowers poverty to a somewhat lesser extent. Because BIG is eliminated or reduced for Social Security recipients, the aggregate amount of BIG payments is $735 billion (17 percent lower than the BIG #1 value). Benefits from other safety net programs decline by a total of $56 billion, so the aggregate increase in benefits under BIG Policy #2 (including both BIG and other benefits) is $679 billion ($56 billion less than the aggregate BIG benefits). The increase in income tax liability is lower under BIG Policy #2 compared with BIG Policy #1, consistent with the lower overall level of BIG benefits. (Social Security recipients who received BIG in BIG Policy #1 but not BIG Policy #2 may have had increased tax liability in BIG Policy #1, but their tax liability in BIG Policy #2 is unchanged from the baseline.) The total government cost of BIG Policy #2 is $332 billion, and children's SPM poverty rate is reduced from 13.0 percent to 8.6 percent.

POLICY PACKAGES

Following their review of the estimated impacts of individual policies on child poverty, the Committee defined four packages of policies to be simulated in combination (see Table Packages-1). A total of 11 policies in nine policy areas were included in one or more of the four packages. The two areas of policy explored by the Committee that are not included in any of the packages are the SSI program and basic income guarantees.

The four packages designed by the Committee had different focuses. Policy Package #1, the work-focused package, included the less expansive of the two EITC options, an expansion of the CDCTC, a minimum wage increase, and the WorkAdvance policy modeled at the higher participation assumption. Policy Package #2 also included the less expansive EITC option and the expansion of the CDCTC. In addition, it included a child allowance policy. Policy Package #3 included expansions of two key means-tested supports—SNAP and housing subsidies—as well as the same EITC and CDCTC policies in Policy Package #1. Policy Package #4 incorporated universal supports—a child allowance policy and child support assurance, combined with the more-generous EITC expansion, the same CDCTC expansion as in the other two packages, the minimum wage increase, and restoration of legal immigrants' eligibility for safety-net programs. In defining Policy Package #3 and Policy Package #4, the Committee's initial specifications used somewhat less-generous versions of the SNAP policy (in Policy Package #3) and the child allowance policy (in Policy Package #4). The packages were modified to use somewhat more-expansive versions

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TABLE Packages-1 Policies Included in Each of the Three Policy Packages

	Policy Package #1 (Work-Based Package)	Policy Package #2 (Work-Based and Universal Supports Package)	Policy Package #3 (Means-Tested Supports and Work Package)	Policy Package #4 (Universal Supports and Work Package)
EITC Policy #1 (Increase Phase-in)	X	X	X	
EITC Policy #2 (40% Increase in Credit and Phase-out Rates)				X
Child Care Policy #1 (Expand CDCTC)	X	X	X	X
Minimum Wage Policy #1 (Raise to $9.15 in 2015 Dollars)	X			X
WorkAdvance Policy #2 (30% Participation in Work Program)	X			
Modified SNAP Policy #3 (35% Increase in SNAP, SEBTC, Teen Allotment)			X	
Housing Voucher Policy #2 (70% Uptake of New Vouchers)			X	
Child Allowance Policy #1 ($2,000, Citizens Only, Current Phase-Out)		X		
Child Allowance Policy #3 ($2,700, Citizens Only, Current Phase-out)				X
Child Support Assurance Policy #1 ($100 Assurance)				X
Immigration Policy Option #1 (Restore Eligibility for Legal Immigrants)				X

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of those policies such that both of these packages achieved a 50-percent reduction in child poverty.

In this section, we review the methods for simulating the policy packages and show overall results.

Simulating the Policy Packages, Prior to Employment and Earnings Effects

Like the simulation of the individual policies, the policy packages were first simulated without employment and earnings effects. This allowed us to validate the results for various programs against the results obtained when policies were simulated individually.

The simulations were developed by starting from the baseline simulation and imposing each of the policy changes in the package. In parameterizing Policy Package #4, a change was made in the implementation of the child allowance policy for consistency with the immigration-related change also being modeled in that policy. Although the child allowance policies when modeled individually were available only to citizens, the child allowance simulated in Policy Package #4 was made available to all legal immigrants, since other benefits programs were also made fully available to legal immigrants as part of that package. The child allowance policy in Policy Package #2 remained restricted to citizens only, because Policy Package #2 did not include the policy allowing legal immigrants to access other benefits programs.

Simulating Employment and Earnings Effects Due to the Policy Packages

Because the Committee's employment and earnings assumptions for various policy areas were developed individually, based on the available literature covering that type of benefit or tax credit, assumptions had to be made regarding the expected combined employment and earnings changes. For example, in the case of Policy Package #1, the EITC policy when modeled individually included new jobs for 307,000 women (based on research on the impacts of EITC expansions), and the CDCTC expansion included new jobs for 600,000 women (based on research on the impacts of child care prices); a decision had to be reached regarding the number of new jobs to expect when both of those policies were combined.

The Committee chose to make the following assumptions regarding employment changes in the policy packages.

- When more than one policy in a package added jobs for a particular demographic group, the target for new jobs in the package was computed as the midpoint between the number of people with a

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new job in any of the individual simulations and the sum of the numbers of new jobs across the simulations. For example, in the case of Policy Package #1, we computed that 636,000 women had been simulated to start working due to either the EITC or CDCTC policy when they were simulated individually; the targeted number of newly working women for this package was 772,000 equal to the midpoint between 636,000 and 907,000 (the sum of the two individual job-increase numbers). The new jobs were assigned to a subset of the people gaining jobs in any of the individual policy simulations in a particular package.

- When more than one policy in a package caused job loss for a demographic group, the same process was followed as for job gains.
- The minimum wage and WorkAdvance policies were considered as having employment and earnings effects independent from any other policy. For example, the reduction in jobs due to the minimum wage policy was assumed to be the same when the minimum wage was simulated as part of a package as when the minimum wage was simulated as an individual policy.

