

NBER WORKING PAPER SERIES

THE EFFECTS OF THE 2021 CHILD TAX CREDIT ON CHILD DEVELOPMENTAL
OUTCOMES

Anna Aizer
Adriana Lleras-Muney
Katherine Micheltore

Working Paper 32609
<http://www.nber.org/papers/w32609>

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
June 2024

No sources of funding for this. The views expressed herein are those of the authors and do not necessarily reflect the views of the National Bureau of Economic Research.

NBER working papers are circulated for discussion and comment purposes. They have not been peer-reviewed or been subject to the review by the NBER Board of Directors that accompanies official NBER publications.

© 2024 by Anna Aizer, Adriana Lleras-Muney, and Katherine Micheltore. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

The Effects of the 2021 Child Tax Credit on Child Developmental Outcomes
Anna Aizer, Adriana Lleras-Muney, and Katherine Michelmore
NBER Working Paper No. 32609
June 2024
JEL No. I24,I30,J38

ABSTRACT

Child poverty fell to historic lows in 2021, in large part due to the temporary expansion of the Child Tax Credit (CTC). We consider the possible implications of this expansion on children's short- and long-term development. To do so, we review the available short-run evidence from the 2021 expansion and the existing research evidence on the longer run effects of similar income transfers in childhood on child health and human capital. We conclude that the CTC likely improved child health and well-being in the short and long run, with greater impacts for poor children and modest or nonexistent effects for non-poor children. Moreover, the effects might be more substantial for younger children and for those in places with weaker safety nets.

Anna Aizer
Brown University
Department of Economics
64 Waterman Street
Providence, RI 02912
and NBER
anna_aizer@brown.edu

Katherine Michelmore
Gerald R. Ford School of Public Policy
University of Michigan
735 S State St
Ann Arbor, MI 48109
and NBER
kmichelm@umich.edu

Adriana Lleras-Muney
Department of Economics
9373 Bunche Hall
UCLA
Los Angeles, CA 90095
and NBER
allerasmuney@gmail.com

The 2021 reform to the Child Tax Credit (CTC) as part of the American Rescue Plan Act (ARPA) constituted the largest temporary expansion in the program's history. The reform increased the size of the credit and expanded eligibility to poor families, whose lack of earned income made them previously ineligible. This reform temporarily transformed the CTC into a near-universal child benefit and greatly reduced child poverty. Child poverty, as measured by the Supplemental Poverty Measure (SPM), fell from 9.7 percent in 2020 to 5.2 percent in 2021 but returned to pre-pandemic levels (12.4 percent) in 2022 after the CTC expansion expired.

In this article, we discuss the possible implications of the ARPA expansion on child development, in both the short and long run. We first discuss theoretical reasons why the CTC would matter for child development, and why it might not. We then review the evidence on how the reform impacted child development outcomes. Because the 2021 expansion is so recent, there is only limited evidence on its short-run effects and no evidence on its long-run effects. To predict its long-term effects, we combine the available short-run evidence from the 2021 expansion with existing evidence from the literature on the effects of similar income transfers in childhood on health and human capital. We conclude with a discussion of directions for future research.

Why Would the CTC Matter for Child Development?

Children raised in higher-income households earn more in adulthood

Among developed nations, the U.S. performs poorly in terms of intergenerational economic mobility. Parental income in the U.S. is highly predictive of a child's income later in life (Corak 2013). The degree of prediction is typically measured by the intergenerational earnings elasticity which ranges from zero (no connection) to one (parental income perfectly

predicts child income). Based on data for over 6 million individuals whose income was measured at ages 30–32 in 2012, Chetty et al. (2014) estimate an intergenerational earnings elasticity in the U.S. of 0.344.

What explains this relationship between parental and child income? One important factor is that children from higher-income families receive more investments in their health and human capital than children raised in lower-income families. This makes them more productive workers and, as a result, they earn more in adulthood. Below we describe the associations between parental income and multiple measures of child health and development. We then discuss how parental income affects child outcomes and present the evidence supporting a causal interpretation of the relationship between parental income on child development.

Parental income and child health and human capital

Child health. Differences in child health by parental income emerge at birth and increase as children age (Case, Lubotsky and Paxson 2002; Currie and Stabile 2003). Children who are born poor fare worse on every measure of child health (Table 1, Panel A). Their infant mortality rates are 70 percent higher than those of non-poor children. Among those who survive, poor children are 20 percent more likely to be born at low birth weight (an important marker of neonatal health), 38 percent more likely to become obese as children, 100 percent more likely to have diabetes, and 51 percent more likely to develop asthma compared to children who are not raised in poverty. They have more intellectual disabilities (60 percent more likely to have a learning disability and 20 percent more likely to have an ADHD diagnosis), and they also have worse mental health (49 percent more likely to suffer from depression and 6 percent more likely to have an anxiety disorder).

[[Insert Table 1 about here]]

Child test scores and educational outcomes. Poor children also have lower cognitive test scores and, ultimately, lower educational attainment than do the non-poor (Table 1, Panel B). In 2019, children receiving free and reduced-price meals (defined as below 185 percent of the federal poverty level) scored roughly 65 to 75 percent of a standard deviation lower on standardized exams of reading and math in grades 4 and 8, than those not receiving free lunch. Disparities in educational attainment by family income are also large: 80 percent of poor children graduate from high school compared with 91 percent of the non-poor; only 67 percent of poor children enroll in college whereas 83 percent of non-poor children do.

Child and adolescent behavior. Children from poor families are more likely to engage in risky behaviors (Table 1, Panel C). They are more likely to have unprotected sex, resulting in teenage pregnancy rates that are twice as high as those among non-poor children. Poor children are 60 percent more likely to report smoking cigarettes or using tobacco, but not illegal drugs or alcohol binging. Poor children are more likely to be involved in the criminal justice system, both as victims and defendants, both of which are associated with worse educational outcomes (Aizer and Doyle 2015).

Not surprising, once children enter the labor force, these differences in health and human capital translate into labor market disparities. Low birth weight, poor health, and low educational attainment reduce employment and wages in adulthood, leading to a greater likelihood of adult poverty (Black, Devereux, and Salvanes 2016). Ultimately, children born in poverty are more likely to end up in jail or prison by the age of 30 and to live shorter lives (Looney and Turner 2018; Aizer et al. 2016).

