



CHAPTER

The Economic Case for Smart Investing in America's Youth

by Melissa S. Kearney and Luke Pardue

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The Economic Case for Smart Investing in America's Youth

AUTHORS

Melissa S. Kearney* and Luke Pardue**

ABSTRACT

The United States spends a relatively small sum on children, both on a per capita basis and as a share of all spending. In 2019, the federal government spent an estimated \$5,595 per child on programs benefiting children under 18, compared to \$29,189 per elderly American on entitlement programs alone—a gap that remains wide even after state and local and private charitable giving are accounted for. These patterns of federal spending run counter, however, to patterns of social returns. Research has consistently found that public spending on young Americans yields high social returns, often resulting in increased tax revenue and lower government spending on other assistance programs in adulthood. Creating a more resilient economy requires building a healthy, productive next generation. Investing in kids—specifically with evidence-based programs targeted at youth raised in disadvantaged settings—is an effective way to achieve that goal.

* Neil Moskowitz Professor of Economics, the University of Maryland; Director, Aspen Economic Strategy Group

** Economic Policy Fellow, Aspen Economic Strategy Group; Economist, Gusto

1. Introduction

Rigorous research has found, time and time again, that specific types of spending on children yield high social returns, including spending in the form of health, nutrition, and education targeted to children in low-income families. These forms of spending generate large social benefits and often lead to government savings over time. In general, the social returns on programs aimed at children are much larger than those targeting older individuals.

Federal spending patterns, however, run counter to patterns of social returns. The federal government spends less on kids than on adults aged 18 to 64 or the elderly, both as a share of all outlays and on a per capita basis. Though accounting for spending by state and local governments and through private philanthropy narrows these spending disparities, the gap between overall spending on children and on adults is still large. Furthermore, even as there remains significant material need among low-income children, and as millions of American children live with the burdens of poverty, spending on youth has become less targeted over time, with the share of transfers going to middle-class families increasing.

This paper lays out the landscape of public spending on youth, summarizes prior research on the long-term effects of these investments, and proposes a refocusing of the federal budget toward targeted investments in children. This spending should be allocated with the goal of benefiting children of all ages, but there are types of spending that have been demonstrated to be particularly effective at improving

children's outcomes, including spending on child health, nutrition, and education. To be sure, a focus on expanding investments in children should not be limited to public programs. Ideally, government spending would be bolstered by broader resource support for community programs with demonstrated evidence of effectiveness.

Targeted spending on children from families with low incomes should not be considered

a "giveaway," nor should it be deliberately meager on account of the notion that alleviating the material need of families might lead to some reduction in parental work effort. Rather, evidence-based targeted spending on America's youth should rightly be considered a smart investment in a healthy, skilled, and productive next generation.

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2. America's Spending on Children

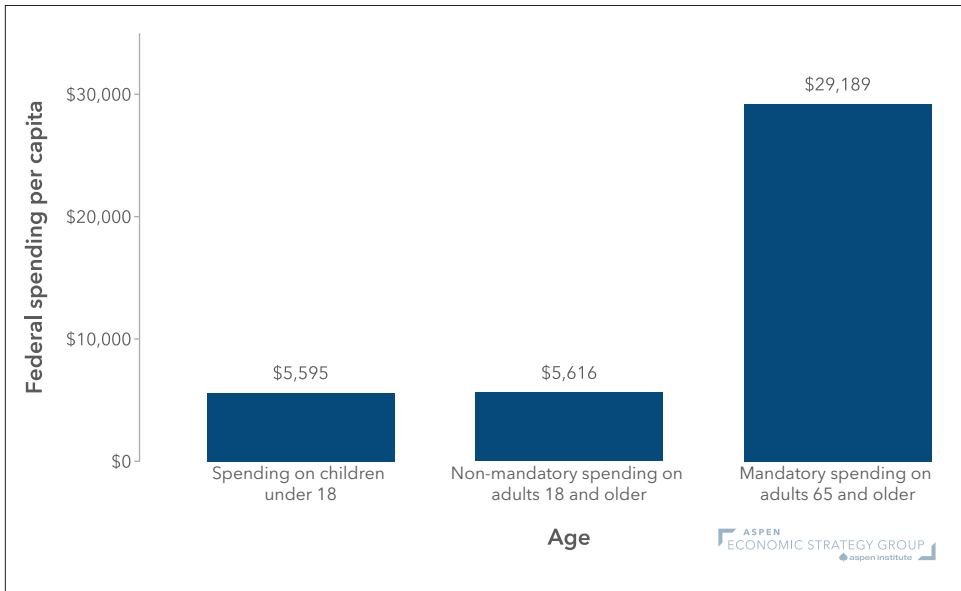
2.a. The federal government spends a relatively small amount on children.

Figure 1 charts per capita federal spending in 2019 for children under 18 years old, for adults between the ages of 18 and 64, and for Americans aged 65 and older.¹ In 2019, US spending on programs directly allocated to children totaled \$408 billion, or \$5,595 per child, the lowest among any age group (Hahn et al. 2020).² Spending was higher among adults, at \$5,616 per person 18–64, and was the highest among the elderly, at \$29,189 per American 65 or older. On a per capita basis, the federal government spent \$5.20 on elderly Americans per \$1 spent on children.³

1 We examine spending patterns in 2019 because large, temporary increases in federal spending in 2020 and 2021 aimed at pandemic relief do not reflect historical patterns of spending across age groups. Applying the same methods to 2021 data, we calculate that in that year, the federal government spent \$8,725 per child, and \$32,139 per elderly adult, or \$3.68 spent on the elderly per dollar on youth. Figures for spending on Americans 65 or older include only mandatory spending on Social Security, federal retirement payments, Medicare, and Medicaid, which in the prior research have been found to make up 90 percent of all spending on elderly Americans (CBO 2000).