Table Packages-2 shows, for each policy package, the employment changes in each policy included in that package (other than the minimum wage and the WorkAdvance policy) and the derivation of the employment-change targets for the package of policies.

When more than one policy in a package caused changes in hours of work for people who remained employed, preliminary work was done to determine each person's appropriate hours-of-work change for the package. If a person's hours were modified by only one individual policy in the package, that same change was imposed in the simulation of the package. If a person's hours were modified by more than one policy in the package, the hours change for the simulation of the policy package was set equal to the smaller hours change plus one-half of the difference between the smaller number of hours and the larger number of hours.

The Committee also requested exploratory simulations using a second set of assumptions for employment and earnings changes in the policy packages. Under this alternate set of assumptions, the number of job changes of a particular type was equal to the sum of numbers across the individual policies. For example, in this alternative implementation of employment effects for Policy Package #1, the combination of the EITC and CDCTC policies was assumed to cause 907,000 women to begin working. For Policy Package #1, the change in child poverty was almost unchanged by the alternate employment-change assumptions. The Committee chose to use the assumptions described above, with somewhat smaller overall levels of both new jobs and job reductions.

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TABLE Packages-2 Targets for Employment Changes in the Simulations of Policy Package

(Numbers Are In Thousands)	Policy #1	Policy #2	Policy #3	Policy #4	Policy #5	Undupli-cated Count	Sum of Individual Numbers	Target Number for These Policies in the Package[a]
Policy Package #1								
Component Policies	EITC #1	Child Care #1	na	na	na			
Number Who Start Working (Women)	307	600				636	907	771.5
Number Who Stop Working		130				130	130	130.0
Policy Package #2								
Component Policies	EITC #1	Child Care #1	Child Allowance #1	na	na			
Number Who Start Working	307	600				636	907	771.5
Number Who Stop Working		130	84			215	214	214.5
Policy Package #3								
Component Policies	EITC #1	Child Care #1	SNAP #3	Housing #2	na			
Number Who Start Working	307	600				636	907	771.5
Number Who Stop Working		130	168	95		360	393	376.5

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Policy Package #4

Component Policies	EITC #2	Child Care #1	Child Allowance #3	Child Support Assurance #1	Immigrant Eligibility #1			
Number Who Start Working	771	600	0	0	1	867	1,372	1,119.5
Number Who Stop Working	198	130	143	12	14	475	497	486.0

[a] Targets apply only to the policies shown in the table. Policy Package #1 includes additional employment changes due to the minimum wage increase and WorkAdvance policy, and Policy Package #4 includes additional employment changes due to the minimum wage.

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Results of the Policy Packages, Including Employment and Earnings Effects

Policy Package #1—the work-based package, had the least anti-poverty impact of the three policies (Table Packages-3). Package #2 reduced poverty by more than Package #1, but not by 50 percent. Both Package #3 and Package #4 reduced poverty by more than one-half. (As mentioned above, the Committee modified the initial specifications for these packages to achieve the 50 percent reduction.) The results of the three packages were:

- Policy Package #1—the work-based package—reduced child SPM poverty by 2.5 percentage points, a drop of about one-fifth from the baseline level of 13 percent (Table Packages-3). A total of 1.815 million children become nonpoor.
- Policy Package #2—including work-based and universal support—reduced child SPM poverty by 4.6 percentage points. This translates to a 35.6 percent reduction in poverty, with 3.429 million children made nonpoor.
- Policy Package #3—including means-tested supports plus work-related components, reduced child poverty by 6.6 percentage points—a drop of 50.7 percent. The number of children removed from SPM poverty was 4.882 million.
- Policy Package #4—which includes universal benefits, reduced poverty by 6.8 percentage points, a drop of 52.3 percent. A total of 5.035 million children are removed from SPM poverty.

The number of children removed from poverty by the packages differs to some extent from the sum of poverty reductions from the component policies, due to policy interactions. In some cases, a child was raised out of poverty by more than one of the individual policies, which works in the direction of the combined impact being lower than the sum of the individual impacts. In other cases, a child was not raised out of poverty by any of the individual policies, but is raised out of poverty by the combination of policies. In the case of all three of these packages, the anti-poverty impact achieved by the package is slightly lower than the sum of the impacts from the individual policies in the package.

The estimated government costs of these packages of policies ranged from $8.7 billion for Policy Package #1 to $108.8 billion for Policy Package #4. Although Policy Package #3 reduced poverty by almost as much as Policy Package #4, the cost of that policy was 17 percent lower than the cost of Policy Package #4, at $90.7 billion. Package #2 had a total cost of $44.5 billion.

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TABLE Packages-3 Selected Impacts of Policy Packages

		Changes from the Baseline			
	Baseline 2015	Policy Package #1, with EE	Policy Package #2, with EE	Policy Package #3, with EE	Policy Package #4, with EE
Number of Children in SPM Poverty (Millions)	9.633	-1.815	-3.429	-4.882	-5.035
SPM Child Poverty Rate[a]	13.0%	-2.5	-4.6	-6.6	-6.8
Selected Program Results					
Supplemental Security Income					
Aggregate Annual Benefits ($ Millions)	$56,399	-$162	-$100	-$31	$2,254
Supplemental Nutrition Assistance Program (SNAP)					
Aggregate Annual Benefits ($ Millions)	$63,039	-$2,168	-$1,148	$36,468	$188
SEBTC Value ($ Millions)	$0			$3,125	
Federal Income Taxes					
Federal Earned Income Tax Credit					
Amount of Credit ($ Millions)	$41,770	$10,706	$10,905	$10,718	$21,471
Federal CTC/ACTC or Child Allowance					
Amount of Credit ($ Millions)	$45,104	$1,218	$67,564	$599	$113,229
Child Support Assurance					
Aggregate Annual Child Support Assurance ($ Millions)	$0				$5,163
Public And Subsidized Housing					
Aggregate Tenant Payments ($ Millions)	$21,492	$411	$372	$32,478	$695
Aggregate Rent Subsidies ($ Millions)	$36,955	-$614	-$409	$34,619	-$910

