

Short title: Children and the US Safety Net

Children and the US Social Safety Net: Balancing Disincentives for Adults and Benefits for
Children

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A hallmark of every developed nation is the provision of a social safety net – a collection of public programs that deliver aid to the poor. Because of their higher rates of poverty, children are often a major beneficiary of safety net programs. Countries vary considerably in both the amount of safety net aid to children and the design of their programs. The US provides less aid to families with children as a share of GDP (0.6 percent) than most countries: Among 37 OECD countries, only Turkey provides less (Figure 1). Countries that provide less aid to families with children have higher rates of child poverty. Among these same 37 countries, only Turkey and Costa Rica have higher child poverty rates than the US. Why does the US appear to be such an outlier in terms of the amount of aid it provides to families and child poverty rates? While there are likely multiple reasons, in this paper we focus on one possible explanation: Past emphasis on the negative behavioral effects of safety net programs for families over the benefits of such programs for children.

The negative behavioral effects derive from the design of the safety net. The design of the social safety net is characterized by: 1) who receives the aid, some programs are universal while others are targeted to low-income families only; 2) how the aid is delivered, as cash or in-kind services such as housing subsidies or health insurance; and 3) whether the aid is conditional on some behavior such as work. When programs target low-income families, they deliver resources to those in greatest need. But this can potentially create negative incentive effects – parents might change their behavior with respect to employment, marriage or fertility to obtain or maintain eligibility.

With respect to mode of delivery, economists tend to favor cash transfers because they are unconstrained and allow families to spend money to meet their greatest needs, but cash transfers can potentially result in spending that was not necessarily intended by the policy-maker. This is

particularly salient for programs that target children as parents are the recipients of the aid and they may not choose to spend it in ways that policy-makers believe will improve the lives of their children, the intended target.

Finally, safety net policies vary on whether aid is given based on certain conditions. In developing countries conditional cash transfers often require parents to show that their children are attending school and/or receiving medical care. In the US, the most common source of conditionality is work.

Since 1965, rates of child poverty in the US have fallen considerably when measured using the Supplemental Poverty Measure (Figure 2). This measure counts the fraction of children in poverty after social safety net transfers (in cash and in kind) are accounted for. Therefore, this measure allows one to evaluate the effectiveness of the safety net in removing children from poverty. Secular trends in child poverty observed in Figure 2 are strongly related to employment conditions (e.g. they fell sharply in the strong economies of the 1990s and the 2010s), but are also related to changes in the size and structure of the social safety net.

Although the safety net for children in the US has expanded over time, it has evolved away from unconditional cash transfers based on need to conditional transfers, and to more in-kind benefits. The main objective of these changes has been to reduce negative behavioral responses on the part of the parents and to direct spending towards certain goods and services. Work requirements, aimed to reduce the impact of the safety net programs on employment, have become increasingly common.

However, these requirements have the potential to reduce assistance to needy families. Indeed, many families in the US do not take-up many of the safety net programs for which they are eligible. Thus, while conditionality reduces disincentives and thus lowers costs, it also

diminishes the ability of the safety net to reduce poverty among children. Additionally, it is not clear whether conditioning aid on work (or other behaviors) is beneficial to the children of recipients.

Nevertheless, concern with behavioral effects have dominated not only discussions among policy-makers but also economic research on the safety net for children. But the economic research on the safety net has evolved significantly over time, moving away from a near exclusive focus on the negative incentive effects of the safety net on employment, earnings, marriage and fertility to include examination of the potential positive benefits of such programs to children.

In this paper, we describe the evolution of this shift in economic research on the safety net to include benefits to children and the factors that precipitated the shift. We focus on the major safety net programs for children in the US: Cash welfare, food stamps, health insurance and tax credits (Table 1). The new research has shown that there are large benefits of safety net programs to children over the long run, with many programs proving to be excellent public investments. This should prompt policy makers to reassess the tradeoff between disincentive effects for adults and benefits for children.

Background on the Safety Net

Improving child health and wellbeing was the main objective of the first widespread US safety net program, the Mothers' Pension Program. In 1911, Illinois was the first state to enact such a program, with most states following soon thereafter (Figure 3). These laws sought to provide mothers with dependent children (widows or those with incapacitated or incarcerated husbands) with an allowance that would enable children to remain at home, and not be placed in

institutional care or forced to work. Policymakers believed that this would, in turn, reduce child mortality and delinquency (Skocpol, 1992).

During the Great Depression, states and counties were no longer able to fund their Mother's Pension program. In response, as part of the Social Security Act of 1935 the federal government created a program to replace it, the Aid to Dependent Children (ADC) program. This program became the template for what is known as "welfare" in the US. Originally the ADC program (renamed Aid to Families with Dependent Children, or AFDC, in 1962) gave mothers cash on the basis of the number and ages of their children, as well as on the perceived needs of the family, which were assessed by social workers with substantial discretion. In most states, women were required to stay home (and not work) as a condition of the transfers. Eventually this approach was replaced with a more formal system that guaranteed a minimum income, not a minimum transfer. As a result, the transfer was phased out at a very steep rate (referred to as the benefit reduction rate) as beneficiaries earned income: The cash payments they received from the program decreased anywhere from 66% to 100% for every \$1 of earnings. In practice benefits varied substantially by state and were quite modest; for example, in 1996 (the last year of the AFDC program) legal *maximum* benefits averaged 35 percent of the federal poverty line (FPL) across states (Safawi and Floyd, 2020).

The safety net expanded substantially in the 1960s with President Johnson's War on Poverty. Two additional in-kind programs to help the poor were established: Food Stamps and Medicaid (Bailey and Danziger, 2013). Food stamps were provided to poor families to guarantee access to appropriate nutrition. Medicaid established free health insurance for the poor (and through later expansions, to the near poor). But there were also changes to the ADC program

beginning as early as the 1950s and continuing into the 1960s and 1980s, with a goal of promoting work among mothers and lower welfare dependency.

In the 1990s, two important policy changes pushed the safety net even further towards more *work-based* assistance (Hoynes and Schanzenbach, 2018). The first was the 1996 welfare reform, which replaced AFDC with Temporary Assistance to Needy Families (TANF), significantly changing both the funding and requirements for the program. In the AFDC program the federal government matched states' spending on cash assistance (at 50% or higher rates), whereas in the new TANF program it provided states with a *fixed* (in nominal terms) block grant that does not increase with enrollment (or prices). States also have great flexibility in how to spend these funds. Finally, TANF imposed lifetime limits of 60 months for cash assistance and instituted work and training requirements for recipients.

The second major change was the significant expansion of the Earned Income Tax Credit (EITC) in the early to mid 1990s and the creation of the Child Tax Credit (CTC) in 1997. The EITC, first established in 1975, is a refundable tax credit for low income working families with both eligibility and benefits increasing with the number of dependent children. Families with earned income pay lower taxes as a result and receive refund checks if their credit exceeds taxes owed. Families without earned income are not eligible. The program grew considerably in both eligibility and benefit levels starting in 1987 and accelerating during the 1990s. As a result of the expansion of the EITC and with introduction of TANF, the cash based social safety net became conditional on work. Like the EITC, the CTC is a *conditional* tax credit received annually when individuals pay taxes. It requires \$3000 of annual earned income for eligibility.

Overall, the 1990s changes in cash assistance and the growth of the tax based social safety net shifted focus from income support toward work-based assistance and consequently the

distribution of households receiving assistance moved away from the poorest households, towards the near poor (Hoynes and Schanzenbach, 2018).