2 Estimates of total spending on children in 2019 come from the Urban Institute's "Kids' Share 2020" report (Hahn et al. 2020). The researchers identify programs (including tax refunds and credits) that directly benefit children or households with children, and they then estimate children's share of that program (or tax credit). They draw on expenditure data from federal sources, particularly data from the Office of Management and Budget. A program is considered to directly benefit children or households with children if it meets any of the following criteria: (1) Benefits or services are provided entirely to children (e.g., K–12 education programs; Head Start) or deliver a portion of benefits directly to children (e.g., SSI; Medicaid); (2) Family benefit levels increase with family size (e.g., SNAP; low-rent public housing); or (3) Children are necessary for a family to qualify for any benefits (e.g., Temporary Assistance to Needy Families (TANF) and the Child Tax Credit). To calculate a program's share of spending going to children when the program provides benefits to families without any delineation of parents' and children's shares, they generally assume equal benefits per capita within the family (e.g., TANF and the Supplemental Nutrition Assistance Program). Per capita spending is updated with recent population estimates from the US Census Bureau (Census 2022).

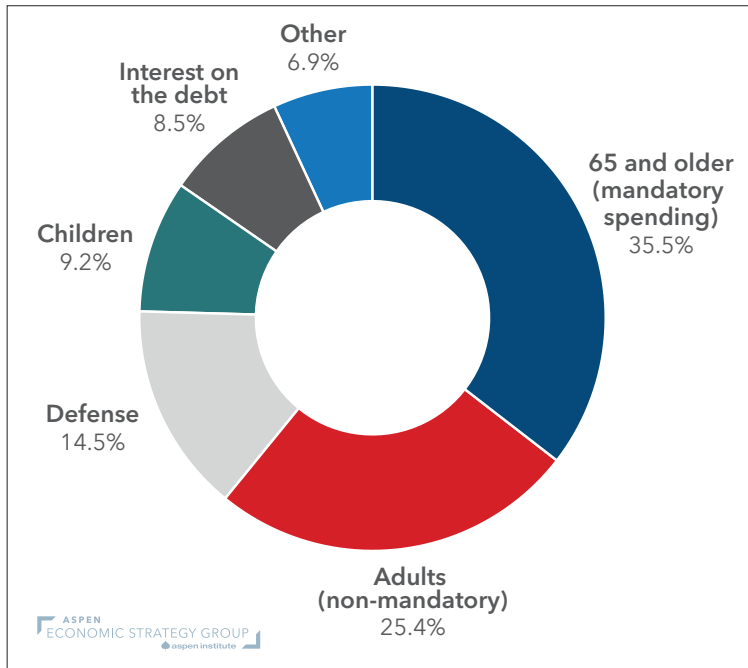
3 This discrepancy likely reflects the different implicit social contracts the federal government has with adults and children. Many people are inclined to view Social Security benefits as something they are owed since they contributed to the system. In contrast, children have not paid into any system and there is no similar promise—either implicit or explicit—from our federal government to provide materially for children. Kearney (2020) made this point in a Brookings essay titled "We Could Abolish Child Poverty in the U.S. with Social Security Benefits for Poor Kids." She noted in that essay that if each child living in poverty in the US were given the average Social Security benefit received by a Social Security recipient aged 65 and over, which is \$17,112 annually, the number of children living in poverty would fall from over ten million to about 413,000.

Figure 1. 2019 Federal Spending Per Capita, by Age

Notes: Federal spending numbers include direct spending from federal programs, as well as the portions of refundable tax credits that exceed tax liability and are paid out to families. Tax reductions resulting from tax exclusions, deductions, and credits below tax liability amounts are not included. Spending on adults includes federal spending on individuals older than 18, excluding mandatory spending on those 65 and older through Social Security, Medicare, and Medicaid.

Sources: Total spending on children and adults from Hahn et al. (2020); population estimates from Census (2022); estimates of mandatory spending on adults 65 and older through Social Security from Social Security Administration (2020) and through Medicare and Medicaid from Congressional Budget Office (2020a).

This disparity is also apparent when examining spending as a share of all federal outlays. Figure 2 depicts selected categories of federal spending as a share of the \$4.4 trillion in total outlays in 2019. The US devoted 9.2 percent of federal outlays to children, less than the 14.5 percent spent on defense. In contrast, spending on adults (excluding mandatory spending on those 65 or older) comprised 25.4 percent of all outlays, and mandatory spending on the elderly, at 35.5 percent, made up the largest share of federal outlays.

Figure 2. Share of Federal Outlays by Category, 2019

Sources: Total outlays from the Congressional Budget Office (2020b); outlays on children and adults from Hahn et al. (2020); estimates of mandatory Social Security and Medicare spending on adults aged 65 and older from Social Security Administration (SSA 2020) and CBO (2020a).

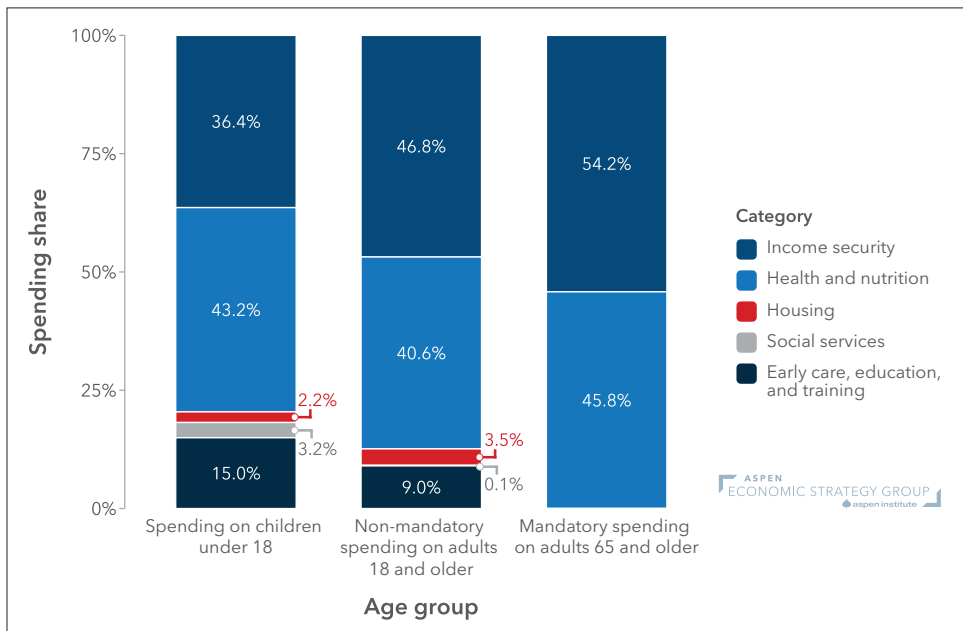
Figure 3 plots the distribution of spending within each age group by major category. Among children, 43.2 percent of federal funds were spent on health and nutrition. Medicaid spending on children alone accounted for 24.0 percent of all outlays (\$98 billion), with the Supplemental Nutrition Assistance Program (SNAP) comprising another 6.7 percent of spending on kids (\$28 billion on children).