Crucially, the associations between parental income and child outcomes do not necessarily imply causation. Other characteristics of high-income parents may drive these relationships. Parental education, marriage, and neighborhood quality are important predictors of child health and development, and all are correlated with parental income. This distinction matters for policy. If the parental income does not improve child outcomes, then the CTC may not translate into better outcomes for children.

Below we describe why parental income may improve child outcomes and review the empirical evidence that assesses whether the relationship is causal. Then we discuss why higher incomes via transfers may not translate to better outcomes.

How parental income promotes child development

Economic models of human capital accumulation identify parental time and purchased goods and services as the main inputs into healthy child development (Becker and Tomes 1986). Work in psychology has identified other inputs, such as parental stress, which negatively affects both the time and the quality of interactions between parents and children (McLoyd 1990), and the closely related but distinct input of parenting style, which refers to how parents interact with their children.

Income and purchased goods/services. One way that parental income improves outcomes for children is through the purchase of goods and services, such as education, health, and nutritious food. Poor parents spend less in all these dimensions. For instance, the poor spend \$239 per year on educational expenditures compared to \$1,621 by the non-poor (Table 2). The poor also spend less on child care, though child care subsidies targeted to low-income families can offset some of the difference.

[[Table 2 about here]]

Family income is also highly correlated with health insurance status as poor children are twice as likely to be uninsured (Table 2); moreover, when they are insured, they are less likely to have private insurance. Causal evidence from Medicaid expansions shows that access to health insurance improves outcomes for children, in both the short and long run: Medicaid results in better newborn and child health, greater educational attainment, and increased earnings in adulthood (Currie and Gruber 1996; Brown, Kowalski, and Lurie 2020).

Income also allows families to purchase more nutritious food, which has long-term benefits for children. Exposure to food stamps in childhood improves health and economic self-sufficiency in adulthood, increases educational attainment and earnings in adulthood, and lowers poverty and mortality among children who are exposed under the age of five (Bailey et al. 2023).

Income and neighborhoods. The U.S. is characterized by high rates of residential segregation by income—a phenomenon that appears to be increasing (Logan et al. 2020). Poorer neighborhoods have greater levels of pollution and crime and schools with lower average test scores (Jbaily et al. 2022; Schleimer et al. 2022 ; Owens 2018). There is causal evidence that neighborhood matters for child outcomes. Evidence from a long-term follow-up of the Moving to Opportunity experiment found that moving to a low-poverty neighborhood before age 13 improves child health and well-being and ultimately increases lifetime income by more than \$300,000 (Chetty, Hendren, and Katz 2016).

Income and parental time. There are significant differences in parental time spent with children by family income. Using data from the American Time Use Survey, Schneider, Hastings, and LaBriola (2018) find that mothers in the highest-income quartile spend on average 125 minutes per day in child care (providing basic care, playing, teaching, and managing

activities), compared with 105 for those in the bottom quartile. This means, for example, poor parents are 35 percent less likely to read every day to their children (Table 2). Because low-income children are less likely to live with a father, the differences in total time spent with a parent are even larger. Causal evidence linking parental time with child outcomes is sparse, but studies show that parental leave policies, which allow working parents (primarily mothers) to remain at home for a period around the birth of a child, improves infant health (Rossin-Slater and Stearns 2020).

Income and stress. Research in neurobiology has identified stress as a factor that can negatively affect a health and well-being among children (McEwen 1998). Poor families are exposed to more frequent stressors (eg, food insecurity, crowded housing, frequent job loss, increased neighborhood crime, etc.) , resulting in higher levels of the stress hormone cortisol among poor children (Blair et al. 2013). A parent’s exposure to stress can negatively affect child development *in utero*, with long-lasting consequences (Aizer, Stroud and Buka 2016). Parental stress can also negatively affect parenting decisions (McLoyd 1990; McLoyd 1998). In this volume, Gennetian and Gassman-Pines review the theoretical and empirical evidence linking parental income, and the CTC specifically, to stress and family functioning. Overall, the authors conclude that the empirical “findings on the effects of the monthly CTC on parent stress, mental health, and subjective well-being are mixed” (Gennetian and Gassman-Pines, this volume). While parents reported that the payments made them feel less stressed financially, establishing a causal impact is more challenging, as is linking it to child development.

Income and parenting style. Poor parents are more likely to engage in child maltreatment, defined as neglect or abuse. Neglect, which often involves an inability to provide adequately for a child, is directly linked with income. Abuse may be linked with income due to either increased

stress or different norms around parenting and the use of physical punishment, which can differ by family income.¹ Indeed Table 2 shows that the children of richer parents are less likely to be the subject of child maltreatment or to have witnessed domestic violence. Studies by Berger et al. (2017), Biehl and Hill (2018), and Raissian and Bulinger (2017) demonstrate that income transfers reduce child abuse and neglect. Although causal evidence on parenting styles and lifetime outcomes is lacking, a substantial literature documents that physical harm is linked to long-term negative outcomes (e.g., Currie and Tekin 2012).

Why the CTC might not matter for child development

The above discussion suggests multiple reasons why higher parental income would lead to better child outcomes. It would therefore seem obvious that transferring income to poor parents would help their children. However, there are also several reasons why, in practice, transfer programs might not improve child health and well-being.

Previous work suggests that poor families benefit more from cash transfers (Costello et al. 2003; Akee et al. 2010; Dahl and Lochner 2012). Yet the CTC may not reach all the poorest families. Most anti-poverty and social insurance programs in the U.S. have less than complete take-up. The 2021 CTC expansion reached only 60 percent of eligible poor families and 80 percent of richer families (Michelmoro and Pilkauskas 2023). There are many reasons why, conditional on eligibility, the poor have lower take-up rates of social programs, including administrative and language barriers (Aizer 2007; Finkelstein and Notowidigdo 2019; Baicker, Mullainathan, and Schwartzstein 2015).

Even when families do receive income transfers, the transfer might not be generous enough to make a difference in children's lives. The question of the optimal generosity of cash

transfers has long been debated in the U.S. The first cash transfer program for low-income mothers with dependent children in the U.S. was the Mothers' Pension program (an early-20th-century form of welfare assistance that gave poor single mothers money to provide for their children at home). The income transfers accounted for 30 to 40 percent of family income (Aizer et al. 2016). Over time, unconditional cash transfers have become much less generous (Aizer, Hoynes, and Lleras-Muney 2022). The CTC amounted to a 10 percent increase in monthly income for the lowest-earning households (Wheat, Deadman, and Sullivan 2022). While not insignificant, the CTC might be insufficient to help poor households move to better neighborhoods or purchase health insurance, for example. On the other hand, small amounts of cash might help children if they occur at critical points in children's development or if families are at a difficult juncture. For example, nutrition in the first three years of life is crucial for development (Victora et al. 2008; Martorell 2017), and income transfers might help families guarantee adequate nutrition during this critical period. Similarly, the transfer could help families pay rent and avoid eviction or cover lifesaving health care expenses, which remain high in the U.S. even among the insured population (Glied and Zhu 2020).