The Child Safety Net Today

Today, the largest safety net program for children is Medicaid, which currently provides health insurance to 35 million poor children at an estimated cost of 115 billion dollars (this includes CHIP, the health insurance targeted towards poor children introduced in 1996). Because the program covers health care costs, the actual value of the transfer to children varies greatly depending on the extent to which they use health care resources, and across states who determine eligibility and generosity.¹

The EITC is the second largest program providing an estimated 56 billion dollars in tax credits for families with children. It currently serves 33 million children in families with at least one working parent, transferring an annual credit worth \$3,204 on average. The CTC is also large but most of the funds go to children that are not in poor families.

Next is the food stamp program—renamed as the Supplemental Nutrition Assistance Program (SNAP) program in 2008 – which serves roughly 20 million children at a cost of 30 billion dollars. SNAP average monthly benefits are about \$130 per person (US Department of Agriculture, 2021).² The US spends another 45 billion on other in-kind programs for poor children (housing, nutrition and help for the disabled, see Panel B of Table 1).

The traditional welfare program (TANF) is very modest today, currently serving 1.5 million children at a cost of about 13 billion dollars. Both expenditures and caseloads for this program are lower today than in 1995 (Table 1). The reductions in caseloads cannot be explained

¹ Like AFDC and TANF, Medicaid is a state program that is regulated and partly funded at the federal level.

² These figures are available at <https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>.

by reductions in the number of poor children: Only 28% of poor families with children receive TANF cash benefits, compared with 68% prior to TANF. The median monthly *maximum* benefit recipients can receive is \$498 (about 30% of the poverty level), but in practice actual cash transfers are likely lower as only 26% of TANF funds go to cash assistance (Bitler and Hoynes, 2016).

Evolution of Research on the Safety Net for Households with Children

The policy changes we have discussed were accompanied (or perhaps influenced) by important trends in the research on the impact of safety net programs. To characterize this evolution, we created a database of all articles employing empirical analyses of our core safety net programs (Panel A of Table 1) and published in the top general interest and field journals in economics since 1968.³ We identified 239 articles on the topic (Appendix Table 1) which we classify as either estimating negative incentive effects or benefits. Of all the safety net programs, Medicaid received the most attention from economists, accounting for 41% of all articles, followed by traditional welfare programs (AFDC/TANF) at 34%, and SNAP at 18%. Overall, only 40% of papers estimated benefits.

Figure 4 summarizes the number of papers published by decade (1970s, 1980s, 1990s, 2000s, and 2010s) and by objective. The figure shows that from 1970s through the 2000s, the focus of economic research was the incentive effects of programs: Prior to 2010 less than 27% of all articles documented benefits. Strikingly, in the last decade the research on benefits of safety net programs has taken off, with 2.5 articles on benefits for every article on incentives. This section provides a description of the factors that led to this evolution.

³ See notes to Appendix Table 1 for details on journals included and selection criteria.

Early Research on Safety Net Programs: Emphasis on Negative Incentive Effects

The optimal welfare program balances the benefits of increased consumption against the cost of the work disincentives it creates (Mirrless, 1971). For decades, in fact since the creation of the Mothers' Pension Programs, concerns have been expressed by politicians and academics that welfare programs create disincentives for maintaining "traditional" family structures of marriage and work. Indeed, the theoretical predictions from standard economic models are unambiguous: The availability of a minimum "guarantee" of income and a benefit reduction rate is predicted to reduce employment and hours worked among female-headed households. Moreover, because the benefit increased with the number of dependent children in the household and declined with the presence of a married partner, this benefit schedule also created incentives to remain single and have more children.

These concerns increased in the post-war years as a result of three broader demographic changes. First, the fraction of children growing up in single-parent households increased dramatically (9% in 1960 to 20% in 1980, US Census 2021). An increasingly large share of recipients were mothers who had never married (rather than divorced or widowed). Second, partly due to increases in access, a larger share of recipients was Black.⁴ In contrast, prior to WWII, most recipients were white widows.⁵ Many observers believed that this growth in single-headed families was directly related to the incentives and generosity in AFDC in particular, a program whose expenditures and roles grew dramatically in the post-war years. Third, the female labor force participation among women with children rose steadily, in what Goldin

⁴ Blacks migrated North where welfare programs were more generous. Additionally civil rights efforts were undertaken to increase access to welfare programs that had been systematically denied to Blacks (Nadasen, 2007).

⁵ In 1938, 48% of children on ADC were living with widowed mothers, by 1961 only 8% were. In 1938, 14% of the recipients were Black, by 1956 38% were and by 1961 44% were (Soule and Zylan, 1997).

(2006) labeled “the quiet revolution.” This raised the possibility that women with children could be self-sufficient and less dependent on a safety net but were not doing so because of the incentives imbedded in the welfare programs.

A major effort to assess the validity of these concerns was the implementation of the Income Maintenance Experiments, 4 large-scale randomized experiments in the 1960s and 1970s designed to assess the work disincentives of the AFDC program.⁶ These experiments, which economists were influential in designing and evaluating, randomized the income guarantee and the benefit reduction rate to a subset of families for three to ten years and tracked the resulting labor supply of the recipients.⁷ Although the results confirmed the predictions of economic theory (larger benefits and higher implicit tax rates lowered work), the estimated effects were surprisingly modest (e.g. Robins, 1985).

By 1992, the empirical evidence on the negative incentive effects of welfare had accumulated and was the subject of a review and synthesis in the *Journal of Economic Literature* (Moffitt, 1992). Moffitt motivated the review with a reference in the introduction to the concerns of policy makers and the general public, writing: “The US welfare system has been considered by many observers to be in a state of crisis since the late 1960s.” He cites two proximate causes of this crisis. The first was the large growth in caseloads and the second was the implications of the growth “for possible long-term welfare dependency” and marriage disincentives that were seen as likely responsible for the growth in poor single parent households over this period.

The available research at that time showed that the AFDC program generated “nontrivial” disincentives to work. For every \$1 in additional AFDC benefit, earnings were reduced by 37

⁶ These took place in New Jersey (1968-72), North Carolina and Iowa (1969-73), Gary - Indiana (1971-74) and Seattle and Denver (1971-1982).

⁷ The experiments also randomized counseling and training subsidies.

cents. Though these seem to be strong disincentives, Moffitt (1992) concludes “the work disincentives of the program have little effect on the size of the caseload itself.” That is, even in the absence of the AFDC program, most women would have earnings that lie below the eligibility threshold. It is unclear why the labor supply responses to the negative work incentive in the welfare program are not as large as economists predicted. With respect to incentive effects regarding marriage and fertility, the results are weak: Moffitt (1992) summarizes “The failure to find strong [cash] benefit effects is the most notable characteristic of this literature.”

Incorporating Benefits to Children in the Short Run

Absent from the Moffitt 1992 review is any reference to the potential *benefits* of cash assistance to the children of the recipients.⁸ The only reference to impacts on children in the review is to a small number of studies that attempt to estimate intergenerational welfare dependency. Indeed, the literature at the time included very few papers on the question, as Figure 4 shows. For example, in our database, only two studies investigated effects of the influential Income Maintenance Experiments on children in the 1970s (Maynard, 1977; Maynard and Murnane, 1979). Although these studies found that the experiment increased the education of children and young adults (at least in some samples), these findings were mostly ignored by policy-makers and researchers alike. Perhaps economists ignored these because the popular Mirless (1971) framework is static, only considering the immediate consumption value of the transfers and ignoring any potential long-term benefits for children.