Early care, education, and training comprised 15.0 percent of all outlays. The main permanent programs in this category include Title 1 spending, which provides funding to school districts to support low-income students (3.9 percent of spending on kids, at \$16 billion) and Head Start, which funds preschool for low-income families (2.3 percent of spending on kids, at \$10 billion).⁴

⁴ In 2021, the largest single source of education spending in 2021 was the Education Stabilization Fund, which provided \$34 billion for school districts to make up for local revenue shortfalls caused by the COVID-19 pandemic and to remediate the large learning losses induced by schooling disruptions in 2020 and 2021. As Jonathan Guryan and Jens Ludwig (2023: p. 150-170 of this volume) discuss in this volume, these learning losses persist even as these funds are set to expire.

Income support programs accounted for 36.4 percent of spending on children. A large portion came through refundable portions of the Earned Income Tax Credit (EITC) and the Child Tax Credit (CTC). The EITC accounted for 12.8 percent (\$53 billion) of spending on kids and the CTC for 9.4 percent (\$39 billion).⁵ Spending on children within the Supplemental Security Income (SSI) program now outstrips expenditures from Temporary Assistance for Needy Families (TANF), the modern-day successor to cash welfare. In 2019, SSI spending on children totaled \$10 billion, compared to \$4 billion in TANF cash assistance, but made up just 2.5 percent of overall spending on children. Income assistance programs make up a larger share of spending on older groups, with unemployment insurance, the Old Age Security and Disability Insurance program (OASDI, or Social Security), and veterans' benefits comprising significant portions of spending on older adults.

Figure 3. Government Spending Shares Within Age Groups, by Major Category, 2019



Notes: Federal spending numbers include direct spending from federal programs, as well as the portions of refundable tax credits that exceed tax liability and are paid out to families. Estimates of spending on Americans 65+ are restricted to mandatory spending on health and income security programs.

Sources: Total spending on children and adults from Hahn et al. (2020); population estimates from Census (2022); estimates of mandatory spending on 65 and older from Social Security Administration (2020) and Congressional Budget Office (2020a).

5 Again, during the COVID-19 pandemic, spending through the CTC rose, since Congress expanded the credit amount and raised refundability limits, with spending at \$70.4 billion in 2021. Those provisions expired at the end of 2021.

The share of federal spending on children rose during the COVID-19 pandemic, but it is projected to decline over the next decade. From estimates in the Urban Institute's "Kids' Share 2022" report, in 2010 the portion of federal spending on children reached its highest point since at least 1960, at 10.5 percent, but then experienced a continual decline through 2019 (Lou et al. 2022). At the onset of the COVID-19 pandemic, relief spending programs—primarily the Child Tax Credit expansion, the Education Stabilization Fund, and increases to SNAP's generosity—caused the share of spending dedicated to children to spike. As these forms of spending have already ended or soon will end, spending on children is declining again.

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By 2024, the federal government will once again devote more resources to interest payments on the debt than to spending on children. As interest payments on the debt and spending on entitlement programs benefiting older Americans are set to balloon, by 2032 the share of outlays on children is projected to fall to 6.4 percent, the lowest level since 1993. This trend is a concrete demonstration of the point made in this volume by Karen Dynan that a failure to control budget deficits and reform entitlement programs will likely crowd out other valuable spending priorities (Dynan 2023).

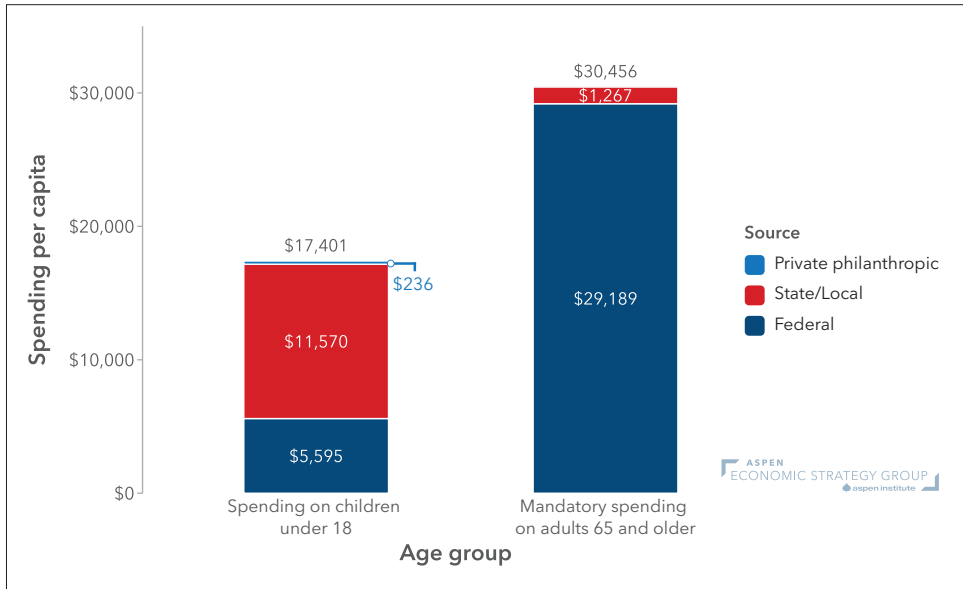
2.b. Accounting for both state and local and philanthropic spending only partially narrows the spending gap between adults and children.