Even if the transfers reach poor families and are generous, they can help children only if parents spend them in ways that promote child development. One of the main critiques of cash transfers is the paternalistic perception that poor parents will not spend money in ways that benefit children and families.² For instance, Senator Joe Manchin (D-WV), in his opposition to making the 2021 CTC expansion permanent, stated his concern that poor families would use the CTC to fund drug and alcohol purchases. Stereotypes aside, poor parents might indeed lack information or face other barriers (like discrimination) that impede them from making decisions that would improve child outcomes. For example, Bergman et al. (2019) show that even with

vouchers, poor families have difficulties identifying and accessing housing in high-mobility neighborhoods. However, the evidence thus far shows that families devoted between 26 and 61 percent of CTC payments to meeting basic household needs, primarily rent or mortgage payments, food, and clothing (see Fisher, Schild, and Johnson, this volume, for a more detailed discussion).

Parental behavioral responses to cash transfers may diminish their impact. The main reason why the U.S. no longer distributes substantial cash transfers to the poor is the concern that they will reduce work effort in response (Corinth et al. 2021). If transfers reduce work effort, family income might not rise with the transfer, and the children would benefit only if the parent stays home and provides additional or higher-quality time investments. As discussed in more detail in this volume, Schanzenbach and Strain conclude that there is no evidence yet that the CTC has negative employment effects, though a permanent expansion could.

Critics of cash transfers also point to the possibility of fertility responses among recipients. Like other welfare programs, CTC transfers increase with the number of children, potentially incentivizing families to have more children and, in turn, perhaps lowering maternal labor supply or average time or income spent on each child. There is little evidence that fertility rises in response to other means-tested programs (e.g., Kearney 2004) or to the non-expanded CTC (Mumford and Thomas 2017), and we conclude it is unlikely here.

A final reason why the CTC might appear to fail to generate improvements in child outcomes relates to our inability to measure potential child outcomes that would likely be affected. Government programs are often evaluated by their effects in the short- to medium-term using a handful of easily collected indicators, like test scores or birth weight. Such evaluations often fail to investigate effects on other important determinants of long-term outcomes, such as

educational attainment, childhood health, or social and non-cognitive skills (Heckman 2000; Aizer, Hoynes, and Lleras-Muney 2022). Moreover, many child investments do not yield measurable benefits until later in life. For example, youth job training programs can increase longevity, but these effects are only visible after age 55 (Aizer et al. forthcoming).

In sum, whether the 2021 CTC improved child outcomes is an empirical question.

The Impact of the 2021 CTC Expansion on Child Outcomes

Given the recency of the CTC expansion, there is limited evidence regarding its short-term impacts on children and no evidence regarding long-term impacts. In this section, we review the evidence on the impacts of the 2021 CTC on short-term child outcomes, provide a brief overview of the evidence on how the reforms affected parental inputs, and discuss the likely impact on longer-term child outcomes.

Estimates of the impact of the 2021 CTC on short-term child outcomes

Bullinger and Boy (2023) estimate the impact of the expanded 2021 CTC on daily child abuse and neglect-related emergency department (ED) visits in Georgia. To do so, they compare ED visits before and after CTC payments in 2021 with the same time periods in 2018 and 2019. The authors estimate declines in ED visits of 22 percent in the period immediately after CTC disbursements, though the estimated effects are precise only for males and the non-Hispanic white population and only in the days immediately following the payments. This finding is generally consistent with existing work documenting a negative and causal impact of parental income on child maltreatment.

Two recent studies have estimated the impact of the 2021 CTC expansion on infant birth weight. A working paper by Ruffini (2023) shows the incidence of low birth weight declined in the latter half of 2021 due to the economic stimulus and CTC payments. The author exploits variation in benefit eligibility based on birth order (first-time parents in 2021 would not be eligible for CTC benefits, while higher-order births would be) and finds that a \$100 increase in benefits reduced the incidence of low birth weight by about 3 percent. In contrast, using different methods but the same data, Margerison et al. (2023) find evidence that incidence of low birth weight was *higher* in the second half of 2021 than predicted, based on historical patterns. Because both estimates are likely biased by endogenous selection into births during the COVID-19 pandemic, which witnessed an initial decline in fertility but strong rebound soon thereafter, we view this evidence as inconclusive.

The impact of the 2021 CTC on intermediate inputs (household spending)

With labor supply largely unaffected by the CTC, we can think of the transfer as a pure increase in household income. Families, and particularly low-income families, spent most of their benefits immediately, within the first week (Wheat, Deadman, and Sullivan 2022). Families devoted between 26 and 61 percent of CTC payments to basic household needs, such as rent or mortgage payments (30 percent of respondents), food (48 to 58 percent), clothing, and utilities (30 percent). For families with income below \$35,000, more than 90 percent spent their CTC on food, utilities, housing, clothing, and school costs (see Fisher, Schild, and Johnson, this volume, for a more thorough discussion). There is no evidence that the CTC increased expenditures on alcohol or tobacco (see similar evidence in Parolin 2023; Parolin et al. 2024). For families with disabled children, hardships before CTC payments were more extreme, and the CTC was more

likely to be used for “routine expenses including more and better-quality food, healthcare expenses and moving or home improvements” (Brugger et al. 2023).

Even if the majority of expenditures were not explicitly child-related—although some clearly were (e.g., child care, clothing, and educational needs)—spending on bills and debt can benefit children indirectly by reducing parental stress or increasing wealth accumulation—both of which correlate to child development.³ Thus, on net, the evidence suggests that the CTC payments increased household income and was spent in ways that potentially benefit children directly by increasing food and education expenditures and perhaps indirectly by allowing parents to reduce debt.

