A Unified Welfare Analysis of Government Policies

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A Unified Welfare Analysis of Government Policies

- What government policies do the most to improve social welfare?
  - Should we spend more (or less) on health insurance?
  - Should we raise top marginal income tax rates?
  - Should we invest more in children? At what age?

- There is existing research analyzing the effect of many of these policy changes
  - But little work quantifying the broad trade-offs across policy categories
  - Often different welfare methods used (CBA, MCPF, cost per life saved…)

- This paper: Conducts a unified welfare analysis of historical policy changes in the US over the past half century
  - Study 133 policy changes spanning four major categories: Social insurance, education and job training, taxes and cash transfers, and in-kind transfers
Measuring the Marginal Value of Public Funds

For each policy change, we draw upon estimates in existing literature to measure:

- The benefits to its recipients (measured as willingness to pay)
- The net cost to the government (inclusive of fiscal externalities)
- We take the ratio of benefits to net cost to form its Marginal Value of Public Funds:

\[
MVPF = \frac{\text{Beneficiaries' Willingness to Pay}}{\text{Net Government Cost}}
\]

- Differs from traditional benefit/cost ratios by focusing on incidence of costs on government

Comparisons of MVPFs yield social welfare impacts

- Suppose Policy 1 has \(MVPF_1 = 1\) and Policy 2 has \(MVPF_2 = 2\)
- More spending on policy 2 financed by less on 1 increases social welfare iff prefer to take $1 from Policy 1 beneficiaries to give $2 to policy 2 beneficiaries
- MVPF quantifies the tradeoffs across policies
- Infinite MVPFs correspond to policies that pay for themselves (\(WTP > 0\) and \(Cost < 0\))
Data and Approach

- Construct comprehensive sample of policy changes (more formally, “identification conditions”) from survey and review articles in the four domains

- For each policy change, translate estimated impacts into the MVPF

- Assess robustness to range of assumptions
  - Program Parameters (discount rate, tax rate, etc.)
  - Forecasting/Extrapolation of Observed Effects
  - Validity of Empirical Designs (RCTs/RDs vs. Diff-in-Diff; Peer Reviewed vs. not; etc.)
  - Publication Bias (Andrews and Kasy, 2018)
  - Missing Causal Estimates (e.g. restrict to subsets of policies with different sets of observed effects)

- Detailed appendices + posted .do files on GitHub for exploration
Direct investments in low-income children have had the highest MVPFs
- High MVPFs throughout childhood: K12, college and health, not just preschool
- Many policies “pay for themselves” (e.g. 3 out of 4 child Medicaid expansions)
- Lower MVPFs for policies targeting adults (MVPFs ranging from 0.5-2)

Several exceptions:
- Children: Large variation in estimates with some low MVPFs (e.g. SSI)
- Adults: Policies with indirect impacts on children (e.g. Moving to Opportunity)

Library of MVPFs provides tests of a range of theories (optimal taxation, in-kind vs cash transfers, optimal policy targeting, value of correcting market failures…)

Lessons for future welfare analyses
- Comparison to traditional Benefit-Cost analysis
- Statistical decision theory to quantify value of future work reducing uncertainty
Outline

1. What We Do: Our Method and An Example
2. What We Find: MVPF Estimates and Robustness
3. Relation to Previous Theory
4. Lessons for Future Welfare Analyses
Outline

1. What We Do: Our Method and An Example
   - Deriving the MVPF
   - Measuring the MVPF: An Education Example
Goal: Illustrate how the MVPF translates “reduced form” policy changes into precise statements about the social welfare impact of those policy changes

Define social welfare:

$$ W = \int \psi_i u_i $$

- $u_i$ is individual $i$’s utility function
  - Expected future discounted utility (e.g. $u_i = E[\sum_{t \geq 0} \beta^j v_{it}]$)
- $\psi_i$ is $i$’s Pareto weight
- Define $\eta_i = \psi_i \lambda_i$, where $\lambda_i$ is the marginal utility of income
- Ratios $\frac{\eta_i}{\eta_j}$ correspond to “Okun’s Bucket” (Okun, 1976)
Impact of Policy Change on Social Welfare

- Consider policy change $dp$ (e.g. change in tax rate, educ. subsidy, etc.)