⁸ The same evolution of the research, with an initial focus on the effects on work, occurred for analysis of the EITC. Initial studies examined impacts on work and marriage, with little focus on children (Hotz and Scholz, 2003, Nichols and Rothstein, 2016).

Starting in the mid-1990s, however, economists began to widen the focus of research on safety net programs to consider effects on household members, particularly children (Figure 4). One of the first papers in this new line of inquiry was “Welfare and Child Health: The Link between AFDC Participation and Birth Weight” (Currie and Cole, 1993). As in Moffitt’s review, the authors motivate the paper with a reference to policy-making. They mention that many states had recently sought to either freeze or reduce payments in their AFDC programs, but were doing so “in a vacuum, because the effects of maternal participation on the wellbeing of their children has received little attention” (p. 971). Using a newly available data source containing information on welfare participation and child health (the National Longitudinal Survey of Youth panel), Currie and Cole (1993) estimated that AFDC benefits during pregnancy increased birthweights.

A second example of the early research on the benefits of the social safety net to children comes from Medicaid. This too was motivated by policy debate: National health reform was being debated in the US in the mid-1990s. To shed light on the potential benefits of legislation that would expand health insurance universally, Currie and Gruber (1996a,b) studied the impact of the expansions in the Medicaid program in the 1980s which made more women and children eligible for the program. They found that increases in Medicaid coverage for pregnant women reduced infant mortality and the share of babies born of low birth weight (below 2,500 grams). The child Medicaid expansions, which doubled the number of children eligible for Medicaid between 1984 and 1992, increased medical utilization and lowered child mortality. Since then, researchers have documented positive benefits of other safety net programs (the EITC and SNAP) during pregnancy on birth outcomes.⁹

⁹ Strully, Rehkopf and Xuan (2010), Hoynes, Miller and Simon (2015), Almond, Hoynes and Schanzenbach (2011).

Another set of early studies was made possible because of a series of randomized controlled trials (RCTs) of state welfare reforms in the early 1990s. Prior to the federal welfare reform that replaced AFDC with TANF in 1996, many states received waivers to reform their AFDC programs. Randomized control trials were used to examine impacts of these state reforms (Karoly and Grogger, 2005). While the first reports focused on effects on earnings and welfare participation, several papers extended that work to examine impacts of welfare reform on children, including health and school achievement (Gennetian et al., 2002; Morris et al., 2005; Duncan et al., 2011).

Linking Early Childhood with Long-run Outcomes

Early work on how safety net programs like AFDC, Medicaid, Food Stamps and the Earned Income Tax Credit affected child outcomes focused on birth outcomes, possibly because of data availability (birth weight and infant death are reported for all births in the vital registration systems) and because it is easier to identify the effects of events that take place during the short gestation period. Advances in three areas of research helped to spur researchers' interest in examining the long run effects of safety net use in childhood: research examining the long run effects of preschool programs, those studying the long-run effects in-utero and early life circumstances, and work documenting low levels of economic mobility in the US. We discuss each of these in turn.

Two influential and highly studied randomized control trials of preschool programs were conducted by psychologists in the 1960s and 1970s: the Perry Preschool Project and Abecedarian. These programs randomized children from disadvantaged households to high quality preschool programs and followed them for 21 (Abecedarian) or 40 years (Perry

Preschool). Both studies found substantial effects on academic achievement among children in K-12 period, though these were not always statistically significant. Studies investigating participants as adults, however, showed a broad range of long run benefits: Children randomized to the high-quality preschool program were more likely to complete high school, earn a bachelor's degree, and earn more in the labor market (Beurutta-Clement et al., 1984; Schweinhart et al., 1997ab, 2005; Heckman et al., 2010). Based on these long run findings, cost-benefit analyses implied returns on investment on the order of 7-10% (Heckman et al., 2010). Importantly, many of the largest effects were not on educational outcomes, but on health and behavioral outcomes, with two-thirds of the financial returns coming from a reduction in criminal activity (Belfield et al., 2006). However, there were legitimate concerns over the generalizability of these findings. They had small sample sizes—around 100 participants in each study—all of whom were drawn from very poor families and had very low cognitive test scores at baseline.

Following this work, several studies emerged evaluating the Head Start program, a program that provides free preschool for poor children also pioneered by psychologists. Like the work estimating the impact of AFDC and Medicaid participation on birth outcomes, the work on Head Start also begins with a discussion of policy-makers desires to increase funding for Head Start even though “a careful reading of the literature reveals that credible studies demonstrating the lasting effects of Head Start are limited.” (Currie and Thomas, 1995 page 341). The initial research documented short term benefits as measured by improved test-scores for children who participated compared to their siblings who did not (Currie and Thomas, 1995). Interestingly, studies document significant fading of gains in the medium term (Puma et al., 2012), but

significant long term gains in educational attainment and earnings (Deming, 2009; Garces, Currie and Thomas, 2002; Bailey et al., 2020).

A number of influential lessons emerged from this literature. First, there can be long term positive benefits associated with high quality preschool programs, even if short or medium run effects are small or statistically insignificant. Second, we need to broaden our understanding of outcomes beyond a narrow focus on cognitive skills (e.g., test scores) when considering child development, as there are large sizeable returns to other forms of human capital. Third, accounting for both long term effects and effects across a range of outcomes changes our evaluation of the desirability of these programs.

Similar lessons emerged from a different literature. In the early 2000s, economists began generating evidence linking in-utero conditions, and birth weight, to long term outcomes of social and economic significance. In particular, a seminal paper by Almond (2006) investigated whether children who were in the womb during the 1917 Spanish Flu pandemic suffered negative consequences as a result of the exposure to the virus in utero. Though epidemiologists had previously linked negative in-utero environments and lower birth weight with worse health later in life (Barker et al., 1989), Almond (2006) showed that in utero flu exposure also lowered individuals' economic wellbeing (measured by educational attainment, disability and earnings) later in life. Many subsequent papers (reviewed in this journal by Almond and Currie, 2011) have confirmed that exposure to the negative shocks in-utero had negative long-term consequences for economic outcomes in adulthood.

A related line of research established a causal relationship between neonatal health and long-run outcomes using exogenous variation in birth weight *within pairs of twins* raised in the same household (Behrman and Rosenzweig, 2004, Black, Devereaux and Salvanes, 2007). The

latter found that the effects of increased birth weight on newborn babies were much smaller than the long term impacts on IQ, education and earnings. This difference in findings (small, short run effects, but considerable long run effects) further underscores the importance of examining multiple outcomes at different points in time to better understand how environments in early life influence child development.

This literature coincided with a third strand of research examining the relationship between paternal and child income. This work exploited new sources of data and documented much greater intergenerational correlations in earnings than had previously been estimated (Solon, 1992): children of rich parents were much more likely to grow up to be rich than the children of poor parents. This research, since confirmed using new and better data including that derived from IRS tax data (Chetty et al., 2014), implied low rates of economic mobility in the US, providing even more impetus for researchers to better understand how economic conditions in childhood shaped future outcomes.

Overall, this literature has led to a large number of papers investigating not only in utero shocks but how parental circumstances and policies in childhood affect economic and long-term well-being. In their extensive recent review, Almond, Currie, and Duque (2018) discuss the evidence on the long-term effects of childhood conditions, including the effects of policies and parental behaviors, not just external disease or environmental insults. This extended beyond programs like Head Start explicitly targeting human capital investments, to include social safety net programs, such as Food Stamps, cash assistance, and the EITC, in which the primary recipient was an adult or family.

