OPPORTUNITY INSIGHTS

A United Welfare Analysis of Government Policies

Executive Summary July 2019

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Which policies improve social well-being the most? Should we spend more (or less) on health insurance? What about raising top marginal income tax rates, or targeting investments towards children?

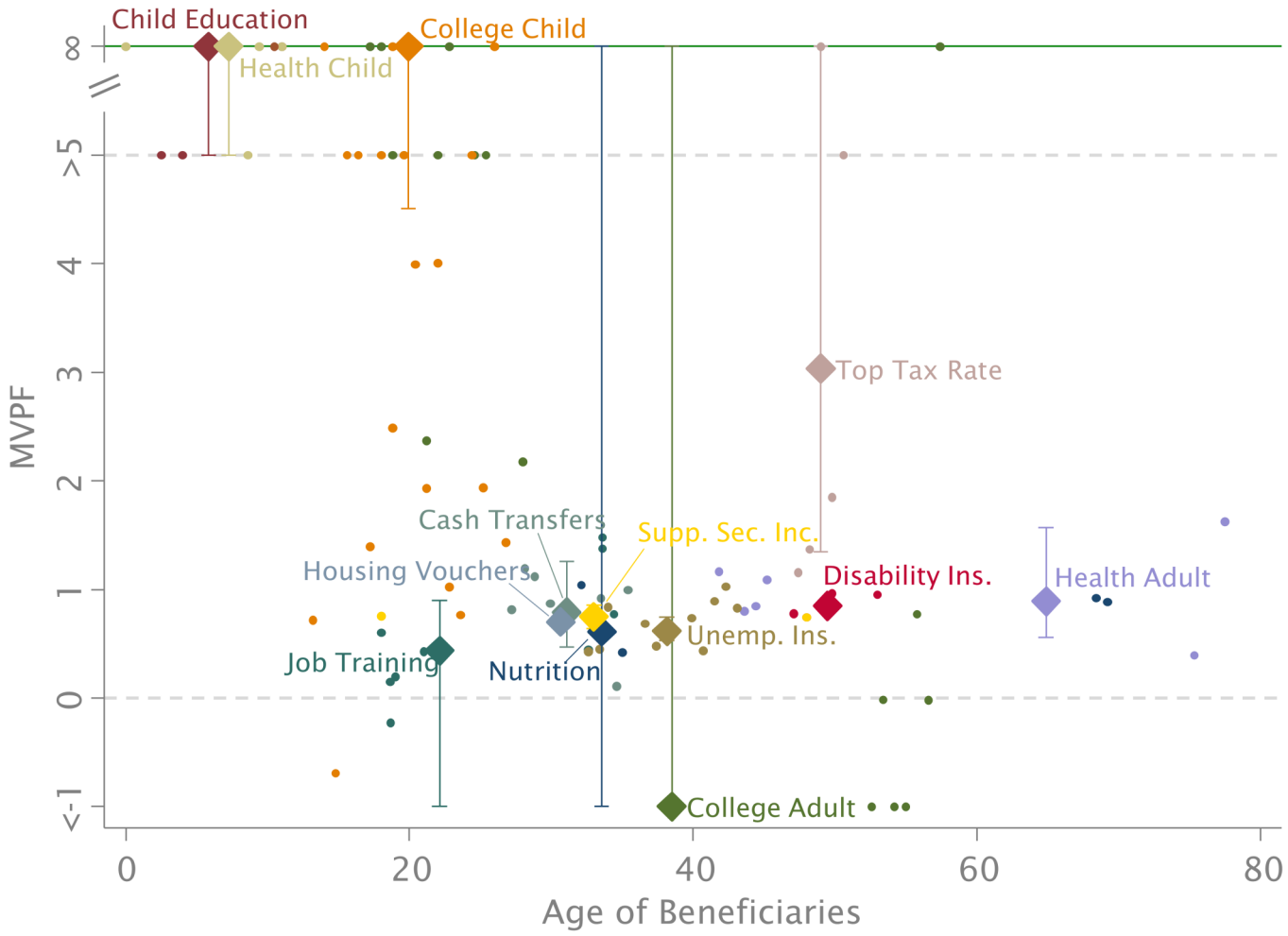
With those questions in mind, this paper examines 133 historical policy changes in the U.S. over the past half century. We analyze policies spanning social insurance (e.g. health and disability insurance), education and job training (e.g. preschool spending and college subsidies), taxes and cash transfers (e.g. top tax rate changes or expansions of the earned income tax credit), and in-kind transfers (e.g. housing vouchers and food stamps.)

We calculate both the benefit that each policy provides its recipients (measured as their **willingness to pay**) and the policy's **cost** to the government. The ratio of these two estimates makes up a policy's Marginal Value of Public Funds, or its "**MVPF**." Our analysis has yielded the following conclusions:

$$\text{MVPF} = \frac{\text{Willingness to Pay}}{\text{Net Government Cost}}$$

Explore the data yourself at www.policyinsights.org to learn more about the welfare impacts of historical policy changes over the last half-century.