- First-order welfare impact:

$$\frac{dW}{dp} = \int \psi_i \frac{du_i}{dp} = \bar{\eta}_p \int WTP_i$$

- $\int_i WTP_i = \int_i \frac{du_i}{dp}$ is the sum of WTP by beneficiaries out of their own income for the policy

- $\bar{\eta}_p = \int \eta_i \frac{WTP_i}{\int_i WTP_i}$ is incidence-weighted average social marginal utility of income
Most policies (i.e. reduced-form variations, $dp$) are not budget neutral

- Let $R$ denote govt budget and $G = \frac{dR}{dp}$ denote impact on govt budget that must be financed
- $G$ includes any fiscal externalities from behavioral responses to the policy

The Marginal Value of Public Funds (MVPF) of policy $p$ is given by:

$$MVPF_p = \int WTP_i = \frac{\text{Willingness to pay}}{\text{Net Cost}}$$

$1$ of govt spending on the policy delivers $MVPF$ benefits to the beneficiaries of the policy [Mayshar (1990), Slemrod and Yitzhaki (1996, 2001), Kleven and Kreiner (2006), Hendren (2017)]

- Delivers $\hat{\eta}_p MVPF_p$ in social welfare
Take two (non-budget neutral) policies: policy 1 and policy 2

Consider budget neutral policy, $dp$: increase spending on policy 1 financed from less spending (greater revenue) from policy 2

To first order, combined policy increases social welfare ($\frac{dW}{dp} > 0$) if only if

$$\bar{\eta}_1 MVPF_1 > \bar{\eta}_2 MVPF_2$$

MVPFs characterize price of delivering welfare to the beneficiaries through the policy
- Motivates comparing policies with similar distributional incidence ($\bar{\eta}_1 \approx \bar{\eta}_2$)
- Laffer effect occurs when $WTP > 0$ and $Net\ Cost < 0 \rightarrow MVPF = \infty$

MVPFs (+ social preferences) are the building blocks for measuring the first-order welfare impact of policy changes
Outline

What We Do: Our Method and An Example

- Deriving the MVPF
- Measuring the MVPF: An Education Example
Florida International University (FIU) had a minimum GPA threshold for admission that created a fuzzy discontinuity.

Zimmerman (2014) utilizes this discontinuity to examine the impact of FIU admission on earnings for 14 years after admission.
Fig. 8.—Quarterly earnings by distance from GPA cutoff. Lines are fitted values based on the main specification. Dots, shown every .05 grade points, are rolling averages of values within .05 grade points on either side that have the same value of the threshold-crossing dummy.
Net Cost to Government of Admission to Florida International University

Note: All amounts in 2005 USD, discounted using a 3% real interest rate
Net Cost to Government of Admission to Florida International University

Cost per admission to FIU (IPEDS/Zimmerman (2014))

Note: All amounts in 2005 USD, discounted using a 3% real interest rate
Net Cost to Government of Admission to Florida International University

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

- Total FIU Cost: $11.4K
- Student Contribution: -$3.2K
- Community College Exp.: -$5.6K

Net Upfront Gov’t Cost: 2.6K

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

- Total FIU Cost: $11.4K
- Student Contribution: $-3.2K
- Community College Exp.: $-5.6K
- Taxes from age 19-25 earnings: $2.0K

Lost tax revenue from initial earnings declines from college attendance

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

Total FIU Cost: $11.4K
Student Contribution: -$3.2K
Community College Exp.: -$5.6K
Taxes from age 19-25 earnings: $2.0K
Taxes from age 26-33 earnings: -$7.3K

$7.3K increase in tax revenue from ages 26-33 (18.6% tax+transfer, CBO)

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

Net government savings of $2.7K by age 33

Total FIU Cost: $11.4K
Student Contribution: $-3.2K
Community College Exp.: $-5.6K
Taxes from age 19-25 earnings: $2.0K
Taxes from age 26-33 earnings: $-7.3K
Net Cost To Government: $-2.7K

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost to Government of Admission to Florida International University

Policy pays for itself → \[ MVPF = \infty \]

Note: All amounts in 2012 USD, discounted using CPI-U-RS and 3% real interest rate
Net Cost by Age to Government of Admission to Florida International University

Observe outcomes through age 33

What about future ages?
Forecast future earnings using cross-section in ACS, following previous literature (e.g. Chetty, Hendren, Katz (2016))
Forecasting Future Earnings using the Cross-sectional Age Distribution
Mean 2015 ACS Earnings by Age with 0.5% Growth
Forecasting Future Earnings using the Cross-sectional Age Distribution

