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Safety Net Investments in Children

ABSTRACT In this paper, we examine what groups of children are served by core childhood social safety net programs—including Medicaid, EITC, CTC, SNAP, and AFDC/TANF—and how they have changed over time. We find that virtually all gains in spending on the social safety net for children since 1990 have gone to families with earnings, and to families with income above the poverty line. These trends are the result of welfare reform and the expansion of in-work tax credits. We review the available research and find that access to safety net programs during childhood improves outcomes for children and society over the long run. This evidence suggests that the recent changes to the social safety net may have lasting negative effects on the poorest children.

A persistently large number of children in the United States live in poverty, despite sustained economic growth. Recognizing the social and moral imperative to alleviate child poverty, the United States has a patchwork of tax and transfer programs that target low-income families with children and seek to reduce child poverty. In 2016, the federal government spent about $200 billion on such programs, and they had a substantial impact on reducing child poverty.[1] Including the value of government taxes and transfers, these efforts reduce child poverty from 25 percent (no taxes

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1. This includes spending on families with children through the Earned Income Tax Credit, the Child Tax Credit, the Supplemental Nutrition Assistance Program, Temporary Assistance for Needy Families, and public housing; and spending on children through Medicaid and Supplemental Security Income. Our data and these calculations are discussed below.

or transfers) to 15 percent (current law) (Shapiro and Trisi 2017)—lifting 7.4 million children out of poverty. Yet 11.1 million children are still living in poverty. Growing up poor not only harms children in the short run; by limiting investments in their human capital, it also harms them in the long run.

Thus, considerable government tax and transfer spending on children is aimed at reducing poverty—with a justification primarily on humanitarian grounds. In contrast, another substantial public sum is spent on child human capital policies where an *investment* (rather than humanitarian) criterion is employed. In a standard human capital investment model, resources are spent up front that generate returns over the longer run across a variety of measures—potentially including better labor market outcomes, improved health, and higher educational achievement. Early childhood education programs are promoted within this framing, and, more generally, the provision of public education is a primary mechanism for U.S. investments in children. Many compelling studies have found that there is also a substantial investment component to safety net programs that alleviate childhood poverty, suggesting that it is also appropriate to consider a portion of safety net spending through the investment framework. However, to date, the investment component of safety net spending has not been widely discussed.

This paper is motivated by our interest in summarizing what is known about the long-run benefits of childhood safety net benefits and in reevaluating current policies in light of this evidence. There are three components to this paper. First, we review the research evaluating the long-run effects of social safety net benefits, which shows that investments in early life can have large effects on later-life outcomes—perhaps strong enough to suggest that reallocation of investments over the life course to earlier periods can be efficiency-enhancing. Recent research has focused on quantifying the social safety net's benefits for health and productivity in adulthood. In particular, we review the available evidence about the three pillars of the U.S. social safety for families with children: the Supplemental Nutrition Assistance Program (SNAP), the Earned Income Tax Credit (EITC), and Medicaid. These studies suggest that in addition to the humanitarian and social insurance reasons to have a safety net, there is also a supply-side case. That is, providing certain safety net programs ends up benefiting children and society over the long run. And these investments have both private and public benefits. The findings we consider imply that the benefits of the social safety net are broader than is commonly assumed—and indeed, that this spending yields downstream benefits to taxpayers (through

increased tax revenues and potential declines in spending on health care and the safety net), in addition to the affected families.

Second, we analyze the data on government spending on children, how it features in broader public spending, and how it has changed over time. Overall, we find that government spending is not in line with our increasing understanding of the importance of resources during early life, and the positive spillovers from safety net spending on children.[2] The United States spends a relatively small amount on children, and spending has remained relatively flat over the last two decades, at between 1.5 and 2 percent of GDP (Isaacs and others 2017). In contrast, per capita spending on the elderly in the United States has grown substantially over the same period, and in 2015 amounted to 9.3 percent of GDP.[3] U.S. spending on children is very low by international standards; the United States is near the bottom of countries belonging to the Organization for Economic Cooperation and Development (OECD) in "family benefits public spending" as a share of GDP (third from the bottom, above only Mexico and Turkey), with a share less than half the OECD average.[4] Yet U.S. spending on the elderly, based on "pension spending" as a share of GDP, is just below the OECD average.[5]

We also analyze how the composition of spending on children has changed over time. Fundamental changes have occurred in the social safety net for children in the past 25 years. The EITC expanded substantially, creating subsidies to work; welfare reform dramatically reduced the availability of cash assistance; and health insurance for low-income children expanded dramatically through Medicaid. We use a unique approach, based on administrative data, to examine who is benefiting from changes to the social safety net and who is being left behind. In particular, we estimate the changes over time in how government spending is allocated across the income distribution (for example, those below the poverty line versus those above it) and how it is allocated across working and nonworking families. This analysis shows that there have been substantial shifts in their composition over the past 20 years. We find that an increasing share is going to children near and above the poverty threshold, while a decreasing

2. The 2017 tax reform legislation includes an expansion of the Child Tax Credit, including the refundable portion that is targeted to lower-earning families.

3. Some of the elderly spending may have spillovers onto children. For example, providing Social Security benefits to grandparents frees up some family resources that may be spent on children.

4. This is as of 2013. The data are available at https://data.oecd.org/socialexp/family-benefits-public-spending.htm.

5. This is as of 2013. The data are available at https://data.oecd.org/socialexp/pension-spending.htm.

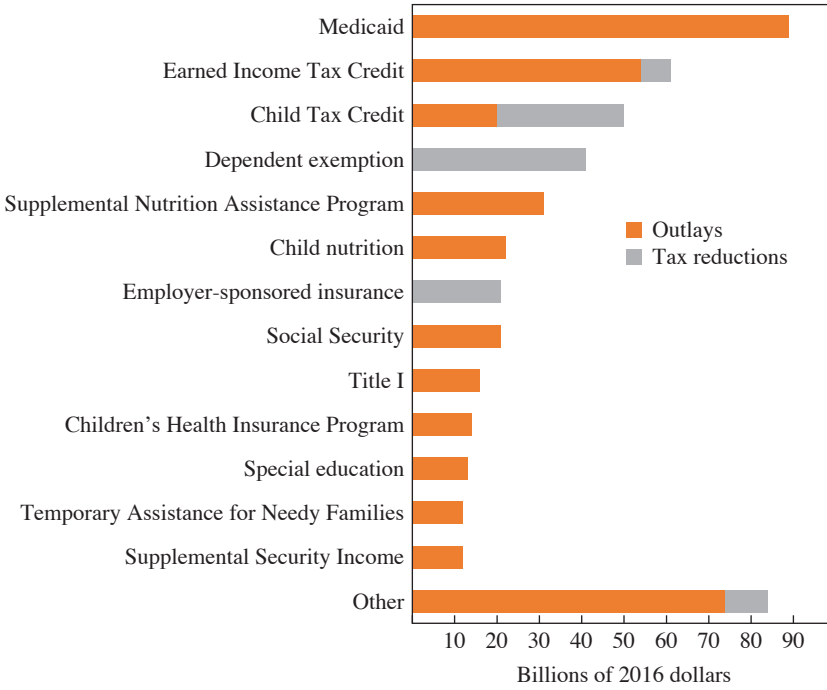
share is directed to the poorest children living below the poverty threshold—despite a relatively stable share of children living in poverty. There has also been a massive shift toward in-work transfers and health insurance, with a declining share in unrestricted cash benefits. Our approach, which uses administrative data wherever possible, makes an important contribution because it circumvents the well-documented undercounting of safety net spending in survey data, the source of data typically used to examine the composition of spending.

Pulling the paper's two sections together, we evaluate the state of the social safety net for families with children. The literature is not sufficiently developed to provide strong guidance on precisely how to optimally allocate funds across eligible groups, and across different programs. Nonetheless, the broad patterns are clear: The research shows there are important benefits to having access to the safety net during childhood that should be considered by policymakers. Furthermore, there are strong returns across the cash, tax-based, near-cash, and health insurance programs that we examine, with potentially larger effects for the most disadvantaged children. These consistent findings imply that we are spending too little on children and their families. And the decline in the availability of benefits for the most disadvantaged children, primarily due to welfare reform, is likely to lead to worse outcomes for these children in adulthood. Any cuts to current programs that will reduce resources going to children would have direct, negative effects on children in both the short and long terms. It is also crucial to recognize that the modal recipient family is combining safety net use with employment; the view that all spending is welfare and going to out-of-work families is not the case. Instead, the social safety net is acting to increase earnings to help families make up for stagnating and declining wages (Autor 2014). In light of this, it is important to make sure that policies can work in alignment with the labor market. Specifically, policymakers should refrain from adding work disincentives to programs—such as eligibility notches that abruptly remove access to benefits above an income threshold—and ensure that programs can respond quickly to replace lost income during recessions.

I. An Overview of the Private and Public Safety Net for Children

We begin by describing the broader set of social safety net programs for children in the United States, how they compare with spending for other groups, and how this has changed over time. Figure 1, reproduced from

Figure 1. Spending and Tax Programs with the Highest Federal Expenditures on Children, 2016



Source: Isaacs and others (2017).

a report by Julia Isaacs and others (2017), details federal expenditures on children in 2016. The spending takes the form of tax expenditures (for example, the EITC, Child Tax Credit, dependent exemption, and tax exclusion of employer-provided health insurance), direct transfers to families (for example, SNAP, Social Security, Temporary Assistance for Needy Families, and Supplemental Security Income), and transfers from the federal to state and local governments (for example, Title I and special education). Note that this figure focuses on *federal* spending on children, and omits the sizable transfers made by states, including the state share of Medicaid and child welfare services, state EITCs, and state education spending.

A number of programs provide benefits to low-income children ranging from cash to insurance. Medicaid, which provides public health insurance to low-income children, is the largest program, with $89 billion spent

annually on children (after removing the share spent on the elderly and disabled). The Children's Health Insurance Program (CHIP) ($14 billion) is another public health insurance program; it supports children in families with income above the Medicaid eligibility limits. The EITC ($61 billion) is a refundable tax credit for working families with children.[6] In 2017, the maximum EITC credit was $5,616 for families with two children, and $3,400 for those with one child. More than 40 percent of tax filers with children received the EITC. The Child Tax Credit (CTC) ($50 billion) is a partially refundable tax credit of $1,000 for each child in working families.[7] The CTC provides important benefits to low-income families with children, but a substantial share of the CTC's cost goes to families much higher up in the income distribution.[8] SNAP ($31 billion) provides vouchers for food assistance, and eligibility is generally limited to those with an income below 130 percent of the federal poverty line. In 2017, the average monthly SNAP benefit was $125 per person. In contrast to the tax credits, both working and nonworking families are eligible for SNAP. The other child nutrition programs ($22 billion) include the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) as well as the National School Lunch Program and School Breakfast Program, which provide free and reduced-price school meals.

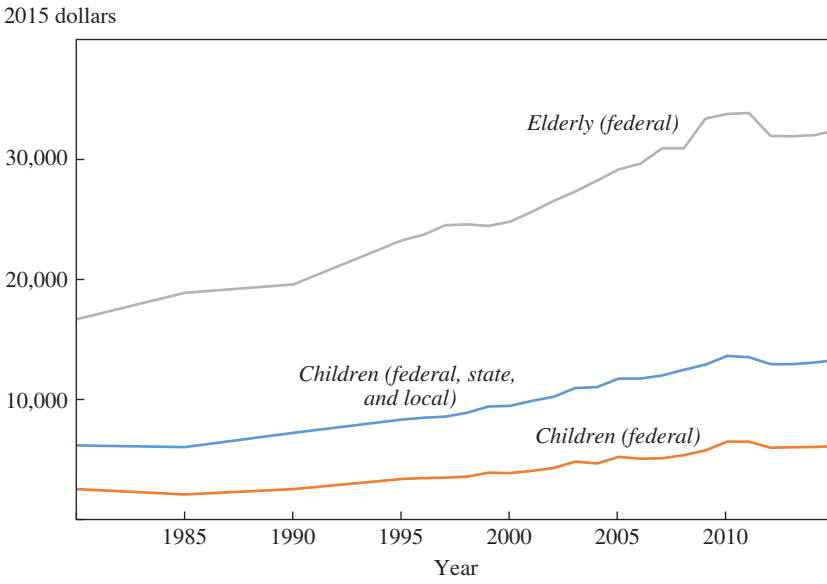
Historically, a cornerstone of the safety net was Aid to Families with Dependent Children (AFDC), a cash welfare program not tied to work. The program was overhauled in 1996 into Temporary Assistance for Needy Families (TANF), block-granting it to states, which were allowed tremendous flexibility in administering the program, with funds frozen at their 1996 level in nominal terms, and strict work requirements and lifetime limits enacted (Bitler and Hoynes 2016). Today, only 2.4 percent of the child-based safety net spending goes to TANF, and the program's reach is low—only 23 percent of children in poor families received TANF cash assistance in 2016, compared with 76 percent in 1996 (Floyd, Pavetti, and

6. There is also a small credit for low-income working families without children; these dollars are excluded from the calculations presented here.

7. The refundable portion of the CTC is known as the Additional Child Tax Credit and is limited to 15 percent of earned income above $3,000. Throughout this paper we present the combined Child Tax Credit and Additional Child Tax Credit and refer to it simply as the CTC.

8. In 2017, the $1,000 credit is phased out starting at incomes of about $80,000 ($120,000) for single parent (married couple) families. The credit is fully phased out at incomes of about $100,000 ($130,000) for single parent (married couple) families. The 2017 tax law reforms the CTC to raise the credit amount and expand the range of income over which families are eligible.

Figure 2. Per Capita Spending on Children and the Elderly, 1980–2015



Sources: Isaacs and others (2017); U.S. Department of Education; authors' calculations.

Schott 2017).[9] Supplemental Security Income (SSI) is another cash welfare program, providing benefits to low-income disabled and elderly persons. After a court decision in 1990, the definition of disability was expanded to allow more children to receive SSI (Duggan, Kearney, and Rennane 2016). Notably, figure 1 shows that cash welfare is a very small share of U.S. social safety net spending on children. Instead, most spending on children consists of public health insurance, tax credits that are linked to paid work (the EITC and CTC), and SNAP.

Figure 2, which is adapted from Isaacs and others (2017), contrasts trends in federal spending on children and the elderly for 1980–2015.[10] To

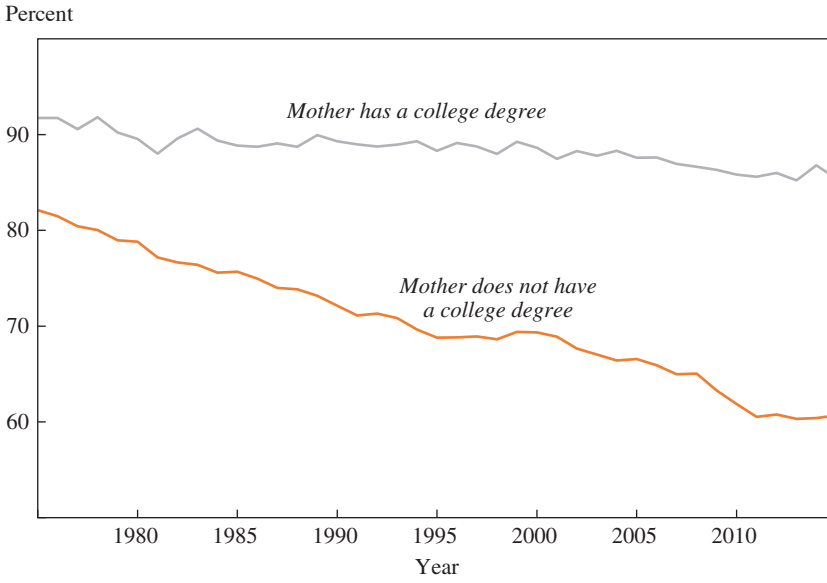
9. TANF accounts for 2.4 percent of all spending items in figure 1. If we limit the set of programs to cash and near-cash direct transfers to households (dropping Medicaid, CHIP, Title I, and special education) and omit the tax reductions (the dependent exemption and the value of untaxed employer-sponsored insurance), TANF still remains below 5 percent of spending.