Recent Evidence on the Long Run Benefits of Safety Net Programs for Children

New studies on the long run impact of safety net programs have been made possible by advances in data collection and greater availability of data linking participation in safety net programs during childhood with long term outcomes.

In an example of creatively accessing administrative data, Brown, Kowalski and Lurie (2020) exploit tax data to estimate the long-term impact of Medicaid eligibility in childhood for children born 1981-1984 on a host of outcomes measured at ages 19-28. The authors find that those eligible for Medicaid in childhood enroll in college at higher rates, delay their fertility, experience reduced mortality, collect fewer EITC benefits, and pay higher taxes. Based only on the increased tax revenue, the authors estimate the government recoups roughly \$0.58 for every dollar spent on Medicaid eligibility in childhood. These findings were confirmed by Goodman-Bacon (2021) who finds that children who gained eligibility for Medicaid when the program was first introduced (1966-70) had better health and improved economic outcomes as adults, concluding “Childhood Medicaid coverage for these cohorts has therefore saved more than twice its cost.”¹⁰

Other work that uses existing data creatively to estimate long term benefits of a safety net program on children is that of Hoynes, Schanzenbach and Almond (2016) and Bailey et al. (2020). Hoynes et al. (2016) link existing data from the Panel Study of Income Dynamics on individuals born 1956-1981 with information on the staggered roll-out of the Food Stamp program across counties between 1961 and 1974. The authors estimate that gaining eligibility for Food Stamps during childhood improved long term adult health and increased economic self-sufficiency among women. Bailey et al. (2020) use a similar identification strategy and take advantage of new linking technologies and data available at the US Census Bureau. They find

¹⁰ Other recent work showing long term economic benefits of health insurance provision for children include Cohodes et al. (2016); Miller and Wherry (2018); Thompson (2017).

that access to food stamps in early childhood leads to increases in completed education, earnings, neighborhood quality and home ownership as well as reductions in poverty, mortality and incarceration. In both these studies, the gains are large and increasing in length of exposure between conception and age five, after which there appear to be few effects, suggesting that early childhood may be a sensitive window for nutritional inputs.

Finally, an example of recent research that relies on the development of a new dataset to estimate the long-term impact of safety net programs is Aizer et al. (2016). The authors collected and digitized data from historical archives that included information on all applicants to the Mother's Pension (1911-1930) program and linked this information with mortality data, the 1940 Census and WWII enlistment records for each boy in the sample. They estimate a positive long-term impact of the original welfare program on children's longevity, educational attainment and earnings in young adulthood.

There are many other recent papers documenting long term benefits. How does this new information affect our evaluation of safety net programs? Recent work by Hendren and Sprung-Keyser (2020) systematically estimates the marginal value of public funds, carefully taking into account the multiple long-term fiscal consequences of safety net programs. They document that programs targeted towards children have very large returns and essentially pay for themselves, in contrast to policies that target adults.

Implications for Policy-Making: Congressional Budget Office (CBO) Scoring

How does research on the safety net translate into policy-making? Consider how CBO scores policy proposals: Since 1975, every major piece of federal legislation has been evaluated by the CBO in an effort "to assess the effects on the economy of "major" legislation that

Congressional authorizing committees approve and to incorporate those effects into the agency’s *10-year cost estimates*” [emphasis added]. To do so, the CBO generates predictions for the overall cost of the legislation:

“Cost estimates show how federal *outlays* and *revenues* would change if legislation was enacted and fully implemented as proposed—compared with what future spending and revenues would be under current law. Each estimate also includes a statement about the costs of any new federal mandates that the legislation would impose on state, local, or tribal governments or on the private sector.”¹¹

This – known as the CBO score – considers behavioral responses of individuals, firms and local governments to the proposed legislation in calculating outlays and revenue.

A March 2015 CBO report “The Effects of Potential Cuts in SNAP Spending on Household with Different Amounts of Income” illustrates the CBO’s approach to evaluating different policy options regarding a major safety net program, SNAP. The main objective of this CBO analysis was to understand how three policies (reducing the maximum benefit by 13%, increasing the benefit reduction rate from 30 to 49 percent, and reducing the monthly income limit for eligibility from 130 to 67% of the FPL), would impact outlays (costs) and household income, the latter potentially affecting tax revenue.

In their analysis, the CBO considered how a reduction in SNAP benefits would reduce direct outlays and affect parental labor supply. In predicting that labor supply would increase in response to benefit reductions, the CBO report cited Hoynes and Schanzenbach (2012) showing that after the Food Stamp program was introduced, female single heads of households worked fewer hours.

The CBO report did not, however, incorporate any predictions regarding changes in the *benefits* of participation associated with reducing SNAP participation. The CBO report

¹¹ Accessed at CBO “Frequently Asked Questions About CBO Estimates” <https://www.cbo.gov/about/products/ce-faq>

concludes “Participation in SNAP may have other consequences, such as effects on recipients’ health or nutrition, but evidence has so far been inconclusive.” (p. 6). At the time of the report, however, evidence that SNAP participation decreased the probability of low birthweight by between five and 11 percent did exist (Almond et al., 2011).

Why wasn’t this information included in the CBO report given what we know about the short and long run benefits of reducing low birth weight on a number of important social and economic outcome including employment and earnings? A number of factors likely contribute to the omission. First, the CBO (as well as most economics research historically) maintains a more narrow view of human capital that focuses on education and job training where the research linking skills with earnings is better developed. While the concept of “skills” with returns in the labor market expanded to include physical health, mental health and other soft skills and behaviors in economics research, these concepts do not yet seem to have been fully incorporated into CBO estimation. One reason may be that measuring the exact rate of return to these other aspects of human capital is more complicated than measuring the private return to an additional year of schooling which is now well-established (Card, 1999). Second, the evidence presented in Almond et al. (2011), Hoynes et al. (2016) and Bailey et al. (2020) is based on historical data from the 1960s and 1970s. This generates concerns about generalizability to the present.

Third, and perhaps most importantly, the CBO is tasked with producing estimates over a ten-year window. Many of the returns to investments in children are not realized for many years, once the children complete their education, attain young adulthood and enter the labor market. Thus, even if there were consensus on the long run benefits of a program (which might need to be predicted if a program is new), the long run benefits outside the 10-year window would not be included in the CBO scoring. In contrast, the costs of the program register in the 10-year scoring

window as do any potential parental work disincentives. In sum, we capture the short-run costs but omit the long-term benefits because of the 10- year scoring window.¹² This structure inhibits policy makers' ability to take full advantage of recent advances in the economic research exploring and documenting the long run benefits of safety net programs, which often exceed their short run costs by a wide margin (Hendren and Spring-Keyser, 2020).

A comparison of the estimated marginal value of public funds (MVPF) for the first welfare program in the US, the Mother's Pension program, in the short and long run provides an illustrative example of how time horizon influences this calculation.¹³ The main estimated benefits of the Mother's Pension program were increases in completed schooling and earnings in early adulthood as well as increases in longevity, which are not realized until many years after benefit receipt. In contrast, the main costs of the program are realized earlier in the form of direct outlays and documented delayed time to remarriage among the mothers. If one only considers the latter, the MVPF calculation is below 1 (0.84), suggesting that the costs of the program exceed its benefits. However, once benefits to children are considered, the MVPF rises to more than 5, suggesting that the program generates substantial benefits relative to the costs (Aizer et al., 2021). The benefits are large, in part, because they accrue over many years, and because there are substantial health benefits in addition to labor market benefits. Similarly, for the Food Stamp program, if one were only to consider the impact on adults, the MVPF would be 0.54. But once one considers evidence that Food Stamps increases the earnings and life

¹² There are examples of programs that generated short run effects that faded over the medium term, only to re-emerge with long run outcomes are measured. This adds uncertainty to long term projections.