Control Group Earnings

Control group earnings are 97% of mean earnings at age 30
Forecasting Future Earnings using the Cross-sectional Age Distribution
Control Group Forecast

Assume constant % of mean earnings over life-cycle
Forecasting Future Earnings using the Cross-sectional Age Distribution
Control Group Earnings + Treatment Effect

Add Treatment Effect to Control Group Earnings
Forecasting Future Earnings using the Cross-sectional Age Distribution

Treatment Group Forecast

Forecast assuming constant % impact on earnings
Net Cost by Age to Government of Admission to Florida International University
Forecasting Future Tax/Transfer Revenue

Original $11.4K cost returns $24.4K to the government over the person's lifetime
\( \text{MVPF} = \infty \)
(Regardless of WTP)
Willingness to Pay for Admission into Florida International University

Baseline WTP

For each policy, form a ‘conservative’ and ‘baseline’ WTP estimate.
Willingness to Pay for Admission into Florida International University
Baseline WTP

Baseline Estimate: Value WTP using impact on net after-tax income

- Valid if no impact on labor effort/disutility and no other impact of education on utility
Willingness to Pay for Admission into Florida International University
Baseline WTP

- Private tuition payments: -$2.9K
- Age 19-25 after-tax earnings: -$8.9K
- Age 26-33 after-tax earnings: $29.1K
- Age 34+ after-tax earnings: $95.5K
- Baseline WTP: $112.8K
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Medicaid Example from Miller and Wherry (2018)
Direct Investments in Children Historically Had Highest MVPFs
Direct Investments in Children Historically Had Highest MVPFs
Direct Investments in Children Historically Had Highest MVPFs

High MVPFs for policies targeting children
Direct Investments in Children Historically Had Highest MVPFs

Lower MVPFs for policies targeting adults
Direct Investments in Children Historically Had Highest MVPFs
With 95% Confidence Intervals Computed via Modified Bootstrap

![Graph showing age of beneficiaries against MVPF with various categories on the y-axis: Cash Transfers, Child Education, College Adult, College Child, Disability Ins., Health Adult, Health Child, Housing Vouchers, Job Training, MTO, Nutrition, Supp. Sec. Inc., Top Taxes, Unemp. Ins.](image-url)
Direct Investments in Children Historically Had Highest MVPFs

Imagine spending $1 in initial program cost on each domain

$$MVPF_{avg} = \frac{WTP_1 + WTP_2 + WTP_3 + WTP_4}{Cost_1 + Cost_2 + Cost_3 + Cost_4}$$
Direct Investments in Children Historically Had Highest MVPFs Category Averages
Net Costs to Government per $1 of Initial Expenditure
Category Averages

Cost Over Program Cost

Age of Beneficiaries

- Child Education
- College Child
- Health Child
Net Costs to Government per $1 of Initial Expenditure
Category Averages

Age of Beneficiaries

Cost Over Program Cost

Cash Transfers
Child Education
College Adult
College Child
Disability Ins.
Health Adult
Housing Vouchers
Job Training
Supp. Sec. Inc.
Unemp. Ins.
Top Taxes
Unemp. Ins.
Not All Child-Targeted Policies Have High MVPFs
Infinite MVPF for 1981 Top Tax Rate…

![Graph showing MVPF vs Age of Beneficiaries with Top Tax 1981 marked on the line.](image-url)
Infinite MVPF for 1981 Top Tax Rate…

The graph shows a scatter plot with the Y-axis labeled "MVPF" and the X-axis labeled "Age of Beneficiaries." The data points are plotted across a range of ages from 0 to 80, with MVPF values spanning from negative to positive infinity. A horizontal line represents the Top Tax 1981 level.
Policies with Spillovers onto Children Have High MVPFs (e.g. MTO)
Robustness
MVPF Robustness to Alternative Discount Rates

7% discount rate

Age of Beneficiaries

MVPF

- Health Child
- College Child
- Child Education
- Cash Transfers
- Supp. Sec. Inc.
- Housing Vouchers
- Job Training
- Disability Ins.
- Unemp. Ins.
- Top Taxes
- Health Adult

∞

<5

>5

∞
MVPF Robustness to Alternative Tax and Transfer Rates

10% Tax and Transfer Rate

- Child Education
- College Child
- College Adult
- Disability Ins.
- Health Adult
- Unemp. Ins.