10. A large share of the federal spending on the elderly is for Medicare and Social Security. Those programs also serve some nonelderly (primarily disabled adults); the trends shown in figure 2 omit the spending on adults. Although much smaller, we also limit SSI to the spending on the elderly (dropping spending on disabled children and adults). Child spending is the total of programs shown in figure 1.

account for trends in population size, each category is presented in terms of spending per capita (for example, per child or per elderly person), in inflation-adjusted 2015 dollars. Per capita federal spending on the elderly is currently $35,000 and has doubled over this period. To be sure, spending on the elderly is not entirely analogous to spending on children—for example, part of spending on the elderly is a pension linked to prior work and payroll taxes, and a higher share comes in the form of health insurance. However, two points to recognize are that spending on the elderly is relatively generous, and it also involves substantial redistribution to the lower-income elderly. Per capita federal spending on children is only about $5,000 a year. When spending on public elementary and secondary schools is included—$11,222 per pupil in the most recent year spent at the state and local levels—total spending on children increases, but a large gap in per capita spending remains. At the end of this period, in 2015, federal spending on children was only 2.1 percent of GDP, compared with more than 9 percent for the elderly. More striking is the significant growth in per capita spending for the elderly alongside the modest spending levels and upward trends for children. This imbalance has implications for future productivity, given the fact that spending on children can be viewed as an investment while spending on the elderly is not.

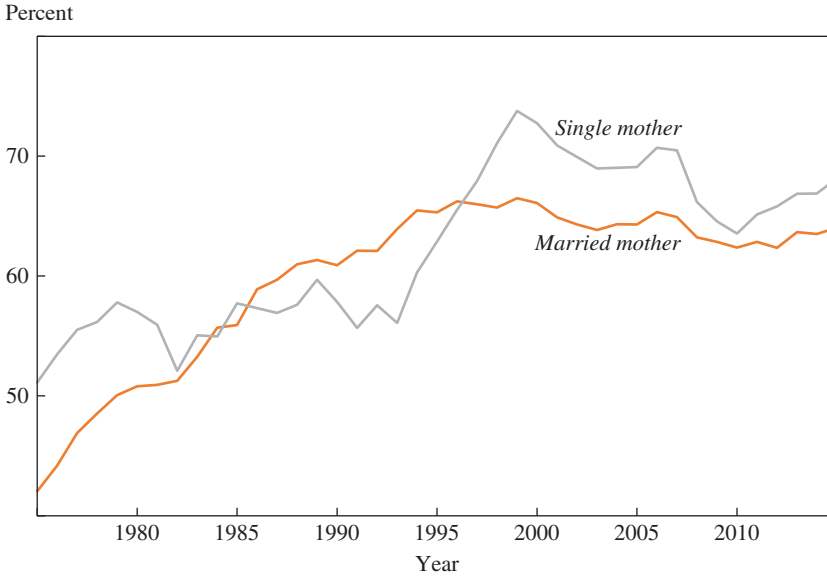
Trends in public spending should be analyzed alongside trends in private resources available to children. By some measures, including parental time with children (proxied by the number of parents in a household) and income, children in lower-income households have stagnant or fewer private resources available. As shown in figure 3, over the past 40 years there has been a marked decline in the share of children living with married parents among children whose mothers have less than a college education; in 2015, only 60 percent of children with mothers without a college degree lived with married parents, compared with 85 percent of children with college-educated mothers. During the same period, large numbers of both single and married mothers joined the workforce, as shown in figure 4. Since 2000, single mothers' labor force participation rate has been nearly identical to that of single childless women (Black, Schanzenbach, and Breitwieser 2017), and above the participation rate of married women with children. However, real wages among workers with low levels of education have been stagnant or declining, as shown in figure 5. As we show in section III, an increasing share of benefits is going to families that combine work with safety net use, and the safety net is supporting families that face stagnant economic opportunities. Finally, along some other dimensions, there have been *positive* changes in the private resources available to

Figure 3. Percentage of Children with Married Parents, 1975–2015



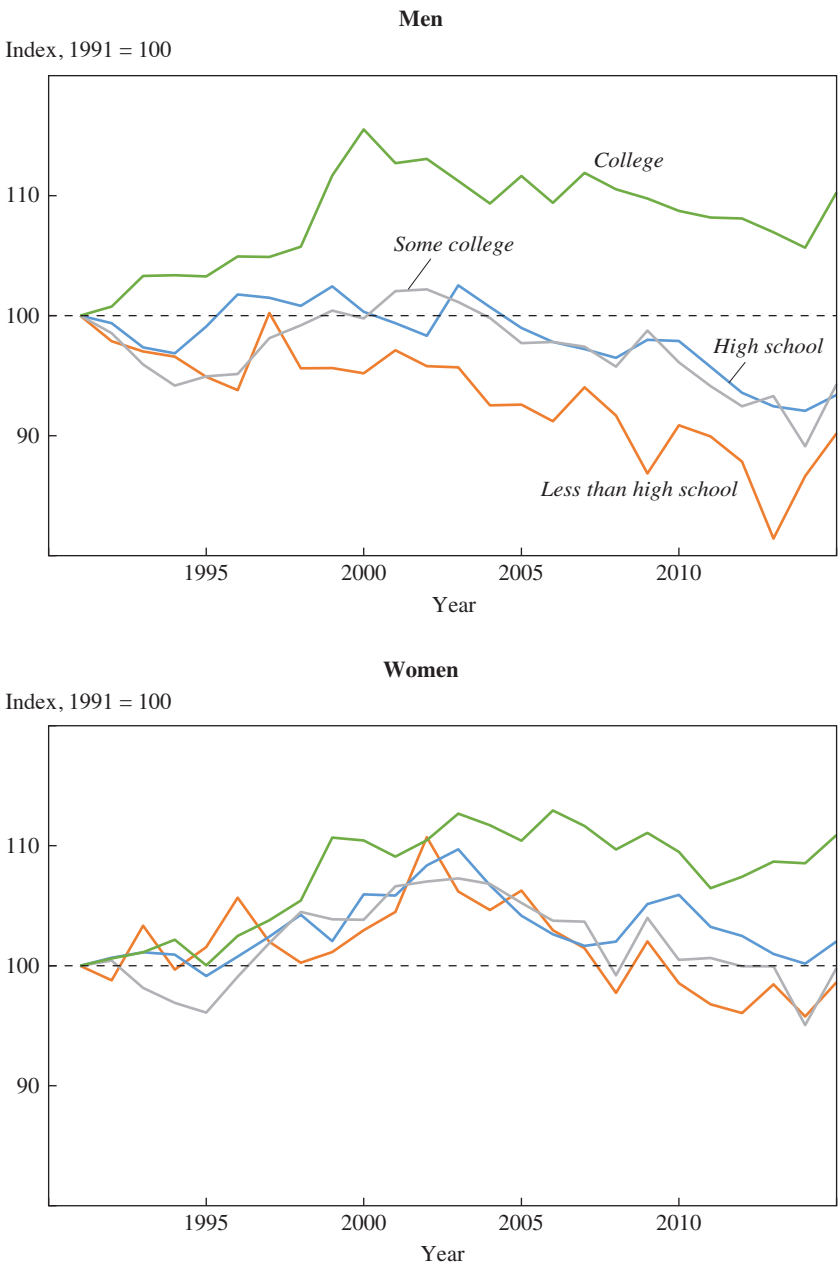
Sources: Current Population Survey, Annual Social and Economic Supplement; authors' calculations.

Figure 4. Percentage of Children with a Working Mother, 1975–2015[a]



Sources: Current Population Survey, Annual Social and Economic Supplement; authors' calculations.
a. The sample is restricted to mothers age 25–54.

Figure 5. Trends in Real Wages of Full-Time Workers, 1991–2015[a]



Sources: U.S. Bureau of Labor Statistics; authors' calculations.
a. The sample is restricted to workers age 25 and above.

children, including a decline in the total number of children per family, and an increase in parental education.[11]

As we proceed below, our analysis focuses on a subset of federal safety net programs with substantial spending on low-income children. We are particularly interested in discussing those programs and policies for which we have evidence on their long-run effects on children. Therefore, in the rest of the paper, we cover Medicaid, EITC, CTC, SNAP, TANF, public housing, and SSI.[12] As shown in figure 1, this captures four of the top five programs in expenditures.

II. Findings from the Recent Literature

In recent years, researchers have made strong advances toward understanding the long-run effects of safety net spending and other early-life events. This research—which has very recently been reviewed by Douglas Almond, Janet Currie, and Valentina Duque (forthcoming)—shows that there are critical times both during the prenatal period and in early childhood that deserve a particular policy focus. This line of inquiry has been based on a large body of literature spanning work on public health, epidemiology, and, more recently, economics that documents important later-life effects of extreme negative shocks on health and mortality—such as famines, wars, and the 1918 flu pandemic. Much of the early work focused on *prenatal* exposure to shocks, and tested David Barker's (1990) "fetal origins" hypothesis. Barker argued that a poor prenatal environment (in particular, inadequate nutrition) "programs" the fetus to be at higher risk of metabolic conditions and disease risk in adulthood. The economic literature subsequently documented that these extreme negative shocks also

11. Over this period, parental educational attainment has increased. Whereas the median mother had only a high school education in the early 1990s, beginning in 1995, the median mother had some college education. Due to these educational attainment changes, the trend for the low education group may partially reflect compositional changes, rather than structural trends. In fact, if we instead reexamine figure 3 for women with below-median (versus above-median) educational attainment, the trends in child living arrangements are much more stable. Throughout the period, about 60 percent of children with a low-educated mother (below median educational attainment) lived with married parents. The increase in employment among low-educated mothers is similar over our period under both measures, but rises slightly less for highly educated mothers using the alternative definition (above median).

12. Below, when we present more detailed data on the CTC, we consider expenditures on the tax credit that go to families with income below 200 percent of the federal poverty line. This allows us to incorporate this relatively large program but to limit it to our population of interest.

have a negative impact on economic well-being—including educational attainment, IQ, and earnings.[13] As the literature has continued to evolve, it has turned to testing milder, commonplace shocks, encompassing positive as well as negative shocks. These studies have further documented the importance of the *postnatal* environment—particularly early childhood—to identify effects, leveraging variation in access to nutrition, maternal stress, exposure to alcohol and tobacco, and environmental toxins and public health interventions. The literature clearly supports the conclusion that relatively mild early-life shocks can have effects on later-life health and labor market outcomes. More recently, this literature has turned to evaluating the effects of the social safety net on long-run outcomes.

To do this work, a number of factors must come together. First, adequate longitudinal data are necessary, including information both about childhood circumstances and adult outcomes. In some cases, the year of birth and the location of birth or residence in early life are sufficient to determine whether the individual had access to a program. In other cases, information on measures or proxies for family income during childhood is also necessary. Much of the pathbreaking work on early-life influences and later-life outcomes has come from countries with extensive individual-level panel data, like Norway and Sweden, but such data are typically harder to come by in the United States.

Because safety net programs typically serve people who need the program when they need it, it is empirically difficult to disentangle the (likely positive) impact of the safety net from the (likely negative) impact of the circumstances that made a family eligible for the program. To overcome this challenge, researchers need a credible research design that allows them to isolate the impact of the program—and that can be implemented with the available data.

Of course, long-term effects can only be measured after an appropriate amount of time passes; this is true broadly across the literature that evaluates the long-term effects of early life events. Before the availability of longer-term outcomes, many studies examined short-term proxy measures such as birth weight—which has been shown to be an important marker of long-run outcomes and which is often more readily available. There is consistent evidence, for example, that links birth weight to cognitive outcomes in childhood (Figlio and others 2014; Bharadwaj, Løken, and Neilson 2013) as well as a wide range of adult outcomes, such as wages, disability, adult chronic conditions, and human capital accumulation (Almond, Currie, and

13. For excellent reviews of the early literature, see Almond and Currie (2011a, 2011b).

Duque, forthcoming). Other studies use educational measures as short-term proxies, such as test scores. As longer-term data become available, many studies have revealed larger long-term effects across a wider variety of measures than the short-run proxies would have implied (Krueger and Whitmore 2001; Ludwig and Miller 2007; Deming 2009; Chetty and others 2011). In particular, outcomes in adulthood need not operate solely though health at birth (Almond, Chay, and Lee 2005; Almond and Currie 2011b). This suggests that a complete analysis of the long-run effects of the social safety net on children requires observing outcomes for affected children when they reach adulthood. Because of the time lag required for measuring long-term outcomes, the evidence we report here is necessarily related to programs that were implemented or expanded two decades ago or earlier. To the extent that these policies have been similar over time, or that the effects measure basic economic channels through which policies flow, these evaluations of older programs are still relevant today. Conversely, if circumstances or policies have changed dramatically, then the inference to today's policies may be more limited.

In the subsections that follow, we present evidence from the four primary types of safety net programs for low-income families, covering in-kind food benefits, tax credits linked to paid work, unconditional cash transfers, and public health insurance.[14] We include studies that produce causal estimates of the impact of the safety net on long-run outcomes, and related work on short- and medium-run effects. As described below, each program type has been evaluated using credible research designs that are capable of identifying the causal impact of program access or participation on a range of outcomes.

II.A. In-Kind Food Benefits: The Supplemental Nutrition Assistance Program

SNAP is a means-tested voucher program designed to supplement low-income families' food budgets. The vouchers are structured to fill the gap between the resources a family has available to purchase food and the resources required to purchase an inexpensive food plan. Eligible families typically have an income below 130 percent of the poverty line. A maximum benefit is extended to those with $0 income, and the benefit is phased out at a 30 percent rate with increases in income (after deductions). Vouchers are paid monthly and can be used to purchase most foods at grocery stores

14. See Almond, Currie, and Duque (forthcoming), Butcher (2017), and Sherman and Mitchell (2017) for other reviews of these studies.

and farmers' markets that are intended to be taken home and prepared. In 2016, 13.6 percent of the population participated in SNAP, and average monthly benefits were $255 per household, or $126 per person. After accounting for the underreporting of benefits, SNAP is estimated to have lifted 3.8 million children out of poverty in 2015 (Wheaton and Tran 2018).

Economic theory predicts that inframarginal participants—that is, those who receive SNAP benefits in an amount less than they would otherwise spend on food, who constitute the vast majority of participants—will treat their benefits like cash. There is some empirical debate about whether SNAP benefits are spent in the same manner as an equivalent cash transfer would be, or if instead the marginal propensity to consume food is higher out of SNAP than from regular income (Hoynes and Schanzenbach 2009; Hastings and Shapiro, forthcoming). In any case, SNAP represents a sizable income transfer to participants and is expected to change the amount or quality of food purchased. Like any means-tested income transfer that is not conditioned on work, there are potential disincentive effects on work effort. Understanding the effect of a program on work is relevant for quantifying the impact on total household financial resources, and also for parental time spent with children. Studies find that such effects for SNAP are small in practice (Hoynes and Schanzenbach 2009; East 2018).

