IRP focus

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A roadmap to reducing child poverty

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. In an omnibus appropriations bill signed into law in December 2015, Congress included a provision directing the National Academies of Sciences, Engineering, and Medicine to conduct a comprehensive study of child poverty in the United States, and to identify evidence-based programs and policies for reducing the number of children living in poverty by half within 10 years. The National Academies appointed a committee of distinguished scholars from a range of disciplines with diverse perspectives and areas of technical

expertise to conduct this consensus study (see text box for committee members). The committee was given five specific charges:

1. Briefly review and synthesize the available research on the macro- and micro- economic, 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 or SPM) by 50 percent within 10 years of implementation.
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 policymakers 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.

A report on this two-year effort, *A Roadmap to Reducing Child Poverty*, is now complete and is available at https://sites.nationalacademies.org/DBASSE/BCYF/Reducing_Child_Poverty/index.htm.

As discussed in the report, many studies show that child poverty has negative effects on a wide range of outcomes across the life course including birthweight, brain development, and child physical and mental health, and leads to diminished education and employment outcomes in adulthood. This is especially concerning because in 2015 more than 9.6 million children lived in families with annual incomes below the poverty line (about $26,000 for a two-parent, two-child family, based on the SPM); and approximately 2.1 million of those children lived in "deep poverty," with family resources below half of the poverty line. The highest rates of poverty and deep poverty were found among families of color, children living with parents without a high school degree, and children in immigrant households. The overall high rate of childhood poverty comes with a big price tag: the committee estimated that child poverty costs the United States between $800 billion and $1.1 trillion annually. Estimates

The National Academies of Sciences, Engineering, and Medicine

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Each year, more than 6,000 of the nation's foremost scientists, engineers, health professionals, and other experts are selected to serve on hundreds of study committees that are convened to answer specific sets of questions. All serve without pay. Federal agencies are the primary financial sponsors of the Academies' work. Additional studies are funded by state agencies, foundations, other private sponsors, and the Academies' endowment.

The Academies provide independent, objective, and nonpartisan advice; external sponsors have no control over the conduct of a study once the statement of task and budget are finalized. Study committees gather information from many sources in public meetings but they carry out their deliberations in private in order to avoid political, special interest, and sponsor influence. The Academies produce 200–300 authoritative reports each year. Many reports influence policy decisions; some are instrumental in enabling new research programs; others provide program reviews.

include reduced adult productivity, increased costs of crime, and greater health expenditures.

While halving child poverty appears daunting, the committee concluded that it is an achievable goal. In fact, child poverty fell in the United States by nearly half between 1970 and 2016, in part due to government tax and transfer programs such as the Earned Income Tax Credit (EITC) and increases in government benefits, such as Supplemental Nutrition Assistance Program (SNAP) food assistance. Furthermore, the report documents the significant impact that the social safety net already has on child poverty and deep poverty. In particular, the EITC and SNAP are the most important programs for reducing child poverty and SNAP and Social Security are the most important programs for reducing deep child poverty. Robust research evidence shows that many of these programs designed to alleviate poverty—either directly by providing income transfers, or indirectly by providing food, housing, or medical care—improve child well-being.

The three articles in this issue draw from *A Roadmap to Reducing Child Poverty*. The first article presents the current state of child poverty in the United States, including a discussion of issues related to measuring poverty. The second article presents sets of policy and program alternatives for meeting the goal of major child poverty reduction. The final article provides an explanation for how the calculations of poverty reduction discussed in the second article were adjusted to account for any anticipated employment effects of the recommended policy changes.■

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Measuring child poverty in the United States

Hilary Hoynes, Robert Moffitt, and Timothy Smeeding

TAKEAWAYS

The Supplemental Poverty Measure uses the best available approach to calculating the poverty rate by defining family resources to include not only cash income, but also near-cash government supports and tax benefits, all net of tax payments.

While child poverty rates fell by nearly half over the past 50 years, they remain high; an estimated 13 percent of children were poor in 2015, based on the adjusted Supplemental Poverty Measure.

The Census Bureau could create a more accurate poverty measure by using administrative data to adjust for underreporting of benefits and by including an estimate of the effect of health care coverage on poverty.

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Causal evidence finds that growing up poor has negative effects in both childhood and adulthood, especially when poverty occurs in early childhood or persists throughout much of childhood. Child poverty has negative effects on birthweight, brain development, and child physical and mental health, and leads to compromised education and employment outcomes in adulthood. In addition to the deleterious lifelong effects on children, child poverty has a societal cost as well. Estimates of the total cost of the reduction in adult productivity, increased costs of crime, and increased health expenditures associated with children growing up in poor families range from 4.0 to 5.4 percent of Gross Domestic Product—equivalent to approximately $800 million to $1.1 trillion annually based on the size of the U.S. economy in 2018. Unfortunately, while child poverty rates in the United States have fallen significantly in the past 50 years mostly because of increases in government benefits, there are still too many children growing up in poverty—9.6 million children were in families with incomes below the poverty line in 2015, 2.1 million of them were in deep poverty.[1] The negative effects and costs of child poverty therefore continue to occur.

The National Academies of Sciences, Engineering, and Medicine were tasked by Congress with conducting a comprehensive study of child poverty in the United States, and identifying evidence-based programs and policies for reducing the number of children living in poverty—including those living in deep poverty—by half within 10 years. The committee appointed by the National Academies to conduct this study produced a consensus report, *A Roadmap to Reducing Child Poverty*, from which the three articles in this issue are drawn.[2] In this article, we address issues associated with measuring child poverty.

Our research questions include:

- What is the best available approach to measuring poverty in the United States?
- What could be changed to improve how poverty is measured?
- Using the best available approach, how much child poverty is there in the United States, how has it trended over time, and who is most affected?

Measuring poverty

While "poverty" is generally understood to refer to a lack of economic resources, measuring it requires a determination of how much money a family needs to cover their basic costs (often referred to as a minimum threshold of resources) and a determination of which family resources to consider when estimating their available income. In the 1960s, the U.S. federal government developed the official poverty measure, which calculates a family's resources as their pre-tax cash income, and compares resources to poverty thresholds that are calculated as three times the cost of a nutritionally adequate diet in 1964, adjusted for family size. The threshold is adjusted upward each year for inflation. While this official poverty measure is still used

to determine social program eligibility and to track long-term trends in poverty rates, it has some important shortcomings: it is based on the now outdated assumption that families spend one-third of their income on food (today they spend less than half that share); it fails to adjust for geographic differences in living costs; and, more importantly, it counts neither in-kind benefits nor refundable tax credits as income. This means that the Earned Income Tax Credit (EITC), the Child Tax Credit, Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps) benefits, childcare assistance, subsidized housing, and many other tax or in-kind benefits are ignored in calculating a family's available resources. It also means that payroll taxes and work-related costs like childcare and transportation are ignored when calculating a family's available resources to spend on basic needs.

To address these shortcomings, in 2011 the Census Bureau introduced the Supplemental Poverty Measure to provide an alternative view of poverty in the United States that better reflects life in the 21st century, including contemporary social and economic realities and government policy. For the Supplemental Poverty Measure, resources are measured as post-tax, post-transfer cash and near-cash income, counting tax credits and in-kind (near-cash) benefits.[3] Poverty thresholds for this measure are based on expenditures for basic needs and are adjusted to vary across states. See the "Measuring poverty" text box for a summary of these two measures.

Our understanding of poverty and the effectiveness of our antipoverty programs can change radically depending on which poverty measure is used. Historical trends in the official poverty measure suggest that virtually no progress has been made in reducing child poverty between the late 1960s and today. However, as we will demonstrate below, given the growth in near-cash benefits and tax credits over this period, child poverty rates based on the Supplemental Poverty Measure show that the child poverty rate actually has dropped by nearly half since 1967. The NAS committee was directed to use the Supplemental Poverty Measure to assess child poverty in the United States for this reason. But the committee also considered whether any improvements could be made to the Supplemental Poverty Measure, and deliberated on the merits of alternate measures.

Adjusting the Supplemental Poverty Measure

The Supplemental Poverty Measure is appropriate for the kinds of policy analyses the committee was asked to undertake, because it aims to fully account for available household resources and compares these to thresholds that reflect expenses for basic needs. However, the measure of resources is only as good as the data on which it is based. The data for the Supplemental Poverty Measure come from the Annual Social and Economic Supplement of the Current Population Survey, which relies on self-reports of income. Existing research that compares survey results to administrative data on the benefits paid has established

Measuring poverty

The U.S. Census Bureau uses two primary poverty measures—the official poverty measure and the Supplemental Poverty Measure. For each measure, analysts calculate the poverty rate by comparing family resources to the established poverty threshold.

Official poverty measure thresholds are calculated as three times the cost of a nutritionally adequate diet in 1964, adjusted for family size and inflation. Resources are calculated as pre-tax cash income.

Supplemental Poverty Measure thresholds are based on expenditures on food, clothing, shelter, and utilities, plus a small additional amount for other needs (such as personal care, transportation, and household supplies). The thresholds, which are based on the 33rd percentile of the distribution of necessary expenses, are adjusted for family size and composition, and for geographic differences in housing costs. Resources are measured as post-tax, post-transfer cash and near-cash income, counting tax credits and in-kind benefits such as the Supplemental Nutrition Assistance Program (SNAP) and housing assistance. Nondiscretionary expenditures such as medical out-of-pocket costs, childcare, work expenses, and child support paid to another household are subtracted.

This article primarily uses the Supplemental Poverty Measure, adjusted for underreporting of some types of income in the survey data. An anchored Supplemental Poverty Measure is used to examine historical trends in child poverty.

To learn more about the official and alternative poverty measures, see: https://www.irp.wisc.edu/resources/how-is-poverty-measured/.

Our understanding of poverty and the effectiveness of our antipoverty programs can change radically depending on which poverty measure is used.

that survey respondents underreport receipt of social programs and that underreporting has grown over time.[4] For example, household reports of food stamp income in the 1986 Current Population Survey accounted for 71 percent of administrative benefit totals, but in the 2006 Current Population Survey they accounted for only 54 percent of administrative benefit totals. To address this underreporting, the committee was directed to rely on the Urban Institute TRIM3 microsimulation model that adjusts benefits for the underreporting of major assistance programs—specifically SNAP, Supplemental Security Income (SSI), and Temporary Assistance to Needy Families (TANF).[5] This adjustment increases the estimated incomes of many low-income households, and in some cases it raises them above their poverty threshold. As a result, the child poverty rates presented here using the adjusted Supplemental Poverty Measure are almost always lower than the rates reported in Census Bureau publications that are based on the unadjusted Supplemental Poverty Measure. For example, the 2015 child poverty rate using the Supplemental Poverty Measure is 16.3 percent. Adjusting for underreporting of income brings this rate down to 13.0 percent. This large effect led the committee to one of its research recommendations: that 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 for all income support programs that are needed by the public, policymakers, program analysts, and researchers.[6] The use of administrative records for individuals and households would allow for a more accurate assessment of income than we can achieve with the TRIM3 microsimulation model. Additionally, the estimates produced by the committee adjust only for the underreporting of receipt and amounts of major assistance programs; the Census Bureau could also use administrative records to more accurately measure other income types such as child support, social insurance, pensions, interest, and dividends.

While the Supplemental Poverty Measure provides a much more comprehensive accounting of household resources and expenses than the official poverty measure, it does not account for the benefits of health insurance.

Accounting for health insurance when measuring poverty

While the Supplemental Poverty Measure provides a much more comprehensive accounting of household resources and expenses than the official poverty measure, it does not account for the benefits of health insurance. The United States has always relied on a patchwork health insurance system, one that does not cover everyone and can substantially add to families' expenses with 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.[7] 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.[8] The CHIP program spends an additional $15 billion per year.[9] Yet despite their proven benefits, health insurance programs such as Medicaid and CHIP are not directly reflected in the official

poverty or Supplemental Poverty measures. While the Supplemental Poverty Measure does take into account medical out-of-pocket 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. Thus, another of the committee's recommendations was to urge the agencies that produce the Supplemental Poverty Measure—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 the Office of Management and Budget and the Department of Health and Human Services on a plan to evaluate and move toward implementation of a health-inclusive poverty measure.[10] The committee's two recommendations for improving measures of income and poverty are summarized in the text box.