Projecting the effects of the CTC based on evidence from short-term outcomes and intermediate inputs

How might these short-term effects translate into longer-term outcomes? We focus on three intermediate inputs affected by income with the strongest evidence of long-term impacts on earnings in adulthood: health at birth, educational attainment, and nutrition. While there is evidence that child maltreatment fell as a result of the 2021 CTC (consistent with other research), there is no evidence of the causal impact of child maltreatment on future income or earnings, though strong correlational evidence exists. As a result, while this clearly represents an improvement in child well-being, we do not include it in our long-term projections.

Among children who were *in utero* during the 2021 CTC expansion, the long-term projections of the income transfer can be computed using existing estimates of the effects of income on birth weight. Given the contradictory effects of the CTC on birth weight, we use existing estimates from the literature. Page (forthcoming) estimates that a \$1,000 cash transfer

increases birthweight by 2 to 3 percent. Assuming that a 10 percent increase in birth weight is associated with a 1 to 2 percent increase in later life earnings (Black, Devereaux and Salvanes, 2007), these numbers imply that the average CTC transfers of \$500 would increase wages by 0.2 percent in adulthood.

Among school-age children, the sum of the evidence suggests that a \$1,000 cash transfer increases years of education by 0.01 (Page 2024). Given that one more year of school increases earnings by 5 to 15 percent (Gunderson and Oreopolous 2020), a \$500 transfer would be expected to raise earnings by 0.03 to 0.08 percent.

The 2021 CTC increased food expenditures. Existing evidence from the rollout of the food stamps program suggests that food stamp exposure in early childhood led to a 7.1 percent increase in earnings (Bailey et al. 2023).⁴ Assuming an average food stamp benefit of \$4,620 (in 2023 dollars), a \$500 increase in income would increase future earnings in adulthood by 0.7 percent.

Predicting the Impact of the CTC Based on Evidence from Similar Programs

Since the literature on the impacts of the 2021 CTC on child outcomes is in its nascent stages, we turn in this section to existing evidence from other transfer programs, including the Earned Income Tax Credit (EITC), the pre-2021 CTC, and the Canadian Child Tax Credit, to provide insights on how the 2021 CTC may impact children in the long term.

Evidence from the EITC

Several expansions to the EITC over the past several decades have facilitated a rich quasi-experimental evaluation of the program's impact on children's outcomes, in both the short

and long term. Hoynes, Miller, and Simon (2015) show that exposure to the EITC *in utero* reduces the incidence of low birth weight. Other work indicates that the EITC improves childhood health (Averett and Wang 2018; Baughman and Duchovny 2016) and reduces child maltreatment (Berger et al. 2017; Rittenhouse 2023). The EITC has also been linked to greater student achievement: a \$1,000 EITC-induced increase in family income increases childhood test scores by about 6 percent of a standard deviation (Dahl and Lochner 2012). These short-term improvements translate into better outcomes in early adulthood. EITC exposure in childhood leads to higher educational attainment, better health, greater earnings, lower poverty, and increased mobility (Bastian and Michelmore 2018; Braga, Blavin, and Gangopadhyaya 2020; Barr, Eggleston, and Smith 2022; McInnis, Michelmore, and Pilkauskas 2023).

While the EITC and CTC are similar in that they both provide tax credits to families with children, the 2021 CTC differs from the EITC in important ways that limit our ability to generalize these findings.⁵ First, the EITC is targeted to low- and middle-income families earning less than \$63,000, depending on household size, while the 2021 CTC was near-universal. Second, while the EITC has always been contingent on work, incentivizing additional earnings at lower levels, the 2021 CTC had no minimum earnings requirement. Whether the EITC is a good predictor of how the 2021 CTC might affect child outcomes depends on whether its impact operates solely through an income effect or whether the implicit work requirement of the EITC is important for child outcomes. Several studies have documented significant, positive effects of the EITC on employment, particularly for single mothers (e.g., Eissa and Liebman 1996; Meyer and Rosenbaum 2001; Hoynes and Patel 2018; Schanzenbach and Strain 2021), though some find no labor supply responses outside a small subset of mothers (Kleven 2019).

Two recent working papers have attempted to isolate the income effect of the EITC using a regression discontinuity approach that implicitly conditions on labor supply. Rittenhouse (2023) and Barr, Eggleston, and Smith (2022) both exploit the fact that children born at the end of the calendar year can be claimed on their parents' income tax returns just a few months after birth, while those born just after the new year must wait an additional year to be claimed. This discontinuity generates an increase in family income in the first year of life of about \$1,300 (Barr, Eggleston, and Smith 2022). Rittenhouse (2023) shows that children eligible for the EITC had fewer referrals to Child and Protective Services (CPS) by age three compared to children who were ineligible because they were born just after the new year. Barr, Eggleston, and Smith (2022) also show that these effects persist, leading to higher test scores in childhood, higher high school completion rates, and higher earnings in early adulthood. This identification strategy does not allow one to estimate impacts for older children.

Evidence from the previous Child Tax Credit in the U.S. and in other countries

The CTC is a federal program that has not changed substantially over time. Thus, historically, there has been limited variation in eligibility or benefits to identify causal effects on children. Some researchers have circumvented this issue by exploiting data on the timing of receipt of CTC benefits on child outcomes. Kovski et al. (2022a, 2022b) linked weekly EITC and CTC refund data from the IRS to state-specific child maltreatment report data for 2015 to 2018. They estimate that for each additional \$1,000 in per-child EITC/CTC refunds, state-level rates of reported child maltreatment immediately decline (within the same month) by 5 percent. Unfortunately, this approach cannot provide estimates on longer-term effects.

Evidence from Canada, where child benefits are not contingent on employment, supports the hypothesis that improvements in child outcomes associated with a child tax credit are driven by increases in family income. Using a simulated benefits approach, Milligan and Stabile (2011) exploit changes in child benefit generosity over time and across provinces and find that increases in child benefits improve the physical health and test scores of boys as well as the mental health of girls. They also find improvements in maternal health, which could, in turn, improve parenting and familial relationships (for the U.S., see Evans and Garthwaite 2014).

Not all unconditional cash transfers generate positive benefits for children. For example, Borra et al. (2021) estimate the impact of a “baby bonus” (an unconditional cash transfer provided at birth) introduced in Spain in 2007 on children’s later health and academic performance. They find no positive impact on any child outcome considered, nor do they find any change in parental behavior, including fertility, parental time inputs, or living arrangements. They speculate that the strong safety net in Spain may explain the null findings.