Of course, the federal government is not the only source of spending on children in America. A large portion of spending on youth comes from state and local governments in the form of K–12 education spending, and these governments spend a much larger share of their budgets on children than on older adults. This facet of spending partially closes the large gap in total spending between children and older adults that exists within the federal budget. In 2019, state and local governments spent a total of \$851 billion on children, or \$11,570 per child, compared to the \$71 billion these groups spent on adults (\$1,267 per capita).

Finally, to provide a more complete view of the country's spending, we include private philanthropic spending on children. Gathering comprehensive data on private philanthropic efforts targeted toward children is complicated by both a lack of comprehensive data sources on charitable giving and the fact that much charitable spending can benefit children and adults in a community (including giving to environmental funds and general donations to hospitals, for instance). Nevertheless, data on giving directly targeting children's causes can offer a picture into how the nation's spending priorities change when private spending is considered.

The University of Michigan's Panel Study of Income Dynamics asks households each year about private charitable giving, along with several domains of purpose, including religious, health, or medical research and youth or family services (PSID 2023).⁶ We tabulate data from the 2019 study, which asks about giving in 2018.

Figure 4. Federal, State/Local, and Private Philanthropic Spending Per Capita, by Age Group, 2019



Note: Private philanthropic spending calculated only for children under 18.

Sources: Total spending on children at the federal and state/local level and adults at state/local level from Hahn et al. (2020); estimates of federal spending on adults 65 and older from the Social Security Administration (2020) and the Congressional Budget Office (2020a); philanthropic spending on children from the Panel Study of Income Dynamics (PSID 2023); population estimates from the Census (2022).

From this nationally representative sample of American households, we estimate that in 2018, a total of \$250 billion was donated to charities of any cause.⁷ Among

6 The study asks respondents if they have donated at least \$25 in the reference year to charity and, if so, asks them to select the main domain of purpose among 18 possible choices. For more information, see PSID 2017.

7 This total is lower than those reported by other sources on charitable giving, such as the Giving USA report, which estimates that Americans gave \$428 billion to US charities in 2018 (Giving USA 2019). The discrepancy is likely due in large part to the significant portion of charitable donations accounted for by the wealthiest families, who are underrepresented in the PSID sample (Pfeffer et al. 2016). With that caveat in mind, however, other sources indicate that the bias toward measuring donations made directly toward children might be small: only a small portion of total charitable giving among the wealthiest families is directed toward children. On Indiana University's "Million Dollar List" of publicly announced private donations of \$1 million or more, only \$75 million of all large donations in 2014—the latest year for which data is presently available—was given to children-focused causes (Indiana University Lilly School of Philanthropy 2023).

these donations, \$18.5 billion was directed to youth or family services. Adjusting for inflation, an estimated \$18.8 billion—or \$236 per child—was donated to such children's charities in 2019.⁸

As presented in figure 4, after incorporating these additional sources, total per capita spending is still much higher on the elderly than on children.⁹ Total spending in 2019 across all four sources – federal, state, local, and estimated philanthropic outlays – comes to \$17,401 per child, compared to \$30,456 for Americans over age 65. That is a ratio of \$1.75 spent on the elderly for every \$1 spent on children.

2.c. Spending on children has become less targeted to low-income families as middle-class transfers have risen.

Public spending on youth has become less targeted toward lower-income children over time. Since the early 2000s, universal programs and tax provisions available to families regardless of income have come to make up a larger share of spending on children. Furthermore, spending on means-tested programs (those with income limits) is increasingly going to families with higher levels of income. In 1995, 36 percent of all federal spending on children was through universal programs or universal tax provisions, such as the dependent tax exemption and Social Security survivor's benefits (Lou et al. 2022). By 2021, that share rose to 53 percent, particularly as universal tax provisions increased as a share of spending—although the enhanced CTC, which contributed to the increase, expired at the end of 2021.

It is also the case that middle-class families are taking a larger share of means-tested programs originally targeted to low-income children. As reported in the 2020 AESG paper by Looney, Larrimore, and Splinter, the middle class—defined as households in the middle 60 percent of the income distribution—received 27 percent of means-tested transfers that went to non-elderly households in 1979. By 2016, the middle class received 49 percent of these transfers. This increase was driven by expanded eligibility for Medicaid and the Children's Health Insurance Program (CHIP), as well as by the increased generosity of the Earned Income Tax Credit.

8 Adjusted using the 1.8 percent change in the Consumer Price Index (CPI-U) between the 2018 and 2019 annual averages.

9 Figure 4 presents spending per capita on children and mandatory spending on elderly adults, leaving out adults 18-64 because here we rely on estimates of state and local spending from Hahn et al. (2020), which only include data for those two age groups. Additionally, data on philanthropic spending by age of beneficiary is only available for spending on children's services, so figure 4 also omits philanthropic spending on the elderly. This omission will (in a very small way) overestimate the extent to which these additional sources narrow the spending gap.

3. Public Spending on Children as Social Impact Investing

3.a. Research documents large, long-term net social benefits from targeted spending on children's nutrition, health, and education.

Research has consistently found significant long-run returns to spending programs aimed at alleviating the material needs of children from low-income families. We begin by highlighting some key pieces of evidence of the high social returns to public spending on childhood nutrition, health, and education, specifically by highlighting evidence from spending on the Food Stamp Program (which is now the Supplemental Nutritional Assistance Program, or SNAP), Medicaid, and Head Start. We then review evidence that the social return to spending on programs aimed at children—especially programs that directly invest in children's nutrition, health, and education—is often very high, and often well in excess of one.

Briefly, SNAP provides monthly vouchers to low-income households to purchase eligible food items. Benefit amounts depend on income, with more voucher money given to those with lower levels of income. Medicaid is the country's public health-insurance program; it is jointly funded by the federal government and state governments and is available to individuals and families who have low levels of income. The program was created in 1965 and was initially linked with cash welfare for low-income families with children. Eligibility for the program has been expanded many times since then.