¹³ The MVPF of a policy or program is calculated by estimating the benefits of the policy or program to recipients (measured as their willingness to pay) divided by the policy's net cost including long-term impacts on the government's budget.

expectancy and reduces incarceration of children, the MVPF including these impacts on children rises to 56 (Bailey et al., 2020).

In sum, these programs represent *investments* in the human capital of children, not simply transfers to adults that increase consumption. The returns of these investments, like that of other investments in human capital, can only be properly measured over the entire lifetime of the recipients and should be comprehensive in nature, including gains to schooling, health and other aspects of human wellbeing.

How to Make Research More Informative for Policy-Making

There are two key areas in which future economic research can help improve the design and scope of the safety net for children in the US. The first is understanding why the estimated impacts of various programs on children seem to differ across settings. The second is to shed light on whether and how evidence based on short term impacts can be used to predict long term outcomes. We discuss each in turn.

Understanding Why Estimated Treatment Effects Differ Across Settings

The effects of safety net programs on children's outcome often vary based on population and environment. This makes it difficult for policy makers to generalize or extrapolate from one setting to another, and impairs their ability to target programs to those likely to benefit the most. For instance, we have highlighted work showing a positive impact of cash transfers through the safety net on child outcomes. But not all research finds positive effects of cash or in-kind transfers to the poor in the long run. For example, Price and Song (2018) find no long-term

effects of the Seattle-Denver Income Maintenance Experiment on children's longevity or on economic outcomes in adulthood. But it is not clear why.

Documenting heterogeneity (differences) in the effects of the programs across settings should be accompanied by an exploration of its sources. One likely source of heterogeneity is differences in the counterfactual environment faced by families eligible for safety net programs. For example, the benefits to children from participation in Head Start have been shown to depend on what the alternative source of care is, with the benefits of Head Start increasing for those whose alternative environment is more deprived or of lower quality (Kline and Walters, 2016; Cascio, 2021). Likewise, Medicaid expansions are more effective for the lowest-income mothers, which likely reflects the fact that higher-income mothers were more likely to have had earlier access to private insurance which Medicaid crowded out (Currie and Gruber, 1996a).

A second potential source of heterogeneous effects is complementarities across multiple programs (program complementarity, the idea that one program is more effective if a child is also participating in another program), or across investments early and later in life (dynamic complementarity), for which the evidence is scant (Almond et al., 2018). Generating empirical evidence of complementarities across environments or programs is challenging due to the difficulty of obtaining plausibly exogenous variation in multiple inputs across time or programs. One example of such an attempt is Johnson and Jackson (2019) who find that school finance reform is far more effective at raising student test scores if students had access to Head Start programming, and also that Head Start is more effective if followed by resource rich educational programming. This might help explain why Black children have been found, in general, to benefit less in the long run than other groups from anti-poverty programs: If Black families are

more likely to attend under-resourced or segregated schools, they may receive lower levels of complementary investments (for example, Garces et al., 2002; Bailey et al., 2020).

Treatment effects may also vary because of interaction effects with labor market conditions or the housing market. For some children, this means that discrimination may also play an important role. Discrimination in the housing market, for example, could hinder Black and Latino families' ability to leave high poverty/high crime neighborhoods with under-resourced schools. Discrimination in the labor market can reduce the returns to skills developed in childhood for Black and Latino youth. Discrimination may reduce access to safety net programs. A better understanding of observed differences by race and the role of discrimination is needed.

Recent work has attempted to better understand treatment effect heterogeneity by pooling results of similar experiments across settings in the spirit of meta-analysis (for example, Dehejia et al., 2021; Meager, 2019; Page, 2021). These efforts highlight the difficulty conducting such assessments in economics. Two barriers include non-standard measurement of outcomes across studies and lack of adequate information to allow researchers to pool the results across studies.¹⁴ Thus, standardized measurement of outcomes and providing more information about sample characteristics would help. Another strategy is to leverage newly available administrative data sets. Large samples allow researchers to precisely estimate treatment effects for different subgroups. New machine learning methods designed to work with large data, such as those in Wager and Athey (2018), can be used to investigate heterogeneity systematically. Machine

¹⁴ Card, Kluve and Weber (2018) make similar observations about the difficulty of conducting such research in their paper which combines the results of 207 papers to investigate the effects of work training programs. Galama et al. (2018) report similar difficulties when attempting to explain the heterogeneity in the estimates of the causal effects of education on health.

learning techniques allow researchers with large datasets to uncover new patterns of heterogeneity that are not ex ante obvious in a statistically sound way.

Projecting Long-Term Treatment Effects from Short-Term Evidence

Some childhood shocks appear to have effects that “fade out” initially, only to re-appear later in life (Almond et al., 2018). An important next step for research is to improve our understanding of the extent to which evidence on short- and medium-term outcomes can be used to make long-term projections. This issue is particularly important given the short-term incentives inherent in policymaking. Programs that show no benefits in the short run tend to be eliminated, but these programs may ultimately “pay for themselves” if they generate long term benefits. Conversely, programs with short-term benefits receive more political support, even if these benefits turn out to be short-lived. An exciting econometric development in this area is the use of new techniques that combine short-term evidence from randomized trials with long-term observational data to project long-run outcomes (Athey et al., 2020; Aizer et al., 2021).

A related need is to better understand what explains these dynamic effects. Estimated effects may “appear” at different points in time either because of dynamics in the underlying process of skill production (for example, a common pattern is that risky behavior does not manifest until adolescence and then declines in adulthood) or because data limitations prevent researchers from effectively measuring outcomes at different points in time. For example, measures of non-cognitive skills are often crude, like measures of criminal involvement, or based on subjective measures, like answers on a questionnaire used to develop a behavioral problem index. As Guttmanova et al. (2008) discuss, these behavioral checklists often do poorly at characterizing the behavior of racial minorities and low-income children. To address this,

economic research may benefit from insights from psychology or neurobiology regarding the timelines of child development. This can serve as a basis for collection of data on outcomes that better reflect the underlying developmental process.

A complementary effort is the development and empirical assessment of models that can generate the types of dynamic treatment effects that are observed in the data. The most important work in this area comes from the model of Cunha and Heckman (2007), which codified a number of existing insights and generated new ones about the formation of skill. Most notably their model allows for there to be “sensitive windows” during which certain skills are best produced and for there to be “dynamic complementarities” which stipulates that skills produced at an early stage raise the productivity of investment at subsequent stages. Another recent example comes from Lleras-Muney and Moreau (2020) that provide a model of health and mortality at the population level where in-utero shocks or differences in socioeconomic status throughout life can result in treatment effects that are u-shaped over time, as the literature has documented. This model accurately predicts the dynamic long-term effects of graduating in a recession on mortality (Schwandt and von Wachter, 2020). Parallel models could be developed for other types of interventions and outcomes. Most importantly empirical evidence in support of these models is needed.