Income compared to consumption measures

Both the official poverty measure and the Supplemental Poverty Measure are "income" measures of poverty, because they compare a measure of available family resources (income) to a poverty threshold. An alternate way to measure poverty is to use a "consumption" measure, which uses family expenditures rather than income to indicate whether a family is meeting its basic needs. One criticism of income poverty measures is that income can fluctuate, but if families have savings or can borrow funds to make up for a temporary setback, expenditure levels may not vary as much as income (see text box for more discussion of income and consumption poverty measures). Another criticism is that income is underreported on surveys, as noted previously. However, while a consumption measure may theoretically provide a better picture than an income measure of how families are faring, such a measure also has challenges, including the need to estimate consumption using data on expenditures and assets, adjust for underreporting of consumption in consumption surveys, and adjust the small sample sizes of the main household survey for measuring consumption—the Consumer Expenditure Survey. Additionally, a consumption-based poverty measure is ill-suited for simulating alternative tax and benefit policies. The committee judged that the Supplemental Poverty Measure is preferable to currently available consumption-based poverty measures, and thus concluded that the adjusted Supplemental Poverty Measure is the best way to assess child poverty.

Committee recommendations for improving measures of income and poverty:

Using administrative records to adjust for underreporting of benefits: 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 for all income support programs that are needed by the public, policymakers, program analysts, and researchers.

Estimating the effect of health care coverage on poverty: The agencies that produce the Supplemental Poverty Measure—the Bureau of Labor Statistics, which produces the thresholds, and the Census Bureau, which measures family resources and produces poverty estimates—should work with the Office of Management and Budget and the Department of Health and Human Services on a plan to evaluate and move toward implementation of a health-inclusive poverty measure.

Income poverty compared to consumption poverty

This article measures poverty based on the income a family has and compares it to thresholds that represent the cost of basic needs for different families in different geographic areas of the United States.

An alternative approach is to measure poverty based on what a family purchases or consumes rather than their available income to determine poverty status.

According to most economists, a family's well-being is best measured by consumption because a family's well-being is generated by the goods and services consumed by the family. Income, however, measures the capacity to consume. If, over the course of every month, a family consumes all of its monthly income, income and consumption are equal, which indicates the same level of well-being. But incomes can fluctuate from one month to the next. If a family is able to save a portion of income (or borrow funds), 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 so it is unclear whether low-income families with children can do much, if any, smoothing. If families maintain their consumption by payday loans with high interest rates and unsecured credit, 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. It is also difficult to identify the effects of current or more generous assistance programs (such as a more generous tax credit) on consumption, while it is straightforward to do so for income.

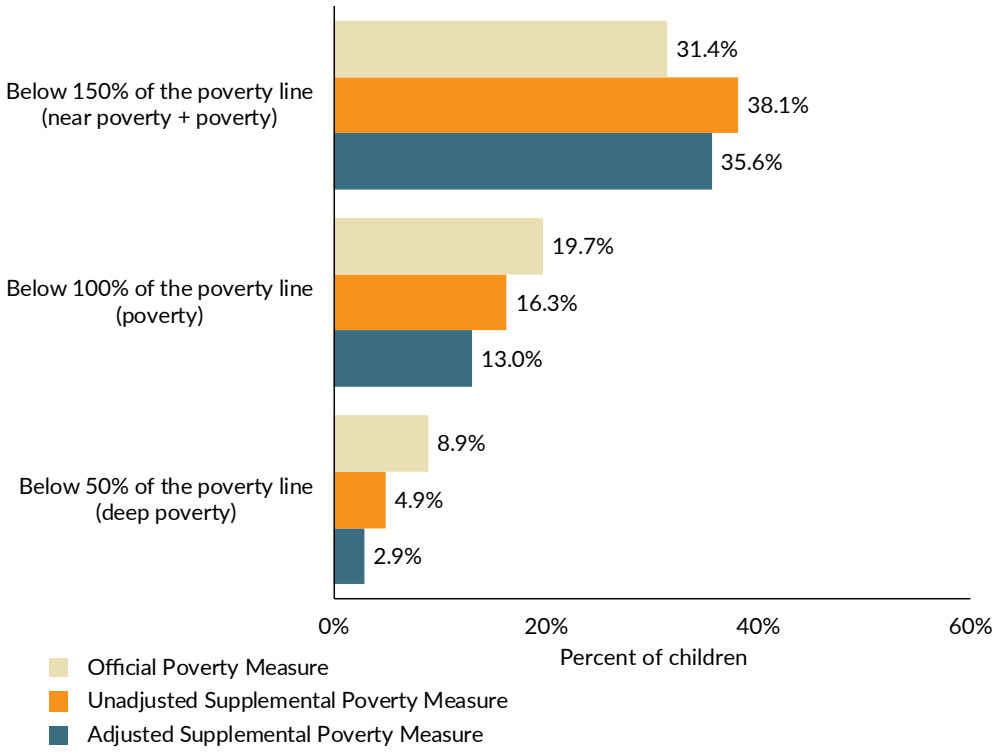
However, efforts are underway at the Bureau of Labor Statistics to develop a more accurate consumption-based measure. Further research on how to relate changes in government policies and programs to consumption would also be worthwhile.

Child poverty in the United States

We illustrate the importance of how poverty is measured in Figure 1, which compares the official poverty measure to the Supplemental Poverty Measure and our adjusted Supplemental Poverty Measure. Based on the definition used in the official poverty measure (pre-tax household income below 100 percent of the applicable poverty line, with no adjustment for underreporting of income), nearly a fifth of U.S. children—14.5 million children in all—were poor in 2015. The addition of tax credits, in-kind income, and other adjustments in the Supplemental Poverty Measure reduces the poverty rate to 16.3 percent, and the adjustments for underreporting of income reduce it further, to our final child poverty rate of 13.0 percent. Under this adjusted Supplemental Poverty Measure, we find that 9.6 million U.S. children—almost two and a half times the number of babies born in the United States in 2015—lived in households with inadequate economic resources.

Figure 1 also shows the rate of deep poverty—that is, children whose family resource levels are less than half the poverty line. The rate of deep poverty in 2015 according to the adjusted Supplemental Poverty Measure (which is particularly sensitive to the underreporting issues discussed in the previous section) was 2.9 percent, or 2.1 million children. This group is of particular interest because the committee was charged with identifying programs and policies that would reduce by half both the overall child poverty rate and the poverty rate of children living in deep poverty.

Figure 1. Using the adjusted Supplemental Poverty Measure, 3 percent of U.S. children were in deep poverty, 13 percent were in poverty, and 36 percent were in poverty or near poverty.



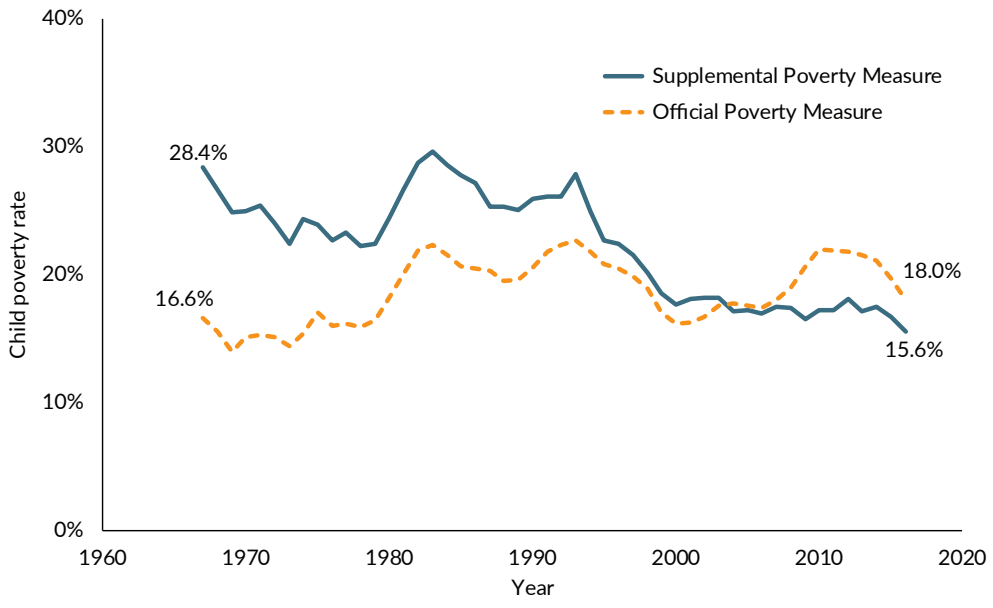
Source: Estimates from the TRIM3 microsimulation model, which include adjustment for underreporting, commissioned by the committee.

The third set of bars in Figure 1 includes children who were "near poor," that is, in families with incomes up to 150 percent of the poverty line. In this case, the rate of children who were in or near poverty in 2015 according to the adjusted Supplemental Poverty Measure—35.6 percent—is actually higher than the rate as measured by the official poverty measure (31.4 percent). There are two primary reasons for this. First, the poverty line for the Supplemental Poverty Measure is higher than the official poverty line. For example, for a family of two adults and two children in 2015, the official poverty measure threshold was $24,036, and the Supplemental Poverty Measure threshold (for families renting a home) was $25,583. Second, many near-poor families pay more in income and payroll taxes than they receive in tax credits, and also incur additional work-related expenses, so their post-tax and transfer income as measured by the Supplemental Poverty Measure may be lower than their pre-tax income as measured by the official poverty measure.

Historical trends in child poverty, 1967–2015

How have the poverty rates in Figure 1 changed historically? As noted above, historical trends in the official poverty measure suggest that virtually no progress has been made in reducing child poverty between the late 1960s and today. However, given the growth in near-cash benefits over this period, child poverty rates based on an anchored Supplemental Poverty Measure, which counts most near-cash benefits as income, show different trends. By this measure, child poverty rates fell by nearly half between 1967 and 2016 due to the increases in government benefits (Figure 2).[11]

Figure 2. While poverty rates as measured by the official poverty measure changed very little between 1967 and 2016, they fell by nearly half over the same period based on the anchored Supplemental Poverty Measure.



Source: Original analyses commissioned by the committee from Christopher Wimer, "Child Poverty in the United States: Long-Term Trends and the Role of Antipoverty Programs using the Anchored Supplemental Poverty Measure," The National Academy of Sciences, Engineering, and Medicine, October 2017.

Notes: The Supplemental Poverty Measure is anchored in 2012 living standards and adjusted back to 1967 and forward to 2016 using the Consumer Price Index. Income data are not adjusted for underreporting.

An important challenge in comparing the two poverty measures over time is deciding how to define Supplemental Poverty Measure-based poverty in a consistent way across the five-decade period. Whether to measure poverty in relative or absolute terms for the purposes of historical analysis is an unsettled question—see the text box for a discussion of relative and absolute poverty measures. The Supplemental Poverty Measure was designed as a relative measure, and uses poverty thresholds based on the 33rd percentile of the distribution of core living expenses. These thresholds, therefore, are tied to changes in the standard of living of this relatively low-income group. In contrast, the official poverty measure, an absolute measure, uses thresholds that are adjusted over time only by rates of inflation, not by changes in the standard of living. In Figure 2, we anchored the Supplemental Poverty Measure to make it an absolute measure. This allows us to look at changes over time that are not related to changes in living standards of low-income consumers. We anchor this measure in fairly recent living standards (2012) in order to make it as comparable as possible with the adjusted Supplemental Poverty Measure estimates presented above.[12]

In addition to showing that child poverty declined by half over the last 50 years (according to the Supplemental Poverty Measure), Figure 2 also shows that until the early 1990s, child poverty rates using the anchored Supplemental Poverty Measure rates were higher than the official poverty measure rates. This is primarily because of the higher Supplemental Poverty Measure thresholds, and to a lesser extent because prior to the early 1990s, the tax system took more income from poor families with children than those families received from the government as in-kind benefits. Much of the decline in Supplemental Poverty Measure-based child poverty over the past 50 years is a result of increasingly generous government benefits, especially expansions of the EITC in the mid- to late 1990s, the growth of the refundable portion of the Child Tax Credit, and the expansion of SNAP in the first decade of the 2000s. Child poverty rates based on the official poverty measure include only cash transfers like SSI and the cash portion of TANF, and thus fail to consider the largest portions of the social safety net today. Because the official poverty measure provides an incomplete picture, reviewing its trends is not useful for drawing conclusions regarding changes in the well-being of children in the United States nor the role that policy has played in the trends.

Figure 3 repeats the trend line for child poverty as measured by the anchored Supplemental Poverty Measure shown in Figure 2, and adds the trends for near poverty and deep poverty. Like overall child poverty, deep child poverty rates had fallen by 2016 to nearly half of their 1967 levels. The proportion of children in families with income at or below 150 percent of the poverty line fell by nearly 40 percent over the period. Strikingly, most of the declines for all three trend lines occurred prior to 2000. Although not shown in the figure, it is also notable that poverty rates declined for whites, blacks, and Hispanics.