Head Start was established in 1965 to promote school readiness for children in low-income families through educational, nutritional, health, social, and other services. Head Start is not an entitlement program; rather, the US Congress authorizes the amount of federal spending for Head Start each year. The US Department of Health and Human Services' (HHS) Administration for Children and Families (ACF) administers the program, awarding federal grants directly to public agencies, private nonprofit and for-profit organizations, tribal governments, and school systems to operate local Head Start programs. Congress typically appropriates about \$10 billion annually for Head Start to serve about ten million children. Eligibility is restricted to children whose family income is below the federal poverty threshold.

Academic research has consistently found that children from poor or low-income families who had access to food-stamp benefits during childhood experienced sustained improvements in health and human capital, as compared to children from comparably poor or low-income families who did not. Bailey et al. (2023) build on earlier work showing long-term benefits of childhood exposure to food stamps. Linking rich individual-level Census and Social Security data across children's lives, they study the long-term effects of the county-level rollout of the Food Stamps

Program between 1961 and 1975. These researchers find that children who gained access to benefits during early childhood (before age five) experienced a significant increase in human capital and economic self-sufficiency in adulthood, as compared to similar children who were not exposed to the policy rollout.

The authors' estimates imply that the allocation of Food Stamp Program benefits to children is a highly cost-effective investment in young children, yielding a marginal value of public funds (MVPF) of 56. The MVPF is a measure in public finance calculated as the ratio of the benefit of the policy to its recipients (in this case, childhood Food Stamps Program beneficiaries) to the net cost to the government. This extremely high MVPF implies that this targeted spending allocated toward children has a benefit-to-public-cost ratio much higher than one.

With large-scale administrative datasets and rigorous research designs, economists have also documented the long-term benefits of childhood eligibility for the public health-insurance program Medicaid. For instance, Miller and Wherry (2019) and Wherry et al. (2018) document that infants and children who gained access to Medicaid during their childhood, or who had more years of childhood eligibility after policy changes, had better health and fewer hospitalizations as adults.

Additional research has established that spending on Medicaid for children saves the government money in the long run, as childhood access to Medicaid leads to better long-term health and human capital, and ultimately higher earnings, more tax revenue, and less reliance on government programs later in life. Brown, Kowalski, and Lurie (2020) examine the long-term impact of Medicaid and CHIP expansions during the 1980s and 1990s on adult wages, income, and tax payments using IRS administrative data on all tax returns from 1996 to 2014. Their study covers over ten million children born in the early 1980s. They find that children who gained eligibility for Medicaid paid more in cumulative taxes and collected less in EITC payments by age 28.

Goodman-Bacon (2021) estimates even longer-term effects of childhood Medicaid eligibility by making use of administrative data on the original cohort of children who obtained access during the program's original introduction in the late 1960s. He documents that early childhood Medicaid eligibility reduces-later life mortality and disability, increases employment, and reduces receipt of disability transfer programs up to 50 years later. The stunning conclusion of his research is that Medicaid has saved the government more than its original cost and saved more than ten million quality-adjusted life-years. Goodman-Bacon calculates that, on average, each dollar spent on expanding Medicaid to young children in the 1970s saved the government \$1.17 in the long term.

The positive benefits of high-quality early-childhood education programs have also been well-established. There are many credible research papers on the long-term benefits of the federal Head Start program, our nation's public preschool program that serves a subset of eligible children. To mention a few examples, Deming (2009) examines differences in outcomes for pairs of siblings in which one attended Head Start and the other did not. Using longitudinal data from the National Longitudinal Survey of Youth (NLSY), he finds that siblings who attended Head Start have better long-term adult outcomes than their siblings who did not. He further finds that the positive effects of Head Start attendance on long-term outcomes are observed even though effects on academic test scores fade out, suggesting that Head Start benefits children in ways not captured by academic test performance.

Using a different methodology, Thompson (2017) also finds long-term benefits of Head Start for participating children. From NLSY data and archival records on early Head Start funding levels, he compares the long-term outcomes of children who were too old for Head Start when the program was introduced in their county with the outcomes of children who were sufficiently young to be eligible. He finds that individuals from counties that had an average-sized program when they were in Head Start's target age range completed more schooling, had significantly higher annual earnings, and were significantly less likely to report a health limitation at age 40. The estimated effects of the program are largest among Black students, children of less-educated parents, and children exposed to better-funded Head Start programs.

In addition, Johnson and Jackson (2019) document a "dynamic complementarity" between spending on early childhood education through the Head Start program and subsequent school years. Put another way, the more one spends on schooling later, the greater the benefits of early investments, and vice versa. Their research implies that there is a positive compounding effect between improved early childhood education and higher-quality education in later years. Their analysis shows that children from low-income families who were exposed to higher public spending on Head Start and then again at K-12 schools experience increased educational attainment and earnings as adults.

Taking an even longer-term view, a recent paper by Barr and Gibbs (2022) finds evidence of second-generation benefits of Head Start participation. The authors examine the outcomes of children whose mothers were exposed as young children to the initial rollout of the Head Start program in the 1960s and 1970s, also using data from the NLSY. They find evidence of intergenerational transmission of beneficial effects in the form of increased educational attainment, reduced teen

pregnancy, and reduced criminal engagement in the second generation. In terms of mechanisms, they find suggestive evidence that mothers exposed to Head Start showed improvements in parenting approaches and social-emotional channels.

3.b. Direct income assistance to low-income families with children yields wide-ranging long-term benefits.

Supplementing the income of low-income parents often leads to improved outcomes for children. Growing up in poverty involves not only material deprivation but also often comes with living in an environment filled with familial stress that imparts substantial negative physical, mental, and emotional effects. Economists have documented that cash assistance programs can relieve some of that income constraint for low-income families and, in turn, improve parental health, children's health, and children's test scores. For instance, expansions of the EITC in 1993 significantly improved reported maternal mental health and biomarkers of stress and also improved infant health outcomes (Evans and Garthwaite 2014; Hoynes, Miller, and Simon 2015). EITC payments also increased math and reading test scores among children (Dahl and Lochner 2012).