Figure 1: MVPF by Age of Beneficiary



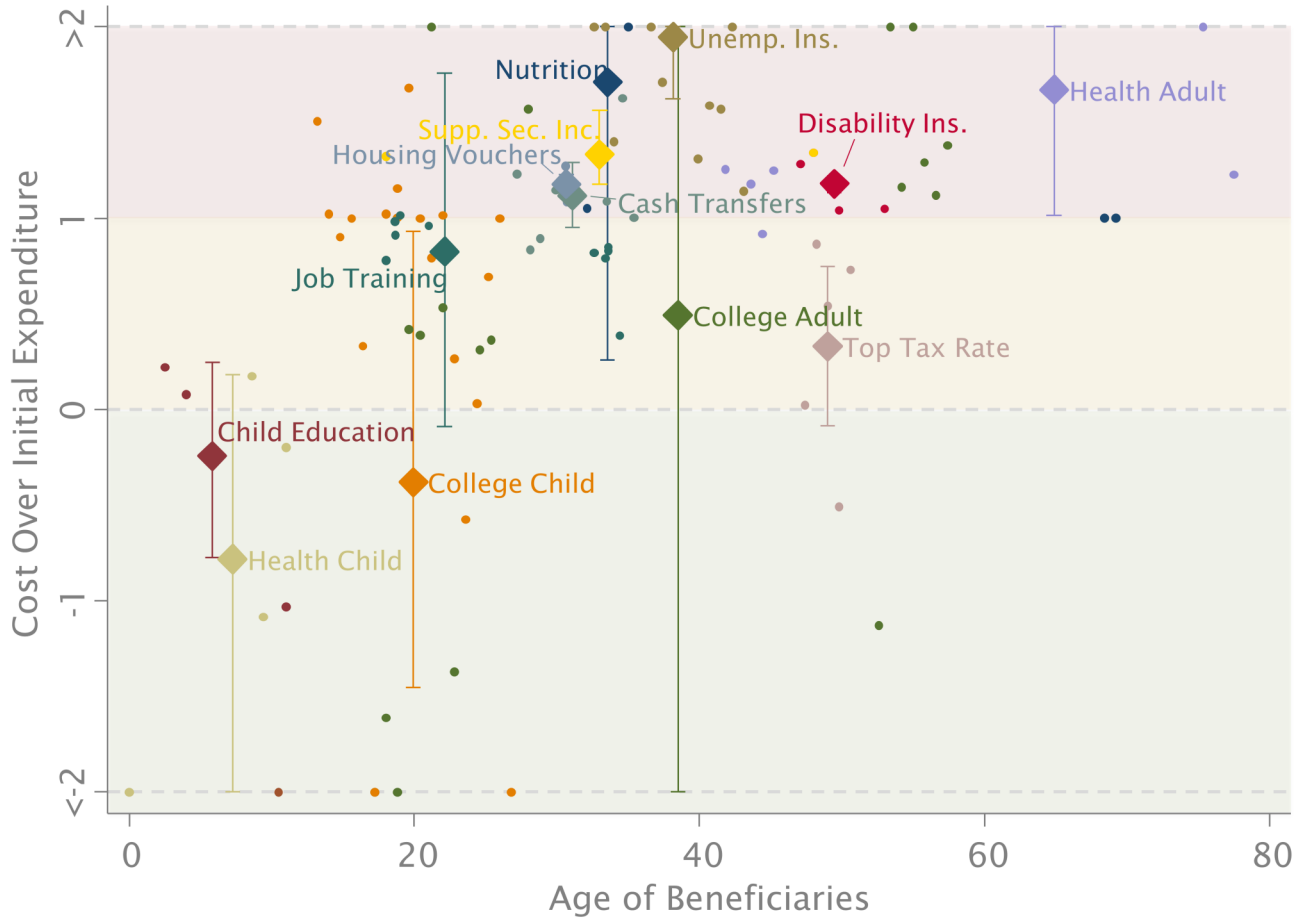
Finding #1: Direct investments in the health and education of low-income children yield the highest returns

Figure 1 plots the MVPFs of each policy by the age of the policy's beneficiaries, as well as averages for each policy category (shown by diamonds). The clustering of estimates in the upper left reveals a clear pattern: **direct investments in children have historically had the highest MVPFs**. Indeed, we find that expansions of health insurance to children, investments in preschool and K-12 education, and policies increasing college attainment all yield high returns.