continued

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TABLE Packages-3 Continued

	Baseline 2015	Changes from the Baseline: Policy Package #1, with EE	Policy Package #2, with EE	Policy Package #3, with EE	Policy Package #4, with EE
Employment And Earnings Changes					
People With Increased Earnings (Thousands, Working in Baseline)		15.021			14.332
People Who Start Working (Thousands)		1.187	0.770	0.770	1.120
People With Decreased Earnings (Thousands, Working in Baseline)		0.333	2.701	4.994	6.916
People Who Stop Working (Thousands)		0.277	0.215	0.377	0.635
Net Earnings Change ($ Millions)		$24,136	$5,108	-$1,869	$14,962
Spending and Tax Summary ($ Millions)					
Aggregate Benefits Paid[b]	$197,816	-$2,971	-$2,235	$73,663	$6,850
Aggregate Taxes: Payroll, Federal, State	$2,588,958	-$11,625	-$46,771	-$17,069	-$101,921
Total Change in Government Spending		$8,654	$44,536	$90,732	$108,771

NOTE: EE = Employment Effects.

[a] Changes are shown in percentage points.

[b] The benefit programs included in these figures are unemployment compensation benefits, SSI, TANF, child care subsidies, housing subsidies, SNAP, LIHEAP, WIC, and child support assurance.

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SIMULATIONS USING 2018 TAX LAW

All the simulations discussed to this point in this report were performed against a "baseline" that modeled all benefit and tax programs using the rules that were in place in 2015—the year of the input data being used for this project. In most cases, policy changes from 2015 to the present were viewed as not being substantial enough to warrant different treatment. However, there was one exception: the Tax Cuts and Jobs Act of 2017 (TCJA), which became law on December 22, 2017, and which affects individual federal income taxes starting with tax year 2018. The changes in the TCJA included revisions to tax rates and brackets, changes to the Alternative Minimum Tax, and—most importantly for this project—substantial changes to the CTC and ACTC combined with the removal of personal exemptions. The maximum CTC per child was raised to $2,000 (from the pre-TCJA value of $1,000) and the potential ACTC was increased, although for the first time some noncitizens are not allowed to take these credits.

The TCJA changes raise the possibility that the relative impact of policy changes (especially tax-related policy changes) would differ when the baseline includes the TCJA compared with the results using a pre-TCJA baseline. To address that concern, the Committee requested that we create a baseline in which policies for all other programs remained at their 2015 settings, but the federal tax simulation used the 2018 TCJA policies. Our goal was not to predict what taxes would be paid in 2018, but instead to model what would have occurred if 2018 tax law had been in place in 2015. After creating this alternative baseline, we reran the policy simulations with the alternative baseline as the starting point. Below, we first provide more information on the simulation of the 2018 tax policies and then summarize the impacts of testing the Committee's policy options in an environment that includes the TCJA policies.

Simulating the New Tax Law

Our simulation of the new tax law captured the following TCJA policies:

- Changed individual tax rates and brackets
- Changed numerous policies related to exemptions and deductions
  - Eliminated the personal exemption
  - Increased the standard deduction to $12,000 for single filers, $24,000 for joint filers, and $18,000 for head of household filers

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  - Reduced the AGI threshold for the medical expense deduction from 10 percent to 7.5 percent of AGI
  - Eliminated miscellaneous deductions
  - Disallowed the deduction for casualty and loss
  - Capped the deduction for state and local income taxes, sales taxes, and property taxes at $10,000
  - Eliminated the limit on total itemized deductions
  - Added a deduction of 20 percent for pass-through income, phased out for higher income tax units (we did not capture exemptions to the phase out)
- Changed policies for the CTC and ACTC
  - Increased the CTC to $2,000 per child
  - Allowed a higher ACTC, but capped it at $1,400 per child
  - Lowered the eligibility threshold for the ACTC to $2,500
  - Increased the beginning of the phase out of the CTC (to $400,000 for joint filers and $200,000 for single and head of household filers)
  - Required Social Security numbers for children for their parents to get the CTC
- Created a new, nonrefundable, $500 credit for dependents other than children
- Changed aspects of the Alternative Minimum Tax (AMT)
  - Increased the AMT maximum exemption to $70,300 for single and head-of-household filers, and to $109,400 for joint filers
  - Increased the point at which the AMT exemption phase-out begins to $500,000 for single and head-of-household filers, and to $1,000,000 for joint filers

While most aspects of the revised simulation were straightforward, assumptions were needed regarding three issues: whether and how to deflate dollars from 2018 dollars to the 2015 dollars of the input data; how to impose the new CTC/ACTC requirement for a Social Security number; and what to assume about responses of state income tax systems to the change in the federal income tax system.

Deflation from 2018 to 2015 Dollars

Our starting point for the modified baseline simulation of federal income taxes was the tax law in place in 2015 (the year of the input data). With only one exception (mentioned below), dollar amounts that were not specifically covered by the TCJA were left at their 2015 values. However, dollar amounts that were named in the TCJA were deflated from 2018 dollars to 2015 dollars, using the CPI-U.

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The one exception to the above decision rule is that we deflated all tax brackets (including the bottom two which are unchanged by the law) from 2018 values, treating these as a "set." Even though the bottom two brackets are unchanged under the law, deflating from 2018 values produced values somewhat different than in the actual 2015 tax rules. For example, when we deflate the bottom single 2018 bracket amount to 2015 dollars, the result was $9,013, rather than the actual value of $9,225 in effect that year. We believe this to be due to rounding rules used in setting the values when the IRS adjusts for inflation. We used the values arrived at from deflating the 2018 values, rather than using the 2015 bracket values for the bottom two brackets, under the assumption that we should treat the tax brackets as a "set" that are subject to the same assumptions regarding inflation.