Projections of the effects of the CTC based on evidence from similar programs

Ananat and Garfinkel (this volume) predict the likely long-run impacts of a permanent child allowance modeled on the 2021 CTC. They estimate the cost of the permanently expanded CTC at \$96.8 billion per year. Annual (present discounted value) benefits include \$202 billion in additional future earnings, benefits to health and longevity representing \$420 billion, and additional savings to taxpayers of \$300 billion due to reductions in crime. Considering some offsetting costs associated with greater longevity, they conclude, “On net, the present discounted value of benefits for society is \$929 billion, nearly 10 times the initial costs” (Ananat and Garfinkel, this volume).

Conclusions and Directions for Future Work

The 2021 expansion of the CTC transformed the credit into a near-universal child benefit and lowered child poverty rates to historically low levels. Although these generous transfers were temporary, we believe the preponderance of the evidence suggests short- and long-term benefits for children.

Specifically, the existing literature suggests the following:

- 1) that increases to parental income improves outcomes for children;
- 2) that these impacts are likely greater for poor children and might be modest or nonexistent for non-poor children,
- 3) that the effects might be more substantial for younger children;
- 4) that the effects might be greater in places with weaker social safety nets; and
- 5) that the effects of increased household income on labor supply will likely be modest

Should the CTC expansion be reinstated, future research tracking child outcomes should focus on understanding the mechanisms that link the income transfer to child outcomes (e.g., nutrition, stress), measurement of intermediate inputs (e.g., categories of parental spending, behavior), and the child outcomes most likely to be affected. Given that much of the prior work on the impact of cash transfers on child outcomes in the U.S. comes from the EITC literature, it will be especially important to provide evidence on the extent to which effects of the CTC operate through pure income effects, or whether parental employment effects also impact child outcomes. Finally, given differences in take-up and the potential impact across types of families and children, future work should investigate whether and how effects differ by parental income, child age, race/ethnicity, and geographic location.

References

- Aizer, Anna, Laura Stroud, and Stephen Buka. 2016. Maternal stress and child outcomes: Evidence from siblings. *Journal of Human Resources* 51(3): 523–555.
- Aizer, Anna, Shari Eli, Joseph Ferrie, and Adriana Lleras-Muney. 2016. The long-run impact of cash transfers to poor families. *American Economic Review* 106(4): 935–971.
- Aizer, Anna, and Joseph J. Doyle. 2015. Juvenile incarceration, human capital, and future crime: Evidence from randomly assigned judges. *The Quarterly Journal of Economics* 130(2): 759–803.
- Aizer, Anna, Hilary Hoynes, and Adriana Lleras-Muney. 2022. Children and the US social safety net: Balancing disincentives for adults and benefits for children. *Journal of Economic Perspectives* 36(2): 149–174.
- Aizer, Anna. 2007. Public health insurance, program take-up, and child health. *The Review of Economics and Statistics* 89(3): 400–415.
- Aizer, Anna, Nancy Early, Shari Eli, Guido Imbens, Keyoung Lee, Adriana Lleras-Muney and Alexander Strand. Forthcoming. The lifetime impacts of the New Deal’s youth employment program. *The Quarterly Journal of Economics*.
- Akee Randall K, William E. Copeland, Gordon Keeler, Adrian Angold, Elizabeth J. Costello. 2010. Parents' Incomes and Children's Outcomes: A Quasi-Experiment. *Am Econ J Appl Econ.* 2(1):86-115.
- Allegretto, Sylvia, Emma Garcia and Elaine Weiss. 2022. Public education funding in the U.S. needs an overhaul. How a larger federal role would boost equity and shield children from disinvestment during downturns. Economic Policy Institute.
- Ananat, Elizabeth Oltmans, and Irwin Garfinkel. 2023. The potential long-run implications of a permanently-expanded Child Tax Credit. *The ANNALS of the American Academy of Political and Social Science* (this volume).
- ASPE. 1995. Trends in AFDC and Food Stamp Benefits, 1972-1994. ASPE Research Notes.
- Averett, Susan, and Yang Wang. 2018. Effects of higher EITC payments on children’s health, quality of home environment, and noncognitive skills. *Public Finance Review* 46(4): 519–557.
- Bailey, Martha J., Hilary Hoynes, Maya Rossin-Slater, and Reed Walker. 2023. Is the social safety net a long-term investment? Large-scale evidence from the Food Stamps program. *The Review of Economic Studies* (preprint). doi:10.1093/restud/rdad063

- Barr, Andrew, Jonathan Eggleston, and Alexander A. Smith. 2022. Investing in infants: The lasting effects of cash transfers to new families. *The Quarterly Journal of Economics* 137(4): 2539–2583.
- Baicker, Katherine, Sendhil Mullainathan, and Joshua Schwartzstein. 2015. Behavioral hazard in health insurance. *The Quarterly Journal of Economics* 130(4): 1623–1667.
- Bastian, Jacob, and Katherine Micheltore. 2018. The long-term impact of the Earned Income Tax Credit on children’s education and employment outcomes. *Journal of Labor Economics* 36(4): 1127–1163.
- Baughman, Reagan A., and Noelia Duchovny. 2016. State Earned Income Tax Credits and the production of child health: Insurance coverage, utilization, and health status. *National Tax Journal* 69(1): 103–132.
- Becker, Gary S., and Nigel Tomes. 1986. Human capital and the rise and fall of families. *Journal of Labor Economics* 4(3[2]): S1–39.
- Berger, Lawrence M., Sarah A. Font, Kristen S. Slack, and Jane Waldfogel. 2017. Income and child maltreatment in unmarried families: Evidence from the Earned Income Tax Credit. *Review of Economics of the Household* 15(4): 1345–1372.
- Bergman, Peter, Raj Chetty, Stefanie DeLuca, Nathaniel Hendren, Lawrence F. Katz, and Christopher Palmer. 2019. Creating moves to opportunity: Experimental evidence on barriers to neighborhood choice. National Bureau of Economic Research Working Paper 26164, Cambridge, MA.
- Biehl, Amelia M., and Brian Hill. 2018. Foster care and the Earned Income Tax Credit. *Review of Economics of the Household* 16(3): 661–680.
- Borra, Cristina Ana Costa-Ramon, Libertad González, and Almudena Sevilla-Sanz. 2021. [The Causal Effect of an Income Shock on Children’s Human Capital](#). *Working Papers* 1272, Barcelona School of Economics.
- Sandra E. Black, Paul J. Devereux, Kjell G. Salvanes. 2007. From the Cradle to the Labor Market? The Effect of Birth Weight on Adult Outcomes, *The Quarterly Journal of Economics* 122 (1): 409–439.
- Black, Sandra E., Paul J. Devereux, and Kjell G. Salvanes. 2016. Does grief transfer across generations? Bereavements during pregnancy and child outcomes. *American Economic Journal: Applied Economics* 8(1): 193–223.
- Blair, Clancy, Daniel Berry, Roger Mills-Koonce, and Douglas Granger. 2013. Cumulative effects of early poverty on cortisol in young children: Moderation by autonomic nervous system activity. *Psychoneuroendocrinology* 38(11): 2666–2675.