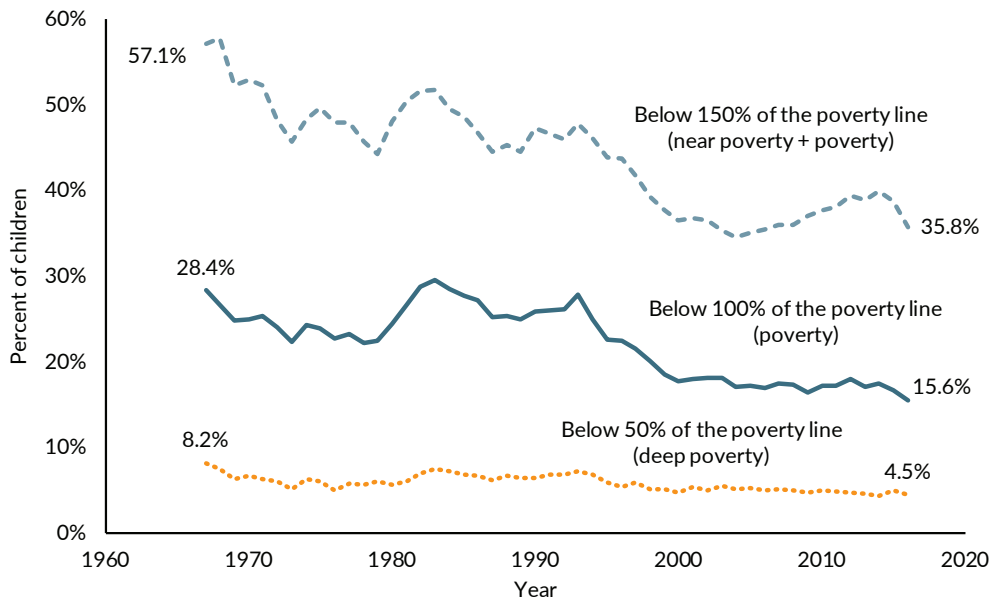
Absolute compared to relative poverty measures

Absolute poverty measure: A measure that compares income to poverty thresholds that are updated for inflation, but not for changes in real living standards. Absolute measures are used to monitor trends in poverty over a time period on the basis of a fixed standard of need. The official poverty measure is an absolute measure because it is adjusted each year only for changes in prices.

Relative poverty measure: A measure that compares income to a standard reflecting the economic situation of the society as a whole, such as median income. Poverty is always relative to time and place—for example, poverty budgets developed in the United States in the 1930s were about 65 percent (in real terms) of the 1963 official poverty measure threshold. Relative measures, however, can make it harder to disentangle the effects of the business cycle and government programs from changes in living standards.

Anchored poverty measure: "Anchoring" a relative threshold at a point in time and keeping it constant in real terms with an inflation index makes that line absolute. It can be useful in determining the trends in real income for low-income families compared to any fixed poverty line. The Supplemental Poverty Measure was designed to be a relative measure. For our historical trend analysis (Figures 2 and 3), we anchor the Supplemental Poverty Measure in recent (2012) living standards and change it forward and backward by the same price index used for the official poverty measure.

Figure 3. Rates of deep and near child poverty (as measured by the anchored Supplemental Poverty Measure) also declined between 1967 and 2016.



Source: Original analyses commissioned by the committee from Christopher Wimer, "Child Poverty in the United States: Long-Term Trends and the Role of Antipoverty Programs using the Anchored Supplemental Poverty Measure," The National Academy of Sciences, Engineering, and Medicine, October 2017.

Notes: The Supplemental 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.

Poverty rates for different groups of children

In this section, we discuss how child poverty varies according to six demographic factors: race and ethnicity, parents' education level, family composition, number of workers in the household, immigration and citizenship status, and parents' age. All the poverty rates presented here use the adjusted Supplemental Poverty Measure.

Race and ethnicity

Concerns over varying rates of child poverty across racial and ethnic groups are long-standing.[13] We find that Hispanic children experience the highest rates of poverty and deep poverty. The poverty rates for African American (17.8 percent) and Hispanic (21.7 percent) children were more than double those of non-Hispanic white (7.9 percent) children. Poverty rates for American Indian children also appear to be much higher, but precise estimates are unavailable. Similar relative disparities are found for rates of deep poverty. If the line is drawn at 150 percent of the poverty threshold to include near poverty, more than half of all black (50.6 percent) and Hispanic (54.6 percent) children, but less than one in four (22.9 percent) non-Hispanic white children, are counted as poor or near poor.

Another way of describing poverty across racial and ethnic groups is by asking what share of a given poverty group is made up by children from specific racial or ethnic categories. We find that while non-Hispanic white children make up a little more than half of all children, they account for only about one-third of children in poverty or in deep poverty. The largest share of poor children are Hispanic.

Parents' education level

Adults' educational attainment is strongly related to their poverty status; 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. We find that child poverty rates decrease as the parents' education level rises. One-third of children whose parents dropped out of high school are living below the poverty line and more than two-thirds of these children are within 150 percent of the poverty line.

Family composition

Even given the economic advantages of having two potential earners in the household, more than one in four 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

The poverty rates among children living with a part-time, as opposed to full-time, worker are correspondingly higher, although even full-time work is insufficient to lift one-quarter of children living with full-time workers above 150 percent of the poverty line. By far the highest child poverty rates are observed for the relatively small (just over 6 percent) group of children living in households with no workers: nearly a quarter of these children are in deep poverty, three-fifths are below the poverty line, and the vast majority are below the 150 percent near-poverty line.

Immigration status

Children in families with at least one foreign-born parent represent about a quarter of all children, and have a poverty rate twice as high as that of children in non-immigrant families. 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 undocumented immigrants are citizens. Children living in households in which all members are citizens have a poverty rate of 10.2 percent, nearly three points below the overall child poverty rate. By contrast, living in households with noncitizens—particularly undocumented immigrants—is associated with higher poverty rates, even for children who are themselves U.S. citizens.

When the household includes recent or undocumented immigrants, the poverty rate among noncitizen children is even higher: 31.8 percent and 33.3 percent, respectively. Citizenship for the child appears to achieve very little in the way of poverty reduction if other household members are undocumented: 31.5 percent of citizen children whose households have at least one undocumented 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 undocumented household members.

Parents' age

Children born to younger mothers are more likely to live in poverty. On average, first-time mothers' age has been increasing, and over the last three decades births to teen mothers have declined by almost two-thirds. Despite these trends, in 2015 more than one-quarter of children were born to mothers under age 25, and non-white and Hispanic children were

more likely than their white counterparts to be born to young mothers. Nearly one-quarter of children living with a young parent fall below the poverty line. Nearly three-fifths of children with a young parent live in families with incomes less than 150 percent of the poverty line.

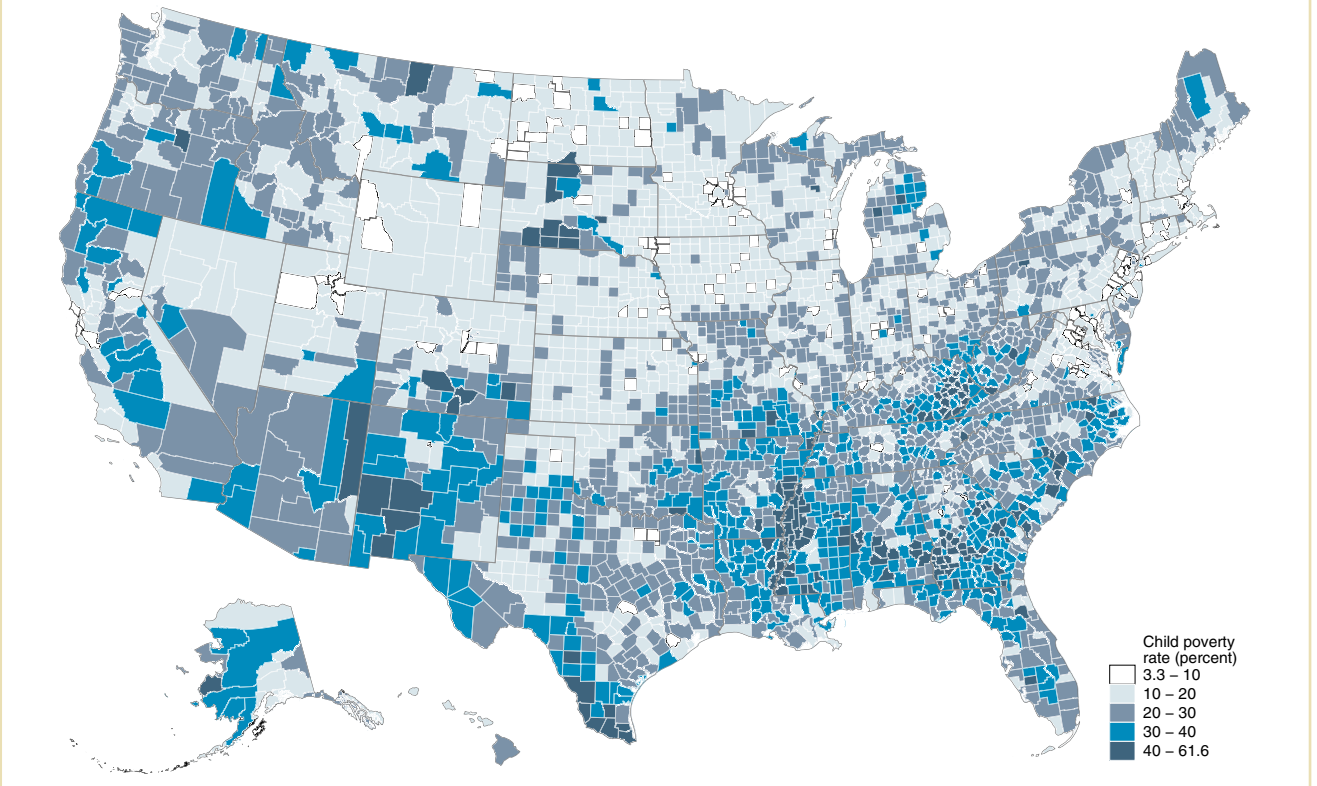
Overall, we find that poverty rates for children vary greatly depending on other characteristics of parents and households. Higher poverty rates are associated with low levels of parental schooling and with living with a single parent, no parent, or a young parent. Poverty is more prevalent when both 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 undocumented.

Geographic distribution of child poverty

Child poverty rates also vary across communities. The experience of child poverty in a community with good schools, resources for families, and opportunities for economic advancement is very 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 official poverty measure, because Supplemental Poverty Measure county-level estimates are not available. As shown in Figure 4,

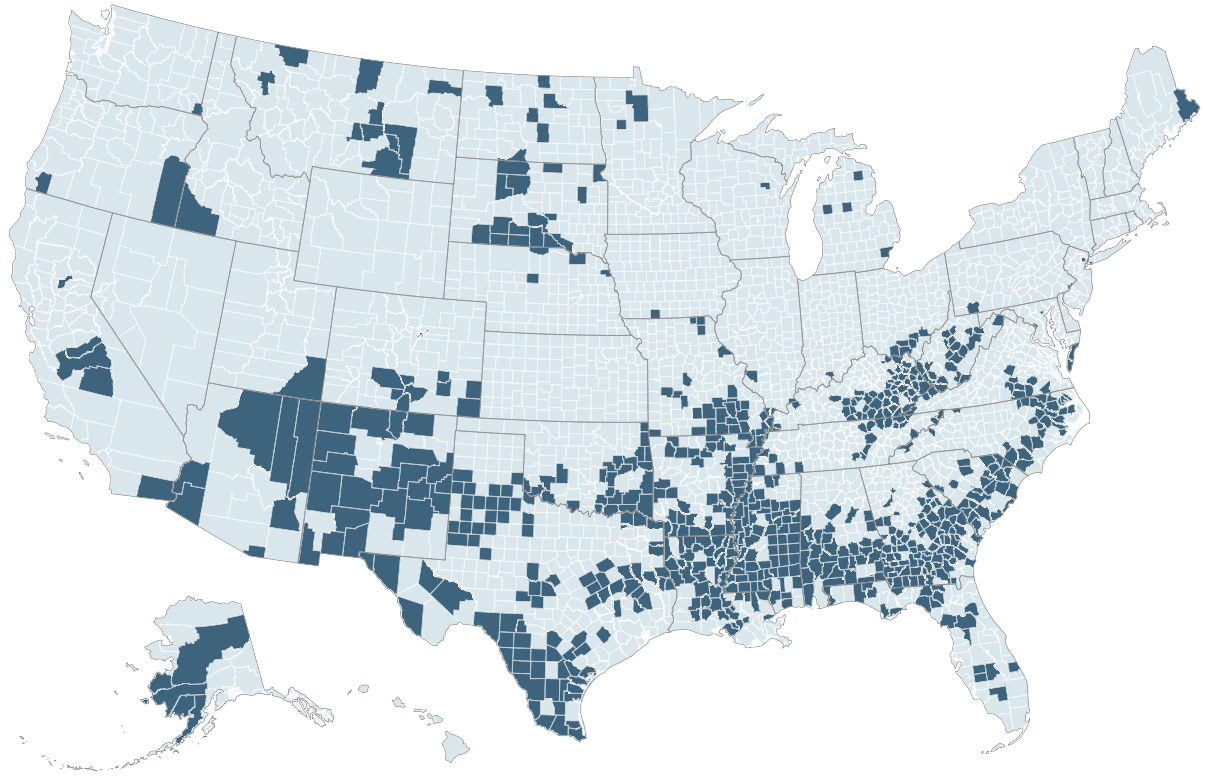
Figure 4. Nearly all counties in the South and Southwest and many counties in the West and the Appalachian region had child poverty rates of 20 percent or higher in 2015.