There have been relatively few expansions or other changes in SNAP that yield a credible research design to study the effects of the program. Benefit levels do not vary by geography (except for Alaska and Hawaii), and eligibility is universal and typically is only conditioned on income and assets. One source of variation leveraged by researchers is the program's gradual, cross-county introduction during the 1960s and 1970s. Another source was the temporary exclusion of legal immigrants from the program, a restriction that was adopted in 1996 as part of the welfare reform law and was reversed in 2003.

Using cross-county variation in the timing of the introduction of SNAP and Vital Statistics data on the universe of births in the United States, Almond, Hoynes, and Schanzenbach (2011) find that SNAP reduced the incidence of low birth weight by 7 percent for whites and 5 to 11 percent for blacks. In addition, although results are not statistically significant, point estimates suggest that the introduction of food stamps reduced neonatal mortality. Examining legal immigrants' loss of benefits in the years after welfare reform, Chloe East (2017) finds that parental access to SNAP during pregnancy improves the child's health at birth, as measured by birth weight. She also examines the impact on medium-run health, finding that a child's SNAP access before age five improves the child's parent-reported

health in adolescence. She finds suggestive evidence that SNAP reduces school absences, doctor visits, and hospitalizations—all of which are suggestive of long-term benefits.

Hoynes, Schanzenbach, and Almond (2016) provide direct evidence, finding that childhood access to SNAP improves adult health status and economic outcomes. In particular, individuals with access to food stamps in childhood had better health in adulthood—as measured by a "metabolic syndrome index," which combines measures of obesity, body mass index, and the presence of chronic conditions such as diabetes and high blood pressure. There are similarly positive overall effects on economic outcomes, as measured by a "self-sufficiency index" that includes current earnings and family income, and indicator variables for whether the individual graduated from high school, is currently employed, is currently not living in poverty, and is not participating in TANF or SNAP.

The effects were largest among those who had access at the youngest ages, particularly between birth and age 5, underscoring the importance of providing protection in early childhood (Barker 1990; Heckman 2006). Although health improvements were similar across gender, the economic self-sufficiency improvements were present only for women (with small and statistically insignificant effects for men). The long-term effects were largest for those who spent their childhoods in the most disadvantaged counties.

WIC is another food and nutrition program, providing vouchers for purchases of specific food items (for example, fortified cereal, eggs, cheese, milk, juice, and dried legumes) to pregnant and postpartum women, infants, and children under age 5. Families with an income below 185 percent of poverty are eligible for WIC. Despite the relatively low budget cost of WIC ($6 billion in 2016), the program's reach is significant, especially to the youngest children—about half of births are to WIC recipients (Hoynes and Schanzenbach 2015). There is a large set of studies with robust evidence that WIC benefits for pregnant women lead to improvements in birth weight and infant health. This is suggestive that WIC may also lead to long-run improvements, though this has yet to be tackled in the research.

II.B. Tax Credits Tied to Paid Work: The Earned Income Tax Credit

A large and increasing share of safety net programs are tied to employment. The most important of these programs is the Earned Income Tax Credit. The EITC is available to lower-income families with positive earned income. It is refundable, so when a family's income is too low to generate tax obligations, the family receives a refund check from the Internal Revenue Service. In 2017, a single mother with two children with earnings

between $14,040 and $18,340 (a full-time, full-year, minimum wage worker earns $15,080) would receive the maximum credit of $5,616, fully 40 percent of pretax earnings. In 2015, the average benefit for families with children was $3,189 (Internal Revenue Service 2017). The Child Tax Credit is similar in structure to the EITC but is available to families earning substantially more than the EITC. Also, the CTC is not fully refundable, which limits the ability of lower-income families to benefit from the program (Hoynes and Rothstein 2016). Together, these tax credits represent the largest antipoverty program for children; the EITC and the CTC raised 4.8 million children out of poverty in 2015 (Renwick and Fox 2016).[15]

Because the EITC is only available to families with a positive earned income, the credit is expected to lead to increases in employment, especially among less-skilled workers.[16] The research finds consistent evidence that the EITC leads to increases in employment (Hoynes and Rothstein 2016; Nichols and Rothstein 2016). For example, Bruce Meyer and Dan Rosenbaum (2001) find that the EITC raised employment by more than 7 percentage points for single women with children relative to those without children between 1984 and 1996. As shown by Hoynes and Ankur Patel (forthcoming), the household earnings gain resulting from the increase in employment is as large a component of the increase in household after-tax income as the government outlay from the EITC. This is important because it establishes a strong "first stage" for the effect of the EITC on family resources. More generally, changes in maternal employment may have direct effects on children—which are potentially positive, to the extent that employment brings more income to the family, or which are potentially negative, to the extent that the child attends low-quality child care or receives fewer time investments from his or her parents. In sum, because the EITC provides both a direct income transfer to families and a boost to maternal employment, studies of the EITC are measuring a dual "treatment."

A recent and growing body of literature uses the increase in after-tax income generated by the EITC to examine effects on downstream outcomes. These studies use quasi-experimental approaches leveraging legislated expansions of the EITC. Many studies focus on the EITC's 1993

15. There is little research on the CTC, though one would expect similar effects as for the EITC where the two programs overlap. All the studies of the short- and long-term benefits of the tax credits come from an analysis of the EITC.

16. One exception is secondary earners married to low-income primary earners; hours of work are predicted to fall for those secondary earners (Eissa and Hoynes 2004).

expansion, when the maximum credit more than doubled for families with two children and increased by more than 40 percent for those with one child. This policy variation is leveraged using a difference-in-differences approach, with comparisons across time and family size. The EITC has been expanded several other times (in 1986, 1990, and 2009), providing additional variation for researchers. Other researchers use the schedule of the credit—which is phased in at low earnings levels, is level across some income range, and then is phased out above a higher earnings level, providing variation that can be used for research—to estimate its effects. In addition, 29 states and the District of Columbia have adopted state add-on EITC programs, providing another source of variation.

Several studies find that the EITC leads to increases in infant health, including an increase in average birth weight (Baker 2008; Strully, Rehkopf, and Xuan 2010). Hoynes, Doug Miller, and David Simon (2015) find that a $1,000 increase in after-tax income due to the EITC leads to a 2 to 3 percent reduction in low-birth-weight births. William Evans and Craig Garthwaite (2014) find that the EITC leads to improvements in maternal health, including reducing the incidence of risky biomarkers—such as measures of inflammation, high blood pressure, and elevated cholesterol—and improving mental health, suggesting an income pathway for a reduction in stress.

There are also several studies that document a link between the EITC and cognitive and human capital outcomes. Gordon Dahl and Lance Lochner (2012, 2017) use an instrumental variables approach leveraging the EITC expansions and find that a $1,000 increase in a family's income due to the EITC leads to an increase in combined mathematics and reading test scores of 0.04 standard deviation. Raj Chetty, John Friedman, and Jonah Rockoff (2011), using the nonlinearity of the EITC schedule and administrative data from the New York City public schools, find that a $1,000 increase in income due to the EITC leads to an increase in test scores of 0.06 to 0.09 standard deviation.[17] Jacob Bastian and Katherine Michelmore (2018) find that a larger EITC during childhood leads to an increase in high school completion, college attendance, and employment in young adulthood. These effects are more important, they find, for the EITC received in the teenage years. Additionally, Day Manoli and Nicholas Turner (2018)

17. In a related paper, Milligan and Stabile (2011) use variation across Canadian provinces in the generosity of child tax benefits over time, and find quantitatively similar effects on children's cognitive test scores. They also find positive contemporaneous effects on mental health and some physical health outcomes.

and Michelle Maxfield (2013) look at the contemporaneous effects of a more generous EITC on education and the transition to college. Both studies find that the impact is larger for children affected at younger ages, while Maxfield also finds larger effects for boys and minority children. Manoli and Turner use the universe of federal tax records and the nonlinearity of the EITC's schedule to examine the EITC's effect in the senior year of high school on college attendance. They find that an additional $1,000 EITC leads to an increase in college attendance of 2 to 3 percentage points. Although direct evidence on longer-term outcomes beyond educational attainment is limited, we would expect that the increase in human capital shown in the literature will result in better adult economic and health outcomes, similar to those found for other interventions.

II.C. Unconditional Cash Transfers

Beginning in 1935, the AFDC program provided cash assistance to poor families—primarily single-mother families—with children. There is little evidence on the long-run effects of the AFDC program, though Currie and Nancy Cole (1993) find that it led to improvements in birth outcomes. Federal welfare reform took place in 1996 and, as discussed above, replaced AFDC with TANF, leading to a reduction in funding and a shrinking role for cash assistance. A large body of literature examines the effects of welfare reform on short-term outcomes, such as maternal employment, family income, and health (Grogger and Karoly 2005; Moffitt 2003; Ziliak 2016). However, the evidence on the long-run effects of providing cash transfers to needy families and the long-term impact of welfare reform is limited. The best evidence we currently have on the effects of the welfare policies on children is from research syntheses that combine the data in several state welfare experiments in the years preceding federal welfare reform. For example, the results from research by Greg Duncan, Pamela Morris, and Chris Rodrigues (2011) imply that an additional $1,000 in family income increases student achievement by 0.05 to 0.06 standard deviation—a similar magnitude as the effects of the EITC described above.[18] This achievement gain would be predicted to raise subsequent earnings by about 1 percent.

18. These results come from pooling data across randomized experiments across U.S. states (and one from Canada), where one group received the welfare reform program and the other the preexisting AFDC program. The impact of income on child outcomes is identified using variation across different programs and an instrumental variables approach (the instrument is random assignment across states).

Before AFDC, some states operated cash welfare programs for families with children—termed "mothers' pension" programs. Anna Aizer and others (2016) use unique historical data to evaluate the effect of child access to cash welfare on a wide range of long-term outcomes. The researchers digitize records from social service agencies in many states to determine who either applied for or received benefits, and they use a research design that compares children in families that were accepted into the program with children in families that were rejected. Using data from the military, death records, and several state historical censuses, they find that receipt of cash assistance has a host of positive effects, including reducing the probability of being underweight by half (the data are only available for men), increasing educational attainment by 0.4 year, and living an additional 1.5 years of life. There is suggestive evidence that the effects may be larger for children exposed at younger ages. Although this evidence, from more than 100 years ago, may have limited applicability to the benefits from current programs, it provides a unique and comprehensive set of findings measuring the impact of providing additional cash resources to disadvantaged children over the very long run.

An interesting set of studies sheds additional light on the impact of additional cash income to disadvantaged populations. Randall Akee and others (2010) trace the effects of a casino opening among the Eastern Band of Cherokee Indians in North Carolina. Using the casino revenues, the tribe initiated "per capita payments"—a sort of universal basic income provided to tribe members. Using variation across cohorts over time, compared with a geographically proximate control group, the researchers found that an additional $4,000 per year in income to the poorest households led to sizable improvements in educational attainment and a reduction in criminal activities, with no adverse impact on employment. Additionally, the cash transfer led to more parental investment and positive interactions between the parent and child, and beneficial effects on children's emotional and behavioral health and personality traits during adolescence (Akee and others 2018).

II.D. Public Health Insurance: Medicaid

Medicaid provides public health insurance to children (and others) in low-income families. Originally, only families receiving cash welfare were eligible for Medicaid, but federal law led to significant expansions in the 1980s and 1990s (Gruber 1997). Though states were required to meet particular expansion targets (for example, the Omnibus Budget Reconciliation Act of 1989 required states to cover pregnant women and

children under age 6 in families below 133 percent of the federal poverty level), the states took very different expansion paths—leading to variation in coverage across states, time, family income, and child age. A large body of literature takes advantage of these expansions, using difference-in-differences models to investigate the long-run effects of access to health insurance and medical care. Another approach takes advantage of the fact that the Medicaid expansion legislation stipulated that states had to expand coverage only to children born after September 30, 1983, creating a sharp increase in Medicaid eligibility that is used in a regression discontinuity design. For example, poor children born in October 1983 experienced five more years of Medicaid eligibility compared with poor children born in September 1983 (Card and Shore-Sheppard 2004; Wherry and Meyer 2016). A few studies discussed below examine the introduction of Medicaid in 1965, which allows for investigation of the effects over a much longer period.

Using the significant policy expansion in the 1980s and 1990s, work on the short-term effects of Medicaid eligibility found sizable effects on infant health, including reduced infant mortality and low birth weight (Currie and Gruber 1996). Infant health effects were stronger when expansions were restricted to low-income women, compared with broader expansions. By expanding eligibility and breaking its link to AFDC, the reforms also resulted in decreased AFDC participation and an increase in employment among affected mothers (Yelowitz 1995).

A large body of literature has recently emerged that examines the effects of childhood exposure to Medicaid on health and economic outcomes in the teenage years through young adulthood. Currie and Hannes Schwandt (2016) find that during this period, mortality for infants and children declined overall, and inequality in mortality also fell (in contrast to the trends among older adults). Currie, Sandra Decker, and Wanchuan Lin (2008) find that Medicaid coverage in early childhood (age 2–4) leads to an improvement in self-reported health in later childhood. Laura Wherry and Meyer (2016) find that additional Medicaid in late childhood (age 8–14) leads to a 19 percent reduction in mortality rates from internal causes among blacks age 15–18. They do not find any significant mortality change among whites, or nonteenage blacks, although death rates for children older than 1 and younger than 15 are quite low. Additionally, Wherry and others (2018) find that Medicaid eligibility during childhood is associated with fewer hospitalizations and emergency room visits in early adulthood for blacks, with the largest reductions for visits related to chronic conditions and among individuals living in low-income neighborhoods. Miller and

Wherry (2018) find that Medicaid eligibility between conception and age 1 results in lower rates of chronic conditions and fewer hospitalizations related to diabetes and obesity in young adulthood. East and others (2017) find that Medicaid's health benefits extend to the next generation: Children of mothers who had more exposure to Medicaid in their childhood themselves go on to have healthier infants.

The positive effects of Medicaid are not limited to health outcomes. David Brown, Amanda Kowalski, and Ithai Lurie (2015) use administrative tax data and find that increased exposure to Medicaid during childhood increases education and earnings through age 28. Miller and Wherry (2018) find that expansions in Medicaid between conception and age 1 lead to increases in high school graduation. These results are also supported by Sarah Cohodes and others (2016), who find that increased Medicaid eligibility during childhood reduces high school dropout rates and increases college completion, and Phillip Levine and Schanzenbach (2009), who find it increases standardized test scores in fourth and eighth grade.

Because these policy expansions have been relatively recent, the population of treated people is still in young adulthood. Examining the mid-1960s introduction of Medicaid allows for a longer-run evaluation of health insurance. Using the timing of the rollout of Medicaid across states, Michel Boudreaux, Ezra Golberstein, and Donna McAlpine (2016) find that increases in Medicaid exposure between birth and age 5 lead to reductions in chronic conditions (particularly high blood pressure) in adulthood. Using cross-state variation in AFDC rules and the introduction of Medicaid, Andrew Goodman-Bacon (2016) finds that additional childhood exposure reduces adult mortality and disability and increases adult employment.

Overall, this recent research on Medicaid documents a strong link between greater access to public health insurance during childhood and improved health and economic well-being in adulthood. There is much more to learn, including the mechanisms for these improved long-run effects.