Researchers examining other forms of payment, such as payments to tribal families from casino profits, have documented similar if not larger benefits to children from cash assistance programs: such payments raised the likelihood of college completion and lowered rates of criminality in adulthood among children in families receiving these payments (Akee et al. 2010). This research bolsters the case for expanding cash allowances or tax credits for low-income families with children.

During the recent COVID-19 pandemic, Congress expanded the Child Tax Credit, making it temporarily more generous and fully refundable (this expansion contributed to the spike in spending on children in 2020 and 2021 as discussed above). This expanded child tax credit considerably reduced material hardship among US children. Remarkably, child poverty in the US fell during the economic downturn of 2020 and 2021, on account of generous government support for families (Creamer et al. 2022).

Estimates suggest that the enhanced CTC alone cut food insufficiency among families with children by 2.4 percentage points, or 20 percent, based on microdata from the Census Household Pulse Survey from April 2021 through May 2022 (Parolin et al. 2023). Despite the reduction in child poverty and food insecurity, Congress let the expanded Child Tax Credit expire. Dominant concerns included the large fiscal cost of the expansion¹⁰ and the concern that such large cash transfers would discourage parents from working.

¹⁰ The Joint Committee on Taxation estimates that the one-year expansion of the CTC cost the federal government \$109.5 billion (JCT 2021).

Given the preponderance of evidence showing that income supplements for low-income families improve outcomes for children, we should expand the CTC in a targeted way. This can be done with a credit design structured to alleviate concerns about discouraging work and unnecessarily high fiscal costs.

Edelberg and Kearney (2023) propose a redesigned CTC that maintains the fully refundable credit amount available in 2021 (\$3,600 for children under 6 or \$3,000 for children 6 to 17) just for families with low but positive income, while providing half that amount to parents with no earnings and phasing it in steeply. Such a program would encourage parents to enter the work force. The authors also propose phasing out the CTC more quickly among higher-income parents, which would reduce the fiscal cost. The experiment with an expanded CTC taught us that a sizable reduction in US child poverty is within reach, if Congress can come to a bipartisan agreement on the specific policy features of an expanded child tax credit or a new child allowance.

3.c. Smart investing in youth has a high social return.

Taking a more sweeping picture of the landscape of spending, Hendren and Sprung-Keyser (2020) draw on more than a 100 studies to systematically examine and compare the economic returns to a wide range of public spending programs. They compare the benefits to program recipients with a program's net cost to the government over a long-term horizon by drawing on research identifying causal effects of the program. For each policy, they calculate the ratio of recipients' net benefits to the net cost to the government. Recall that in the academic public finance literature, this ratio is referred to as the *marginal value of public funds* (MVPF). A policy that is calculated to have zero net cost to government—by bringing in additional tax revenue or saving future tax payments over a longer time horizon—is calculated to have an infinite MVPF, since the ratio puts zero in the denominator.

The MVPF is a measure of the benefits delivered to policy beneficiaries per dollar of expense to the government. Conceptually, it is related to Arthur Okun's (1975) concept of a "leaky bucket," used to illustrate the idea that redistributive policies often deliver benefits below their costs, due to administrative costs and induced reductions in labor supply among both those who are taxed and those who receive transfers. The leakier the bucket is by which the government transfers money to recipients, the lower the MVPF. Conversely, for a similar amount of benefits delivered, a higher MVPF implies less efficiency loss or administrative cost. An infinite MVPF implies a policy with no efficiency loss and potentially an efficiency gain.

The MVPF measure facilitates a comparison of spending across programs. If program A has an MVPF of 2 and program B has an MVPF of 1, then one should prefer to allocate spending toward program A if they prefer to give \$2 to program A recipients

over \$1 to program B recipients (at the same cost to the government). If program C has an infinite MVPF and program D has an MVPF of 1, then spending a dollar on program D instead of C can only be justified in a social welfare sense by placing greater weight on the welfare of program D's recipients—that is, by a political preference for giving \$1 to the beneficiaries of program D (say, people over age 65) over a cost-saving measure that benefits the recipients of program C (say, children).

Across the 133 public tax and spending programs they examine under this unified framework, these researchers find that spending programs that primarily serve children have the highest MVPFs. Figure 5 charts the MVPF estimates for different programs color-coded by major category of spending, plotted by the age of the program's main beneficiaries. Each category comprises multiple programs.

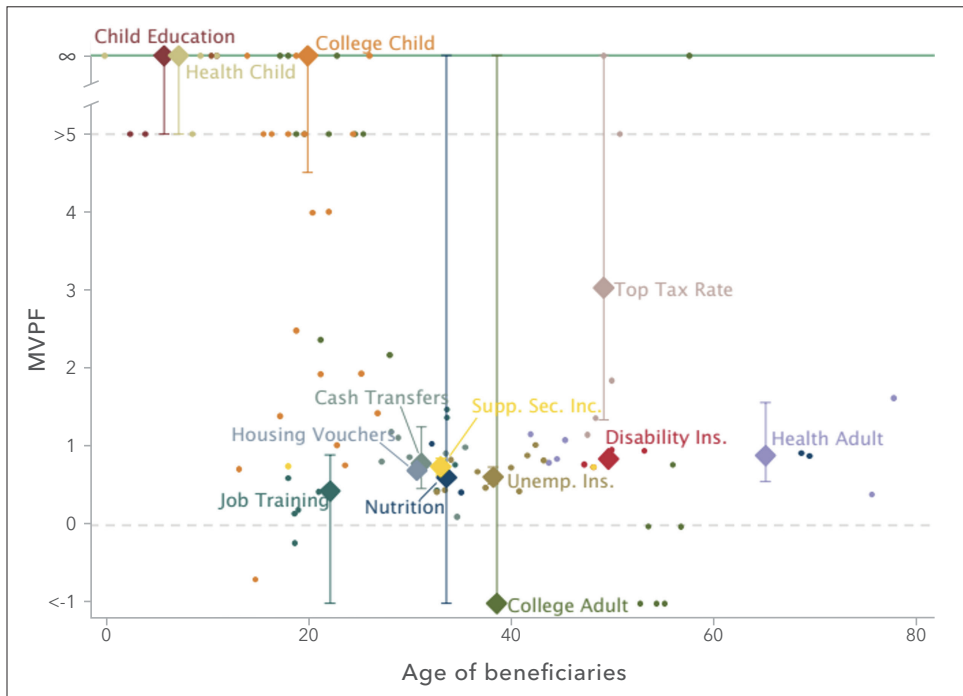
To give a few examples, the category “child education” includes studies of Head Start, K–12 school spending reforms, and the Perry Preschool Program, among others; “college adult” includes studies of the American Opportunity Tax Credit, the Hope Tax Credit, and the tax deduction for postsecondary tuition, among others; “college child” includes various policy reforms and programs targeting full-time college students, including admissions criteria for state flagship universities and community college tuition changes in multiple states; and “adult health” includes insurance subsidies for health insurance purchase in Massachusetts, the expansion of Medicaid to adults in Oregon, and the introduction of Medicare. There is a clear pattern among the estimates: spending on children yields the highest social value per cost and spending on adults consistently yields lower social returns.