- Braga, Breno, Fredric Blavin, and Anuj Gangopadhyaya. 2020. The long-term effects of childhood exposure to the Earned Income Tax Credit on health outcomes. *Journal of Public Economics* 190: 104249.
- Brown, David W., Amanda E. Kowalski, and Ithai Z. Lurie. 2020. Long-term impacts of childhood Medicaid expansions on outcomes in adulthood. *The Review of Economic Studies* 87(2): 792–821.
- Brugger, Laura, Stephen Roll, Leah Hamilton, Allyson Baughman, Meg Comeau, Candace Jarzombek, and Caroline Parker. 2023. “It helped us more than I could have imagined”: How the 2021 expanded Child Tax Credit supported families raising children with disabilities. St. Louis, MO: Social Policy Institute at Washington University in St. Louis. Available from openscholarship.wustl.edu.
- Bullinger, Lindsey Rose, and Angela Boy. 2023. Association of expanded Child Tax Credit payments with child abuse and neglect emergency department visits. *JAMA Network Open* 6(2): e2255639.
- Case, Anne, Darren Lubotsky, and Christina Paxson. 2002. Economic status and health in childhood: The origins of the gradient. *American Economic Review* 92(5): 1308–1334.
- Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. 2016. The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity experiment. *American Economic Review* 106(4): 855–902.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, Emmanuel Saez, and Nicholas Turner. 2014. Is the United States still a land of opportunity? Recent trends in intergenerational mobility. *American Economic Review* 104(5): 141–147.
- Corak, Miles. 2013. Income inequality, equality of opportunity, and intergenerational mobility. *Journal of Economic Perspectives* 27(3): 79–102.
- Corinth, Kevin, Bruce D. Meyer, Matthew Stadnicki, and Derek Wu. 2021. The anti-poverty, targeting, and labor supply effects of the proposed Child Tax Credit expansion. Becker Friedman Institute Working Paper 2021-115, Chicago, IL.
- Costello, E Jane, Scott Compton, Gordon Keeler G, and Adrian Angold 2003. Relationships between poverty and psychopathology: a natural experiment. *JAMA* 290(15):2023-9.
- Currie, Janet, and Firouz Gahvari. 2008. Transfers in cash and in-kind: Theory meets the data. *Journal of Economic Literature* 46(2): 333–383.
- Currie, Janet, and Jonathan Gruber. 1996. Health insurance eligibility, utilization of medical care, and child health. *The Quarterly Journal of Economics* 111(2): 431–466.

- Currie, Janet, and Mark Stabile. 2003. Socioeconomic status and child health: Why is the relationship stronger for older children? *American Economic Review* 93(5): 1813–1823.
- Currie, Janet, and Erdal Tekin. 2012. Understanding the cycle: Childhood maltreatment and future crime. *Journal of Human Resources* 47(2): 509–549.
- Dahl, Gordon B., and Lance Lochner. 2012. The impact of family income on child achievement: Evidence from the Earned Income Tax Credit. *American Economic Review* 102(5): 1927–1956.
- Eissa, Nada and Jeffrey B. Liebman. 1996. Labor Supply Response to the Earned Income Tax Credit. *The Quarterly Journal of Economics*, 111 (2): 605–637
- Evans, William N., and Craig L. Garthwaite. 2014. Giving mom a break: The impact of higher EITC payments on maternal health. *American Economic Journal: Economic Policy* 6(2): 258–290.
- Finkelstein, Amy, and Matthew J. Notowidigdo. 2019. Take-up and targeting: Experimental evidence from SNAP. *The Quarterly Journal of Economics* 134(3): 1505–1556.
- Fisher, Jonathan, Jake Schild, and David S. Johnson. 2023. Spending responses to the Child Tax Credit expansions. *The ANNALS of the American Academy of Political and Social Science* (this volume).
- Gennetian, Lisa, and Anna Gassman-Pines. 2023. The effects of the 2021 Child Tax Credit on parents’ psychological well-being. *The ANNALS of the American Academy of Political and Social Science* (this volume).
- Glied, Sherry A., and Benjamin Zhu. 2020. *Catastrophic out-of-pocket health care costs: A problem mainly for middle-income Americans with employer coverage*. New York, NY: The Commonwealth Fund. Available from www.commonwealthfund.org.
- Gunderson, Morley, and Philip Oreopolous. 2020. Returns to education in developed countries. In *The economics of education: A comprehensive overview*, eds. Steve Bradley and Colin Green, 2nd edition, 39–51. Cambridge, MA: Academic Press.
- Harrell, Erika, Lynn Langton, Marcus Berzofsky, Lance Couzens, and Hope Smiley-McDonald. 2014. Household Poverty and Nonfatal Violent Victimization, 2008-2012. US Department of Justice Bureau of Justice Statistics.
- Hastings, Justine, and Jesse M. Shapiro. 2018. How Are SNAP Benefits Spent? Evidence from a Retail Panel. *American Economic Review*, 108 (12): 3493-3540.
- Heckman, James J. 2000. Policies to foster human capital. *Research in Economics* 54(1): 3–56.
- Hoynes, Hilary, Doug Miller, and David Simon. 2015. Income, the Earned Income Tax Credit, and infant health. *American Economic Journal: Economic Policy* 7(1): 172–211.