MVPF

Age of Beneficiaries

- Housing Vouchers
- Cash Transfers
- Supp. Sec. Inc.
- Job Training
- Top Taxes

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MVPF Robustness to Alternative Tax and Transfer Rates

30% Tax and Transfer Rate

- Child Education
- College Child
- Health Child
- College Adult
- Disability Ins.
- Unemp. Ins.
- Top Taxes
- Cash Transfers
- Supp. Sec. Inc.
- Housing Vouchers
- Job Training
- Health Adult

Age of Beneficiaries vs. MVPF

MVPF = 0, 20, 40, 60, 80

<1, 0, 1, 2, 3, 4, >5

∞
MVPF Robustness to WTP
Conservative Willingness to Pay

MVPF

WTP/Prog. cost

College Adult
Disability Ins.
Health Adult

<1
0
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2
3
4
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7
8

Age of Beneficiaries

Child Education
College Child
Health Child

Supp. Sec. Inc.
Cash Transfers
Housing Vouchers
Job Training
Unemp. Ins.

Top Taxes
College Adult
Disability Ins.
Health Adult

∞
MVPF Robustness to Forecasting
Assuming Fixed Income over Life Cycle (No Income Growth, Restricted Sample)

Age of Beneficiaries

MVPF

- Child Education
- College Child
- Health Child
- Cash Transfers
- Job Training
- Supp. Sec. Inc.
- Unemp. Ins.
- Disability Ins.
- Health Adult
- Top Taxes

Child Spillovers  No Forecast
MVPF Robustness to Sample/Specification Quality
RCTs, RDs, and Lotteries

Cash Transfers
Child Education
College Child
Supp. Sec. Inc.
Job Training
Housing Vouchers
Cash Transfers

Age of Beneficiaries
MVPF
MVPF by Year of Policy
Averages by Decade

Year

Adult Policies

Child Policies
Publication Bias

- Our estimates are constrained by the existence of previous literature.
- Would Perry Preschool have been published if the effects were an (imprecise) zero?
- Andrews and Kasy (2018) provide a method to test for and correct publication bias.
- **Child Policies:** 3-4 times more likely to be published if they find a repayment effect.
- **Adult Policies:** up to 12 times more likely to be published if they find a distortionary effect.
MVPF Robustness to Publication Bias
Adjusting for Observed Publication Bias

Age of Beneficiaries vs. MVPF

- Child Education
- College Child
- Health Child
- College Adult
- Health Adult
- Disability Ins.
- Unemp. Ins.
- Supp. Sec. Inc.
- Job Training
- Housing Vouchers
- Cash Transfers
- Top Taxes

MVPF: Child > College

Age of Beneficiaries: Child > College
MVPF Robustness to Publication Bias
Adjusting for 35X Bias in Experimental Economics Studies [Camerer (2016)]

Age of Beneficiaries

MVPF

- Child Education
- Health Child
- College Child
- Top Taxes
- Housing Vouchers
- Supp. Sec. Inc.
- Cash Transfers
- Unemp. Ins.
- Disability Ins.
- Health Adult
- College Adult
- Job Training
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1. What We Do: Our Method and An Example
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Quantifying the Tradeoffs of Redistribution through the Tax Schedule
(Mirrlees 1976)

Prefer 1993 OBRA tax change iff prefer $1.12 to low-income EITC beneficiaries to $1.85 to top earners

Spillovers on Children
Efficient Redistribution through Investments in Low-Income Children
Child Health, College and Education Programs
Outline

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Lesson #1: MVPF vs Benefit/Cost Ratio [Heckman et al., 2012; Zimmerman 2014]

Benefit Cost Ratio by Age of Beneficiaries

![Graph showing Benefit Cost Ratio (BCR) vs Age of Beneficiaries]

- BCR, $\phi_{DWL} = 50\%$

The graph visualizes the benefit-cost ratio for different programs and age groups, with a $50\%$ threshold for $\phi_{DWL}$. The x-axis represents the age of beneficiaries, and the y-axis represents the BCR ratio. Different categories are marked with distinct markers and colors.
Lesson #1: MVPF vs Benefit/Cost Ratio [Heckman et al., 2012; Zimmerman 2014]
Tax Revenue Impacts Counted as Social Benefits, not Government Cost Reductions

\[ \text{BCR}, \phi_{DWL} = 50\% \]

\[ \text{BCR} = \frac{\text{Social Benefits} - \text{Social Costs}}{\text{Programmatic Cost}(1 + \phi_{DWL})} \]
Lesson #2: Use MVPF-Framework to Design RCTs

MVPF of Welfare/AFDC Reforms

- Job Search First
- Mandatory Educ.
- Mandatory Work Exp.
- Mixed Programs
- Time Limits
- Earnings Supp.