Source: Estimates by the committee from United States Population Estimates, 2016 Vintage, U.S. Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates program data.

Note: Map shows official poverty measure child poverty rates for 2015.

Figure 5. The South and Northeast regions have the highest proportion of children in persistently poor counties and account for the vast majority of children (81 percent) living in those counties.



Source: Estimates by the committee from United States Population Estimates, 2016 Vintage, U.S. Census Bureau. Data as of July 1, 2015. 2015 county poverty rates from Census Small Area Income and Poverty Estimates program data.

Note: Darker shading indicates counties with official poverty measure poverty rates of 20 percent or higher in 1980, 1990, 2000, and 2008–2012.

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 or ethnicity, the risk of residing in a point-in-time poor county is highest among black children (70.8 percent), followed by American Indian and Alaskan Native (70.6 percent), Hispanic (65.0 percent), and non-Hispanic white children (46 percent).

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 poor (according to the official poverty measure) over four decades. About one in seven children lives in counties with persistently high child poverty. 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 5). Although not readily apparent in the figure 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.

The starting point on the road to child poverty reduction

Our adjusted Supplemental Poverty Measure-based poverty rate of 13.0 percent represents 9.6 million U.S. children living in households with inadequate economic resources. The congressional charge to the committee was 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. The next article in this issue presents options for achieving this goal.■

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[1]2015 is the latest year for which we were able to generate estimates that took full account of benefits from federal tax credits and other safety net programs.

[2]National Academies of Sciences, Engineering, and Medicine, *A Roadmap to Reducing Child Poverty* (Washington, DC: The National Academies Press, 2019) https://doi.org/10.17226/25246. Adapted and reproduced with permission from the National Academy of Sciences, Courtesy of the National Academies Press.

[3]Except medical benefits, as discussed below.

[4]B. D. Meyer, W. K. C. Mok, and J. X. Sullivan, "The Under-Reporting of Transfers in Household Surveys: Its Nature and Consequences" NBER Working Paper No. 15181, National Bureau of Economic Research, 2009.

[5]The Transfer Income Model, version 3 (TRIM3) is a widely used microsimulation model that simulates the major U.S. social safety net programs, and can produce results at the individual, family, state, and national levels. More information about TRIM3 can be found at http://trim3.urban.org/T3Welcome.php.

[6]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.

[7]See, for example, J. Currie and J. Gruber, "Saving Babies: The Efficacy and Cost of Recent Changes in the Medicaid Eligibility of Pregnant Women," *Journal of Political Economy* 104, No. 6 (1996): 1263–1296; and J. Currie and J. Gruber, "Health Insurance Eligibility, Utilization of Medical Care, and Child Health," *Quarterly Journal of Economics* 111, No. 2: 431–466.

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

[9]Centers for Medicare and Medicaid Services, "HHS FY 2017 Budget in Brief – CMS – CHIP," 2017. Retrieved March 14, 2018, from https://www.hhs.gov/about/budget/fy2017/budget-in-brief/cms/chip/index.html.

[10]The committee commissioned a paper that provided a detailed proposal for how to implement a health-inclusive poverty measure: S. Korenman, D. K. Remler, and R. T. Hyson, "Accounting for the Impact of Medicaid on Child Poverty," NBER Working Paper No. 25973, National Bureau of Economic Research, 2019.

[11]Note that the Supplemental Poverty Measure rates shown in Figure 2 do not reflect an adjustment for underreporting, since the data needed to make that adjustment are not available for most of the years shown.

[12]See the full report (National Academies of Sciences, Engineering, and Medicine, *A Roadmap to Reducing Child Poverty* (Washington, DC: The National Academies Press, 2019) https://doi.org/10.17226/25246) for a depiction of a "historical Supplemental Poverty Measure" based on changes in living standards rather than inflation (Figure D2-15 in Appendix D, 2-10).

[13]See, for example, D. J. Eggebeen and D. T. Lichter, "Race, Family Structure, and Changing Poverty Among American Children," *American Sociological Review* 56, No. 6 (1991): 801–817.

IRP focus

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Policy approaches to reducing poverty and deep poverty among children

Hilary Hoynes, Robert Moffitt, and Timothy Smeeding

TAKEAWAYS

Current social safety net programs have strong poverty-reducing effects for children, but more needs to be done.

No single policy or program change would reduce child poverty by half within ten years.

Two policy and program packages can meet the goal of reducing poverty by half at a cost of $90–109 billion per year—much less than the estimated societal cost of child poverty.

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Thirteen percent of U.S. children lived in households with inadequate resources in 2015, based on the adjusted Supplemental Poverty Measure.[1] The National Academies of Sciences, Engineering, and Medicine were tasked by Congress with conducting a comprehensive study of child poverty in the United States, and identifying evidence-based programs and policies for reducing the number of children living in poverty—including those living in deep poverty—by half within 10 years. The committee appointed by the National Academies to conduct this study produced a report, *A Roadmap to Reducing Child Poverty*, from which the three articles in this issue are drawn.[2] In this article, we provide policy and program alternatives for achieving these poverty-reduction goals.

Research questions:

- What effect do current programs have on child poverty?
- Which policy or program changes (alone or in combination) would achieve the goal of reducing child poverty and deep poverty by half in 10 years?
- What are the costs of these policy or program changes and what are their effects on the work effort of the poor?
- What other policy and program approaches could reduce child poverty?

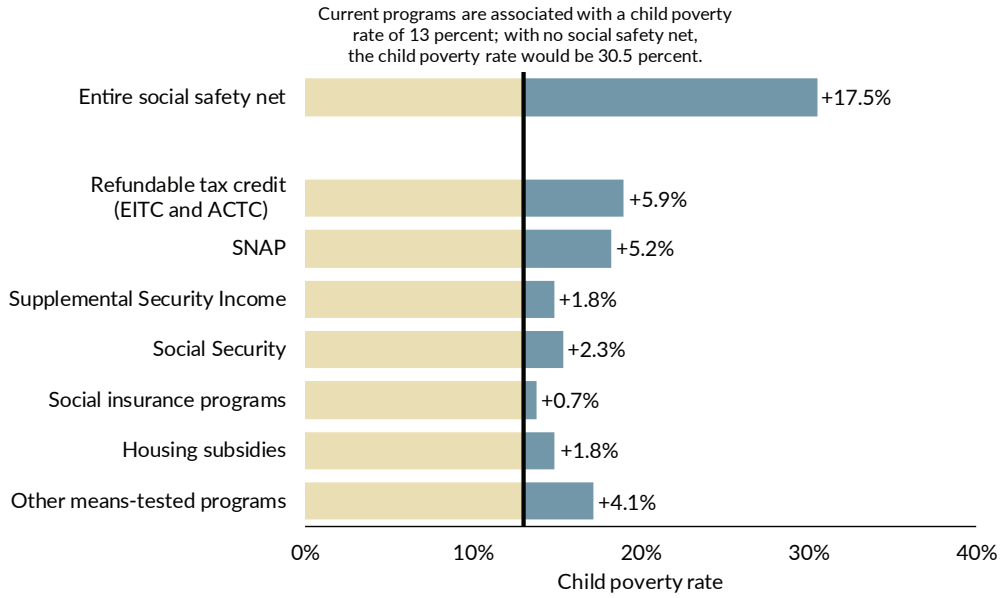
How much do current programs in the United States reduce child poverty?

Before the committee began constructing policy alternatives for reducing child poverty, it first needed to understand the poverty-reducing impacts of the current set of federal assistance programs (see "current federal assistance programs" text box for a list). The committee looked at each major program and asked what the child poverty rate would be if that program was *not*

Current federal assistance programs:

- *Federal tax credits*
  - Earned Income Tax Credit (EITC)
  - Additional Child Tax Credit (ACTC)
- *Supplemental Nutrition Assistance Program (SNAP)—formerly Food Stamps*
- *Supplemental Security Income (SSI)*
- *Social Security*
- *Social insurance programs*
  - Unemployment Insurance
  - Workers Compensation
  - Disability Insurance
  - Medicare
  - Veterans Benefits
- *Housing assistance*
- *Other means-tested programs*
  - Temporary Assistance for Needy Families (TANF)—formerly Aid to Families with Dependent Children (AFDC)
  - Solely state-funded assistance programs
  - Means-tested veterans benefits
  - Means-tested education assistance
  - Low-Income Home Energy Assistance Program (LIHEAP)
  - National School Breakfast and Lunch Programs
  - Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC)

Figure 1. The current set of federal assistance programs reduces the child poverty rate from 30.5 percent to 13.0 percent; the two refundable federal tax credits are the most successful at reducing child poverty, followed closely by the Supplemental Nutrition Assistance Program (SNAP).



Source: Estimates commissioned by the committee, using the Supplemental Poverty Measure with the Current Population Survey Annual Social and Economic Supplement, with income adjusted for underreporting.

Note: See "current federal assistance programs" text box for details of social insurance programs and other mean-tested programs.

implemented (Figure 1).[3] It found that if all major programs were eliminated, the poverty rate would rise to 30.5 percent from its current value of 13.0 percent. It also found that the two refundable tax credits—the Earned Income Tax Credit (EITC) and the Additional Child Tax Credit (ACTC, the refundable portion of the Child Tax Credit)—are the most successful at alleviating child poverty.[4] The elimination of these two tax credits would raise 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, formerly known as Food Stamps) are the next largest; elimination of this program would increase child poverty by an estimated 5.2 percentage points. The other programs included in the figure have discernible, but smaller, effects.

Most of the demographic groups with the highest child poverty rates—African Americans and Hispanics, single-parent families, and families with low-educated parents—benefit disproportionately from both SNAP and refundable tax credits. 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.

The committee also examined the effects of these assistance programs on deep poverty—the percentage of children in families with income below 50 percent of the poverty threshold. For children in these families, the elimination of all major programs would increase the poverty rate from 2.9 percent of all children to 16.0 percent. But the refundable tax credits have little effect. This is because most families in deep poverty have low levels of earned income, and these tax credits are based on earnings. For families in deep poverty, the most effective poverty-fighting federal program by far is SNAP; without this benefit, the committee estimated that the proportion of children in families with incomes below the deep poverty threshold would nearly double, from 2.9 percent to 5.7

percent. Social security is the next most important program—the deep poverty rate would rise from 2.9 to 4.4 percent. Although it is clear that current programs do greatly reduce child poverty, with 9.6 million children still living in poverty in 2015, including 2.1 million in deep poverty, there is more to be done.

Reducing child poverty in the United States by half in 10 years

The committee's primary mandate was 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. The committee considered a large number of alternative programs, drawing on a set of recommendations suggested to it by experts in the field and drawing on the committee's knowledge of programs that had been considered in the past and were known to have broad support. To narrow the list of possible policies and programs, the committee considered for each alternative program: (1) the strength of the research and evaluation evidence supporting its poverty-reducing effects; (2) the magnitude of its likely reductions in the number of poor children; (3) the extent to which it could reduce child poverty within the subgroups with the highest child poverty rates; (4) its cost; and (5) and whether the policy or program in question had positive effects on work, marriage, opportunity, and social inclusion.[5] Bearing in mind the 10-year timeline, the committee did not consider policies and programs that would take a longer period of time to reduce child poverty, such as early childhood education, child development savings accounts, and other programs for investments in children.