Why is the US Child Poverty Rate Still So High and What Can We Do About It?

The growth of the social safety net (particularly through tax credits and in-kind transfers) has played an important role in reducing child poverty, but has not eliminated it (Figure 2). In order to have large impacts on poverty, a better understanding of the causes of poverty and how safety net programs influence poverty is needed.

There are multiple candidate explanations for the continued high rate of child poverty. The first and most obvious is that the US spends less on assistance for families with children than other high-income countries as discussed previously. The question is why? It's not necessarily that the US is unwilling to spend on social programs: The US spends considerably more on the elderly than on children, (7% of GDP for 54 million seniors compared with 0.5% of GDP for 73 million children) and indeed spends more on seniors (as a percent of GDP) than many other OECD countries. Moreover, the main programs for the elderly (Social Security Retirement Benefits and Medicare) are universal while child benefits are income targeted and include conditionality (such as work requirements). Indeed, initial estimates suggest that the US reduced child poverty significantly in 2020 and 2021 through the expanded CTC and other efforts related to pandemic relief, but the relief is temporary, with most of it expiring after 2021 (Urban, 2021; CCPSP, 2022).

Why is the safety net in the US less generous for children than for other groups?

Two factors may explain the disparity in U.S. public funding between children and the elderly. The first is "senior power" which refers to the political influence of the elderly who vote in large numbers (71% voter turnout in the 2016 election compared with 46% for 18-29 year olds) and are very well organized. The American Association of Retired People (AARP) boasted 38 million members and \$1.7 billion in revenues in 2019. They constitute a powerful lobby. Children on the other hand do not vote and there is no organization that represents the needs of children to rival the AARP. The Children's Defense Fund, one of the major groups advocating for children in the US, reported revenue of \$17.8 million in 2019, just 1% of AARP revenue.

The second may be the racial and ethnic composition of the two populations. The elderly population in the US is 77% white non-Hispanic in contrast to children who are slightly less than half white non-Hispanic. From the onset, the generosity and universality of anti-poverty programs have been a function of the racial composition of potential recipients. In the Mother's Pension program, only 3 percent of all families receiving aid were Black, which was far less than what one would have predicted if aid were based solely on need (The Children's Bureau, 1931). Many New Deal safety net programs of the 1930s explicitly excluded workers in industries with high Black employment shares (Katznelson, 2005). This bias persisted throughout the 20th century. The 1996 welfare reform which gave states considerable discretion over spending, led to lower levels of cash assistance in states with higher shares of Black residents (Hardy et al., 2019). Today, states with large Black populations have substantially less generous welfare programs (Urban Institute, 2017). This evidence is consistent with the conclusion of Alesina, et. al. (2001) that race is the "single most important predictor of support for welfare" in the US (see also Luttmer, 2001). This combination of lack of political power and racial and ethnic discrimination have likely influenced the divergence in public priority and policy for these two groups.

The third reason is likely tied to the complexity of the safety net today. Children from low-income US households are often served by more than one program and these programs are not well-coordinated. For example, 92 percent of children on food stamps participate in at least one other program and one-third participate in two other safety net programs (King and Giefer, 2021). A call to coordinate and streamline eligibility for multiple safety net programs is not new (Currie, 2006). A coordinated and comprehensive approach could work in a US context. It is notable that the two of the most prominent and successful early education interventions (the

Abecedarian and Perry School programs) provided a comprehensive set of services to children and their families.

Fourth, it may well be that even though the safety net has benefitted children, this complicated set of policies are not the best approach to lowering poverty. Poverty rates for children are responsive to business cycles, with strong demand for labor and rising rates of employment and wages resulting in significant declines in child poverty. This suggests that labor market policies that increase the earned income of poor families such as raising the minimum wage (Derenoncourt and Montialoux 2021) could prove to be as or more successful as direct aid. Another fruitful direction for research is to assess the relative cost-effectiveness of multiple approaches to lowering child poverty.

Conclusion

The emphasis of economic research on disincentives may have adversely influenced policy. Economic research on the effects of safety nets programs has been and continues to be extremely influential in policy making. For many years this research focused primarily on documenting the potential negative behavioral impacts of these programs, even if small. Policy makers responded by attempting to minimize these. The same focus on quantifying negative incentive effects has also historically dominated the study of social insurance programs, such as health insurance and unemployment insurance. The economic research on these programs has likewise evolved to include benefits as well as costs. A new focus on the benefits of safety net programs on children—the intended beneficiaries of these programs—that incorporates evidence on their many long-term benefits can contribute to the design of better policies going forward.

We thank Raheem Chaudhry, Sungwoo Cho and Ray Huang who provided excellent research assistance. We also thank Janet Currie, Greg Duncan, Shari Eli, and Robert Moffitt for helpful comments on an earlier draft.

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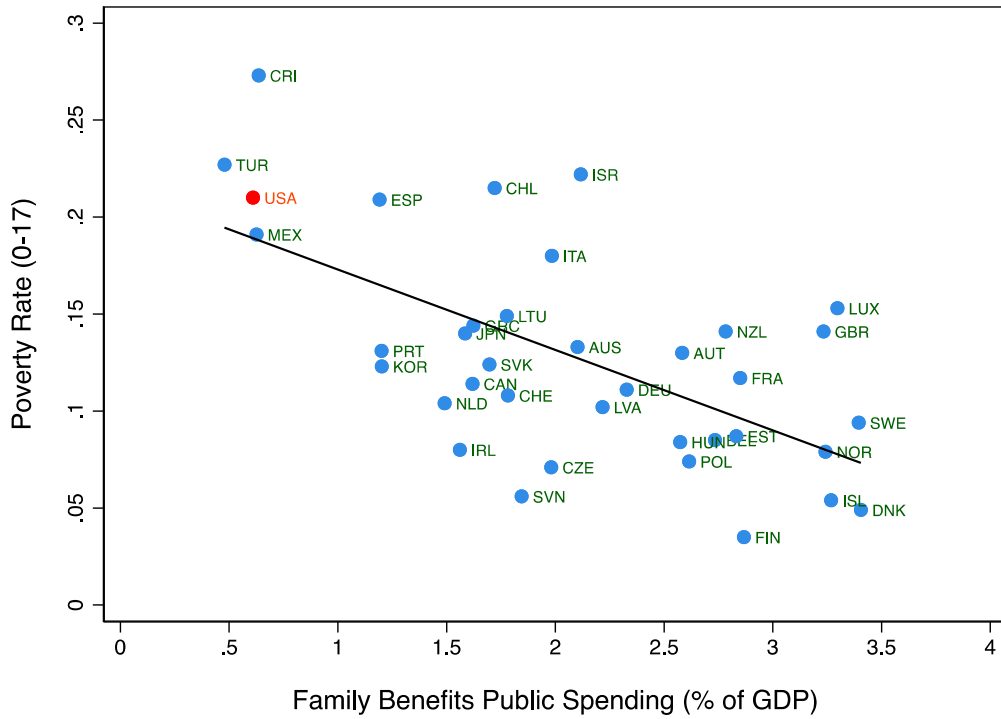
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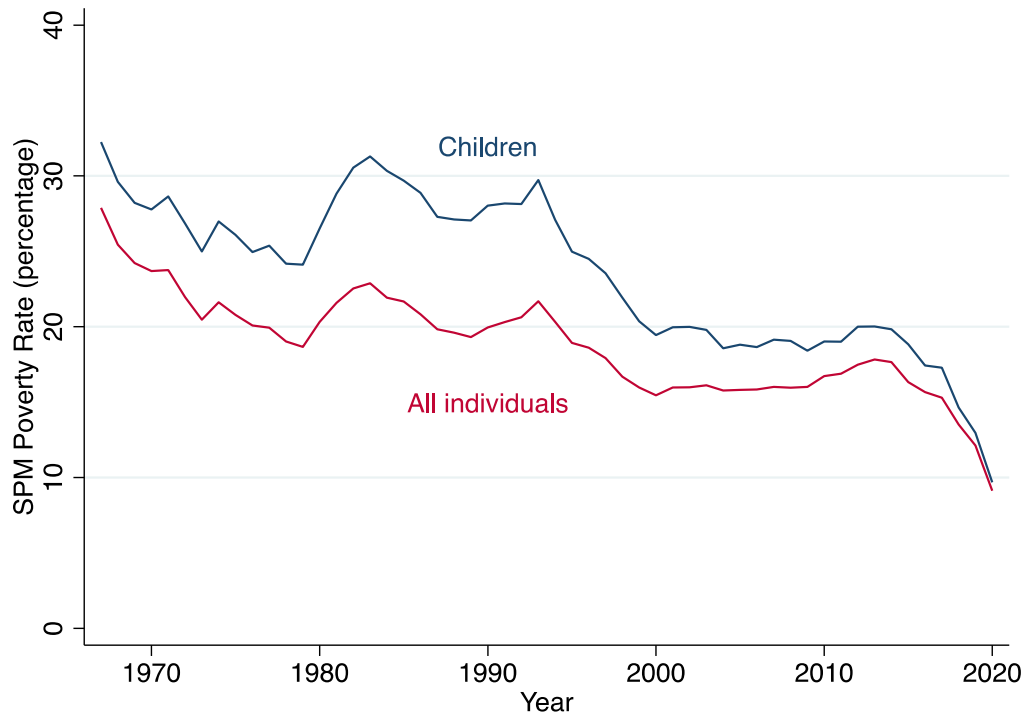
Wager, S., & Athey, S. (2018). Estimation and Inference of Heterogeneous Treatment Effects using Random Forests. *Journal of the American Statistical Association*, 113(523), 1228-1242. <https://doi.org/10.1080/01621459.2017.1319839>