Graph details:
- Cost
- Post Tax Income
- Net Transfers

Variables:
- LFA NEWWS At
- SWIM
- GAIN LA jobs
- HCD NEWWS Col. Int.
- NEWWS Del. Trad.
- SD
- CWEP
- WIN Demo
- GAIN SD
- GAIN Rev.
- GAIN Butte
- GAIN Tul.
- Proj. Ind. FL
- GAIN LA
- Jobs First
- WRP Time lim.
- FTP
- WRP Earn Supp.
Lesson #3: Use MVPF-Framework to Quantify Value of Future Research

- MVPF estimates contain considerable (model + sampling) uncertainty

- The MVPF is a shadow price → value to reducing uncertainty

- Should govt raise $1 of revenue from known MVPF of 1 to spend on policy j?

- Can spend $v_j$ to reduce sampling uncertainty before investing
  - E.g. reduce sampling uncertainty from PSID -> Admin data estimates of food stamp intro

- Solve for $v_j$ that makes government indifferent to learning
  - E.g. food stamps: government WTP $0.24 for every $1 spent on SNAP to learn census vs PSID estimate before deciding to spend
Conclusion

- *Direct* investment in *low-income children* have had highest, often infinite, MVPFs
  - Policies often pay for themselves

- Lower MVPFs for policies targeting adults
  - Costly to redistribute from rich to poor adults
  - Investment in children has historically been efficient method of redistribution

- Lessons for future welfare analyses
  - Incidence on the government matters (difference relative to CBA)
  - Design RCTs where WTP can be measured, not just costs
  - High value to identifying long-run earnings effects, especially child spillovers

- All code + data is available on github and at www.policyinsights.org
Appendix
WTP over Program Cost
Baseline Specification

Age of Beneficiaries

WTP Over Program Cost

Programs:
- Health Child
- College Child
- Child Education
- College Adult
- Disability Ins.
- Health Adult
- Housing Vouchers
- Job Training
- Supp. Sec. Inc.
- Unemp. Ins.
- Top Taxes
- Supp. Sec. Inc.
WTP over Program Cost
Lower Bound Specification
MVPF Robustness to Alternative Discount Rates

10% discount rate

![Graph showing MVPF values for different age groups and programs.](image)
## Table III: Publication Bias Estimation

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Notes: The numbers shown are the estimated probability of publication relative to an insignificant result. Standard errors in parentheses.
MVPF Robustness to Forecasting
No Projections for All Policies (Restricting to 5+ years Observed)
MVPF Robustness to Forecasting
Observed Impacts on Children

MVPF vs. Age of Beneficiaries
- Child Education
- Health Child
- College Child
- Job Training
- College Adult

Age of Beneficiaries: 0 to 80
MVPF Estimates
With and Without Spillovers on Children

- MVPF
- AFDC
- Housing Vouchers
- Housing Vouchers Chicago
- Negative Income Tax
- WIC

No Kid Impacts
With Kid Impacts
EITC OBRA 1993 MVPF Estimates
Incorporating Different Estimates of Spillovers on Children

MVPF Estimates

- No Impact
- Bastian and Michelmore (2018) [Earnings]
- Bastian and Michelmore (2018) [College]
- Michelmore (2018) [College]
- Manoli and Turner (2018) [College]
- Dahl and Lochner (2018) [Test scores]
- CFR (2011) [Test scores]
- Maxfield (2013) [Test scores]

Theory Back
Willingness to Pay for Admission into Florida International University

Conservative WTP

Individuals WTP at least $1 because enrollment was optional → Conservative WTP Estimate
Willingness to Pay for Admission into Florida International University
Baseline WTP

Baseline Estimate: Value WTP using impact on net after-tax income

- Valid if no impact on labor effort/disutility and no other impact of education on utility

$1 Conservative WTP
Medicaid Expansion to Pregnant Women and Infants

- In the 1980s, states expanded Medicaid to pregnant women and children < 1

- A series of papers, beginning with Currie and Gruber (1996), use state variation over time in these expansions