Table 1. Two options for each of ten policies and programs were considered

Policy or Program	Option #1	Option #2
EITC	Increase payments along the phase-in and flat portions of the EITC schedule.	Increase payments by 40 percent across the entire schedule, keeping the current range of the phase-out region.
Childcare	Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5.	Guarantee assistance from the Child Care and Development Fund for all eligible families with incomes below 150 percent of the poverty line.
Minimum wage	Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation after that.	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.
WorkAdvance	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.	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.
SNAP	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.	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.
Housing voucher	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.	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.
SSI	Increase by one-third the maximum child SSI benefit.	Increase by two-thirds the maximum child SSI benefit.
Child allowance	Pay a monthly benefit of $166 per month per child to the families of all children under age 17 (born in the United States or naturalized citizens), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children.	Pay a monthly benefit of $250 per month per child to the families of all children under age 18 (born in the United States or naturalized citizens), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children. Phase out child allowance benefits between 300 percent and 400 percent of the poverty line.
Child support assurance	Set guaranteed minimum child support of $100 per month per child.	Set guaranteed minimum child support at $150 per month per child.
Immigrant program eligibility	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).	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).

The committee reached consensus that a set of 10 policies and programs met one or more of the five criteria mentioned above and were worthy of detailed simulation. Within each of these 10, two levels of generosity were considered. The resulting 20 options chosen for simulation are shown in Table 1. The 10 policies and programs fall into two broad categories: work-oriented and income-support-oriented. The income-support-oriented policies extend benefits to both workers and nonworkers and the work-oriented programs benefit only working families. The committee simulated the poverty-reducing effects of each policy along with its cost and impacts on subgroups. The estimates also account for indirect effects on family resources that operate through changes in employment or in the number of hours worked as a result of program or policy changes. Such labor-market changes are an example of behavioral effects, or changes in household behavior in response to a change in policy. If the behavioral effect of a particular benefit expansion is a reduction in work and thus in family earnings, then that policy change will lead to a smaller decrease in poverty than would be expected from the dollar value of the benefit expansion alone. Conversely, if the behavioral effect is to increase work and earnings, then the poverty-reducing effects of that policy or program change will be amplified. The third article in this issue examines the estimated behavioral effects of all examined program and policy changes in more detail.

No single program or policy option of the 20 considered would meet the goal of reducing child poverty by half (equivalent to a 6.5 percentage point reduction).

The committee found that no single program or policy option of the 20 would meet the goal of reducing child poverty by half (equivalent to a 6.5 percentage point reduction). A $3,000 per child per year child allowance policy (a monthly cash payment to families for each child living in the home) would come the closest, reducing child poverty by an estimated 5.3 percentage points, and it would fully meet the goal of reducing deep poverty by half. Other program and policy options that were estimated to reduce child poverty substantially

Table 2. Four program and policy packages include various combinations of expanded work supports and income supports.

		Work-based	Work-based & universal support	Means-tested supports & work	Universal supports & work
Work-oriented programs and policies	Expand EITC	✓	✓	✓	✓
	Expand Child Tax Credit	✓	✓	✓	✓
	Increase minimum wage	✓			✓
	Roll out WorkAdvance	✓			
Income support-oriented programs and policies	Expand housing voucher program			✓	
	Expand SNAP benefits			✓	
	Begin child allowance		✓		✓
	Begin child support assurance				✓
	Eliminate 1996 immigration restrictions				✓

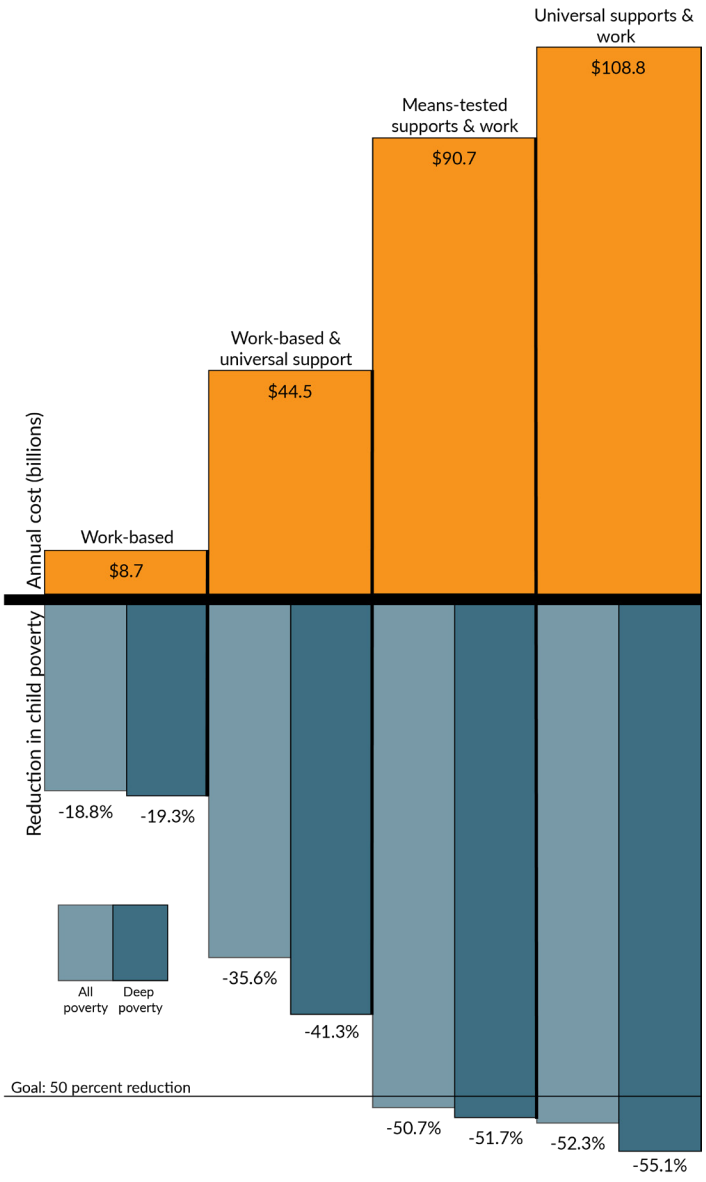
include modifications to the EITC, SNAP, and subsidized housing. The committee also found that more effective policies generally cost more; on average, moving a million children out of poverty costs about $15 billion per year.

Packages of policies and programs that reduce poverty and deep poverty among children

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 four program and policy "packages," and estimated their combined expected poverty-reducing effects and costs. Combining programs (rather than simply increasing the generosity of a single program to a level sufficient to achieve the poverty-reduction goals) makes it possible to balance the differing advantages of various programs and to therefore achieve multiple objectives simultaneously. We found that expansions to income support programs such as SNAP or housing vouchers were relatively effective at reducing both deep poverty and overall poverty, but also reduced employment and earnings. Work-support programs such as the EITC and the Child and Dependent Care Tax Credit (CDCTC) reduced poverty while increasing work but did little for deep poverty and for those without work. The combination of SNAP, housing vouchers, the EITC, and the CDCTC, is an example of a package that could achieve multiple objectives. In general, program and policy packages can better address multiple needs faced by poor families than a single program or policy. Details of each program and policy package are shown in text boxes, and Table 2 summarizes the components of each package. Figure 2 shows for each package the estimates for reductions in poverty and deep poverty and the annual cost.

In recent decades most of the growth in the safety net has been in work supports, primarily because of bipartisan support for the EITC and the CTC. 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.

Figure 2. Packages that combine a work-based approach with either means-tested supports or universal supports can meet the goal of reducing child poverty by half at a cost of $91–$109 billion per year.



Notes: As detailed in the third article in this issue, simulating the effects of packages of programs 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. 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.

But work alone is not enough, especially for single parents, so the packages aim to expand these programs but also expand benefits in the form of child allowances, or housing and food support that are available if one is out of work, or does not work enough to escape poverty.

A work-based package

The committee considered one package, our work-based package, that consists of four policies each tied to paid employment, combining expansions of two tax credits (the EITC and the CDCTC), with an increase in the minimum wage and national implementation of WorkAdvance, a promising sectoral training and employment program. But the package added no expanded income support programs. 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, it would reduce poverty by less than 20 percent, falling far short of the poverty reduction goal.

A work-based and universal-support package

The second package builds on the work-based package by combining expansions of two tax credits (the EITC and the CDCTC) with a $2,000 child allowance designed to replace the Child Tax Credit. This package generates an estimated 36 percent reduction in child poverty and 41 percent reduction in child deep poverty, again short of the 50 percent reduction goal. 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. And it is less expensive than the universal supports and work package (below) because it only extends the current $2,000 Child Tax Credit down to cover the bottom third of children who do not fully benefit from the current credit.

A means-tested supports and work package

The third package combines expansions of the two tax credits in the work-oriented package with expansions of two existing income support programs: SNAP and the housing voucher program. As noted above, the largest poverty reductions associated with existing programs result from our modifications to the EITC, the CDCTC, housing vouchers, and SNAP. Since both of the tax credits 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 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 combination of the four program expansions included in this

A work-based package:

- Increase EITC payments for the lowest earners;
- Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5;
- Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation so that it will continue to increase automatically; and
- Expand eligibility for WorkAdvance to all male heads of families with children and income below 200 percent of the poverty line, creating training slots for 30 percent of eligible men.

A work-based and universal-support package:

- Increase EITC payments for the lowest earners;
- Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5; and
- 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.

A means-tested supports and work package:

- Increase EITC payments for the lowest earners;
- Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5;
- Increase SNAP benefits by 35 percent, make adjustments for the number of children age 12 and above in the home, and increase the Summer Electronic Benefit Transfer for Children; and
- Increase the number of housing vouchers directed to families with children so that 70 percent of eligible families not currently receiving subsidized housing would use them.

package provides balance by combining work-based and income-support program expansions. We estimate that this package of programs would meet the goal of reducing both poverty and deep poverty by half, at a cost of $90.7 billion per year. In addition, 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 low-income workers and generate $2.2 billion in additional earnings.

A universal supports and work package

Finally, the fourth package was designed to meet the 50 percent poverty and deep poverty reduction goals by rewarding work, but also by adding a new form of income support, a child allowance, which expands the current Child Tax Credit and converts it to a monthly payment. As noted above, the introduction of a child allowance would produce the largest poverty-reducing effects for both poverty and deep poverty, but would also generate work disincentives, though smaller than in targeted benefits programs like SNAP and public housing because the child allowance benefits are not phased out until very high income levels. This package provides a child allowance that is similar in value to what most taxpayers now receive for their children through the Child Tax Credit, combined with three work-enhancing policies: an expanded EITC, a new CDCTC, and a higher federal minimum wage. We also include a Child Support Assurance policy, and a feature that promotes equity and social inclusion—an extension of benefits to include immigrant children, reversing immigrant eligibility restrictions that were imposed by the 1996 welfare reform. This package of programs, which reduces both child poverty and deep child poverty by over 50 percent, 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.

Other policy and program approaches to child poverty reduction

Most of the program and policy ideas described above are modifications and combinations of decades-old social programs that have been studied extensively by academic researchers and policy analysts. The exception is the one new income support program, the child allowance. The research 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 Urban Institute TRIM3 microsimulation model, which was used to simulate the poverty reduction effects of changes to the programs and packages of programs discussed here.

There are additional evidence-based program and policy ideas that were considered by the committee but, for a variety of reasons, were not chosen for inclusion in the set of programs and policies

A universal supports and work package:

- Increase EITC payments by 40 percent for all eligible earners, keeping the current range of the phase-out region;
- Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5;
- Raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation so that it will continue to increase automatically;
- Restore program eligibility for non-qualified legal immigrants. This option would eliminate eligibility restrictions for non-qualified parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs;
- 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, this child allowance would also be paid to currently non-qualified legal immigrants; and
- Set a guaranteed minimum child support amount of $100 per month per child to be received by custodial parents, regardless of the amount paid by noncustodial parents.

for which we estimated poverty-reducing effects, either alone or combined in a package. For most of these additional ideas, research evidence was not sufficiently strong to support predictions of the size and, in some cases, even the direction of effects on child poverty rates. Note again that many evidence-based program areas such as home visiting and early education may generate benefits that fall outside of the specified 10-year window, and were thus not considered here. The full list of other programs and policies the committee considered is summarized in the "other program and policy ideas" text box.

Conclusion

Both the U.S. historical record (illustrated in the first article in this issue) and the experience of peer countries such as the United Kingdom and Canada show that reducing child poverty and child deep poverty by 50 percent over 10 years is an achievable policy goal.[6] Indeed, 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. Both of the successful 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 about $90 and $110 billion per year, although this cost is much lower than the estimated macroeconomic cost of child poverty, which, as described in the first article in this issue, is estimated to range from $800 billion to $1.1 trillion annually.