Figure 1: Child Poverty Rates and Public Spending on Families in OECD Countries



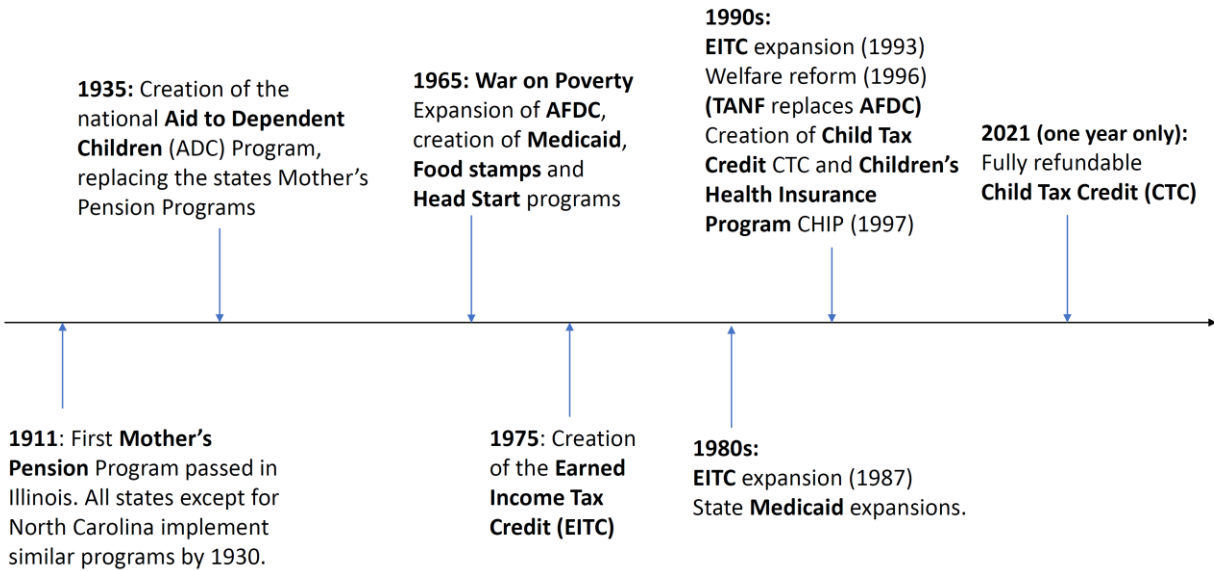
Note: Data come from the OECD database and use the latest information available mostly from 2017-2019. Poverty Rate Data are available at <https://data.oecd.org/inequality/poverty-rate.htm>. Family Spending Data are available at <https://data.oecd.org/socialexp/family-benefits-public-spending.htm#indicator-chart>.

Figure 2: Trends in Poverty and Child Poverty in the US, 1965-2020



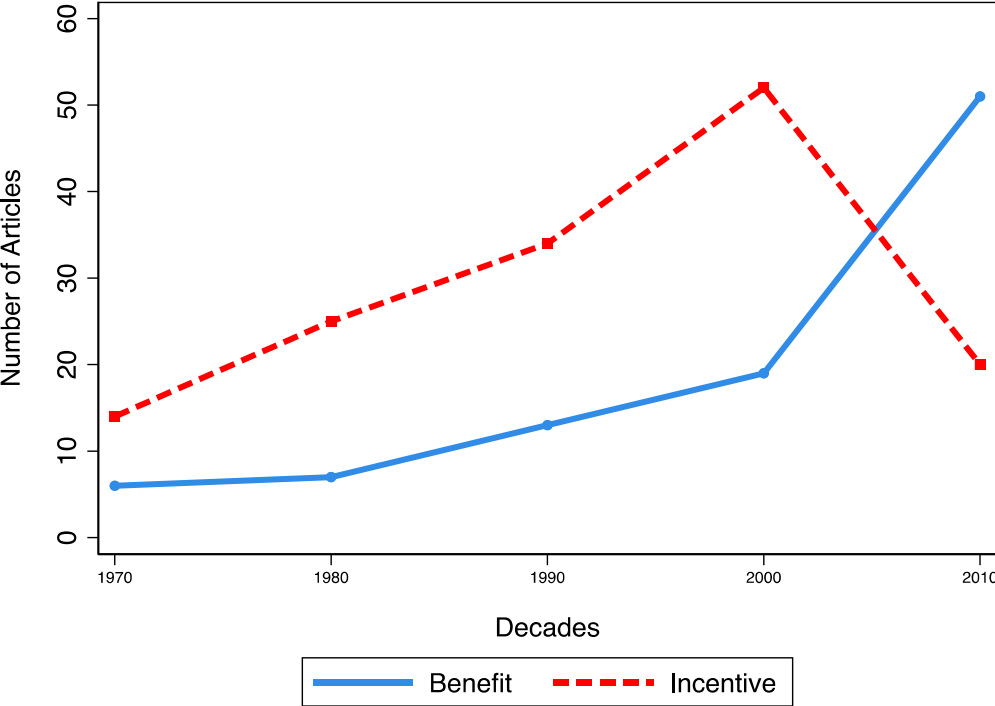
Note: Unpublished data from Trisi and Saenz (2021) and using the methods described therein. The Supplemental Poverty Rate (SPM) is based on a family resource measure that includes cash income plus the value of in-kind transfers (food and nutrition and housing) minus taxes, selected work deductions and out of pocket health payments. For detail see Fox and Burns (2021).