II.E. Implications of Safety Net Research

Overall, the literature across programs finds positive long-run benefits of having access to safety net programs in childhood, leading to improvements to both health and economic productivity in adulthood. Before the emergence of this recent literature, the discussion of the costs and benefits of the social safety net was focused on the narrow lens of the short run. Many of the long-run benefits are private (such as improved own earnings

and own health), though public benefits are also present, due to increased taxes and decreased health-related government outlays. Although the literature does not suggest that the benefits "pay for themselves" in the long run, these programs nonetheless have substantial positive external benefits that have been quantified. Moreover, many additional aspects have not yet been quantified—for example, effects on criminal activity and longer-term effects on health—which have large public components and may further increase benefits.

The literature points to findings that could be helpful in considering how to redesign the social safety net. First, in the limited number of cases that have explored differential returns by child age of exposure, the evidence points to greater long-run returns to exposure in early childhood than later childhood. Second, the benefits are larger for more disadvantaged groups, especially African Americans. One caveat of this finding, however, is that it can be difficult to disentangle whether the larger effects for more disadvantaged groups are due to higher rates of *exposure* to these programs or larger *returns* to exposure. Other dimensions—such as whether long-run returns differ across cash transfers, in-kind benefits, or health insurance—are important to ascertain; but the evidence is still too incomplete to be able to make such comparisons to inform better policy design.

III. The Recent Evolution of the Safety Net for Children

Having summarized the recent findings documenting long-run benefits of childhood exposure to the social safety net, we now examine in more detail what population these core programs are serving and how this has changed over time. In particular, we use administrative data to examine aggregate trends in social safety net spending, how the spending varies across working and nonworking families, and how it varies across the income distribution. We do this for seven programs—Medicaid, EITC, CTC, SNAP, AFDC/TANF, SSI, and public housing—and our analysis covers the period 1990–2015. In light of the evidence presented in the previous section, not only may these trends have implications for the welfare of children, families, and the economy today, but they may also have an impact on individuals and the aggregate economy in the long run.

The analysis of trends in safety net spending for different subgroups is complicated by the well-documented fact that social safety net income is increasingly underreported in household surveys (Meyer, Mok, and Sullivan 2009, 2015). Because this underreporting has increased over time, relying on household survey data may be particularly unsuitable for

examining trends in the social safety net. Therefore, our analysis relies as much as possible on program-specific administrative data.[19] In general, we begin with administrative aggregates and identify the total spending on families with children. For programs that serve populations beyond families with children, we use available administrative data to identify the amount that goes to families with children.[20] We then apportion total child spending into four groups based on the share going to those families with incomes less than 50 percent poverty, 50–99 percent poverty, 100–149 percent poverty, and 150–199 percent poverty.[21] We also apportion total child spending into the amount going to families with earned income and families without earned income. Unlike the data given in figures 1 and 2 (which contain only federal data), our administrative aggregates for state and federal programs (AFDC/TANF and Medicaid) consist of the combined federal and state spending.

To construct the spending across the four income-to-poverty bins requires a definition of family resources and the poverty threshold (a family is poor if resources are less than the poverty threshold). For the poverty threshold, we use the supplemental poverty measure (SPM), projected back to 1990 using methods developed by Christopher Wimer and others (2013). The SPM threshold bases needs on a broader array of necessary expenditures and makes other technical improvements relative to the official poverty measure (which is based on food costs alone). For reference, the SPM threshold for a family with two adults and two children in 2016 is $26,104, compared with $24,300 for the official poverty threshold. We

19. Administrative data are not perfect. They are generated as part of program administration and as such often have limited demographic information and only capture family members and family resources that are part of eligibility and benefit determination. The advantage of household survey data is that they provide a more comprehensive picture of the household.

20. To be more specific, EITC, CTC, SNAP, TANF, and affordable housing provide benefits to "family units"—in our case, families with children. Two programs, Medicaid and SSI, provide benefits targeted to particular individuals. We count spending on the entire family (parents and children) for the family unit programs and count spending for the children for Medicaid and SSI. For more detail, see the online appendix; the online appendixes for this and all other papers in this volume may be found at the *Brookings Papers* web page, www.brookings.edu/bpea, under "Past BPEA Editions."

21. The CTC extends to families earning far above 200 percent of the federal poverty line—we estimate that almost 40 percent of the $54 billion in CTC spending in 2015 went to families above 200 percent of the federal poverty line. Among the other social safety net programs, little or no spending goes to families above 200 percent of the federal poverty line. To maintain our focus on programs targeting the low-income population, throughout our analysis in this section we limit CTC spending to families below 200 percent poverty.

define resources to be earned income plus cash transfers plus in-kind transfers (excluding Medicaid) minus taxes (but including the EITC and CTC)—essentially after-tax and transfer income, following Marianne Bitler and Hoynes (2016) and Bitler, Hoynes, and Elira Kuka (2017). This definition of resources is aligned with—though not identical to—the definition of resources in the SPM as measured by the U.S. Census Bureau since 2011.[22] However, each administrative data source provides a different subset of these resource elements.

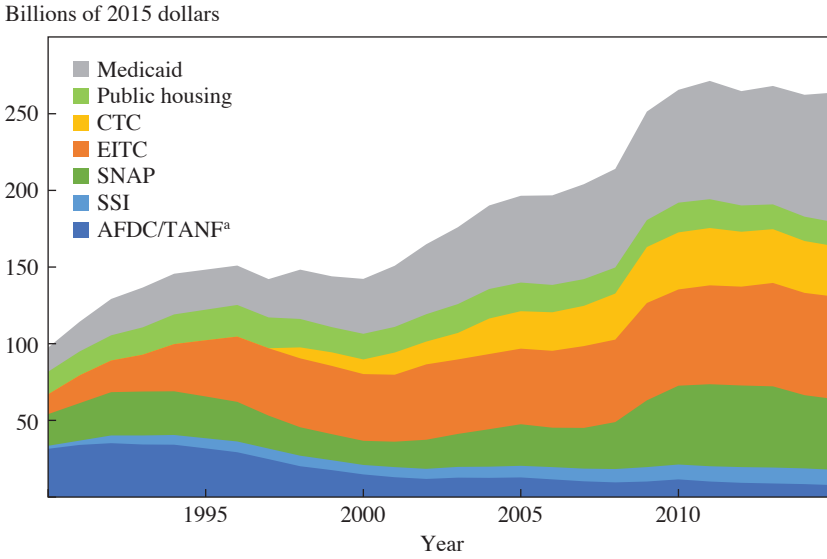
We come as close as we can to measuring after-tax and transfer income consistently across the administrative data sources, imputing missing elements in some cases. Note that poverty is typically defined based on annual resources. Although the EITC and CTC measures contain annual income data, the administrative data for SNAP and AFDC/TANF only measure monthly income, which we then use to approximate annual income by multiplying by 12. We are able to apportion spending into the four poverty and two earnings groups, relying solely on administrative data for SNAP, EITC, CTC, and AFDC/TANF. For the remaining three programs (Medicaid, SSI, and public housing), no suitable administrative data are available; we instead use the Current Population Survey (CPS) to apportion aggregate spending into the groups. For more detail on our approach, see the online appendix.

Figure 6 plots the real aggregate spending on families with children between 1990 and 2015, by program.[23] Overall total spending is increasing, from under $100 billion in 1990 to about $270 billion in 2015 (in real 2015 dollars). However, the overall trend masks substantial differences across individual programs. Cash welfare (not tied to work) for families with children declined substantially after the 1996 federal welfare reform; cash assistance through AFDC totaled $34 billion in 1990, compared with $8 billion in 2015 under TANF. In contrast, the introduction of the CTC and expansion of both tax credits (EITC and CTC) have led to large increases

22. The SPM resource measure subtracts medical out-of-pocket expenditures and work-related expenses (including child care and other expenses). These elements are not measured in the administrative data and thus excluded from our resource measure. Additionally, each of our administrative data sources covers different income and transfer measures. For example, the tax data that we use for the EITC and CTC do not include any nontaxable income sources (such as SNAP); and the SNAP administrative data do not include measures of tax credits (such as the EITC and CTC). We make an effort to calculate resources consistently across sources; see the online appendix for details.

23. Here, and throughout the rest of the paper, we limit CTC spending to that going to families with income below 200 percent of poverty.

Figure 6. Government Spending on Children, by Program, 1990–2015



Sources: Various administrative sources (see the online appendix); authors' calculations.
a. AFDC became TANF after the 1996 welfare reform.

in spending—from $12 billion in 1990 (for the EITC) to about $100 billion in 2015 for the combined EITC and CTC.[24] SNAP spending had been fairly consistent during the first two decades of the time series, before increasing sharply during the Great Recession. Medicaid spending has also increased substantially during this 25-year period, reflecting the policy expansions that led to increases in health insurance coverage among children. Housing assistance and SSI, by contrast, have remained fairly small contributors to overall federal spending on children. In sum, the composition of the social safety net for children has changed substantially during this period. In 1990, the majority of spending was received by families with children receiving cash welfare.[25] Today, there is minimal unconditional cash welfare spending; instead, the vast majority of public expenditures are for tax credits tied to paid work and health insurance.

24. In 2015, the total CTC cost was $54 billion, and the cost limited to those with income below 200 percent of poverty was $33 billion.

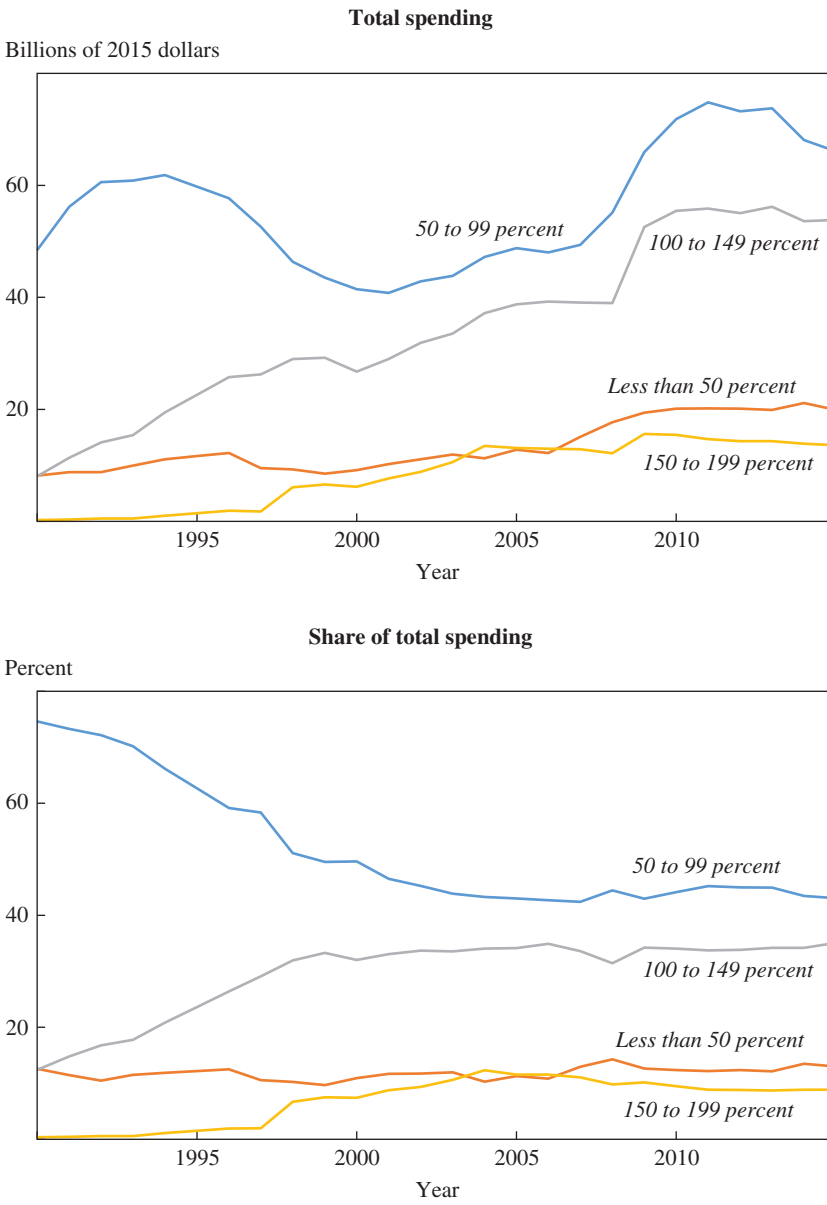
25. Before welfare reform, Medicaid was limited to families receiving cash assistance (AFDC or SSI).

To further investigate these changes, we next examine how social safety net spending has changed across the income distribution. To do this, we apportion total spending in each program into four bins of after-tax and transfer income relative to the SPM poverty threshold (less than 50 percent, 50–99 percent, 100–149 percent, 150–199 percent) and sum up across the programs. Figure 7 presents the tabulations based on spending on SNAP, EITC, CTC, and AFDC/TANF. We limit our analysis to these four programs because apportioning into poverty (and earnings) groups is possible using only administrative data. Online appendix figure 1 presents a comparable figure that also includes public housing, SSI, and Medicaid (where apportioning into groups relies on the CPS). In the top panel, we plot aggregate spending (by poverty category) over time in real 2015 dollars; and in the bottom panel, we plot the share of total spending each year going to each of the four poverty categories. These figures show that overall spending has increased most dramatically for families between 100 and 149 percent of the poverty line, from less than $10 billion in 1990 to $54 billion in 2015. Spending directed to families between 150 and 199 percent of poverty has also notably increased, from essentially $0 in 1990 to $14 billion in 2015. Spending on families between 50 and 99 percent of poverty dropped in real terms from 1995 to 2002, then increased sharply during the Great Recession before coming down again in recent years. The bottom panel shows that the share of the social safety net going to families with children living in poverty (particularly, 50–99 percent poverty) has declined substantially during this period; the share of spending on families with income below the poverty line has fallen, from 87 percent in 1990 to 56 percent in 2015. This has been replaced by gains in the share going to families with income at 100–149 percent poverty, and to a lesser extent those at 150–199 percent poverty.

The qualitative findings are similar for the results on the full set of seven programs (online appendix figure 1). Although there are gains in the level of spending in each income-to-poverty group, the share of spending for families below the poverty threshold has fallen steeply.