The other simulated packages would also help meet social goals and reduce child poverty but not by half. One package concentrates on work alone and reduces child poverty by less than 20 percent. Another package fell short of the full 50 percent poverty reduction goal but did reduce child poverty by 36 percent, and at $44.5 billion, cost considerably less.

The advantages of combining work- and income-support-oriented policy and program enhancements into packages are clear. No single modification we considered met the 50 percent poverty reduction goals, and those that came close reduced paid work by modest amounts. 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

Other program and policy ideas:

Family planning—Evidence suggests that increased awareness of and access to long-acting reversible contraceptive (LARC) devices reduces the incidence of unplanned births, which could in turn reduce child poverty. However, 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.

Family composition (marriage promotion)—The poverty rate for children in single-parent families is about five times that of children in married-couple families. Although increasing the proportion of children living with married or cohabiting parents, rather than single parents, would almost certainly reduce child poverty, evidence on whether and how policy can achieve this goal is inconclusive.

Paid family and medical leave— 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.

Mandatory employment programs—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.

Block grants—Block grants give states considerable flexibility in allocating and spending federal funds. While block grants can in principle be a tool for reducing poverty, the evidence on this point is incomplete. Block grants also vary greatly on factors such as adequacy of funding and whether they are sustained over time; these factors likely affect their poverty-fighting effects.

The TANF program—The Temporary Assistance for Needy Families (TANF) program converted the Aid to Families with Dependent Children (AFDC) program 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. Based on the available evidence, it is not possible to simulate changes in the many features of state TANF programs and the effects of these changes on the U.S. child poverty rate.

Health, health insurance, and measuring poverty—While investment in child health clearly has the potential to provide long-run benefits to society as a whole, medical care needs and benefits are currently captured only indirectly by current poverty measures. As described in the first article in this issue, we recommend creating a Health-Inclusive Poverty Measure with poverty thresholds that consider health insurance and measures of family resources that count medical expenses.

Policies toward American Indian and Alaska Native children—Evidence suggests 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 among American Indian and Alaska Native children, but small sample sizes make it difficult to measure poverty rates for this group and to assess the effectiveness of programs and policies that affect this population.

the number of children living in deep poverty. We found that it is 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.■

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[1]2015 is the latest year for which we were able to generate estimates that took full account of benefits from federal tax credits and other safety net programs. For more detail on measuring poverty, see the first article in this issue.

[2]National Academies of Sciences, Engineering, and Medicine, *A Roadmap to Reducing Child Poverty* (Washington, DC: The National Academies Press, 2019) https://doi.org/10.17226/25246. Adapted and reproduced with permission from the National Academy of Sciences, Courtesy of the National Academies Press.

[3]All poverty statistics cited in this article use the adjusted Supplemental Poverty Measure, as detailed in the first article in this issue.

[4]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.

[5]As described in the first article in this issue, child poverty rates are highest for: African American and Hispanic children; those whose parents dropped out of high school; children living with a single parent or with neither biological parent; those in households with no workers; those living in a household with noncitizens, particularly undocumented immigrants; and those living with a young parent.

[6]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; see J. Waldfogel, *Britain's War on Poverty* (New York: Russell Sage Foundation, 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; see A. Sherman, *Canadian-Style Child Benefit Would Cut U.S. Child Poverty by More Than Half*, Washington, DC: Center for Budget and Policy Priorities, June 4, 2018. Available at: https://www.cbpp.org/blog/canadian-style-child-benefit-would-cut-us-child-poverty-by-more-than-half.

IRP focus

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Adjusting estimates of poverty reduction for behavioral effects

Hilary Hoynes and Robert Moffitt

TAKEAWAYS

Poverty-reduction effects may be strengthened by work-based policies and programs that provide work incentives.

Poverty-reduction effects may be weakened by income support-based policies and programs that provide disincentives to work.

Modeling of behavioral effects can increase the accuracy of estimates of the expected effects of program and policy modifications, even though in this setting the behavioral adjustments do not dramatically change the overall poverty-reducing effects of the programs.

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At first glance, estimating poverty reductions for any given program may appear to be a straightforward calculation—estimating how many families are raised above the poverty threshold by the additional income provided by that program. One complication is that changes in antipoverty policies and programs can produce behavioral responses on the part of parents, such as increasing or decreasing labor market participation or hours of work of those employed. Accounting for these indirect effects on poverty may magnify or moderate the direct effects of the additional income. The National Academies of Sciences, Engineering, and Medicine were tasked by Congress with conducting a comprehensive study of child poverty in the United States, and identifying evidence-based programs and policies for reducing the number of children living in poverty—including those living in deep poverty—by half within 10 years. The committee appointed by the National Academies to conduct this study produced a report, *A Roadmap to Reducing Child Poverty*, from which the three articles in this issue are drawn.[1] Adjustments for behavioral effects were part of the committee's statement of task. This article details how the committee adjusted its estimates of child poverty reductions for behavioral responses.

Our research questions include:

- How should the poverty-reducing estimates of a program or policy change be adjusted for behavioral effects?
- How should these adjustments be incorporated when a package includes multiple policies, each with its own expected behavioral effects?

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, changes in the number of hours worked.

Most often, these effects result from voluntary decisions taken by household members, but they may also result from hiring and layoff decisions taken 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 magnify the poverty reduction if they increase work or hours and therefore also family earnings.

Behavioral responses could 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 Earned Income Tax Credit (EITC), like the broader tax system, provides marriage subsidies for some recipients and marriage penalties for others.[2] Income-tested transfers based on family income, on the other hand,

generally lead to marriage penalties, since some families are likely to lose eligibility for the benefit when the incomes of two earners are combined. And finally, while in theory programs that serve only families with children or provide higher benefits to families with more children increase incentives for additional childbearing, in practice families must weigh the large costs of having children against such potential fertility-related increases in benefits. Overall, the majority of available research on these family-related behaviors finds very small, often statistically insignificant, evidence of program effects on marriage and fertility. Consequently, the committee chose to focus on behavioral effects on labor supply and exclude estimates on the behavioral effects on marriage and fertility.

The committee examined 10 program and policy areas, and formulated two policy variations for each. In this article, we focus on behavioral adjustments for the programs and policy areas that are included in one of the four program and policy packages described in the previous article (detailed in Table 1).[3] For each of the program and policy areas, the committee surveyed the existing research and assessed the evidence on behavioral responses and their magnitudes. The conclusions of this assessment are summarized in the following sections. Further details can be found in Appendices D and F of the full report.[4]

Table 1. Policy options included in four policy and program packages to reduce child poverty.

Policy or program	Policy option	Work-based package	Work-based & universal support package	Means-tested supports & work package	Universal supports & work package
EITC A	Increase payments along the phase-in and flat portions of the EITC schedule.	✓	✓	✓	
EITC B	Increase all payments by 40 percent, keeping the current range of the phase-out region.				✓
Childcare	Convert the Child and Dependent Care Tax Credit to a fully refundable tax credit and concentrate its benefits on families with the lowest incomes and with children under the age of 5.	✓	✓	✓	✓
Minimum Wage	Raise the federal minimum wage to $10.25 per hour and index it to inflation.	✓			✓
WorkAdvance	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.	✓			
SNAP	Increase SNAP benefits by 35 percent, plus an additional $360 per teenager per year, and an increase of $180 in the summer benefit for each child in pre-kindergarten through twelfth grade.			✓	
Housing vouchers	Increase the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving subsidized housing would receive and use them.			✓	
Child allowance A	Pay a monthly benefit of $166 per child to the families of all children under age 17 (born in the United States or naturalized citizens), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children.		✓		
Child allowance B	Pay a monthly benefit of $225 per child to the families of all children under age 18 (including currently nonqualified legal immigrants), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children. Phase out child allowance benefits between 300 and 400 percent of the poverty line.				✓
Child support assurance	Set guaranteed minimum child support of $100 per month per child.				✓
Immigrant policies	Restore program eligibility for nonqualified legal immigrants.[a]				✓

[a]This option eliminates eligibility restrictions for nonqualified parents and children in the SNAP, TANF, Medicaid, SSI, and other means-tested federal programs.

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, changes in the number of hours worked.

Behavioral responses to expanding the EITC

The EITC is a refundable federal tax credit for low- and moderate-income workers. A central feature of the credit is that earned income is required for eligibility; it is phased in at low earnings levels until it reaches a maximum level where it remains until it is phased out at higher earnings levels. In the phase-in region, the credit increases for every additional dollar earned, and in the phase-out region the credit declines for every additional dollar earned. For families with two earners, the benefit begins to phase out at a higher income level compared to families with one earner. All four program and policy packages include expansions of the EITC; the first three increase payments along the phase-in and flat portions of the EITC schedule, and the fourth increases payments by 40 percent across the entire schedule, keeping the current range of the phase-out region.

Theoretical predictions and research evidence

For families with one earner, labor supply theory predicts that the EITC will increase employment by increasing the returns to work in the phase-in region. However, for those already in the workforce, labor supply theory predicts a reduction in hours worked for those with earnings in the flat region (where the credit remains the same as income rises) and in the phase-out region (and in some circumstances in the phase-in region).

The research bears out the first part of this hypothesis; for single women with children, the EITC does in fact lead to increases in employment.[5] The effects are large—a substantial expansion of the credit in 1993 led to a 7 percentage point increase in employment for low-educated single women. This reflects the high subsidy rate as the credit is phased in; for households with two or more children the subsidy rate is 40 percent.[6] As for single-parent workers with higher incomes, there is little research to support the prediction of reduced labor supply other than some evidence that self-employed workers are likely to report earnings that maximize the credit amount as it is phased in.[7]

For families with two earners, the theory is more complicated, but we expect most secondary earners to reduce both employment and hours of work. The research shows small reductions in employment and hours of work for secondary earners as a result of the EITC, with little effect on primary earners.[8]

It is also possible that the increase in labor supply generated by the EITC in the presence of a weak wage floor (minimum wage) will lead to lower market

wages because of the EITC. There is limited evidence on the size of this effect, but 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, for example, to not having children)."[9]

Adjustments used in the report

Based on the research evidence we reviewed, we assume an increase in employment for low-educated single mothers and no effect on hours worked of those already employed. Earnings levels were imputed to new workers based on average earnings of those already receiving the EITC (analogous imputation of earnings levels to newly employed workers was followed for the other programs discussed below). For married mothers, we assume a modest decrease in employment and hours worked. For men, we assume no change in employment or hours worked, whether single or married. Overall, we find that expanding the EITC in the phase-in and flat regions would result in more than 250,000 additional low-income workers in the economy, and a net earnings increase in the economy of almost $5 billion. The second EITC policy we considered, a 40 percent increase in the credit, would result in almost 550,000 additional low-income workers and an increase in aggregate earnings of more than $9 billion. These employment effects boost the poverty-reducing effects of an expansion of the EITC.

Behavioral adjustments: EITC

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

Policy B: Increase all payments by 40 percent, keeping the current range of the phase-out region.

Effect on employment: Net increase

Effect on earnings: Net increase

Contribution of behavioral response to poverty reduction: Large and positive

Details for behavioral adjustments for an increase in the EITC:

- **Single mothers:**

Employment—3 percentage point increase for Policy A (expand phase-in and flat) and 7.4 percentage point increase for Policy B (40 percent increase); all for women with educational achievement of some college or less

Hours of work—no adjustment in hours or earnings

- **Single fathers:**

Employment and hours of work—no adjustment

- **Married women:**

Employment—No adjustment for Policy A and a 0.8 percentage point reduction for Policy B

Hours of work—No adjustment for Policy A and a reduction of 100 annual hours for Policy B

- **Married fathers:**

Employment and hours of work—no adjustment

Behavioral responses to expanding childcare subsidies

The Child and Dependent Care Tax Credit (CDCTC) is a nonrefundable tax credit that reimburses a portion of the qualifying childcare expenses of working parents with children under the age of 13. All four packages include converting the CDCTC to a fully refundable tax credit and concentrating its benefits on families with the lowest incomes and with children under the age of 5.

Theoretical predictions and research evidence

A large body of research indicates that government childcare subsidy programs increase employment rates among mothers in low-income families. For example, a review of numerous studies of local-area childcare reforms conducted in the 1980s and early 1990s showed positive effects on maternal employment.[10] There is little evidence on the impact of childcare subsidies on hours of work.