- Hoynes, Hilary W., and Ankur J. Patel. 2018. Effective policy for reducing poverty and inequality? The Earned Income Tax Credit and the distribution of income. *Journal of Human Resources* 53(4): 859–890.
- Jbaily, Abdulrahman, Xiaodan Zhou, Jie Liu, Ting-Hwan Lee, Leila Kamareddine, Stéphane Verguet, and Francesca Dominici. 2022. Air pollution exposure disparities across US population and income groups. *Nature* 601: 228–233.
- Kearney, Melissa Schettini. 2004. Is there an effect of incremental welfare benefits on fertility behavior? A look at the family cap. *Journal of Human Resources* 39(2): 295–325.
- Kleven, Henrik. 2019. The EITC and the extensive margin: A reappraisal. National Bureau of Economic Research Working Paper 26405, Cambridge, MA.
- Kovski, Nicole L., Heather D. Hill, Stephen J. Mooney, Frederick P. Rivara, and Ali Rowhani-Rahbar. 2022a. Short-term effects of tax credits on rates of child maltreatment reports in the United States. *Pediatrics* 150(1): e2021054939.
- Kovski, Nicole L., Heather D. Hill, Stephen J. Mooney, Frederick P. Rivara, Erin R. Morgan, and Ali Rowhani-Rahbar. 2022b. Association of State-level Earned Income Tax Credits with rates of reported child maltreatment, 2004–2017. *Child Maltreatment* 27(3): 325–333.
- Logan, John, Andrew Foster, Hongwei Xu, and Wenquan Zhang. 2020. Income segregation: Up or down, and for whom? *Demography* 57(5): 1951–1974.
- Looney, Adam, and Nicholas Turner. 2018. *Work and opportunity before and after incarceration*. Washington, DC: Brookings Institution. Available from www.brookings.edu.
- Mohamoud Yousra, Russell Kirby, and Deborah Ehrental. 2019. Poverty, urban-rural classification and term infant mortality: a population-based multilevel analysis. *BMC Pregnancy Childbirth*.19(1):40
- Margerison, Claire E., Yasamean Zamani-Hank, Ralph Catalano, Katlyn Hettinger, Timothy R. Michling, and Tim A. Bruckner. 2023. Association of the 2021 Child Tax Credit advance payments with low birth weight in the US. *JAMA Network Open* 6(8): e2327493.
- Martorell, Reynaldo. 2017. Improved nutrition in the first 1000 days and adult human capital and health. *American Journal of Human Biology* 29(2): e22952.
- McEwen, Bruce S. 1998. Protective and damaging effects of stress mediators. *New England Journal of Medicine* 338(3): 171–179.

- McInnis, Nicardo S., Katherine Micheltmore, and Natasha Pilkauskas. 2023. The intergenerational transmission of poverty and public assistance: Evidence from the Earned Income Tax Credit. National Bureau of Economic Research Working Paper 31429, Cambridge, MA.
- McLoyd, Vonnie C. 1990. The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development* 61(2): 311–346.
- McLoyd, Vonnie C. 1998. Children in poverty, development, public policy, and practice. In *Child psychology in practice*, eds. K. Ann Renninger and Irving E. Sigel, 5th edition, 135–208. New York, NY: Wiley.
- Meyer, Bruce D., and Dan T. Rosenbaum. 2001. Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers. *The Quarterly Journal of Economics* 116(3): 1063–114.
- Micheltmore, Katherine, and Natasha V. Pilkauskas. 2023. The 2021 Child Tax Credit: Who received it and how did they spend it? *American Economic Association Papers and Proceedings* 113: 413–419.
- Milligan, Kevin, and Mark Stabile. 2011. Do child tax benefits affect the well-being of children? Evidence from Canadian child benefit expansions. *American Economic Journal: Economic Policy* 3(3): 175–205.
- Mumford, Kevin J., and Paul Thomas. 2017. Fertility Response to the Tax Treatment of Children. *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, 110: 1–18
- Owens, Ann. 2018. Income segregation between school districts and inequality in students' achievement. *Sociology of Education* 91(1): 1–27.
- Page, Marianne. Forthcoming. New advances on an old question: Does money matter for children's outcomes? *Journal of Economic Literature*,
- Parolin, Zachary. 2023. *Poverty in the pandemic: Policy lessons from COVID-19*. New York, NY: Russell Sage.
- Parolin, Zachary, Giulia Giupponi, Emma K. Lee, and Sophie Collyer. 2024. Consumption responses to an unconditional child allowance in the United States. *Nature Human Behaviour* 8: 657–667.
- Raission, Kerri M., and Lindsey Rose Bullinger. 2017. Money matters: Does the minimum wage affect child maltreatment rates? *Children and Youth Services Review* 72: 60–70.

- Reardon, Sean F, Lindsay Fox, and Joseph Townsend. 2015. Neighborhood Income Composition by Household Race and Income, 1990–2009. *The ANNALS of the American Academy of Political and Social Science*, 660(1), 78-97
- Rittenhouse, Katherine. 2023. Income and child maltreatment: Evidence from a discontinuity in tax benefits. *SSRN*. doi:10.2139/ssrn.4349231
- Rossin-Slater, Maya, and Jenna Stearns. 2020. Time on with baby and time off from work. *The Future of Children* 30(2): 35–52.
- Ruffini, Krista. 2023. Does unconditional cash during pregnancy affect infant health? *SSRN*. doi:10.2139/ssrn.4404319
- Schanzenbach, Diane Whitmore, and Michael R. Strain. 2021. Employment effects of the Earned Income Tax Credit: Taking the long view. *Tax Policy and the Economy* 35(1): 87–129.
- Schanzenbach, Diane, and Michael Strain. 2023. Employment and labor supply responses to the Child Tax Credit expansion. *The ANNALS of the American Academy of Political and Social Science* (this volume).
- Schleimer, Julia P., Shani A. Buggs, Christopher D. McCort, Veronica A. Pear, Alaina De Biasi, Elizabeth Tomsich, Aaron B. Shev, Hannah S. Laqueur, and Garen J. Wintemute. 2022. Neighborhood racial and economic segregation and disparities in violence during the COVID-19 pandemic. *American Journal of Public Health* 112(1): 144–153.
- Schneider, David, Orestes P. Hastings, and Joe LaBriola. 2018. Income inequality and class divides in parental investments. *American Sociological Review* 83(3): 475–507.
- Victoria, Cesar G., Linda Adair, Caroline Fall, Pedro C. Hallal, Reynaldo Martorell, Linda Richter, and Harshpal Singh Sachdev. 2008. Maternal and child undernutrition: Consequences for adult health and human capital. *Lancet* 371(9609): 340–357.
- Wheat, Chris, Erica Deadman, and Daniel M. Sullivan. 2022. *How families used the advanced Child Tax Credit*. New York, NY: JPMorgan Chase Institute. Available from www.jpmorganchase.com.