- We combine these impacts across papers to form the implied MVPF

- Begin with government costs
Currie and Gruber (1996) estimate cost to Medicaid of $3,774 per eligible pregnant woman, inclusive of costs from increased utilization.
Dave et al. (2015) estimate a 21.9% reduction in mother labor force participation, leading to a $564 reduction in contemporaneous tax revenue.
Medicaid Expansion to Pregnant Women and Infants: Costs

- Program Costs: $3473
- Taxes from reduced mother earnings: $564
- Govt. spending on uncompensated care: -$868

25% ($868) is recouped via uncomp. care (e.g. DSH payments)
- ~50% were prev. unins. (Cutler & Gruber 1996)
- ~50% of low-income unins. births paid by govt (Gol et al., 1987)
Medicaid Expansion to Pregnant Women and Infants: Costs

Government Costs ($)

- Program Costs: $3473
- Taxes from reduced mother earnings: $564
- Govt. spending on uncompensated care: $-868

Implies initial cost of $3,169
Medicaid Expansion to Pregnant Women and Infants: Costs

Government Costs ($)

- Program Costs: $3473
- Taxes from reduced mother earnings: $564
- Govt. spending on uncompensated care: $-868
- Age 19-65 health costs: $-530

$239 savings from lower future Medicaid costs from improved health and reductions in chronic conditions at $r = 3\%$ [Miller and Wherry, 2018]
Medicaid Expansion to Pregnant Women and Infants: Costs

- Program Costs: $3473
- Taxes from reduced mother earnings: $564
- Govt. spending on uncompensated care: $-868
- Age 19-65 health costs: $-530
- Govt. college costs: $371
Medicaid Expansion to Pregnant Women and Infants: Costs

Increased earnings of 0.116% for every 1pp increase in eligibility
[Miller and Wherry, 2018]

Tax revenue increase over 14 years of $3,836 at $r = 3\%$, $\tau = 18.9\%$
Medicaid Expansion to Pregnant Women and Infants: Costs

- Program Costs: $3473
- Taxes from reduced mother earnings: $564
- Govt. spending on uncompensated care: $-868
- Age 19-65 health costs: $-530
- Govt. college costs: $371
- Taxes from future earnings: $-10024
- Net Cost To Government: $-7014

Future tax revenue pays for initial cost.
Medicaid Expansion to Pregnant Women and Infants: Costs Recouped by Age 34

Upfront net cost of $3,366

Program pays for itself by age 34.

Original $3,774 cost returns $6,640 to the government over the person's lifetime

Note: Costs discounted to age 0 using 3% interest rate
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay

Recall: 50% of the $3,774 cost crowds out private spending on insurance [Cutler and Gruber (1996, QJE)] → “Mechanical” transfer provides conservative WTP estimate
Medicaid expansion causes 2.822 fewer deaths per 1000 births [Currie and Cutler (1996, JPE)]

- $2.8K at VSL of $1M (VSL can be child or parent WTP)
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay

- Private Insurance Crowd Out: $1.7K
- VSL WTP: $2.8K
- Private College Costs: $-0.1K
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay

- Private Insurance Crowd Out: $1.7K
- VSL WTP: $2.8K
- Private College Costs: $-0.1K
- Age 23-36 after-tax earnings: $16.8K

Miller and Wherry (2018) estimate 11.6% impact on earnings over 14 yrs

- WTP if no change in effort
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay

- Additional $26.2K after age 36
- $16.8K after-tax earnings for Age 23-36
- $2.8K after-tax earnings for VSL WTP
- $1.7K after-tax earnings for Private Insurance Crowd Out
- $-0.1K after-tax earnings for Private College Costs

WTP ($): $0, $1.7K, $2.8K, $16.8K, $26.2K
Medicaid Expansion to Pregnant Women and Infants: Willingness to Pay

<table>
<thead>
<tr>
<th>Description</th>
<th>WTP ($)</th>
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</thead>
<tbody>
<tr>
<td>Private Insurance Crowd Out</td>
<td>$1.7K</td>
</tr>
<tr>
<td>VSL WTP</td>
<td>$2.8K</td>
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<tr>
<td>Private College Costs</td>
<td>$0.1K</td>
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<tr>
<td>Age 23-36 after-tax earnings</td>
<td>$16.8K</td>
</tr>
<tr>
<td>Age 37+ after-tax earnings</td>
<td>$26.2K</td>
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<tr>
<td>Baseline WTP</td>
<td>$47.4K</td>
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</tbody>
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