We do not capture the effects of the fact that that the TCJA moves to the use of the chained CPI (instead of the CPI-U) to adjust for inflation in 2019 and later years. Over time, switching to the chained CPI will cause taxes to rise and credits to fall, relative to what would have occurred if tax parameters had continued to be adjusted under the CPI-U. The effects of switching to the chained CPI will increase over time. So, to simulate that effect, one would need to pick the future point at which the difference is to be ascertained. For simplicity (and because our focus was on modeling the 2018 tax rules as if they had been in effect in 2015), we did not try to incorporate the effect in 2019 and later years of switching to the chained CPI.

Modeling Social Security Number Requirements

Under the prior tax law (in effect in 2015), the head, spouse, and children in the tax unit must all have an SSN in order for the unit to claim the EITC. However, there was no corresponding requirement for the CTC. TRIM3's baseline federal income tax simulation for 2015 models this by denying the EITC to tax units with a head, spouse, or child who is an unauthorized immigrant or a temporary resident (such as a person living in the United States with a work visa or student visa).

The 2018 tax law maintains the EITC restrictions, and imposes a new restriction for the CTC/ACTC. Starting in 2018, children must have an SSN in order to be claimed for the CTC. We modeled this by preventing tax units from claiming unauthorized children and children temporarily in the United States for the CTC. However, the head and spouse are not required to have an SSN in order to be able to claim the CTC for their children.

The 2018 tax law also includes a new credit that tax units can claim for dependents who do not qualify for the CTC. The amount is $500 per person in 2018. This credit is not refundable. Tax units can claim this credit for children who cannot be claimed for the CTC due to their immigrant/

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A Roadmap to Reducing Child Poverty

citizenship status. They can also claim the credit for dependents who are too old to qualify for the child tax credit. TRIM3 captures these changes.

Assumptions Regarding Responses by State Income Tax Systems

It is not yet known how states will respond to the federal income tax changes. Many states' income tax systems currently direct taxpayers to copy specific numbers from the federal income tax form—such as the number of exemptions or the amount of CTC. In the absence of explicit changes in states' income tax forms and instructions, state income tax liabilities will be indirectly affected by the federal income tax systems. In the absence of information on how states will respond, the simulation allows those indirect effects to occur.

Key Results of the New Tax Law

The simulation of 2018 tax law on the 2015 data (with the deflation described above) lowers federal income tax liability from the $1.25 trillion simulated in the standard 2015 baseline to $1.12 trillion (Table Tax2018-1).

When child SPM poverty is assessed in the 2015 CPS-ASEC data using those tax results, the estimate is 12.6 percent—0.4 percentage points lower than TRIM3's baseline child SPM poverty estimate for 2015. The expanded CTC/ACTC likely plays a major role in the lower poverty estimate.

Simulating the Committee's Policy Changes with the New Tax Law

Each of the Committee's individual policy changes and each of the policy packages was re-simulated from the starting point of the modified baseline that included the 2018 tax law. In most cases, the percentage point change in child SPM poverty was the same or very close to the percentage point change achieved using the pure 2015 baseline as the starting point (Table Tax2018-1). The largest differences are in the anti-poverty impacts of child allowance policies; when simulated against 2018 tax law, child allowance policies have somewhat less anti-poverty impact than when simulated against 2015 tax law, because the 2018 tax law already included an increase in the CTC.

SUMMARY AND CAVEATS

The Committee on Building an Agenda to Reduce the Number of Children in Poverty by Half in 10 Years—established by the National Academies of Sciences, Engineering, and Medicine (the National Academies) in response to a directive in December 2015 legislation—has developed a

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TABLE Tax2018-1 Comparison of Key Results from Policy Simulations Using the Standard Baseline vs. the Modified Baseline with 2018 Tax Law

	Standard Baseline (2015 Policies for All Programs)	Modified Baseline (2018 Tax Law)
Baseline Federal Income Tax Liability (Millions of 2015 Dollars)	$1,254,515	$1,118,904
SPM Child Poverty Rate[a]		
Baseline	13.0%	12.6%
Percentage Point Changes in the SPM Poverty Rate From the Baseline (When Policies are Simulated Including Employment and Earnings Effects)		
EITC Policy #1 (Increase Phase-in)	-1.2	-1.2
EITC Policy #2 (40% Increase in Credit And Phase-out Rates)	-2.1	-2.0
Child Care Policy #1 (Expand CDCTC)	-1.2	-1.2
Child Care Policy #2 (Expand CCDF)	-0.6	-0.6
Minimum Wage Policy #1 (Raise to $9.15 in 2015 Dollars)	-0.2	-0.1
Minimum Wage Policy #2 (Raise to Lower of $9.15 or State's 10th Percentile Wage)	-0.1	-0.1
Work Advance Policy #1 (10% Participation in Work Program)	0.0	0.0
Work Advance Policy #2 (30% Participation in Work Program)	-0.1	-0.2
SNAP Policy #1 (20% Increase in SNAP, SEBTC, Teen Allotment)	-1.7	-1.5
SNAP Policy #2 (30% Increase in SNAP, SEBTC, Teen Allotment)	-2.3	-2.1
Housing Voucher Policy #1 (50% Uptake of New Vouchers)	-2.1	-2.0
Housing Voucher Policy #2 (70% Uptake of New Vouchers)	-3.0	-2.8
SSI Policy #1 (Increase Benefits to Children by 1/3)	-0.2	-0.2
SSI Policy #2 (Increase Benefits to Children by 2/3)	-0.4	-0.4
Child Allowance Policy #1 ($2,000, Citizens Only, 2018 Phase-out)	-3.4	-3.0

continued

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TABLE Tax2018-1 Continued

	Standard Baseline (2015 Policies for All Programs)	Modified Baseline (2018 Tax Law)
Child Allowance Policy #2 ($3,000, Citizens Only, Phase-out 3x-4x Pov.)	-5.3	-5.0
Child Allowance Policy #3 ($2,700, Citizens Only, 2018 Phase-out)	-4.6	-4.3
Child Support Assurance Policy #1 ($100 Assurance)	-0.2	-0.3
Child Support Assurance Policy #2 ($150 Assurance)	-0.4	-0.4
Immigration Policy Option #1 (Restore Eligibility for Legal Immigrants)	-0.1	-0.2
Immigration Policy #2 (Restore Eligibility For All Immigrants)	-1.1	-1.1
Package 1 (Work-Based Package)	-2.5	-2.4
Package 2 (Work-Based and Universal Supports Package)	-4.6	-4.3
Package 3 (Means-Tested Supports and Work Package)	-6.6	-6.3
Package 4 (Universal Supports and Work Package)	-6.8	-6.5