The type of spending – not just the age of the target beneficiary – matters for the social return. Spending on children's health and education — from a very young age through age 20 — consistently yields a very high MVPF. There is also evidence that the Moving to Opportunity project that provided housing vouchers for parents to move from high-poverty to low-poverty neighborhoods generated enough government savings through improved outcomes for children to pay for itself (Chetty, Hendren, and Katz 2016).

3.d. The federal government spends the least where the social returns are highest.

Charting these benefits along with federal spending across age groups, reveals how our spending patterns have fallen out of line with these patterns of social returns. See figure 6. The federal government spends \$3.68 on elderly Americans for each dollar spent on young children, even though each dollar spent on adults over 18 largely generates less than \$1 in benefits, compared to far larger benefits, on average, when that dollar is spent on kids.

Figure 5. Marginal Value of Public Funds (Ratio of Benefits to Net Government Costs), by Age of Beneficiary



Source: This figure is taken from Hendren and Sprung-Keyser (2020).

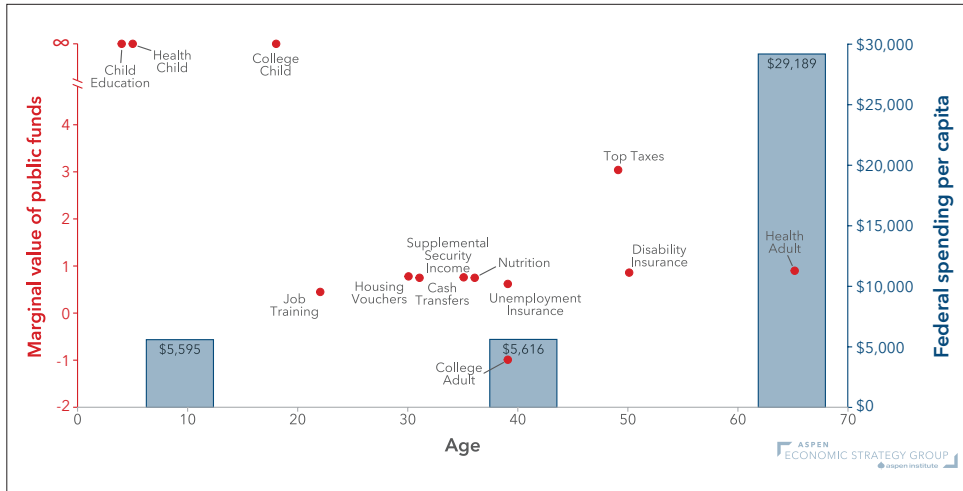
In general, programs serving people above age 20 yield lower and sometimes negative returns. Even similar programs have quite different MVPFs when they serve adults instead of children. For instance, Medicaid expansions that expanded access to health insurance for children in low-income families are estimated to have an infinite MVPF (practically speaking, a zero net cost to the government), but expansions of health insurance to older populations are found to have much smaller MVPFs. The difference is because improved health among children results in lower health care spending and higher earnings capacity in adulthood, which is what generates the net savings to the government.

3.d. Spending on older children can be just as cost effective as spending on young children, and not all public spending on youth yields high social returns.

The average returns across categories plotted in figure 6 masks substantial variation in the returns to different spending programs, even within the set of programs aimed at children. First, spending on the youngest children (under five years old) often,

but not always, generates high returns. Second, there are many programs aimed at older children that generate the same level of returns as the most beneficial early childhood programs.

Figure 6. MVPF vs. Per Capita Spending, by Age



Notes: The marginal value of public funds (MVPF) is the ratio of a program's benefits to its net government cost. Estimates are plotted by program category (i.e., child education programs) at the average age of that category's recipients. Programs in each category can be found in Hendren and Sprung-Keyser (2020). Spending per capita estimated in 2019 for children under 5, adults, and mandatory spending on adults 65 and older. Federal spending numbers include direct spending from federal programs, as well as the portions of refundable tax credits that exceed tax liability and are paid out to families, but they exclude tax reductions.

Sources: MVPF estimates by age and category from Hendren and Sprung-Keyser (2020); total spending on children and adults from Hahn et al. (2020); population estimates from Census (2022); estimates of mandatory spending on adults 65 and older from Social Security Administration (2020) and Congressional Budget Office (2020a).

Programs supporting very young children's health and education generally yield the highest returns among the various types of public spending. For instance, expansions of Medicaid coverage to low-income pregnant women and infants improved those children's health enough to pay for itself, generating an infinite MVPF (Miller and Wherry 2019). High-quality preschool provided to children from low-income families through the Perry Preschool and Abecedarian programs are estimated to generate \$44 and \$7 per dollar spent, respectively.

There are, however, funds spent on children with lower returns. Publicly funded childcare programs, for example, have been found to have negative effects for children from high-income families who would have otherwise spent time in highly

enriched environments (see, for instance, Havnes and Mogstad 2015).¹¹ Similarly, among Head Start participants, the long-term benefits are significantly lower for children who likely would have attended another preschool program (Kline and Walters 2016).