Another lens that can be used to examine this change is to apportion spending to families with earned income compared with families without earned income. We present those results (excluding Medicaid, SSI, and public housing) in figure 8 (and with these programs, in online appendix figure 2). These striking results show that virtually all the gains in spending on the social safety net for children since 1990 have gone to families with earnings (figure 8, top panel). In real terms, spending on families without earnings has fallen, from $45 billion in 1990 to $33 billion in 2015. The

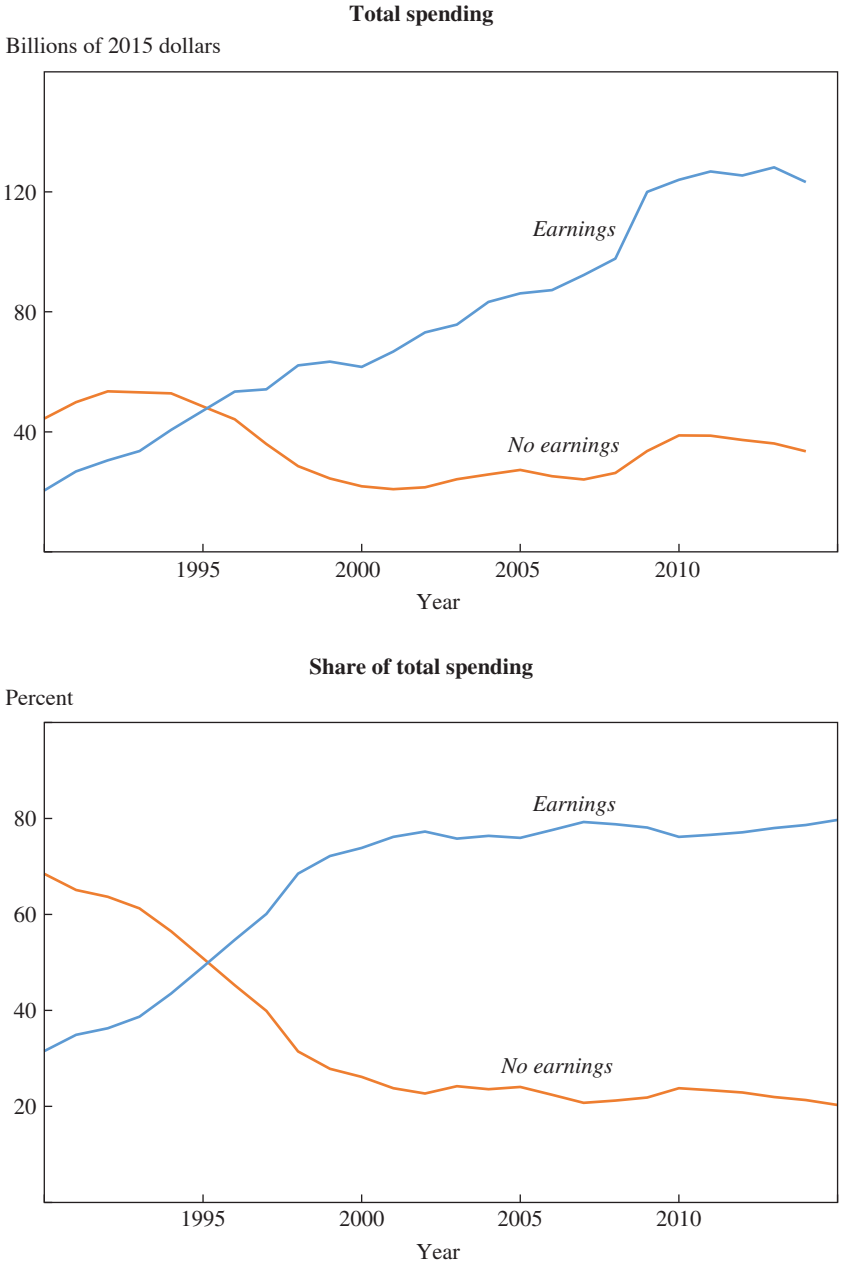
Figure 7. Government Spending on Children, by Family Income, 1990–2015[a]



Sources: Various administrative sources (see the online appendix); authors' calculations.

a. Programs include SNAP, AFDC/TANF, EITC, and CTC. The line captions denote family income as a percentage of the supplemental poverty measure.

Figure 8. Government Spending on Children, by Parental Earnings, 1990–2015[a]



Sources: Various administrative sources (see the online appendix); authors' calculations.
a. Programs include SNAP, AFDC/TANF, EITC, and CTC.

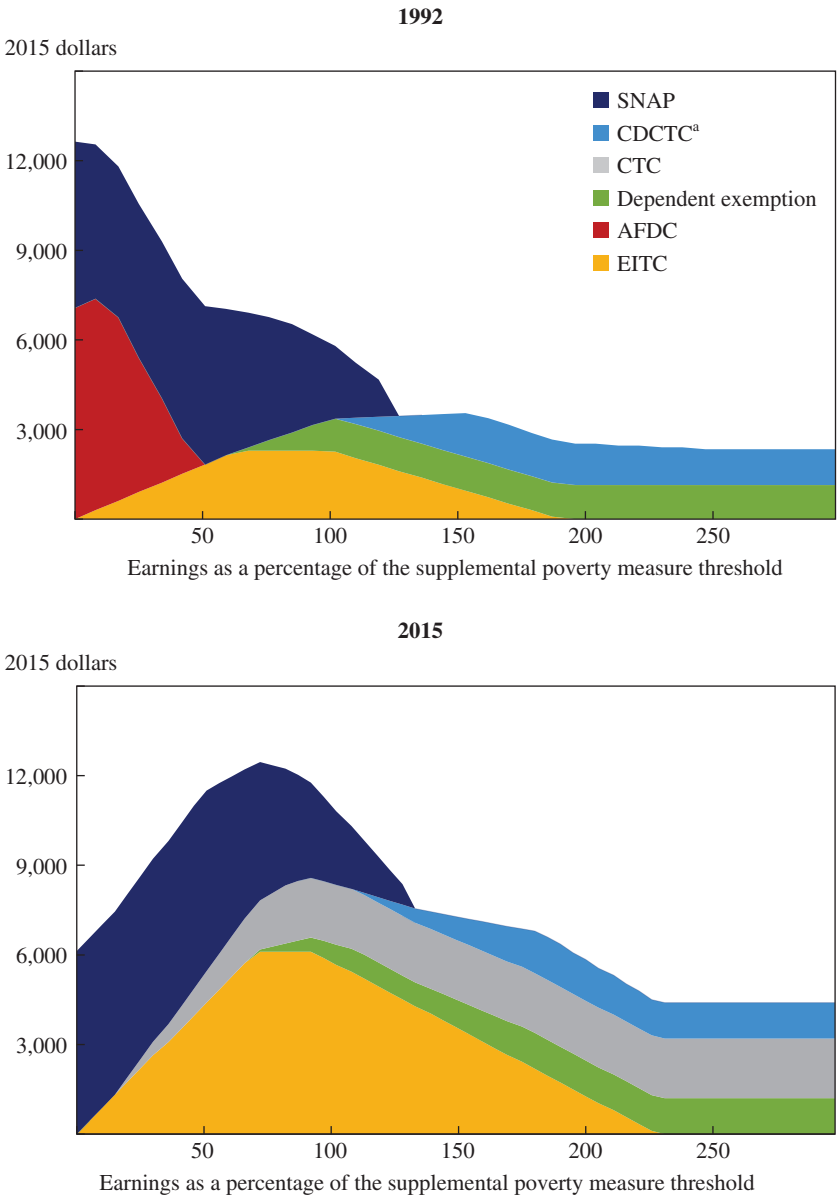
share of total spending going to families without earnings has fallen even more—from almost 70 percent of spending in 1990 to 20 percent in 2015 (figure 8, bottom panel). The same patterns are evident for the full set of seven programs (online appendix figure 2).

Figures 7 and 8 show that the distribution of spending has changed substantially over time—away from the lowest income levels and away from nonworkers. Part of this is the result of the contraction of some programs (for example, AFDC/TANF) and the expansion of others (EITC and CTC). Figure 9 provides a summary of the policy changes between 1992 (top panel) and 2015 (bottom panel). Each figure shows the sources of support for a hypothetical family consisting of a single mother with two children. We simulate the benefits for a range of annual earnings; all benefits and earnings are in 2015 dollars.[26] In 1992, welfare reform had not yet occurred, the EITC was quite small, there was no CTC, and the benefits were targeted at the bottom of the earnings distribution. In 2015, in contrast, AFDC (now called TANF) is no longer an entitlement (so it is excluded from the figure), the EITC had expanded, the CTC had been introduced, and SNAP remained much the same. On net, resources shifted away from the lowest earnings levels and moved up the income distribution. These illustrative policy changes are borne out in the empirical analysis shown in figures 7 and 8.

A natural question to ask is to what extent are the trends in spending across poverty and work categories (figures 7 and 8) driven by changes in the number of children across these groups. These changes may be a direct result of the changes in the policies illustrated above, as well as other factors. However, the administrative data do not allow for this measurement, so counting the number of children by poverty group (or by parental work status) requires using CPS data, which are known to contain substantial measurement errors. Nonetheless, figure 10 presents the percentage of children in each of the poverty groups, using CPS data from 1990 to 2015. The percentage of children below 50 percent of poverty has remained quite steady. The share in 50–99 percent poverty dropped sharply in the 1993–2000 period due to welfare reform, the EITC expansion, and the rise in employment (Meyer and Rosenbaum 2001; Grogger 2003), and slightly trended up before falling at the end of the period. We can use the poverty counts underlying figure 10 (and, for earnings, figure 4) and convert the spending in a poverty group (or earnings group) into spending per number of children in that group.

26. These figures exclude income taxes paid. AFDC benefits are calculated under the rules of the state of Colorado.

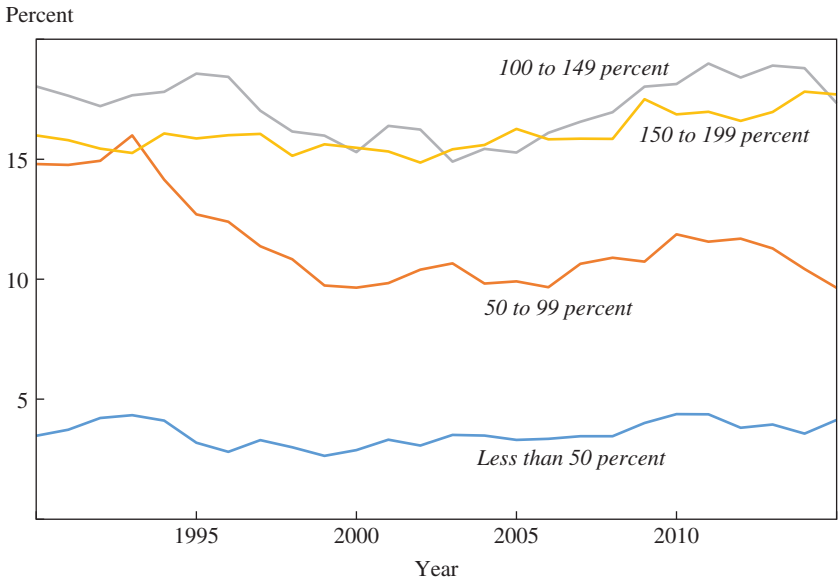
Figure 9. Tax and Transfer Benefits for Universally Available Cash and Near-Cash Programs for a Single Adult with Two Children in Colorado, 1992 and 2015



Sources: Steurle (2015), data provided by Caleb Quakenbush; Internal Revenue Service; Tax Policy Center; U.S. House of Representatives, Committee on Ways and Means, Green Book; U.S. Department of Agriculture; authors' calculations.

a. CDCTC stands for the Child and Dependent Care Tax Credit.

Figure 10. Percentage of Children in Supplemental Poverty Measure Bins, 1990–2015[a]

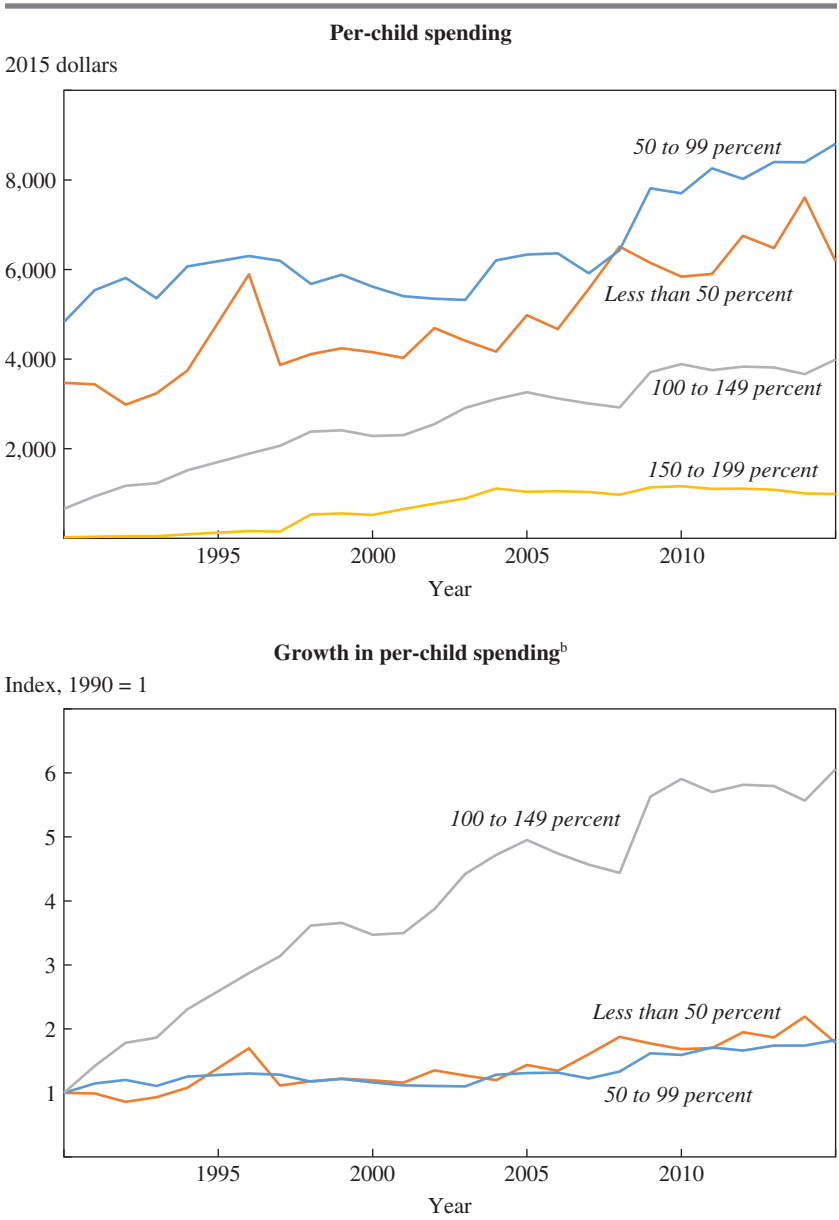


Sources: Current Population Survey, Annual Social and Economic Supplement; authors' calculations.
a. The line captions denote family income as a percentage of the supplemental poverty measure.

As shown in the top panel of figure 11, per-child spending in all the income-to-poverty groups exhibits a steady upward trajectory, particularly for the highest income-to-poverty groups—for example, from under $1,000 in 1990 to more than $4,000 in 2015 for those between 100 and 149 percent of poverty (in real 2015 dollars). The trends for the lower two groups are quite flat, by comparison, except for increases during the Great Recession and its aftermath. This is particularly apparent when the trends by poverty group are expressed relative to their 1990 levels. The bottom panel of figure 11 shows the relatively small changes for the lower poverty groups in per capita spending compared with the sixfold increase for those with incomes between 100 and 149 percent (in fact, we had to omit the relative trend for the highest income group because it increases 45 times over this period, from a very low baseline in 1990).