Notes

¹ Parenting style, including how parents motivate, reprimand, and instill values in their children, also affects child development. Psychologists categorize parenting styles into three types: authoritarian, permissive, and authoritative. Authoritative styles are seen as more beneficial to children because they do not involve physical punishments (as authoritarian styles often do), and they rely on extensive persuasion and parental involvement (unlike permissive styles, which can be associated with neglect).

² This appears to be particularly salient when the recipients are of different races from the taxpayers (Currie and Gahvari 2008).

³ However, the mental health of parents (see Gennetian and Gassman-Pines, this volume) appears to have been unchanged by the CTC, though this is difficult to assess because it coincided with the pandemic, which affected mental health directly.

⁴ We assume participation of one year on average to make this projection. We consider spending on food out of SNAP food stamps benefit to be equivalent to spending out of a cash transfer, though there is evidence that food spending out of SNAP is greater than out of cash transfer (Hastings and Shapiro 2018). Average food stamp benefits for a single mother with two children and no earnings in 1972 come from Aspe (1995).]

⁵ There is a small EITC benefit for childless adults.

Table 1. Child Outcomes by Poverty Status

	Poor	Not Poor	Year
Panel A: Health			
Infant mortality rate (per 1,000)	2.4	1.4	2013
Low birth weight	10.4%	8.7%	2018–19
Obesity	39.9%	29.0%	2018–19
Diabetes	0.6%	0.3%	2018–19
Asthma	10.6%	7.0%	2018–19
ADHD	10.0%	8.4%	2018–19
Learning disability	9.6%	6.0%	2018–19
Depression	5.2%	3.5%	2018–19
Anxiety	8.9%	8.4%	2018–19
Panel B: Education and skills			
Math test scores grade 4	229	253	2019
Math test scores grade 8	266	296	2019
Reading test scores grade 4	207	235	2019
Reading test scores grade 8	250	275	2019
Graduated high school	80%	91%	2019
Enrolled in college	67.1%	82.9%	2016
Panel C: Other			
Teenage pregnancy (per 1,000)	27.84	9.63	2019
Victim of violent crime (per 1,000)	39.8	20.5	2008–12
Victim of serious violent crime (per 1,000)	15.2	6.3	2008–12
Victim of simple assault (per 1,000)	24.7	14.3	2008–12
Binge alcohol use	3.6%	5.2%	2019
Marijuana use	8.2%	7.2%	2019
Illicit non-marijuana drug use	2.3%	2.4%	2019
Tobacco use	5.4%	3.4%	2019
Cigarette use	3.2%	2.0%	2019

NOTES: The health outcomes in Panel A come from the National Survey of Children's Health, which defines poverty using the official poverty line. The infant mortality rates come from Figure 1 in Mahoumad et al. (2019), who define poverty as living in a county with a poverty rate $\geq 20.0\%$ versus $< 10\%$. Test scores in Panel B come from the National Center for Education Statistics Nation Report Card of 2019. Individuals are classified as poor if they are eligible for free or reduced-price lunch (income up to 185% of the poverty line). High school graduation rates were reported by the U.S. Department of Education, which classifies individuals as poor if they are eligible for free or reduced-price lunch. The share enrolled in college is reported in the Digest of Education Statistics, which classifies individuals as poor if they are in the bottom 20% of the income distribution and compares their outcomes to those in the top 20% of the income distribution. Teenage pregnancy rates come from the National Center for Health Statistics. Individuals are counted as poor if they live in counties with poverty rates greater than 20% and their pregnancy rates are compared to the pregnancy rates of those living in counties with poverty rates that are less than 10%. The crime outcomes are taken from Table 1 of Harrell et al. (2014). Serious violent crime is defined as rape/sexual assault, robbery, and aggravated assault. Poverty status is defined using the official poverty line. Drug-related outcomes come from the National Survey on Drug Use and Health. Drug or alcohol use is defined as within the past month. The age range is 12–17. Poverty is defined using the official poverty line.

Table 2. Child Inputs by Poverty

	Poor	Not Poor	Year
Panel A: Parental inputs			
Education expenditure per child	\$239	\$1,621	2019
Child care expenditure per child	\$240	\$1,052	2019
Health insurance			
Private	21.3%	72.5%	2018–19
Medicaid	74.0%	25.3%	2018–19
Uninsured	11.7%	5.6%	2018–19
Can always afford to eat good, nutritious meals	49.9%	72.4%	2018–19
Never read to children 0–5	12.7%	6.6%	2018–19
Read every day to children 0–5	24.5%	37.9%	2018–19
Someone in the household smokes	22.1%	12.5%	2018–19
Parent ever incarcerated	15.0%	5.8%	2018–19
Witnessed domestic violence	10.4%	4.5%	2018–19
Experienced standard neglect (per 1,000)	16.10	2.22	2005–06
Experienced standard abuse (per 1,000)	7.73	2.47	2005–06
Panel B: Neighborhood and school environment			
Pollution level (pm 2.5) in place of residence	7.2	6.4	2016
Median income percentile in neighborhood	41.5	59.7	2007–11
Per-student expenditures in school district	\$16,570	\$19,280	2017–18
Test scores in local school system	-0.06	0.28	2009–18
Saw or was victim of neighborhood violence	7.5%	3.4%	2018–19

NOTES: Expenditures in Panel A come from the Panel Study of Income Dynamics. Poverty status is defined using the official poverty line. Neglect and Abuse in Panel A come from the Fourth National Incidence Study of Child Abuse and Neglect. Poverty in this survey is defined as at least one of the following: household income below \$15,000 a year, parents' highest education level less than high school, or any member of the household a participant in a poverty program (such as TANF, food stamps, public housing, energy assistance, or subsidized school meals). All other outcomes in Panel A come from the National Survey of Children's Health, which uses the official poverty line to identify the poor. Note that some individuals have both private health insurance and Medicaid; they are counted in both categories. The outcomes in Panel B are taken from multiple published sources. Pollution levels are taken from Jbaily et al. (2022), who report pollution for zip codes with poverty rate $\geq 20.0\%$ and for zip codes with poverty rates $< 10\%$. Median income percentiles in neighborhoods come from Table 2 in Reardon et al. (2015), who report these median incomes for households in the 10th-versus-90th percentile income. Per-student expenditures are taken from Figure C of Allegretto, García, and Weiss (2022), who report these for the top and bottom quartile of the income distribution across school districts. Test scores in the local school system are reported by the Stanford Education Data Archive for districts with poverty rates $\geq 20.0\%$ and for districts with poverty rates $< 10\%$. Victimization rates come from the National Survey of Children's Health and use the official poverty line.