[a] Changes are shown in percentage points.

range of policies that could reduce child poverty in various ways: increasing the rewards to work, expanding safety-net benefits, and creating universal benefits. The goal of this project was to estimate the anti-poverty impact of each of the policies individually, and to estimate the impact of packages of policies defined by the Committee.

The anti-poverty impacts of the policies were estimated by applying the TRIM3 microsimulation model to data from the CPS-ASEC, and computing the SPM prior to any policy changes and again after the policy changes. The model's baseline data are adjusted to compensate for underreporting of benefit programs in the survey data, creating an augmented data file in which the incidence and amounts of all the key benefits come very close to actual figures according to administrative data. The simulation model is able to capture changes in each of the 10 policy areas specified by the Committee, to capture cross-program interactions, and to capture the combined impacts of the policy packages.

Considering the policies individually, the reductions in child SPM poverty ranged from less than 0.1 percentage point to 5.3 percentage points. Among policies focused on increasing the rewards to work (see Figure

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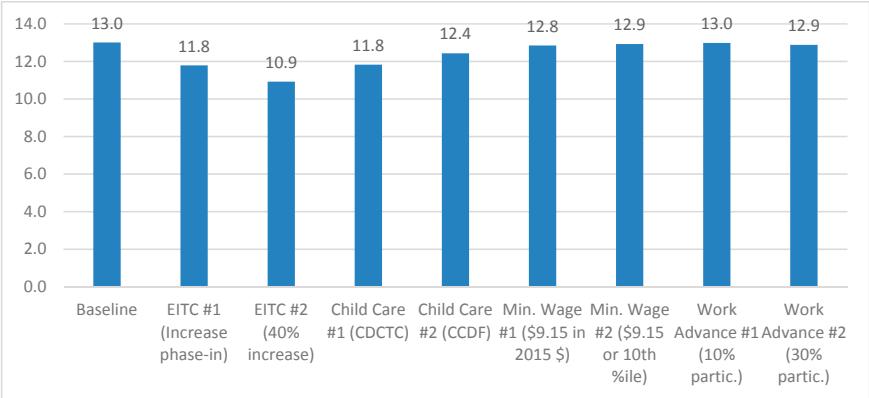

FIGURE Summary-1 Child SPM poverty impacts of policies to increase the return to work.

Summary-1) the greatest anti-poverty impact was achieved by a 40 percent increase in the EITC, which reduced child SPM poverty from 13.0 percent to 10.9 percent. A smaller increase in the EITC and an expansion of the CDCTC each reduced child poverty to 11.8 percent. Expansions to CCDF subsidies, reductions in the minimum wage, and the implementation of a WorkAdvance policy had smaller impacts.

Among policies expanding safety-net programs, the greatest anti-poverty impact was achieved by an expansion to housing vouchers, in which 70 percent of eligible households with children currently lacking subsidies were assumed to obtain them. That policy reduced child poverty to 10.1 percent (see Figure Summary-2).

A third set of policies created universal benefits—child allowances and child support assurance programs. Of these, the policy with the greatest impact on child poverty was a $2,700-per-child child allowance, modeled using the existing CTC phase-out (see Figure Summary-3). The child support assurance policies that were modeled had smaller anti-poverty impacts than the child allowance policies.

Simulations of basic income guarantees (see Figure Summary-4) produced very large child poverty reductions. However, these policies were simulated without any modeling of employment or earnings impacts, so the results are not as directly comparable to the results of the other policies.

Finally, the Committee's packages of policies reduced child SPM poverty to as low as 6.2 percent (see Figure Summary-5).

The model is also able to estimate the government costs of the policies, to the extent that the costs can be assessed at the household level. (The model does not capture administrative costs.) The costs of the policies were

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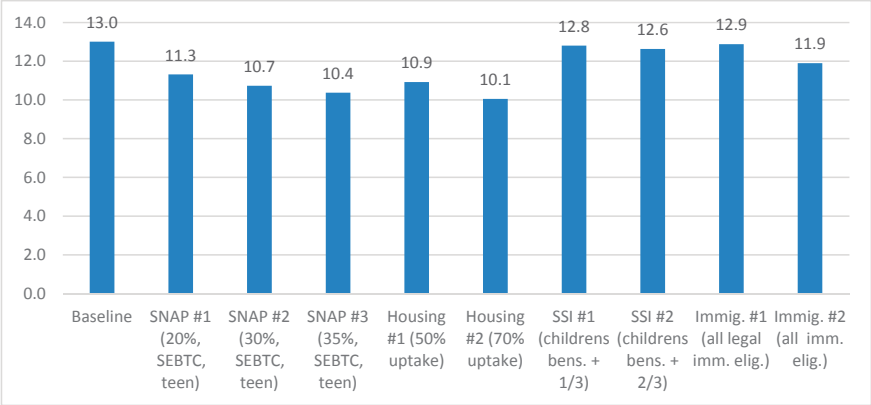

FIGURE Summary-2 Child SPM poverty impacts of policies to expand safety-net programs.