As shown in figure 4, children are much more likely to live in families with working parents. This is important to take into account when viewing the trends over time in spending by earnings group (figure 8). Figure 12 presents per capita spending by earnings group in levels (top panel) and

Figure 11. Per-Child Government Spending on Children, by Family Income, 1990–2015[a]

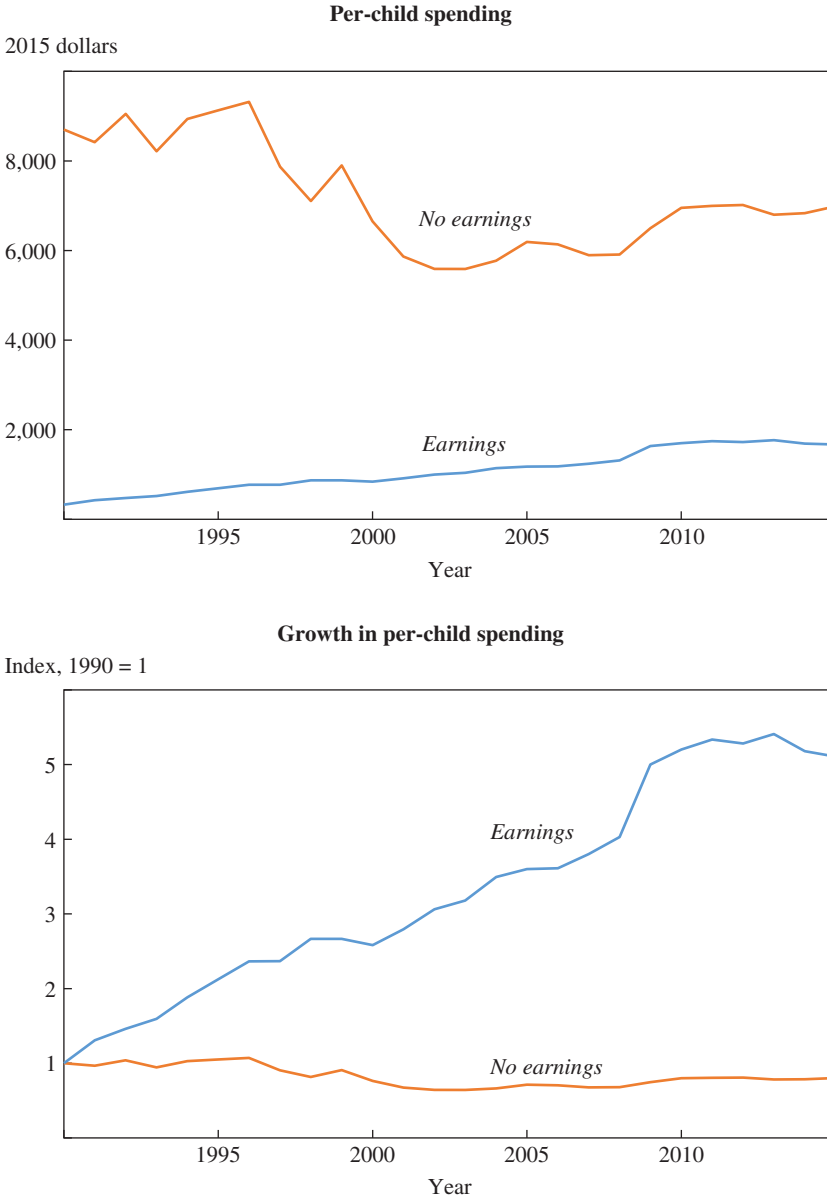


Sources: Various administrative sources (see the online appendix); authors' calculations.

a. Programs include SNAP, AFDC/TANF, EITC, and CTC. The line captions denote family income as a percentage of the supplemental poverty measure.

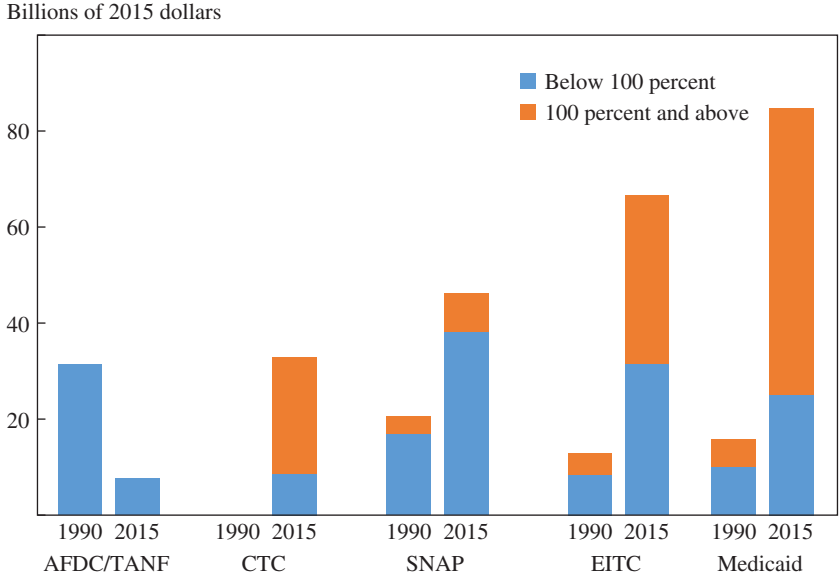
b. The "150 to 199 percent" line is omitted from this panel due to its very high growth rate. (The value in 2015 relative to 1990 is 45.)

Figure 12. Per-Child Government Spending on Children, by Parental Earnings, 1990–2015[a]



Sources: Various administrative sources (see the online appendix); authors' calculations.
a. Programs include SNAP, AFDC/TANF, EITC, and CTC.

Figure 13. Government Spending on Children, by Poverty Status, 1990 and 2015[a]



Sources: Current Population Survey, Annual Social and Economic Supplement; various administrative sources (see the online appendix); authors' calculations.

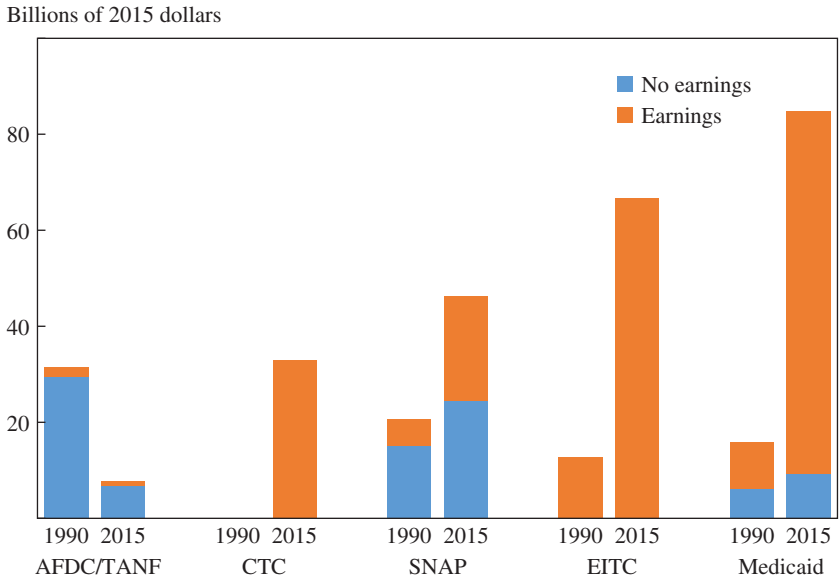
a. The legend captions denote family income as a percentage of the supplemental poverty measure.

relative to 1990 (bottom panel). These figures clearly show that the spending per child has increased dramatically for children in families with earnings (increasing fivefold over this period) compared with a small decline in per capita spending for children without working parents.

To gain more insight into how these changes in the social safety net break down along the different programs, figure 13 presents spending for those below poverty (pooling less than 50 percent and 50–99 percent) and above poverty (pooling 100–149 percent and 150–199 percent) in 1990 and 2015, program by program. This figure reveals several important facts. Welfare reform and the decline in unconditional cash assistance are fully felt by those with the lowest incomes. More than half the increased spending for the EITC and more than three quarters of the increased spending for the CTC goes to those with incomes between 100 and 199 percent of poverty. Most of the increases in Medicaid spending are also going to those above poverty. Figure 14 shows that, across each program, the increases in spending are going to those with earned income.

Ours is not the first study to examine the evolution of the social safety net for children and families. However, to our knowledge, we are the first

Figure 14. Government Spending on Children, by Parental Earnings, 1990 and 2015



Sources: Current Population Survey, Annual Social and Economic Supplement; various administrative sources (see the online appendix); authors' calculations.

to rely almost exclusively on administrative data to analyze data by poverty status and work status. For example, Robert Moffitt (2015), in his presidential address to the Population Association of America, presents similar calculations by poverty status when he uses the Survey of Income and Program Participation to apportion spending into poverty bins. The Congressional Budget Office (2013), in its analysis of the distribution of taxes and spending across income quintiles, uses the Internal Revenue Service's Statistics of Income Public Use File (for taxable transfers, EITC, CTC, and other taxes—as we do) but uses the CPS for nontaxable transfers. Meyer and Nikolas Mittag (2015) show that relying on household surveys such as the CPS entails important misclassifications of the level and composition of families defined as poor. Isaacs and others (2017) use the Urban Institute's Transfer Income Model to adjust for underreporting of transfers, but their study focuses on aggregate trends and does not show the results by poverty or work status. In online appendix figure 3, we compare the CPS and administrative estimates of the share of social safety net spending by poverty group. The CPS shows much higher amounts of spending on the above-poverty group than do the administrative data, which is consistent with underreporting among lower-income survey recipients. The CPS

underreporting is also becoming greater over time for the below-poverty group—the ratio of CPS to administrative counts fell from almost 50 percent in 1990 to 27 percent in 2015.

In summary, the level and composition of the social safety net for families with children has changed substantially over the past 25 years. One major finding is the decline of cash assistance and the rise of Medicaid and tax credits that are linked to paid work. Spending on Medicaid and tax credits has grown, both absolutely and as a share of total expenditures, and they now represent three quarters of all spending on low income families with children. A second major finding is the shift in spending to work-contingent programs away from traditional out-of-work assistance. A third finding, related to the first two, is the shift in spending from the most disadvantaged to somewhat higher up the income distribution. Finally, throughout this period, SNAP has remained steady and significantly important for low-income families.

An implication of this shift is less protection from negative (labor market and other) shocks among disadvantaged families. In fact, building a safety net around work leaves families with little protection during times of high unemployment. Bitler, Hoynes, and Kuka (2017) show that spending on tax credits is procyclical, and thus provides little protection against economic downturns. Bitler and Hoynes (2015, 2016) show that an implication of the massive shift in the social safety net is that deep poverty increased by more during the Great Recession than one would have predicted from previous downturns.[27] This shift would also be expected to increase income volatility for the most disadvantaged. Because unemployment rates are higher and more cyclical for African Americans, this reorientation of the safety net is likely to have particularly harmful consequences for black children (Hoynes, Miller, and Schaller 2012). The mounting evidence presented above on the long-term effects of resources in childhood, however, suggests that children's additional vulnerability to economic downturns likely will have downstream costs in terms of worse later-life health and economic outcomes.

27. Bitler and Hoynes's work estimates regressions of the relationship between the state-level unemployment rate and poverty and deep poverty rates, finding that in the Great Recession deep poverty increased by more than would be predicted based on the relationship from previous recessions. Bitler and Hoynes's data are not adjusted for underreporting. Sherman and Trisi (2015) find that the overall rate of children's deep poverty, after adjusting for underreporting, did not rise between 2007 (2.7 percent) and 2010 (2.6 percent).

IV. Conclusions and Future Research

Increasing income and resources at the bottom of the distribution may generate substantial benefits, both private and public, in the longer run that have only recently begun to be quantified. There may be particularly large returns to these investments when children are young and to the most disadvantaged children. This implies that the benefits of the safety net are broader than previously thought, and that there are positive external benefits for taxpayers. With interest in more "evidence-based policymaking," it is important to keep in mind that the costs are easily measured today, but many of the benefits are harder to measure and may not appear for many years.

There is much more we would like to know. There are more outcomes to be quantified—including outcomes that, if improved, would yield substantial public cost savings, such as disability, crime, and later-life health. There are programs with demonstrated positive, short-run effects (for example, WIC and SSI) where we have no research on long-run effects. In addition, it is important to determine whether there are interactions between programs and, if so, whether they are substitutes or complements. What is effective for remediation for early childhood deprivation? How do these investments vary across children? When and for whom are the benefits the greatest? Are the returns consistently greater in early life? Are there differences by gender or race? Finally, we need to fill in gaps in our understanding of the effects of programs between early life and adulthood; this should help us learn about mechanisms.

Given the early stages of this research, we do not think it is possible at this point to draw conclusions about the rates of return, their magnitudes, or how they vary across different programs. Given the emerging evidence, we do not think it is likely that these long-run benefits will be sufficiently large for the programs to "pay for themselves." However, these long-run benefits currently are largely ignored in policy discussions, but they may be important for gaining insight into the nature of material deprivation and the gains from a more generous and countercyclical social safety net.

The research has been sufficiently developed, however, to provide some guidance for policymakers. First, it documents the importance of a robust social safety net. Cuts to programs that reduce resources going to children, which are currently being discussed, will have direct, negative effects on children in both the short and long terms. Second, employment and earnings have become an increasingly important source of income for the poor, and as a result safety net programs are acting as a partial income supplement

during normal economic times (which is extremely important, given the prevalence of wage stagnation in the lower half of the wage distribution), and are acting as consumption insurance when earnings are lost or fewer hours are available. As such, it is crucial to preserve these programs' work incentives, which are currently quite strong (Kosar and Moffitt 2017), and also to ensure that these programs can respond quickly to replace lost income during recessions. This suggests that reforms such as block grants that are unchanged during downturns—or require congressional approval, and the delays that come with it—are less effective than programs that can automatically respond and quickly enroll families once they become eligible for benefits. Third, given the long-run benefits of these programs, more effort should be paid to enrolling all eligible children. Fourth, building a safety net based largely on work-contingent programs means that they provide incomplete insurance against earnings and employment losses. The fact that the United States lacks a significant out-of-work social safety net means higher rates of deep poverty (below 50 percent poverty), which harms children in both the short and long runs. To put this all together, because safety net spending has a substantial investment component, and because there have been positive returns from expansions in spending, the evidence suggests that we may be spending too little on the safety net for the young.

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Comments and Discussion

COMMENT BY

JANET CURRIE This paper by Hilary Hoynes and Diane Schanzenbach should be required reading for policymakers facing decisions about social safety net programs in the United States. The bottom line is clear, and clearly put:

> We are spending too little on children and their families. . . . Any cuts to current programs that will reduce resources going to children would have direct, negative effects on children in both the short and long terms. It is also crucial to recognize that the modal recipient family is combining safety net use with employment; the view that all spending is welfare and going to out-of-work families is not the case.

The findings regarding spending, in particular, are the most authoritative to date in that they are based on administrative data, which captures much more spending on families at the bottom of the income distribution than traditional, survey-based measures.

Hoynes and Schanzenbach argue that we spend too little, because society has not recognized the returns to investing in safety net programs in terms of reductions in taxpayer expenditures (or increases in tax revenues) down the road. Children who grow up to be better educated, more likely to be employed, and more likely to lead healthy and productive lives will pay higher taxes themselves and be less likely to rely on taxpayer-funded social programs as they age. Although there is no doubt that safety net programs have an investment component, it is less clear that policymakers have failed to take future payoffs into account when arriving at current levels of social spending. Language about "investing in children" goes back at least to the Clinton administration. President Clinton's 2000 State of the Union Address repeatedly calls for investing in children and working families—stating, for example, "We must also make investments that

reward work and support families. Nothing does that better than the Earned Income Tax Credit."

It is possible, in fact, that policymakers have taken the investment paradigm too literally when it comes to children. As Hoynes and Schanzenbach point out, the United States spends 2.1 percent of GDP on children, compared with 9 percent of GDP on the elderly. Yet we do not expect spending on the elderly to yield a return. We spend on the elderly because they are viewed as deserving of our support. The disparity in treatment of children and the elderly is embedded in the fact that programs for the elderly (especially Social Security and Medicare) are entitlements, with strong protection from the vagaries of federal budgeting, whereas programs for children are highly vulnerable to cuts in spending from their already-low levels.