Figure 3: Evolution of Federal Anti-poverty Programs in the US



Notes: The Aid to Dependent Children Program's name was changed to Aid to Families with Dependent Children (AFDC) in 1962.

Figure 4: Research articles on incentive and benefit effects of anti-poverty programs



Notes: Data compiled by the authors. 2010 includes publications through 2020. See notes to Appendix Table 1 for details.

Table 1: Major Safety Net Programs for Children in the US

Program	Description	Share of Caseload that is Children	Number of Children Served (2019, in millions) a/	Income Eligibility	Estimated Annual Expenditures on Children (2019, in billions)
A. Major Programs (covered in this paper)					
Medicaid/CHIP	Health insurance	0.51	35.0	<185% FPL for pregnant women and infants, <133% FPL for children (varies by state)	\$115.4
EITC	Tax credit for working families	0.74	33.0 (annual)	<150-235% FPL (depends on #kids)	\$56.6
Child Tax Credit	Tax credit for families with children	1.00	-		\$37.6
SNAP	Food assistance through EBT card	0.44	19.9	<130% FPL	\$27.8
TANF	Cash transfer	0.75	1.5	<16% -150% FPL (varies by state)	\$12.8 f/
AFDC (precursor to TANF, ended in 1995)	Unconditional cash transfer	0.68	9.1 (1995)	<185% of the state determined standard of need	\$40.0 e/
B. Other Programs that Serve Children					
Supplemental Security Income	Cash transfer for aged and disabled	0.14	1.2	Countable income below \$750/month	\$10.5
Public Housing d/	public housing and rental vouchers	0.45	4.5 (annual) i/		\$8.5
Child Nutrition	school meals programs	1.00	29.6 h/	<=130% FPL free and <=185% FPL reduced price	\$22.3
Special Supplemental Food (WIC)	In-kind food assistance	0.76	4.8	<185% FPL for pregnant women and children<5	\$4.8

Notes: See appendix for sources

a/ Number of children served is average monthly in 2019 unless otherwise noted.

b/ Annual expenditures equal federal spending on children, based on estimates in Hahn et al (2021), unless noted otherwise. AFDC spending includes component of block grant spent on cash assistance.

c/ Annual spending.

d/ Includes public housing and section 8 vouchers.

e/ Expenditures in 1996 before welfare reform, in billions of 1996 dollars.

f/ This spending is for the entire block grant, an estimated 26% of the block grant is spend on cash assistance (Bitler and Hoynes 2016).

h/ Number of children served by school lunch program.

i/ Includes all households, not limited to households with children.

Appendix Table 1: Counts of Articles on Social Safety Net, by Type

	70s	80s	90s	00s	10s	Total
Number of Articles						
All Programs	20	31	47	70	71	239
AFDC/TANF	5	15	24	35	3	82
EITC	0	0	2	6	15	23
SNAP/FSP	0	7	9	16	11	43
Medicaid	2	5	21	23	47	98
Negative Income Tax	13	9	1	1	1	25
Number of Articles with Incentive Effect						
All Programs	14	25	34	52	20	145
AFDC/TANF	5	14	22	30	1	72
EITC	0	0	2	4	7	13
SNAP/FSP	0	4	8	11	1	24
Medicaid	1	1	11	16	11	40
Negative Income Tax	8	9	1	1	1	20
Number of Articles with Benefit Effect						
All Programs	6	7	13	19	51	96
AFDC/TANF	0	2	2	5	2	11
EITC	0	0	0	1	8	9
SNAP/FSP	0	3	1	5	10	19
Medicaid	1	4	10	9	36	60
Negative Income Tax	5	0	0	0	0	5

Notes: Data compiled by the authors. The welfare database includes information on all papers studying welfare programs that are published in leading economic journals from 1968 to 2020 (American Economic Review, Econometrica, Journal of Political Economy, Quarterly Journal of Economics, Review of Economic Studies, AEJ: Applied, AEJ: Economic Policy, Review of Economics and Statistics, Journal of Human Resources, Journal of Labor Economics, Journal of Public Economics and the Journal of Health Economics). To create the database, a search was conducted on each journal's website and JSTOR with search terms of the name of welfare programs such as "AFDC" and "Medicaid". The database then contains the title, author(s), published journal and the number of Google Scholar citations as of 2021. The name and the country of the welfare program that the paper studies are also included in the database. The welfare programs include AFDC, TANF, EITC, SNAP, Food Stamps, Medicaid, and Negative Income Tax. To study the trends of these papers, the database also includes the paper's central incentive and benefits effects and outcomes of interest and the data used. These incentive and benefits effects are further categorized into "Labor Supply", "Family" (marriage, fertility, female headship etc.), "Participation" and "Savings" for incentives and "Health", "Education", "Crime" and "Consumption" for benefits. The benefits effects are also classified into short- or long-term effects and whether the benefits recipient was a child or not. We exclude papers that are not empirical and those that do not study incentive or benefits effects of one of these social safety net programs.

Appendix: Data Sources For Table 1

Sources for table 1 Estimated expenditures on Children

<https://www.urban.org/research/publication/kids-share-2021-report-federal-expenditures-children-through-2020-and-future-projections>

Sources for Table 1 Caseloads

- AFDC: <https://www.acf.hhs.gov/ofa/data/afdc-caseload-data-1960-1995>
- TANF: <https://www.acf.hhs.gov/ofa/data/tanf-caseload-data-2019>
- EITC:
 - All: <https://www.eitc.irs.gov/eitc-central/statistics-for-tax-returns-with-eitc/statistics-for-2019-tax-returns-with-eitc>
 - Children: https://crsreports.congress.gov/product/pdf/R/R43805#_Toc61454427
- SNAP: <https://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>
- Medicaid:
 - <https://www.kff.org/medicaid/state-indicator/total-medicaid-and-chip-child-enrollment/?currentTimeframe=14&selectedRows=%7B%22wrapups%22:%7B%22united-states%22:%7B%7D%7D%7D&sortModel=%7B%22colId%22:%22Medicaid%2FCHIP%20Child%20Enrollment%22,%22sort%22:%22desc%22%7D>
- Head Start: <https://eclkc.ohs.acf.hhs.gov/about-us/article/head-start-program-facts-fiscal-year-2019>
- CTC:
<https://crsreports.congress.gov/product/pdf/R/R41873#:~:text=Eligible%20taxpayers%20can%20claim%20a,taxpayer%20has%2C%20multiplied%20by%20%242%2C000.>
- SSI:
 - https://www.ssa.gov/oact/ssir/SSI20/E_ssiLOT.html
 - https://www.ssa.gov/oact/ssir/SSI20/IV_B_Recipients.html#946694
 - eligibility: <https://journals.sagepub.com/doi/pdf/10.1177/0002716219884072>
- public housing: <https://journals.sagepub.com/doi/full/10.1177/0002716219877801>
- WIC
 - <https://www.fns.usda.gov/pd/wic-program>
 - <https://www.fns.usda.gov/sites/default/files/resource-files/26wifypart-1.pdf>
- child nutrition
 - <https://www.fns.usda.gov/pd/child-nutrition-tables>
 - <https://www.fns.usda.gov/sites/default/files/resource-files/slsummar-1.pdf>