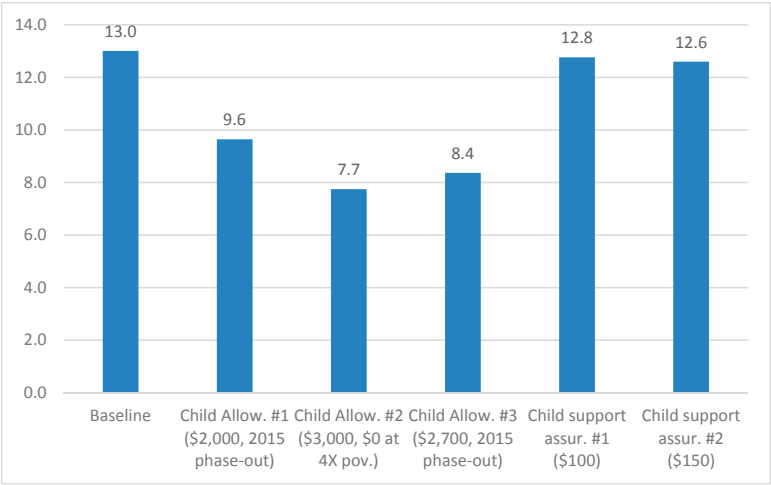

FIGURE Summary-3 Child SPM poverty impacts of universal benefit policies.

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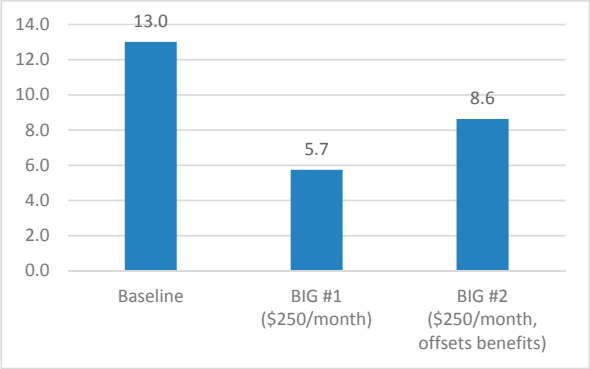

FIGURE Summary-4 Child SPM poverty impacts of basic income guarantee, modeled without employment or earnings impacts.

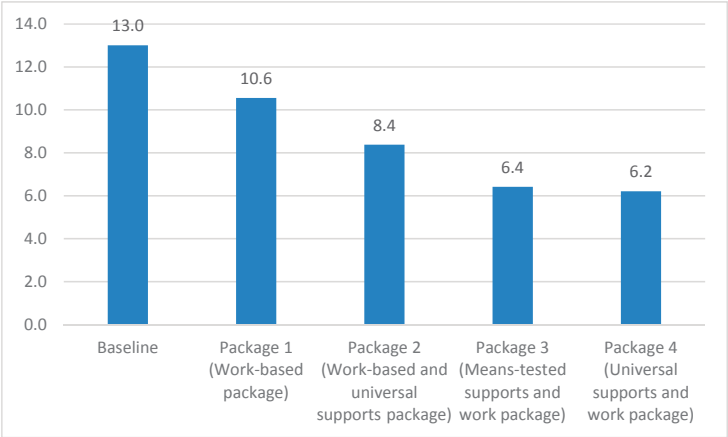

FIGURE Summary-5 Child SPM poverty impacts of policy packages.

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TABLE Summary-1 Percentage Point Reductions in Child Poverty and Government Costs, Selected Policies, Implemented in 2015

Policy	Percentage Point Reduction in Child SPM Poverty	One-Year Government Cost, Millions
EITC #1 (Increase Phase-in)	1.2	8,384
EITC #2 (40% Increase)	2.1	20,206
Child Care #1 (CDCTC)	1.2	5,141
Child Care #2 (CCDF)	0.6	6,894
SNAP #1 (20%, SEBTC, Teen)	1.7	26,414
SNAP #2 (30%, SEBTC, Teen)	2.3	37,390
SNAP #3 (35%, SEBTC, Teen)	2.6	43,075
Housing #1 (50% Uptake)	2.1	24,134
Housing #2 (70% Uptake)	3.0	34,916
SSI #1 (Children's Bens. + 1/3)	0.2	4,235
SSI #2 (Children's Bens. + 2/3)	0.4	9,386
Immigration #1 (All Legal Imm. Elig.)	0.1	3,933
Immigration #2 (All Imm. Elig.)	1.1	16,921
Child Allow. #1 ($2,000, 2015 Phase-out)	3.4	32,904
Child Allow. #2 ($3,000, $0 at 4X Pov.)	5.3	54,364
Child Allow. #3 ($2,700, 2015 Phase-out)	4.6	77,901
Child Support Assurance. #1 ($100)	0.2	5,660
Child Support Assurance #2 ($150)	0.4	8,843

NOTE: Does not include minimum wage policies (because cost is borne primarily by private sector, WorkAdvance (because a substantial portion of cost is administrative), or BIG (because employment effects were not modeled).

generally proportional to their anti-poverty impacts (see Table Summary-1 and Figure Summary-6). Considering the policies that alter benefit programs or taxes, plus the child allowance and child support assurance policies, the smallest reduction in child SPM poverty (0.1 percentage points) was produced by the policy to restore potential benefit eligibility to all legal immigrants, which had the lowest government cost ($3.9 billion) of any of the individual policies. At the opposite extreme, the individual policy with the largest anti-poverty impact—5.3 percentage points—had the second-largest cost, at $54.4 billion.