The research evidence does not support the notion that only programs targeted at very young children have high social returns. There is evidence of the cost-effectiveness of various programs for teens, for example. For example, job programs for teenagers across several cities have been found to significantly reduce participating teenagers' likelihood of incarceration, with effects lasting months after the program ends (Heller 2014; Gelber, Isen, and Kessler 2016; Modestino 2019). The social benefits of these youth job programs exceed the cost based on the reduction in criminality alone.

As another example of the positive return of investing in older youth, economists have found that expanding college financial assistance to low-income students through Pell Grants increases college completion, generating savings (through tax revenues from increased earnings) large enough to pay for the program outlays (Denning et al. 2019). Though it is important to note here too that not all spending on college-aged students is cost-effective; spending can generate lower social returns if it is not wisely spent and does not raise college completion rates (Deming and Walters 2017).

In sum, to effectively spend public funds, it is crucial to focus on specifics and evidence, rather than on rules of thumb, which may draw funding to inefficient and even harmful efforts.

4. A Call for Smarter Investing in America's Youth

In an ideal society, no child would go without health care, nutritious food, or a quality education due to the circumstances of their birth. But even setting moral ideals or social values aside, as a matter of economics, as reported above, money spent providing access to these goods for children from low-income families has been found to have a net positive return. In some instances, the government recoups the money spent, and then some. Despite ample evidence demonstrating that targeted spending on youth tends to offer the highest returns, the United States devotes relatively few public dollars to investments in youth. This practice is a mistake that will result in a less healthy, less productive future population.

¹¹ Havnes and Mogstad (2015) examine the effects of a large-scale expansion of subsidized childcare in Norway. They find that the effects on long-term outcomes for exposed children were positive for those who came from families in the lower and middle parts of the earnings distribution, but negative for children from families in the top part of the income distribution. They interpret their results as suggesting that the benefits of providing subsidized childcare to middle- and upper-class children are unlikely to exceed the costs, in contrast to the benefits for children from low-income families.

Though early childhood programs garner much attention, and though the case for investing in early childhood is exceptionally strong, targeted investments made in disadvantaged children throughout adolescence and into young adulthood have also been shown to be cost-effective in many instances, as described above.

Even after high school, programs that raise students' likelihood of completing a college degree are some of the best investments in a skilled workforce the country can make (see Ganz et al. 2018). Workforce training programs focused on re-skilled adult workers show mixed results, making the need to build these skills earlier in these workers' careers all the more urgent (Andersson 2023, Holzer 2023). The significantly smaller benefits documented to these adult programs do not mean they are not worth investing in, but they do highlight the benefit of investing in skill development during youth.

Our call for expanded investments in children is not limited to strengthening and expanding public programs that invest in kids but is also for enhanced support to community programs with evidence of success.¹² Such efforts should align with rigorous research that has demonstrated program effectiveness. Community programs should be studied using credible research designs. Fortunately, academic research labs like the Urban Labs at the University of Chicago and the Lab for Economic Opportunity (LEO) at Notre Dame are working with community partners to build evidence around the effectiveness (or lack thereof) of locally implemented, often privately-funded programs. As the evidence builds around such programs, those showing evidence of cost effectiveness would ideally be scaled up.

5. Conclusion

Creating a resilient economy requires not only stabilizing America's fiscal outlook—by ensuring spending and revenues are more aligned—but also ensuring our budget priorities reflect the most effective use of those funds. Today's spending priorities, across federal, state, local, and private sources, are far out of line with patterns of social returns: we spend \$1.75 on elderly Americans for each \$1 spent on youth, when targeted expenditures on children often more than pay for themselves in the long term. Investing in America's children, in their families, and in the communities that support them is an investment in our country's future.

¹² As one example of an area where community-based programs have proven quite cost effective, we point to mentorship programs. Community-based mentorship programs that take place out of the classroom can have large impacts on academic outcomes and student achievement. High-quality programs such as Big Brothers Big Sisters of America, where mentors undergo background checks, are trained extensively, and start mentorship under supervision, have been found to improve student GPAs by 0.08 points on average (Tierney, Grossman, and Resch 1995). The estimated benefits to this higher GPA—in the form of higher educational attainment and lifetime earnings—can exceed five times the \$1,600 cost of such a mentor (Levine 2014).

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ABOUT THE AUTHORS

Melissa S. Kearney

Director, Aspen Economic Strategy Group; Neil Moskowitz Professor of Economics, the University of Maryland

Melissa S. Kearney is the Neil Moskowitz Professor of Economics at the University of Maryland. She is also director of the Aspen Economic Strategy Group; a research associate at the National Bureau of Economic Research; and a nonresident senior fellow at the Brookings Institution. She serves on the board of directors of MDRC and on advisory boards for the Notre Dame Wilson-Sheehan Lab for Economic Opportunities and the Smith Richardson Foundation. Kearney previously served as director of the Hamilton Project at Brookings and as co-chair of the Massachusetts Institute of Technology J-PAL State and Local Innovation Initiative. Kearney's research focuses on poverty, inequality, and social policy in the United States. Her work is published in leading academic journals and is frequently cited in the press. She is an editorial board member of the *American Economic Journal: Economic Policy* and the *Journal of Economic Literature*; she was previously co-editor of the *Journal of Human Resources* and a senior editor of the *Future of Children*. Kearney teaches public economics at both the undergraduate and PhD levels at the University of Maryland. She holds a BA in economics from Princeton University and a PhD in economics from MIT.

Luke Pardue

Economic Policy Fellow, Aspen Economic Strategy Group; Economist, Gusto

Luke Pardue is an economist at Gusto, a payroll and HR platform for small and medium-sized businesses. He obtained his PhD in economics from the University of Maryland and, before joining Gusto, worked at the Federal Reserve Board and the US Census Bureau. His research focuses on finding policies and practices that help businesses, workers, and their families thrive. As an AESG economic policy fellow, Luke writes data-based explainers of current policy issues as part of the "In Brief" series. His work and commentary have been featured in outlets including the *New York Times*, *Washington Post*, and *Wall Street Journal*. Luke currently resides in Washington, DC.

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