Finding #2: MVPFs are high throughout childhood

We find high MVPFs for policies that target children throughout the full duration of childhood. This is true for a range of policies spanning from preschool and health programs for young children to college policies for older youth. This finding directly challenges the notion that opportunities for high-return investments in children decline rapidly with age. Historically, **there have been opportunities for high-return investments in children and youth of all ages.**

Figure 2: Net Costs to Government per $1 of Initial Expenditure

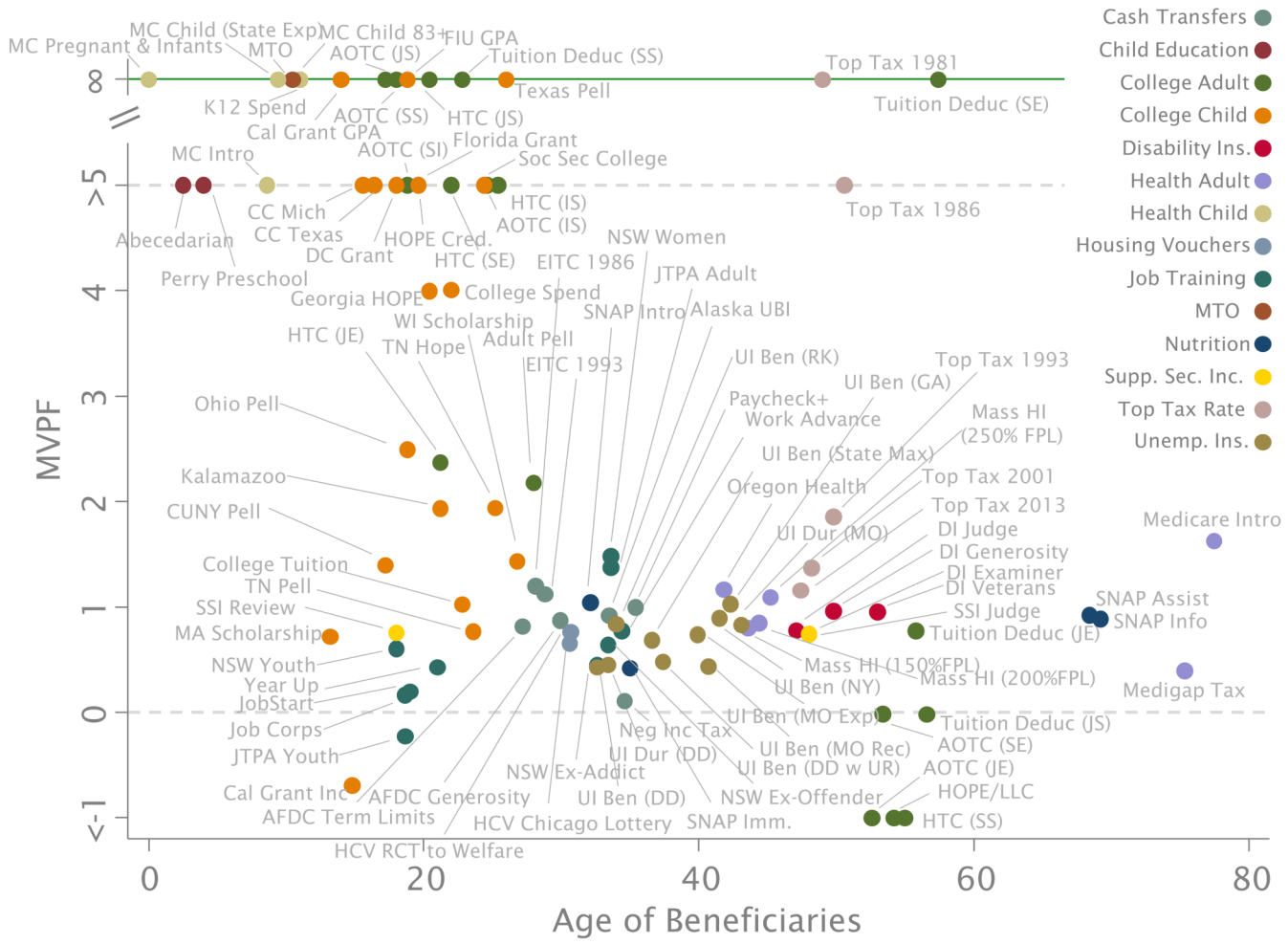


Finding #3: Many direct investments in low-income children's health and education pay for themselves.

In Figure 1 we report that a number of policies have infinite MVPFs. (These points lie along the green line at the top of each figure.) An MVPF of infinity occurs when beneficiaries value a policy (their willingness to pay is positive), and the policy does not impose a net cost on the government. For example, while government spending on public universities is costly, evidence from the state of Florida suggests that raising enrollment in public colleges pays for itself over the long-run through increased tax revenue and reduced transfer payments. Similarly, several Medicaid expansions to children resulted in increased tax revenue and decreased government spending on medical care for recipient children in adulthood. These long-run impacts were large enough to fully offset the initial program expenditure. As a result, these policies provided benefits to children without costing the government any additional resources.