Although the comparison between spending on children and spending on the elderly is instructive, focusing on intergenerational conflict may distract from the major driver of spending, which is health care costs. Hoynes and Schanzenbach's figure 6 shows that Medicaid is the largest single program for children in terms of costs, and this figure understates costs because it omits spending on pregnant women and the state Child Health Insurance Program (CHIP). Moreover, in programs such as public housing and the Supplemental Nutritional Assistance Program (SNAP), some share of the benefit goes to adults in the household, whereas Medicaid is targeted to the covered children.

However, the bulk of public health care spending goes to the elderly and disabled. Until recently, Medicaid itself was really two programs, one covering low-income children and their parents, and the other covering the elderly and disabled. And though children make up half of Medicaid beneficiaries, they account for only 19 percent of expenditures (Truffer, Wolfe, and Rennie 2016). In 2015, per-person personal health care spending for the elderly, disabled, and children was, respectively, $14,323, $19,478, and $3,389.[1] Now that substantial numbers of adults are also covered under the Affordable Care Act's Medicaid expansions, the share of Medicaid spending accounted for by low-income children can be expected to fall still further.

Given the gap in health care costs between children and the elderly, rising health care costs can be expected to widen gaps in spending between

1. This is according to the Centers for Medicare and Medicaid Services' National Health Expenditures fact sheet for 2015.

the two groups and will create budgetary pressures that will threaten all other forms of spending on children. According to the Centers for Medicare and Medicaid Services, health care spending has been growing faster than the rate of inflation for decades, and is projected to continue to do so. This rise in health care costs seems to be driven largely by higher prices in the United States relative to other countries.

Preserving the safety net is likely to require the reining in of health care costs. Because prices are so important to driving costs, measures that might help include imposing regulations to mandate price transparency and reforming Medicare to allow it to negotiate prices (including drug prices) with providers. Other measures that might help include using big data to identify providers that are outliers in the care they provide, and more systematically identifying best practices (Currie, MacLeod, and Van Parys 2016; Currie and MacLeod 2017).

Just as rising health care costs will continue to drive a wedge between spending on the elderly and spending on children, they will also continue to increase the share of spending on children in families just above the poverty line relative to children in poor families. This shift in relative spending is quite intentional. Even if we kept everything the same for poor families, expanding public health insurance for families above the poverty line (along with expansions of the Earned Income Tax Credit and other programs to families in this income category) would have had the effect of increasing the share of safety net spending going to families above the poverty threshold. Hence, I urge readers not to skip the authors' online appendix, and to focus on the figures that show amounts spent *per child* in the various income categories (for example, the top panels of the authors' figures 11 and 12), rather than to focus on the figures emphasizing expenditure shares for different economic groups. These figures also suggest flat periods in spending on families below poverty, along with declines in spending for families with no income between 1995 and 2005, but are less dramatic than the shifts in shares emphasized in the main text. On the whole, they indicate that the trend is for new safety net monies to be allocated to nearly poor families rather than for money to have been taken from poor families.

Hoynes and Schanzenbach focus on federal spending, but it is important to understand that this is only one strand of the safety net. State and local spending on the safety net is tremendously important, and also highly variable across states and over time. Medicaid is one of the most important components of state budgets (along with K–12 education, higher education, and prisons), so rising health care costs threaten to eat up a larger and

larger share of state spending. This budgetary pressure will likely have negative consequences for public education, state Earned Income Tax Credit programs and child tax credits, and child protective services (which are chronically underfunded in many localities, even though child abuse and neglect is a leading cause of child injury and death). Other important state programs to protect working families include workers' compensation and especially unemployment insurance.

It is surprising that in a period when the safety net is increasingly geared toward parents who work, unemployment insurance systems in many states have become less and less generous, to the point where they offer very little insurance to working families in the event of a job loss. Data from the National Employment Law Project indicate that the fraction of the unemployed who receive any assistance ranges from a low of 11 percent in Florida to a high of 66 percent in North Dakota. The median state, Oklahoma, assisted only 28 percent of the unemployed (McKenna and McHugh 2016). Several states adopted significant benefit cuts after 2011, and currently nine states are offering fewer than 26 weeks of benefits. For example, in Florida in February 2016, a newly unemployed worker qualified for only 12 weeks of benefits. Given work by Jonathan Gruber (1997) and Raj Chetty (2008) showing that unemployment insurance smooths consumption and reduces liquidity constraints on households, this is a disturbing trend.

One reason that state and local safety net programs are generally neglected by researchers, despite the rich variation in these programs, is that good data are hard to come by. Even for federal programs, administrative data are patchy and incomplete. For example, Hoynes and Schanzenbach point out that there are no federal data that can be used to apportion Medicaid, Supplemental Security Income, and public housing expenditures by poverty group or parental employment status. Hence, even studying the components of the federal safety net in a consistent fashion requires making assumptions about how resources are being allocated.

The researcher wishing to study state and local programs must first assemble and harmonize data from many different jurisdictions, all with different data access policies and stances toward the use of their administrative data for research purposes. Thus, just building a data set becomes simply a monumental task that tends to shut down research before it can even get started. The creation of cross-state data depositories for state and local administrative data would likely have a tremendous impact on research in this area. One model is the Healthcare Cost and Utilization Project, which is managed under the auspices of the federal Agency for

Healthcare Research and Quality. Participating states provide their hospital discharge data (that is, records of each hospitalization that occurs in the state, which are collected for regulatory purposes) to the project's central depository, which makes the data available in an anonymous and standardized format to health care researchers.

One reason to hope that more data could become available at the state and local levels is that these jurisdictions will be increasingly responsible for experimenting with the traditional safety net programs. Executive Order 13828, dated April 10, 2018, encourages states to implement stricter work requirements on programs, including SNAP and Medicaid, reduce the size of program bureaucracies, target programs more strictly to the neediest people, and eliminate programs they find to be duplicative or ineffective. It also promises to grant states flexibility to achieve these goals. These policies seem likely to reduce access to the safety net for many, and it will be important to assess their effects on children and families.

In summary, Hoynes and Schanzenbach offer a wonderful introduction and overview to federal safety net programs, as well as innovative analyses of administrative data to support their arguments. In this brief comment, I have tried to place the programs and trends they identify in a larger context, in which spending on the elderly is protected in entitlement programs while spending on children is not; spending on all nonhealth programs is increasingly threatened by rising health care costs; and variation in the generosity of the safety net depends on state and local policies, in addition to the federal programs and policies that garner the lion's share of research attention. Adding these dimensions to the analysis would not change their key conclusion—that we spend too little on children—but it would make clear how difficult it may be to spend more on programs that have been shown to make a difference.

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COMMENT BY

GORDON B. DAHL[1] Hilary Hoynes and Diane Schanzenbach's paper serves as a valuable resource for both researchers and policymakers. It makes two contributions. First, it synthesizes the recent literature on the effects of early investments in children, with a particular focus on safety net spending directed toward children. Not so many years ago, there was scant evidence on long-term outcomes, and arguments for government transfer spending on children relied more on humanitarian and social insurance grounds. But as Hoynes and Schanzenbach document, there is now substantial evidence that spending on children has benefits for a variety of later-in-life outcomes. Some of these gains accrue privately, but others have positive spillovers to society due to increased tax revenue and lower government transfers in the future.

The second contribution is an analysis of how spending on children via the safety net has changed over time. The findings are both striking and relevant for policymaking. Total spending has remained fairly flat over time, but its composition has changed. Relative to 20 years ago, more spending reaches families near or above the poverty line, while less is spent on the poorest of the poor. There has also been a large movement away from unconditional transfers and toward benefits linked to work. Other studies have looked at how the child safety net has evolved, but this is the first based primarily on administrative data. This is an important contribution, given that survey data suffer from several issues—including sizable undercounting, a problem that is becoming more severe over time.

Although the long-term benefits of safety net spending on children documented by Hoynes and Schanzenbach are compelling and broad-based, I found it refreshing that the authors remained true to what the data can and cannot say in terms of policy recommendations. The authors rightly conclude that the fiscal benefits are unlikely to make increased expenditures on child safety net programs self-funding. Instead, the investment

1. I am grateful to my colleagues Jeff Clemens, Julie Cullen, and Roger Gordon for helpful discussions and suggestions.

rationale still needs to be combined with humanitarian and social insurance motivations. Moreover, the authors recognize that the literature is not yet developed enough to estimate rates of return or provide guidance on how to optimally allocate funding across programs. This type of humility is admirable, but it should not detract from the authors' main policy conclusion that there is "a substantial investment component [to safety net spending], and because there have been positive returns from expansions in spending, the evidence suggests that we may be spending too little on the safety net for the young." At a more granular level, there is a solid case that returns to increased spending on children are especially large for the most disadvantaged, and that reallocating spending from later in life to earlier in life is likely to enhance efficiency.

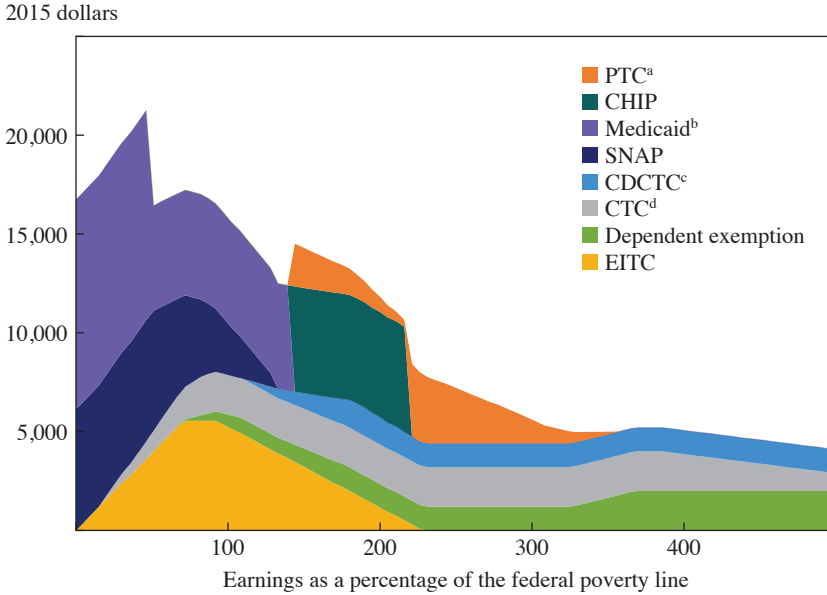
Hoynes and Schanzenbach are experts on this topic. Their summary of the literature is comprehensive and up-to-date, and their analysis of spending trends is well executed. This is a great paper, with little to quibble over, so I instead focus my comments on three broadly related issues: program interactions, work requirements, and intergenerational issues.

PROGRAM INTERACTIONS The authors' analysis focuses on the tax and transfer benefits for seven of the largest programs affecting children. In the authors' figure 9, they summarize changes in universally available cash and near-cash programs between 1992 and 2015. The figure plots benefits for a single adult with two children in Colorado, and serves to highlight the shift over time toward programs tied to work.

An augmented version of the authors' figure 9 can also be used to illustrate program interactions, and the unintended incentives that can arise. In my figure 1, I have added three universally available noncash programs to the 2015 panel: Medicaid, the Children's Health Insurance Program (CHIP), and the Premium Tax Credit (PTC), which subsidizes health insurance under the Affordable Care Act (ACA). These three programs provide a patchwork of health insurance coverage for low-income families.

As background, all but two states cover children's health insurance up to at least 200 percent of the federal poverty level (FPL) via Medicaid coverage and CHIP. In addition, most states cover pregnant women past the federal minimum of 138 percent of the FPL via Medicaid and CHIP. In contrast, health insurance coverage for other parents varies widely across states. Thirty-two states currently cover parents up to 138 percent of the FPL, because these states have adopted the ACA Medicaid expansions. But 19 states have not expanded Medicaid, and among these nonexpansion states, the median eligibility limit is only 44 percent of the FPL. Premium assistance credits kick in after 138 percent of the FPL has been reached for

Figure 1. Tax and Transfer Benefits for Universally Available Cash, Near-Cash, and Noncash Programs for a Single Adult with Two Children in North Carolina, 2015



Sources: Hoynes and Schanzenbach, top panel of figure 9; HealthCare.gov; Kaiser Family Foundation; author's calculations.

a. The PTC area above CHIP includes parents only. The PTC area to the right of CHIP includes parents and children.

b. Medicaid includes parents and children.

c. CDCTC stands for the Child and Dependent Care Tax Credit.

d. CTC stands for the Child Tax Credit.

all parents, and after CHIP eligibility ends for all children (Garfield and Damico 2017).

In my figure 1, I graph the case for a single adult with two children in North Carolina (as opposed to Colorado, in the authors' figure 9).[2] North Carolina was chosen because it illustrates the potential for perverse work incentives when the three health insurance programs are not well coordinated. North Carolina chose not to adopt the Medicaid expansions. Between 0 and 44 percent of the FPL, a parent in North Carolina qualifies for Medicaid; between 44 and 138 percent, a parent receives no coverage or subsidy; and between 138 and roughly 350 percent, a parent is eligible

2. Thanks to Hoynes and Schanzenbach for sharing their figure 9 with me. Program parameters for the Medicaid, CHIP, and PTC programs come from HealthCare.gov and the Kaiser Family Foundation.

for marketplace subsidies through the PTC. This creates a gap in coverage for the parent, as shown in my figure 1.

To illustrate the type of work disincentives created by the canyon-shaped gap in coverage, consider a single parent in North Carolina with two children who earns the minimum wage of $7.25 per hour. If this parent works between 0 and 25 hours per week ($0 and $8,985 in yearly earnings), they would be covered by Medicaid. But they would have no coverage if they worked between 25 and 78 hours per week, as marketplace subsidies do not start until $28,180 per year. This example makes clear the disincentive for full-time employment, as it entails a loss of Medicaid. Even for a single parent making twice the minimum wage ($14.50 per hour), there would be no assistance between 12 and 39 hours per week.

Does the ACA mandate that employers offer full-time workers health insurance coverage help fill in the gap? The answer is: only imperfectly. One challenge is that such a mandate creates an employer-based disincentive for hiring full-time workers. Moreover, 42 percent of working adult Medicaid enrollees work in a firm with fewer than 50 employees, and these firms are exempt from the mandate (Garfield, Rudowitz, and Damico 2018).

As shown in my figure 1, health insurance assistance for children does not have a similar gap. Even so, a parent's coverage can have spillovers to their children. The first reason is that when a parent does not have access to health care, they are more likely to become sick and less able to effectively care for their children. An additional spillover is that roughly 160,000 uninsured children have a parent in the coverage gap. This is potentially a problem, because parental coverage in public programs is associated with higher enrollment of eligible children (Sommers 2006).

Similar notches in the Temporary Assistance to Needy Families (TANF) program and Section 8 housing vouchers make the work disincentive problem even worse for some families. Other programs—such as the Special Supplemental Nutrition Program for Women, Infants, and Children and the National School Lunch Program—are also tied to the FPL, and therefore they affect a family's budget constraint. One caveat in the analysis of noncash programs is that individuals may not value them at the cost of provision.[3] If individuals value in-kind transfers such as health insurance or housing vouchers at less than their cost, this would make the canyon-shaped gaps in the budget constraint less pronounced. But the basic point

3. For example, Finkelstein, Hendren, and Luttmer (2015) find individuals value Medicaid benefits between $0.20 and $0.40 per $1 of government spending, perhaps in part because the counterfactual is often not a complete lack of medical care but care from other sources, such as emergency rooms.

remains that program interactions can have unintended incentive effects, especially when they create nonlinearities and dominate segments in the budget constraint.