Adjustments used in the report

Based on a review of the effects of childcare subsidies on maternal labor supply, we assume an increase in employment in response to reductions in childcare costs but make no adjustment to hours worked. We find that converting the CDCTC to a fully refundable tax credit and concentrating its benefits on families with the lowest incomes and with children under the age of 5 would result in more than half a million additional low-income workers in the economy, and a net earnings increase in the economy of more than $9 billion. These employment effects would boost the poverty-reducing effects of an expansion in childcare subsidies. Since the research literature focuses almost exclusively on the impacts of childcare costs on employment rather than on hours of work conditional on employment, we did not make any adjustment based on changes in hours worked.

Behavioral adjustments: Childcare

Policy: 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.

Effect on employment: Net increase

Effect on earnings: Net increase

Contribution of behavioral response to poverty reduction: Large and positive

Details for behavioral adjustments for an expansion of the CDCTC:

- **Single mothers:**

Employment—8.5 percent increase
Hours of work—no adjustment in hours or earnings

- **Single fathers:**

Employment and hours of work—no adjustment

- **Married women:**

Employment—1.0 percent decrease
Hours of work—No adjustment

- **Married fathers:**

Employment and hours of work—no adjustment

Behavioral responses to raising the minimum wage

Two of our program and policy packages raise the current $7.25 per hour federal minimum wage to $10.25 and index it to inflation after that.

Theoretical predictions and research evidence

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 is expected also to induce some nonworkers to enter the labor market. We use estimates of the net employment impact from the Congressional Budget Office (CBO) to model the behavioral adjustment of the minimum wage increase.[11]

Adjustments used in the report

The CBO estimated that a 10 percent increase in the minimum wage would reduce teen employment by 3.4 percent and adult employment by 1.1 percent. Employment effects were calculated for each person in the model, using the actual changes in wages for each individual and multiplying those by the relevant CBO estimates. An estimated 28 percent of families with children and incomes under 200 percent of the Supplemental Poverty Measure poverty line had at least one worker who would be affected by a minimum wage increase. Simulations of an increase of the minimum wage to $10.25 show a loss of 42,000 jobs among individuals in low-income families. The net increase in earnings for those who continue to work would be $3.5 billion. The effect of these behavioral adjustments on the poverty-reducing impact of the minimum wage is negligible.

Behavioral adjustments: Minimum wage

Policy: Raise the current $7.25 per hour federal minimum wage to $10.25 per hour and index it to inflation.

Effect on employment: Net decrease

Effect on earnings: Net increase

Contribution of behavioral response to poverty reduction: Negligible

Details for behavioral adjustments for a minimum wage increase:

Employment—4.7 percent decrease for teens (male and female) and a 1.3 percent increase for adults (male and female) among individuals living in families with income below 200 percent of the poverty line

Hours of work—No adjustment

Behavioral responses to WorkAdvance

WorkAdvance is a promising employment and training program 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. One of our program and policy packages includes an expansion of eligibility for WorkAdvance programming to all male heads of families with children and income below 200 percent of the poverty line, and the creation of training slots for 30 percent of them.

Theoretical predictions and research evidence

Because the research evidence on WorkAdvance is much stronger for adult men than for adult women, who were represented in significant numbers in only one of four sites and that site showed effects quite different than the other three, our proposal and policy simulations focus on men, with the understanding that actual policy would offer the program more broadly.[12]

Adjustments used in the report

The nature of the program is such that it has effects only through increased employment and earnings, so there is no estimated impact except through a behavioral response. The number of program enrollees is estimated to be 1,464,000, with an aggregate earnings increase of $2.4 billion. The poverty reduction from WorkAdvance is small.

Behavioral adjustments: WorkAdvance

Policy: 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.

Effect on employment: Net increase

Effect on earnings: Net increase

Contribution of behavioral response to poverty reduction: Small.

Details for behavioral effects of the WorkAdvance program: Policy increases earnings for selected (male) workers. The number of enrollees is simulated to be 1,464,000, with an aggregate earnings increase of $2.4 billion per year.

Behavioral responses to expanding SNAP

One of our program and policy packages includes a 35 percent increase in SNAP benefits, plus an additional $360 per teenager per year, and an increase of $180 in the summer benefit for each child in pre-kindergarten through twelfth grade. This is a modification of one of the 20 program and policy changes we simulated; that expansion raised SNAP benefits by 30 percent rather than 35 percent.

Theoretical predictions and research evidence

As with housing vouchers, SNAP benefits take the form of a typical income support program, where the maximum benefit is provided if a family has no income and is phased out as earnings increase. With this structure, we predict a reduction in employment and hours worked. A small number of studies estimate the effects of the SNAP program and its predecessor, the Food Stamp Program, on employment, earnings, and labor supply.[13] Most of these found modest negative effects of the program, possibly because the rate at which benefits are phased out as income increases (30 percent) is also modest, or because the transfer accounts for a relatively low fraction of income.

Adjustments used in the report

Our estimates of employment and earnings reductions resulting from an increase in SNAP benefits are based on an analysis that used the expansion of the Food Stamp Program in the 1970s to assess the effects of the program on work effort.[14] For single mothers, for a 20 percent increase in SNAP benefits, we assume a 2.4 percentage point reduction in employment and a 64 hour reduction in annual hours. For single mothers made newly eligible for SNAP because of the higher income eligibility level (and thus lower benefits), we assume no employment reduction but a 25 hour per year reduction. There is much less research on effects of the program on work effort of married men and married women with children. We assume that a 20 percent increase in SNAP leads to no employment reduction for men and a 0.25 percentage point reduction in employment for married women. These behavioral responses reduce the poverty-reductions of SNAP expansion by a modest amount, small in comparison to the total poverty reduction.

Behavioral adjustments: SNAP

Policy: Increase SNAP benefits by 35 percent, plus an additional $360 per teenager per year, and an increase of $180 in the summer benefit for each child in pre-kindergarten through twelfth grade.

Effect on employment: Net decrease

Effect on earnings: Net decrease

Contribution of behavioral response to poverty reduction: Modest and negative

Details for behavioral adjustments for an expansion of SNAP benefits:

- **Single mothers eligible under current income eligibility level:**

Employment—4.2 percentage point reduction
Hours of work—reduction of 113 annual hours

- **Newly eligible single mothers:**

Employment—no change
Hours of work—reduction of 43 annual hours

- **Men:**

Employment—no change

- **Married women:**

Employment—0.44 percentage point reduction
Hours of work—reduction of 22 annual hours

- **Newly eligible married mothers:**

Employment and hours of work—no change

Behavioral responses to expanding housing programs

The Housing Choice Voucher Program makes subsidized housing available to low-income families, but because only a fixed number of vouchers are available, about one-quarter of all eligible families actually receive vouchers. One of our program and policy packages includes an increase in the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving housing vouchers would receive and use them.

Theoretical predictions and research evidence

Most research on the behavioral effects of subsidized housing programs has examined their effect on employment and earnings. Housing vouchers are structured so that they provide a set benefit amount if the family has no earnings, and the voucher value is phased out with earnings or income. This, like typical income support programs, leads to predictions of a reduction in employment and hours worked. A study of an expansion of housing vouchers in Chicago, where some of those on the waiting list were randomly selected to be offered a voucher, found that vouchers reduced employment and earnings, but that those reductions sometimes differed by gender and headship status.[15]

Adjustments used in the report

Based on the available research, we assumed no employment response for male heads of household; 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 worked for all adults in the labor market. These adjustments make the poverty reductions from housing assistance expansion smaller by a modest amount.

Behavioral adjustments: Housing vouchers

Policy: Increase the number of vouchers directed to families with children so that 70 percent of eligible families not currently receiving housing vouchers would receive and use them.

Effect on employment: Net decrease

Effect on earnings: Net decrease

Contribution of behavioral response to poverty reduction: Modest and negative

Details for behavioral adjustments for an expansion of the Housing Choice Voucher Program:

- **Male heads of household:**

Employment—no adjustment

- **Female heads of household and married women:**

Employment—3.3 percentage point reduction

- **All adults in labor market:**

Hours of work—7.3 percent reduction

Behavioral responses to the child allowance

A child allowance is a monthly cash payment to families for each child living in the home. Two of our program and policy packages include child allowances. In one, families of all children under age 17 (born in the United States or naturalized citizens) would receive a monthly benefit of $166 per child, replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children. In the other, families would receive a monthly benefit of $225 per child, the benefit would also be extended to nonqualified legal immigrants, and benefits would be phased out between 300 percent and 400 percent of the poverty line. This second child allowance policy is a modification of one of the 20 program and policy changes we simulated; that child allowance would have been $250, and would not have provided benefits to nonqualified legal immigrants.

Theoretical predictions and research evidence

Economic theory predicts that increases in income that are not tied to work, and the phasing out of those benefits, will reduce the incentive to work. Research evidence supports this prediction, although the size of the reduction differs across studies. For our calculations, we draw on a comprehensive review of the literature, using the rough midpoint of the estimates included in that review.[16]

Adjustments used in the report

We assume that a 10 percent increase in family income will reduce the employment rate by 0.5 percent for men, 1.2 percent for married women, and 0.9 percent for single mothers. We multiply the number of children in the family by the child allowance amount (which differs for the two levels of the benefit simulated), divide by each family's income to calculate the percentage increase in income, and then apply the appropriate employment reduction rates. We also assume that a 10 percent increase in family income will reduce hours of work by 0.5 percent for men, 0.9 percent for married women, and 0.7 percent for single mothers. For the policy option where the child allowance would be phased out at higher income levels, we calculated employment reductions and hours of work reductions separately for those in the phase-out region; however, this had virtually no effect on any of our simulation results, because a negligible fraction of families had their incomes reduced by work disincentives by enough to place them in the low-income sample for whom we examined effects. With a $166 monthly child allowance, these behavioral responses are estimated to reduce employment by 68,000 jobs and earnings by $1.6 billion. With a $225 monthly allowance, behavioral responses would reduce employment by 104,000 jobs and earnings by $2.6 billion. Despite the sizes of these reductions, the poverty reduction from the child allowance programs is only slightly reduced.

Behavioral adjustments: Child allowance

Policy A: Pay a monthly benefit of $166 per child to the families of all children under age 17 (born in the United States or naturalized citizens), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children.

Policy B: Pay a monthly benefit of $225 per child to the families of all children under age 18 (including currently nonqualified legal immigrants), replacing the Child Tax Credit, Additional Child Tax Credit, and the dependent exemption for children. Phase out child allowance benefits between 300 and 400 percent of the poverty line.

Effect on employment: Negligible (negative)

Effect on earnings: Net decrease

Contribution of behavioral response to poverty reduction: Small and negative

Details for behavioral adjustments for the introduction of a child allowance: We simulated reductions in employment and annual hours using income elasticities from the literature applied to the simulated percent change in each household's income.

- **Female heads of household:**

Income elasticity of employment— -0.085
Income elasticity of hours— -0.07

- **Married women:**

Income elasticity of employment— -0.12
Income elasticity of hours— -0.09

- **Men:**

Employment—no effect
Income elasticity of hours— -0.05

Behavioral responses to a child support assurance policy

A child support assurance policy would guarantee that a custodial parent would consistently receive at least a minimum amount of child support each month, regardless of how much was paid by the noncustodial parent. One of our program and policy packages includes setting a guaranteed minimum monthly child support amount of $100 per child.

Theoretical predictions and research evidence

The policy simulation identifies families with a noncustodial parent who is legally required to pay child support, and determines the amount of monthly support being received per child. The publicly provided child support payment is the difference between $100 and the actual amount of child support received. Employment effects are assumed to occur only through the types of effects discussed above for the child allowance, and we drew on that same research evidence for estimating behavioral response to the child support assurance. We calculate employment effects only for the custodial parent, who would receive the increased income. We find that the income increase from the relatively low child support assurance amount is too small to cause any significant reduction in work effort, and thus has essentially no effect on the poverty reductions of the policy.

Behavioral adjustments: Child support assurance

Policy: Set guaranteed minimum child support of $100 per month per child.

Effect on employment: Negligible

Effect on earnings: Negligible

Contribution of behavioral response to poverty reduction: Negligible

Details for behavioral adjustments for the child support assurance: Same elasticities as for child allowance applied to the resident parent.

Behavioral response to immigrant policies

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 long-run economic growth and innovation.[17] Immigrants' contributions to the labor force also reduce the prices of some goods and services. However, 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. These short-term negative effects may be offset since as adults, the children of immigrants (the second generation) contribute more in taxes than either their parents or the rest of the native-born population. Eligibility rules for federal antipoverty programs explicitly exclude several classes of immigrants, including many legal immigrants. One of our program and policy packages includes the restoration of program eligibility for nonqualified legal immigrants.