Figure 2 focuses solely on the net cost to the government, narrowing in on the denominator of our MVPF equation. The figure reports the average net cost for every $1 of upfront spending in each policy category. In the case of four major Medicaid expansions studied in previous literature, we estimate that each $1 of initial spending was fully repaid and that the policy returned an additional $0.78 to the government.

Figure 3: MVPF for All Polices by Age of Beneficiaries



Finding #4: MVPFs are lower for policies targeting adults

We find lower MVPFs for policies that target adults. Indeed, MVPFs for these policies are often close to 1, indicating that their benefits are approximately equal to their costs.

Figure 3 reports the MVPFs for each policy. We find MVPFs ranging from 0.8-1.63 for health insurance expansions to adults, 0.42-1.07 for in-kind transfers such as housing vouchers and food stamps, and 0.11-1.2 for tax credits and cash welfare programs to low-income adults. These lower MVPFs reflect the fact that many of these policies resulted in lower levels of earnings and subsequently less government revenue.

Finding #5: There are important exceptions to the general pattern of our results

Not every policy targeting children has a high MVPF.

Despite the general patterns presented here, some policies targeting children yield low MVPFs. For instance, we find low returns for youth job training programs and college subsidies when they don't significantly increase attainment. We also find lower MVPFs for transfers to disabled children and their families. This reinforces the important reality that the MVPF alone does not determine which expenditures are desirable or undesirable. Rather, it measures the budgetary tradeoffs associated with different types of policies.

Some policies targeting adults have high MVPFs, particularly if they have spillovers onto children

We find that spending on adults can result in high MVPFs if those policies have positive spillover effects on children. For example, the provision of vouchers and counseling services in the Moving to Opportunity experiment helped families move to lower-poverty neighborhoods. The resulting improvement in childhood environments led to large increases in children's earnings that generated sufficient tax revenue to pay for the program cost. These results highlight the need for further work to uncover when such spillovers are likely to occur.

We also find high MVPFs for historical reductions in the top marginal tax rate in the 1980s when those rates were 50% or above. As we document in the academic paper, however, these estimates contain considerable statistical uncertainty. For a policy such as the 1981 reduction in top tax rates, we cannot rule out an infinite MVPF nor can we rule out an MVPF of 1.

Want to Learn More?

Read the full paper

Explore the patterns for yourself at www.policyinsights.org

Download the new data containing the MVPFs for each policy in this study

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Previously the Equality of Opportunity Project, Opportunity Insights develops scalable policy solutions that will empower families throughout the United States to rise out of poverty and achieve better life outcomes.

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Methods FAQs

What does it mean for a policy to have an MVPF of infinity?

A policy with an infinite MVPF provides benefits to its recipients without costing the government money in the long run. We often refer to this as the policy "paying for itself" because the government recoups its initial investment through increased tax revenue and reductions in transfers. In the context of tax policy, this effect is often referred to a "Laffer" effect.

What does it mean for a policy to have an MVPF of 1?

Policies have MVPFs equal to one if the beneficiaries value the government expenditure at its cost. In the simplest case, if the government gave a single individual a single dollar, and this policy did not change their behavior, that policy would have an MVPF of 1. It would cost the government one dollar and the person would value the policy at one dollar.

The MVPF diverges from this benchmark if a policy causes indirect impacts on the government's budget. For example, if a policy causes an individual to work less, then government tax revenues fall. This raises the net cost of the policy above $1. By contrast, if a policy causes an individual to get more schooling and consequently increases their income, government tax revenues would rise. The net cost of the policy would fall below $1.

The MVPF may also deviate from that benchmark value of 1 if willingness to pay for the policy differs from the government cost. For example, when the government provides insurance, individuals may place additional value on the insurance benefit beyond its cost, just as individuals buy insurance from private companies at a price above its cost. By contrast, if individuals change their earnings in order to be eligible to receive an in-kind transfer such as food stamps or housing vouchers, willingness to pay may fall below government costs. (The logic of this final example relies on an application of the "envelope theorem." We discuss these methods in more detail in the paper.)

How do you measure the net cost of a policy?

Net costs incorporate both initial spending on a policy and any future impacts of the policy on government revenue. We use existing literature to measure initial policy costs and to capture how the causal effects of the policy impact the government's budget.

How do you measure willingness to pay for a policy?

In some cases, willingness to pay (WTP) is straightforward. For example, a non-distortionary tax cut offering $1 additional after-tax income will have a WTP of $1. In other cases, measuring WTP is conceptually more difficult, and, as noted above, relies on more nuanced applications of the "envelope theorem." We discuss the assumptions of these methods in detail in the paper. We also illustrate that our primary conclusions are robust to a range of different approaches to measuring WTP.