As a side note, from an evaluation perspective, program interactions make it more difficult to estimate the effect of safety net programs. Programs can have offsetting incentive effects on an individual's budget constraint. For example, the phase-out portion of the Earned Income Tax Credit (EITC) coincides with the introduction of health insurance subsidies in my figure 1. Program interactions also pose a challenge for certain estimation approaches. Suppose a researcher was interested in utilizing the kinks in the EITC schedule to estimate labor supply elasticities. One approach would be to use a bunching estimator, looking for excess mass to the left of the first kink in the EITC schedule, for example. But my figure 1 makes clear that in this setting a bunching estimator will have issues, as the notch in Medicaid will limit the number of individuals with earnings in a neighborhood near the first EITC kink.

WORK REQUIREMENTS One of Hoynes and Schanzenbach's central findings is that there has been a shift toward requiring work for benefit eligibility, largely as a result of more reliance on programs like the EITC and less on cash transfers like the now-defunct Aid to Families with Dependent Children program. The authors recognize the importance of assistance programs that supplement low earnings during normal economic times, especially given wage stagnation in the lower end of the wage distribution. They argue that "it is crucial to preserve these programs' work incentives, which are currently quite strong."

Preserving work incentives is important, but the shift toward work requirements can have the wrong incentives if implementation is not well thought out. Consider recent proposals to link Medicaid to employment. Starting in January 2018, states were allowed to seek a waiver and impose work requirements for Medicaid eligibility. Kentucky was the first state to get approval, and other states are following (Goldstein 2018). For Medicaid nonexpansion states seeking waivers, like Kansas and Mississippi, meeting Medicaid work requirements through 20 hours of work at the minimum wage would actually lead to a loss of Medicaid eligibility, as income would be too high. One solution is to expand Medicaid coverage at the same time as imposing a work requirement, a proposal that was recently put forward as a political compromise in North Carolina.[4]

4. Although work requirements are generally waived for caregivers of young children, a work requirement would still affect a couple's work incentives.

Moreover, it is important to recognize that not all social assistance programs are designed with a positive work incentive. Consider one of the largest social insurance programs in most countries, disability insurance (DI). In the United States, DI is administered through two programs, Supplemental Security Income and Social Security Disability Insurance. To qualify for DI in the United States, the primary requirement is that the individual is deemed *not* able to work, with individuals being disqualified if they earn more than a minimal amount.[5] DI is often considered a social insurance program, but it also has incentive effects and is a key part of the safety net. DI participation has been shown to generally rise during periods of high unemployment, even though it is unlikely that the latent amount of disability in the population has increased (Autor and Duggan 2003).

In the United States, an individual is either on or off DI, whereas in many European countries partial disability is allowed. For example, in the Netherlands roughly 40 percent of individuals are currently on partial disability benefits. One possible reform to the U.S. system would be to allow for partial disability, so that individuals with some ability to work could be gainfully employed. Research finds that many DI participants have substantial work capacity, both in the United States and Europe (French and Song 2014; Maestas, Mullen, and Strand 2013; Kostøl and Mogstad 2014). The possibility of partial DI has the potential for cost savings that can be redirected elsewhere.

A detailed discussion of policy reforms to encourage part-time work for disabled individuals is beyond the scope of this comment. But other researchers have thoughtfully considered what types of reforms might work. Some of the more innovative proposals promote work through a mixture of firm incentives and individual accommodations to allow those with partial work limitations to remain employed or return to work (Autor and Duggan 2010; Burkhauser and Daly 2012).

How do DI programs interact with the rest of the social safety net provided to families? The first thing to note is that health insurance coverage is automatic if an individual is on DI in the United States. Combined with a replacement rate of 40 to 50 percent, this makes DI one of the more generous social assistance programs in the United States.

5. There are some existing incentives for participants to exit DI and return to work. For example, participants can earn more money during a "trial work period" for Social Security Disability Insurance, but not Supplemental Security Income. Moreover, programs like the Social Security Ticket to Work program provide resources such as vocational training.

Recent research has also documented substantial social support substitution across programs. Lex Borghans, Anne Gielen, and Erzo Luttmer (2014) examine a reform in the Netherlands that tightened DI eligibility for existing claimants. Using a regression discontinuity design, they find that about 4 percent of DI participants exited DI due to the more stringent rules and that annual benefits fell by about €1,000, or roughly 10 percent. Treated individuals exposed to the reform replaced over 60 percent of lost DI benefits with increased earnings in the labor market. Equally relevant, the drop in DI income was partly offset as individuals shifted to other government programs. The authors find that for each €1 of lost DI benefits, treated individuals collected €0.30 from other social assistance programs in the short run (primarily unemployment insurance). This echoes the point made above that considering program interactions is crucial when evaluating the social safety net.

INTERGENERATIONAL ISSUES Hoynes and Schanzenbach's review of the recent literature documents compelling evidence for the positive effects of social safety net spending on children's outcomes. There are both immediate and medium-term benefits, as well as long-term improvements in a variety of health, human capital, and economic outcomes. When thinking about long-term effects, one additional consideration is whether a parent's participation in a program has an effect on their child's participation.

Parental participation in a social assistance program—such as TANF, SNAP, or DI—could influence a child's participation through a variety of channels. Parents could serve as role models, provide information about how to apply, demonstrate what it is like to be on a program, or even invest differentially in child development due to changing resource constraints. All these channels suggest a causal effect, where a parent's participation influences a child's outcomes in the long run. Conversely, the use of public assistance could primarily be due to environmental factors. Poverty, bad health, and reduced opportunities could persist across generations, in which case intergenerational links could simply reflect unobserved heterogeneity and not a behavioral response.

Until recently, it has been difficult to differentiate between correlation and causation. But a series of recent quasi-experimental papers suggests that children do learn from their parents. For example, using an instrumental variables approach, Robert Hartley, Carlos Lamarche, and James Ziliak (2017) find that a mother's use of welfare increases the chances that her daughter will participate as well. Using a random judge design, Dahl, Andreas Kostøl, and Magne Mogstad (2014) find that children whose

parents enter DI on appeal are more likely to themselves participate as young adults. And using a regression discontinuity design, Dahl and Gielen (2018) find that children whose parents are kicked off DI or have their benefits reduced are less likely to themselves participate 21 years later. Monique de Hann and Ragnhild Schreiner (2017) bound average treatment effects and find substantially smaller estimates compared with the local average treatment effects identified in the other papers, suggesting caution about extrapolating the large responses found to the entire population.

Taken together, these recent studies suggest that children do learn from and copy their parents. But the spillovers extend beyond program participation. Dahl and Gielen (2018) show that children whose parents are pushed out of DI or have their benefits reduced not only reduce their own participation in DI but also earn more in the labor market as adults. The increased taxes due to increased earnings by children exceed the cost savings from their reduced DI usage. Consistent with an anticipated future with less reliance on DI, the children of affected parents on average complete an extra 0.12 year of schooling. Although several interpretations of these intergenerational effects are possible, a consistent explanation is that children learn from their parents about the relative costs, benefits, and stigma associated with work versus government assistance. From a fiscal perspective, these intergenerational links matter. Ignoring parent-to-child spillovers understates the long-run cost savings of the Dutch reform by between 21 and 40 percent in present discounted value terms.

FINAL THOUGHTS Hoynes and Schanzenbach provide an excellent summary of the existing literature and a careful analysis of safety net investments in children. Their paper is a useful reference for academic researchers and policymakers alike. Though my comment has disproportionately focused on various aspects of incentives related to work, this should not be interpreted as an endorsement of policies to reduce or eliminate unconditional cash transfers. As the authors point out, "building a safety net around work leaves families with little protection during times of high unemployment." Creating effective incentives for work is important, but it is crucial to recognize that the social safety net also needs to take care of children with nonworking parents. Children whose parents are out of work are among the poorest of the poor, and the United States currently does not have a comprehensive safety net to cover them. Investments in these disadvantaged children have high returns, but policy recommendations about how to best structure programs to help children in these nonworking families are beyond the scope of this comment.

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GENERAL DISCUSSION Robert Moffitt complimented the authors for bringing to bear new data on expenditures on children. He had two comments. First, he noted that the paper has two distinct parts: The first documents new evidence on the effects of transfers on children, and the second explores how the distribution of transfers has changed over time. He asked what the second part implies about the first—that is, given that transfers have benefited children, what does the change in the distribution of transfers imply about which programs should be expanded? For example, should we try to redesign programs to focus on the lowest-income families instead of those with slightly higher incomes? Second, he referred to work by Janet Currie showing that cash transfers do not have the same impact as transfers targeted specifically at children.[1] He wondered if it would be best to focus on programs like preschool education and the School Breakfast Program, which are more specific to children than cash transfers to families.

Katharine Abraham noted that certain programs not mentioned in the authors' literature review also have been shown to have an impact on outcomes for children. In particular, a recent paper by Fredrik Andersson and colleagues examines the long-term effects of growing up in public housing or receiving a housing voucher.[2] Abraham also drew attention to the present paper's findings on divergent trends in spending on children and the elderly, noting that, although there are strong political economy reasons to have universal assistance programs for the elderly, it would be interesting to know more about the incomes of elderly households receiving assistance.

Jeffrey Campbell asked about the complementarity of parental ability and public assistance. If more effective parents are able to put public

1. Janet Currie, "Welfare and the Well-Being of Children: The Relative Effectiveness of Cash and In-Kind Transfers," *Tax Policy and the Economy* 8 (1994): 1–44; Janet M. Currie, *The Invisible Safety Net: Protecting the Nation's Poor Children and Families* (Princeton University Press, 2008).

2. Fredrik Andersson, John C. Haltiwanger, Mark J. Kutzbach, Giordano E. Palloni, Henry O. Pollakowski, and Daniel H. Weinberg, "Childhood Housing and Adult Earnings: A Between-Siblings Analysis of Housing Vouchers and Public Housing," Working Paper no. 22721 (Cambridge, Mass.: National Bureau of Economic Research, 2016).

resources to better use, then there may be some justification for moving the resources up the income distribution.

N. Gregory Mankiw noted that because the number of people in each section of the income distribution is changing, changes in the shares of benefits going to different segments of the income distribution are difficult to interpret. Mankiw also mentioned that he would be interested in hearing the authors' views on a universal basic income (UBI). Though freely admitting that a UBI was in no way politically feasible in 2018, he wondered how the kind of UBI conceptualized by Milton Friedman—or, more recently, by Chris Hughes—would compare with programs that already exist.[3]

Alice Rivlin mentioned that a common perception among those in the general public who oppose the social safety net is that they are "the hard-working folks who are supporting these lazy people." The present paper, she said, offers two messages about this perception. The first one, which should be reassuring to those who oppose public assistance programs, is that assistance has shifted toward working families. The second one, however, is that as income increases, it is very difficult to know what the work incentives are. In his comment, Gordon Dahl documented the seemingly impenetrable structure of work incentives in North Carolina. Rivlin asked what the paper's authors and other experts would do to make work incentives more sensible—suggesting, as Dahl did, that one option is to combine programs. The downside, she said, is that doing so would likely result in less money being allocated to the programs.

Isabel Sawhill praised the paper as "a great synthesis of the research and wonderful data," but she expressed concern that some of its findings on programs such as the Supplemental Nutrition Assistance Program are based on data that started being collected in the 1960s. An effect that occurred 40 or 50 years ago may not hold true today because of changes in contextual factors. For instance, malnutrition was more widespread and education was less ubiquitous in the 1960s than in 2018. Her preference is to use data on more recent cohorts of children from randomized controlled trials when available, or otherwise from quasi-experimental studies.

Picking up Rivlin's point about the shift in benefits toward working families, Sawhill remarked that she was not sure of the authors' normative

3. Milton Friedman advocated his notion of a "negative income tax," which is conceptually similar to a universal basic income, in his book *Capitalism and Freedom* (University of Chicago Press, 1962). See also Chris Hughes, *Fair Shot: Rethinking Inequality and How We Earn* (New York: St. Martin's Press, 2018).

position on this trend. She added that many of the families receiving assistance are probably female-headed, and that there had been a major change in female labor force participation over the last several decades—due in part to welfare reform, but mostly to changes in norms and opportunities for women. Finally, she was glad that the authors had focused on an "investment framework"—that is, on assistance programs as investments—but she cautioned that many of these programs may not be able to compete with other kinds of investment programs. This could be a reason to focus on motivations rooted in humanitarianism and fairness, she concluded.

David Autor drew the conversation back to work incentives, saying that one distinction between programs targeted at the young and those targeted at the elderly is that for the elderly, there is no danger of substitution away from work as a result of transfers. He noted that the transfer programs discussed in the paper were also, in a sense, labor market programs. Labor market shocks feed more strongly into social safety net programs than into intended labor market programs. For example, a trade shock in a local labor market will exacerbate a larger uptake of disability insurance, Medicare, Medicaid, and other transfer programs than of unemployment insurance or trade adjustment assistance. Just as social safety nets are ultimately forced to respond to changes in labor market conditions, labor market incentives are affected by public transfers, he concluded.

Kent Smetters pointed out that the median voter model could predict that transfers would increasingly go to the elderly, because the median voter will eventually become elderly but "is not going to be young someday." And yet, he said, $1 spent on Social Security is not $1 taken away from youth. Rather, Social Security is a "pay-as-you-go game."

Michael Klein asked whether it is possible to compare trends in the distribution of transfers to children and the elderly across countries. If so, he suggested that it may be worth looking into the political reasons for differences between the United States and other countries.

Richard Cooper agreed with Klein, stating that the paper "cries out for international comparison." He mentioned Canada and Sweden as potential comparisons. He noted that the Copenhagen Consensus asked panelists to choose from a long list of international public goods that they would like to fund, assuming they had $75 billion to spend over the next five years. The first choice was reducing child malnutrition, and the second was reducing childhood diseases. These priorities seemed consistent with those laid out in the present paper. Cooper also reinforced the point made by both Dahl and Currie that the "full picture" must also pay attention to state and local spending (though Currie noted that obtaining data on state and local

programs would be a "daunting challenge"). For instance, though special education does not feature much in federal spending, Cooper noted that in Cambridge, Massachusetts, special education is roughly a quarter of the school system's budget.

Finally, Cooper objected to the authors' lumping together of Social Security and Medicare with the other safety net programs. Social Security and Medicare are part of a "social contract," whereby workers pay into the system during their lifetimes and receive the returns to the investment down the road. He thinks the paper fails to acknowledge the difference between public expenditures financed by dedicated taxes and those financed by general revenues.

Schanzenbach first addressed the point made by some macroeconomists earlier in the writing process (and by Mankiw earlier in this discussion) that the authors should express spending in terms of shares of the population living within a certain range of the poverty level. Doing so would require relying primarily on data from the Current Population Survey (CPS), which is well known to be plagued by measurement errors. The authors went through the tedious process of obtaining administrative data primarily to avoid using the CPS, though CPS-based calculations are included in their online appendix. Additionally, not much research exists on many of the policy questions in which the authors are most interested—for example, whether $1 is better spent on the group living at between 0 and 50 percent of the poverty threshold or on those living between 100 and 150 percent, or on which program, or on people whose parents have high cognitive abilities, as Campbell had suggested.

On the question of work disincentives, Schanzenbach pointed out that the paper discusses well-identified studies that have found the work disincentive effects for programs like the Supplemental Nutrition Assistance Program to be very small. Although this does not mean that doubling the safety net might not produce a larger effect, current research suggests that the programs discussed in the paper carry minimal work disincentives. On Mankiw's question about a UBI, she noted that between the Supplemental Nutrition Assistance Program and the Earned Income Tax Credit, the current social safety net is similar to Friedman's negative income tax.