Theoretical predictions and research evidence

The immigrant policy would expand eligibility for SNAP, Supplemental Security Income, and Temporary Assistance for Needy Families. We assumed that each program would have the same employment effect that has been estimated for those programs in the general research literature (and that, for SNAP, are discussed above). We first assessed the importance of behavioral effects by counting the number of immigrants with children who would be newly eligible, and would participate in, each of the three programs. These calculations showed that receipt of SNAP would far outweigh receipt of either of the other two programs; thus we chose to simulate employment responses only for SNAP.

Adjustments used in the report

We used the same SNAP estimates based on the research literature described above, but scaled to fit the immigrant proposals. We took note of the fact that some households who had already been receiving SNAP benefits would become ineligible because the immigrant income would raise household income above the eligibility limit. The results show that a small number of immigrants will begin work, but a larger number will stop work. However, the poverty reductions from the immigrant policy are little affected by these behavioral responses.

Behavioral adjustments: Immigrant policies

Policy: Restore program eligibility for nonqualified legal immigrants.

Effect on employment: Net decrease

Effect on earnings: Net decrease

Contribution of behavioral response to poverty reduction: Small and negative

Details for behavioral adjustments for restoring program eligibility to nonqualified legal immigrants: We modeled the employment and earnings changes from one program, SNAP, due to its major component of the simulated policies. Due to mixed status families, this expansion could lead to a reduction in SNAP benefits for some (due to new countable income).

- **Newly eligible single mothers:**

Employment—12 percentage point reduction
Hours of work—reduction of 322 annual hours

- **Men:**

Employment—no change

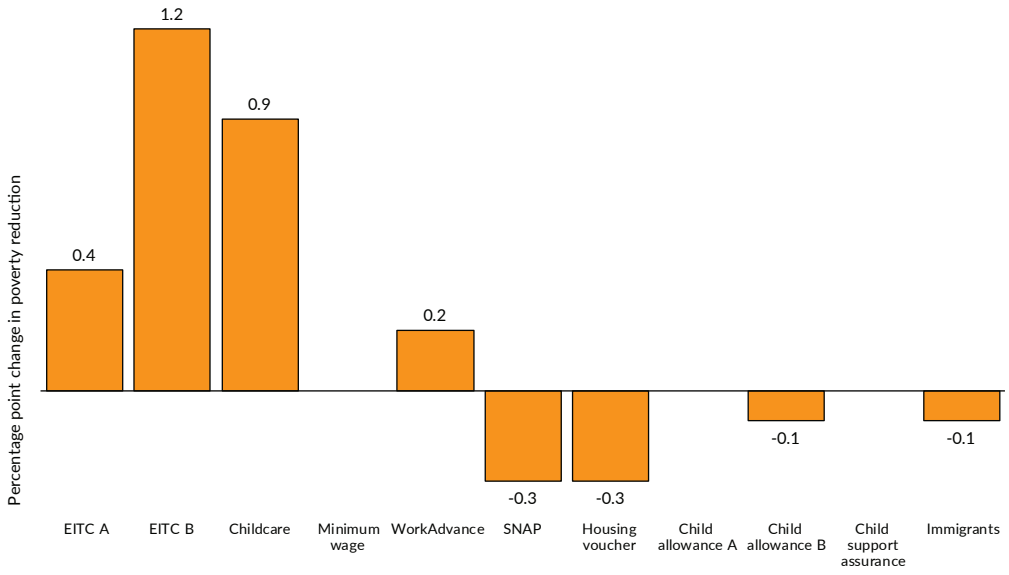
- **Married women:**

Employment—1.25 percentage point reduction
Hours of work—reduction of 63 annual hours

Summary of effects of behavioral responses

Figure 1 shows the magnitudes of net effects of adjusting for behavioral responses on the poverty-reducing effects of the possible program and policy modifications. A positive number indicates that poverty reduction impacts were increased by behavioral response and a negative number indicates that those impacts were reduced. For example, EITC A would make the poverty reduction 0.4 percentage points greater than it would otherwise have been. Of the nine program and policy areas examined, there are only two—the EITC and childcare—where behavioral adjustments result in a notable change in the poverty-reduction estimates. For both of these programs, expanding benefits results in a work increase, which in turn results in a large increase in poverty reduction. Figure 1 also shows that for the program and policy areas where an expansion would have negative employment and earnings effects—SNAP, housing vouchers, a child allowance, and immigrant program eligibility—the size of those negative effects, and the corresponding moderating effect on poverty reduction, is only modest (SNAP and housing vouchers) or very small (child allowance and immigrant program eligibility). In addition, these moderating effects are small relative to the total poverty reduction of the policies.

Figure 1. Adjusting for behavioral responses increases the poverty-reducing effects of expansions to the EITC and childcare; for those programs where an expansion would temper poverty reduction, the effect is relatively small.



Source: Estimates commissioned by the committee using the TRIM3 microsimulation model.

Notes: Figure shows the change in poverty reduction of a given policy option after adjusting for employment and earnings effects. Positive changes indicate that employment and earnings increases boost poverty reduction, while negative changes indicate that employment and earnings decreases dampen poverty reduction. See Table 1 for details of the 11 policy and program modifications.

Simulating employment and earnings effects due to the policy packages

Simulating the effects of packages of programs is more difficult than simulating effects of individual program and policy changes because it requires combining what might be a work disincentive with one policy and a work incentive with another policy, as well as estimating the total behavioral response of families who are affected by more than one policy in a package. All four of our packages include expansions of both the EITC and the CDCTC, and each of these two policies induce entry into the labor force. But since an individual can enter the labor market only once in response to the package, the estimated impact of both policies cannot be simply added together to produce this effect for a given individual.

Because the committee's employment and earnings assumptions for various policy areas were based on the available literature covering the behavioral responses to that type of benefit or tax credit, and because there is very little literature on the combined effects of multiple programs, assumptions had to be made regarding the expected combined employment and earnings changes. For example, in the case of the work-based policy package, the EITC policy when modeled individually included new jobs for 307,000 women (based on research on the effects of EITC expansions), and the CDCTC expansion included new jobs for 600,000 women (based on research on the effects of childcare 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 calculated as the midpoint between the lower bound (the unduplicated count of the number of people with a new job in any of the individual simulations) and the upper bound (the sum of the numbers of new jobs across the simulations). For example, in the case of the work-based policy package, the committee calculated that 307,000 women would start working as a result of the EITC policy modification, and 600,000 as a result of the CDCTC policy modification, with an unduplicated count of 636,000. The targeted number of newly working women for this package was thus the midpoint between 636,000 and 907,000 (the sum of the two individual job-increase numbers), or 771,500. The new jobs were assigned to a random 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.

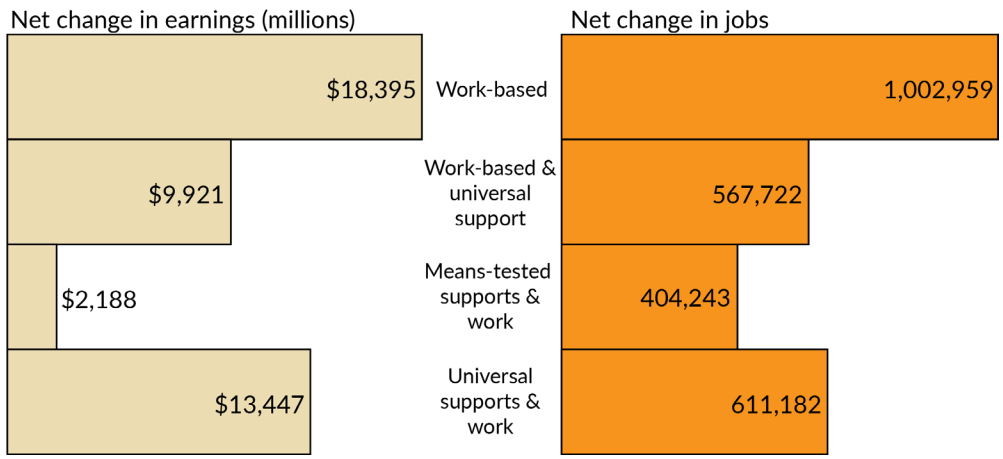
The minimum wage and WorkAdvance policies were considered as having employment and earnings effects independent from any other policy. For example, the reduction in jobs due to the minimum wage policy was assumed to be the same when the minimum wage was simulated as part of a package as when the minimum wage was simulated as an individual policy.

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 half of the difference between the smaller number of hours and the larger number of hours.

Figure 2 shows the earnings and employment effects of the four program and policy packages. The work-based package, which adds minimum wage increases and expansion of WorkAdvance programming to EITC and childcare expansions, would provide the largest increases in earnings and employment. The means-tested supports and work package, which combines expansions of the two tax credits in the work-based package with expansions of two existing income support programs—SNAP and housing voucher programs, would provide the smallest increases in earnings and employment. The effects on employment and earnings are positive even for the packages that include expanded income support programs, because the work incentives of the work-based programs in the package are larger than the work disincentives arising from the income support programs.

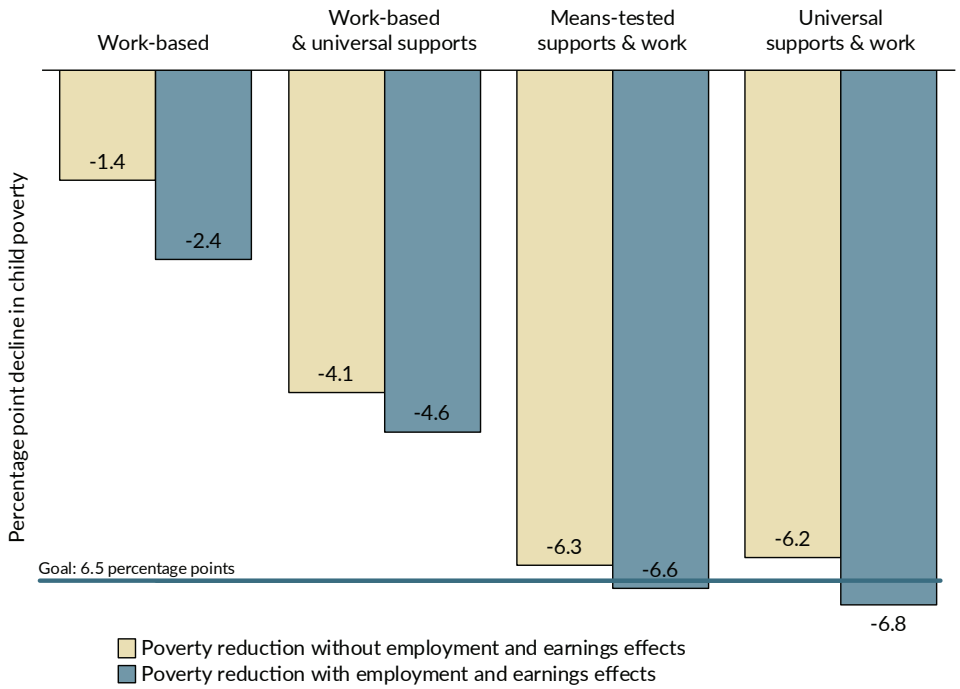
Figure 2. Of the four program and policy packages considered by the committee, the work-based package would provide the largest increases in employment and earnings among low-income workers, and the means-tested support and work package would provide the least.



Source: Estimates commissioned by the committee using the TRIM3 microsimulation model.

Figure 3 shows how the behavioral adjustments affect the poverty-reducing effects of each package. Behavioral adjustments almost double the poverty-reducing effects of the work-based package, from 1.4 percentage points to 2.4 percentage points. Behavioral adjustments result in more modest increases in the poverty-reducing effects of the other three packages, although these small increases are just enough to bring both the means-tested supports and work package and the universal supports and work package above the 50 percent poverty-reduction goal.

Figure 3. Behavioral adjustments have the largest impact on the poverty-reducing effects of the work-based package, although the smaller behavioral adjustments bring the means-tested supports and work package and the universal supports and work package above the 50 percent poverty-reduction goal.



Source: Estimates commissioned by the committee using the TRIM3 microsimulation model.

Conclusion

A large volume of scholarly research on behavioral effects of policies over the last 40 years has shown that policies can affect employment and hours of work, although the magnitude of these effects varies across studies and often appear for only some population groups. The committee determined that for programs with a large number of participants and significant outcomes, it is necessary to adjust poverty-reduction estimates for behavioral effects on labor market participation. We hope that this discussion will be useful to others considering similar large-scale simulations.■

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[1]National Academies of Sciences, Engineering, and Medicine, *A Roadmap to Reducing Child Poverty* (Washington, DC: The National Academies Press, 2019) https://doi.org/10.17226/25246. Adapted and reproduced with permission from the National Academy of Sciences, Courtesy of the National Academies Press.

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