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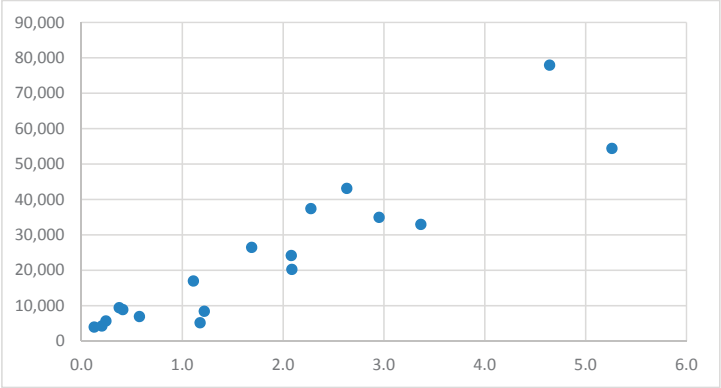

FIGURE Summary-6 Relationship between anti-poverty impact of individual policies and annual government costs of policies, selected individual policies.
NOTE: The policies shown in this scatterplot are the same policies shown in Table Summary-1.

However, there are some cases in which a less-expensive policy has greater anti-poverty impact. For example, Child Allowance #1 reduces poverty by 3.4 percentage points but costs about $10 billion less than SNAP #3, which reduces child SPM poverty by 2.6 percentage points. Also, the child allowance policy with the greatest anti-poverty impact—child allowance #2—costs substantially less than child allowance #3, which had less anti-poverty impact.

Several caveats are important to note. First, the majority of the analysis is based on data representing the population, economy, and policies in 2015. Additional simulations tested the impacts of the policies when imposed on a modified baseline incorporating 2018 tax law, and showed that, in general, the relative impacts of the policies were similar. However, no attempt was made to adjust for difference in the population or the economy between 2015 and today.

Second, we do not incorporate into the model how the government would pay for any new or expanded programs. If new policies were funded by reducing spending on some current programs or by altering the tax system, the resources of low-income families could be impacted by those changes as well as by the new anti-poverty policies.

Third, the model focuses only on the immediate impacts of policy changes on children's poverty. There is no estimation of how improvements in current economic well-being could affect children's future education or employment outcomes.

Fourth, the cost estimates that are shown are the first-year costs of the policies, if they had been applied to the 2015 population with economic

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circumstances as they were in 2015. Over a longer period, the annual costs would depend on changes in the total population, the economy, and the number and characteristics of people living in poverty.

Despite those limitations, the analysis shows the potential to substantially reduce child poverty through a combination of increased gains to work, increased safety net benefits, and new universal benefits. This report has summarized the methods used to create these estimates and presented overall results. Detailed programmatic results and substantial additional information on antipoverty impacts for demographic subgroups of children are available in appendix materials.

REFERENCES

Acs, G., Wheaton, L., Enchautegui, M., and Nichols, A. (2014). *Understanding the Implications of Raising the Minimum Wage in the District of Columbia*. Research report. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/understanding-implications-raising-minimum-wage-district-columbia.

Allegretto, S. and Cooper, D. (2014). Twenty Three Years and Still Waiting for Change: Why it's time to give tipped workers the regular minimum wage. Economic Policy Institute. Available: https://www.epi.org/files/2014/EPI-CWED-BP379.pdf.

Blau, D. (2003). Child care subsidy programs. In *Means-Tested Transfer Programs in the United States*, edited by Robert A. Moffitt. Chicago: University of Chicago Press. Available: http://www.nber.org/chapters/c10260.

Blau, F.D., and Kahn, L.M. (2007). Changes in the labor supply behavior of married women: 1980-2000. *Journal of Labor Economics,* 25(3), 393–438.

Blundell, R., and MaCurdy, T. (1999). Labor supply: A review of alternative approaches. Chapter 27 (pages 1559-1695) in *Handbook of Labor Economics*, edited by O.C. Ashenfelter and D. Card, Volume 3, Part A. London, UK: Elsevier.

Bollinger, C.R., Hirsch, B.T., Hokayem, C., and Ziliak, J.P. (Forthcoming). Trouble in the Tails? What We Know about Earnings Nonresponse Thirty Years after Lillard, Smith, and Welch. *Journal of Political Economy.* Available: https://www.journals.uchicago.edu/doi/pdfplus/10.1086/701807.

Children's Defense Fund. (2015). *Ending Poverty Now.* Washington, DC. Available: http://www.childrensdefense.org/library/PovertyReport/EndingChildPovertyNow.html.

Cohen, E., Minton, S., Thompson, M., Crowe, E., and Giannarelli, L. (2016). *Welfare Rules Databook: State TANF Policies as of July 2015*. OPRE Report 2016-67. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Congressional Budget Office (CBO). (2017). June 2017 Baseline Forecast-Data Release (Calendar Year). Available: https://www.cbo.gov/sites/default/files/recurringdata/51135-2017-06-economicprojections2.xlsx.

Congressional Budget Office (CBO). (2014). *The Effects of a Minimum Wage Increase on Employment and Family Income*. Washington, DC. Available: https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/44995-MinimumWage_OneColumn.pdf.

Crouse, G., and Macartney, S. (2018). *Welfare Indicators and Risk Factors. Seventeenth Report to Congress*. Washington, DC: U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Available: https://aspe.hhs.gov/system/files/pdf/259196/WELFAREINDICATORS17THREPORT.pdf.

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Cunnyngham, K. (2018). *Reaching Those in Need: Estimates of State Supplemental Nutrition Assistance Program Participation Rates in 2015*. Washington, DC: USDA Food and Nutrition Service. Available: https://fns-prod.azureedge.net/sites/default/files/ops/Reaching2015.pdf.

Eissa, N., and Hoynes, H. (2004). Taxes and the labor market participation of married couples: The Earned Income Tax Credit. *Journal of Public Economics,* 88, 1931–1958.

Food and Nutrition Service. (2016). *State Options Report. Supplemental Nutrition Assistance Program. Options as of October 1, 2015*. Washington, DC: United States Department of Agriculture. Available: https://fns-prod.azureedge.net/sites/default/files/snap/12-State_Options.pdf.

Fox, L. (2017). The Supplemental Poverty Measure: 2016. *Current Population Reports P60-261* (RV). Washington, DC: US Bureau of the Census. Available: https://www.census.gov/content/dam/Census/library/publications/2017/demo/p60-261.pdf.

Giannarelli, L., Lippold, K., Minton, S., and Wheaton, L. (2015). *Reducing Child Poverty in the US: Costs and Impacts of Policies Proposed by the Children's Defense Fund*. Washington, DC: The Urban Institute. Available: https://www.urban.org/research/publication/reducing-child-poverty-us.

Giannarelli, L., Morton, J., and Wheaton, L. (2007). *Estimating the Antipoverty Effects of Changes in Taxes and Benefits with the TRIM3 Microsimulation Model*. Washington, DC: The Urban Institute. Available: http://www.urban.org/UploadedPDF/411450_Estimating_Effects.pdf.

Government Accountability Office. (2016). *Supplemental Security Income. SSA Provides Benefits to Multiple Recipient Households but Needs System Changes to Improve Claims Management*. GAO-16-674. Washington, DC. Available: https://www.gao.gov/assets/680/679137.pdf.

Gray, K.F., Fisher, S., and Lauffer, S. (2016). *Characteristics of Supplemental Nutrition Assistance Program Households: Fiscal Year 2015*. U.S. Department of Agriculture, Food and Nutrition Service, Office of Policy Support. Available: https://fns-prod.azureedge.net/sites/default/files/ops/Characteristics2015.pdf.

Hendra, R., Greenberg, D., Hamilton, G., Oppenheim, A., Pennington, A., Schaberg, K., and Tessler, B. (2016). *Encouraging Evidence on a Sector-Focused Advancement Strategy. A Preview Summary of Two-Year Impacts from the Work Advance Demonstration*. MDRC. Available: https://www.mdrc.org/publication/encouraging-evidence-sector-focused-advancement-strategy.

Hoynes, H.W., and Patel, A.J. (2017). Effective policy for reducing poverty and inequality? The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources* 53.

Hoynes, H.W., and Schanzenbach, D.W. (2012). Work incentives and the Food Stamp Program. *Journal of Public Economics,* 96, 151–162.

Jacob, B.A., and Ludwig, J. (2012). The effects of housing assistance on labor supply: Evidence from a voucher lottery. *American Economic Review* 102(1). Available: https://www.aeaweb.org/articles?id=10.1257/aer.102.1.272.

Lippold, K. (2015). *Reducing Poverty in the United States: Results of a Microsimulation Analysis of the Community Advocates Public Policy Institute Policy Package*. Project report. Washington, DC: Urban Institute. Available: https://www.urban.org/research/publication/reducing-poverty-united-states.

Mittag, N. (2016). *Correcting for Misreporting of Government Benefits*. IZA Discussion Paper No. 10266. Available: http://ftp.iza.org/dp10266.pdf.

Passel, J.S., and Clark, R. (1998). *Immigrants in New York: Their Legal Status, Incomes, and Taxes*. Project report. Washington, DC: The Urban Institute. Available: http://webarchive.urban.org/publications/407432.html.

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A Roadmap to Reducing Child Poverty

Passel, J.S., and Cohn, D. (2011). *Unauthorized Immigrant Population: National and State Trends 2010*. Pew Research Hispanic Trends Project. Available: http://www.pewhispanic.org/2011/02/01/unauthorized-immigrant-population-brnational-and-state-trends-2010.

Passel, J.S., Van Hook, J., and Bean, F.D. (2006). *Narrative Profile with Adjoining Tables of Unauthorized Migrants and Other Immigrants, Based on Census 2000: Characteristics and Methods*. Warrington, PA: Sabre Systems, Inc.

Rothbaum, J. (2015). *Comparing Income Aggregates: How do the CPS and ACS Match the National Income and Product Accounts?* SEHSD Working Paper 2015-01. U.S. Bureau of the Census.

Stevens, K., Fox, L.E., and Heggeness, M.L. (2018). *Precision in Measurement: Using State-Level SNAP Administrative Records and the Transfer Income Model (TRIM3) to Evaluate Poverty Measurement*. SEHSD Working Paper No. 2018-15. U.S. Census Bureau. Available: https://www.census.gov/content/dam/Census/library/working-papers/2018/demo/SEHSD-WP2018-15.pdf.

Stevens, K., Minton, S., Blatt, L., and Giannarelli, L. (2016). *The CCDF Policies Database Book of Tables: Key Cross-State Variations in CCDF Policies as of October 1, 2015*. OPRE Report 2016-94. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Tessler, B.L., Bangser, M., Pennington, A., Schaberg, K., and Dalporto, H. 2014. *Meeting the Needs of Workers and Employers. Implementation of a Sector-Focused Career Advancement Model for Low-Skilled Adults*. MDRC. Available: https://www.mdrc.org/sites/default/files/CEO_WorkAdvanced_FR.pdf.

Trippe, C., Tadler, C., Johnson, P., Giannarelli, L., and Betson, D. (2018). *National- and State-Level Estimates of WIC Eligibles and Program Reach in 2015*. Project report to the Food and Nutrition Service. Available: https://www.fns.usda.gov/wic/national-and-state-level-estimates-special-supplemental-nutrition-program-women-infants-and-2.

Wheaton, L., and Stevens, K. (2016). *The Effect of Different Tax Calculators on the Supplemental Poverty Measure*. Research report. Washington, DC: Urban Institute. Available: https://www.census.gov/library/working-papers/2016/demo/wheaton-stevens-2016.html.

Zedlewski, S., Clark, S., Meier, E., and Watson, K. (1996). *Potential Effects of Congressional Welfare Reform Legislation on Family Incomes*. Washington DC: The Urban Institute.

Zedlewski, S., and Giannarelli, L. (2015). *TRIM: A Tool for Social Policy Analysis*. Washington, DC: Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services. Available: https://aspe.hhs.gov/pdf-report/trim-tool-social-policy-analysis.

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