
CBA of Economic Investments in Early Childhood

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Thanks to the Partnership for America's Economic Success

Early education and home visitation programs can generate long-run benefits that exceed costs

- What about income transfers?

Theoretical Framework

□ Epidemiology/Neuroscience

- Early years may represent a sensitive period during which social processes become embedded in biology

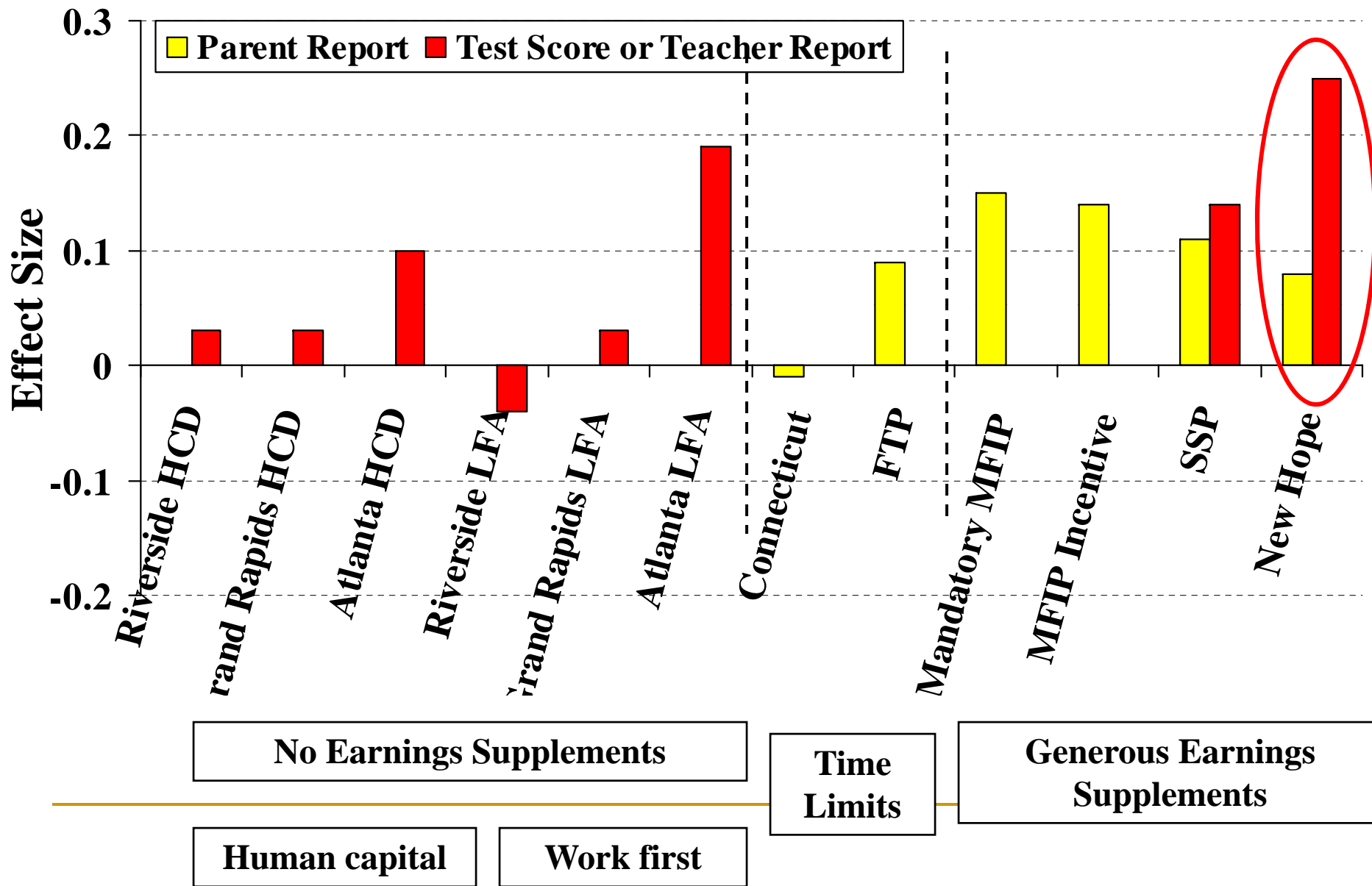
□ Economics

- Families with higher economic resources purchase/produce important “inputs” into young children’s development
- Human capital accumulation may be best facilitated with early investments

□ Developmental Psychology

- Higher incomes may improve family psychological processes (e.g. parental emotional well-being and parenting)
 - Family environment is key during pre-school years
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Impacts on Younger Children's Achievement



New Hope Evaluation:

- 3-year program in Milwaukee's two poorest neighborhoods in 1995-98
 - 51% African-American; 27% Hispanic
 - Random assignment, conducted by MDRC
 - New Hope vs. Tommy Thompson's ambitious welfare reforms
 - Child and family impacts evaluation from MacArthur-funded Network on Middle Childhood
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- **What New Hope requires:**

- Proof of 30+ hours of work per week

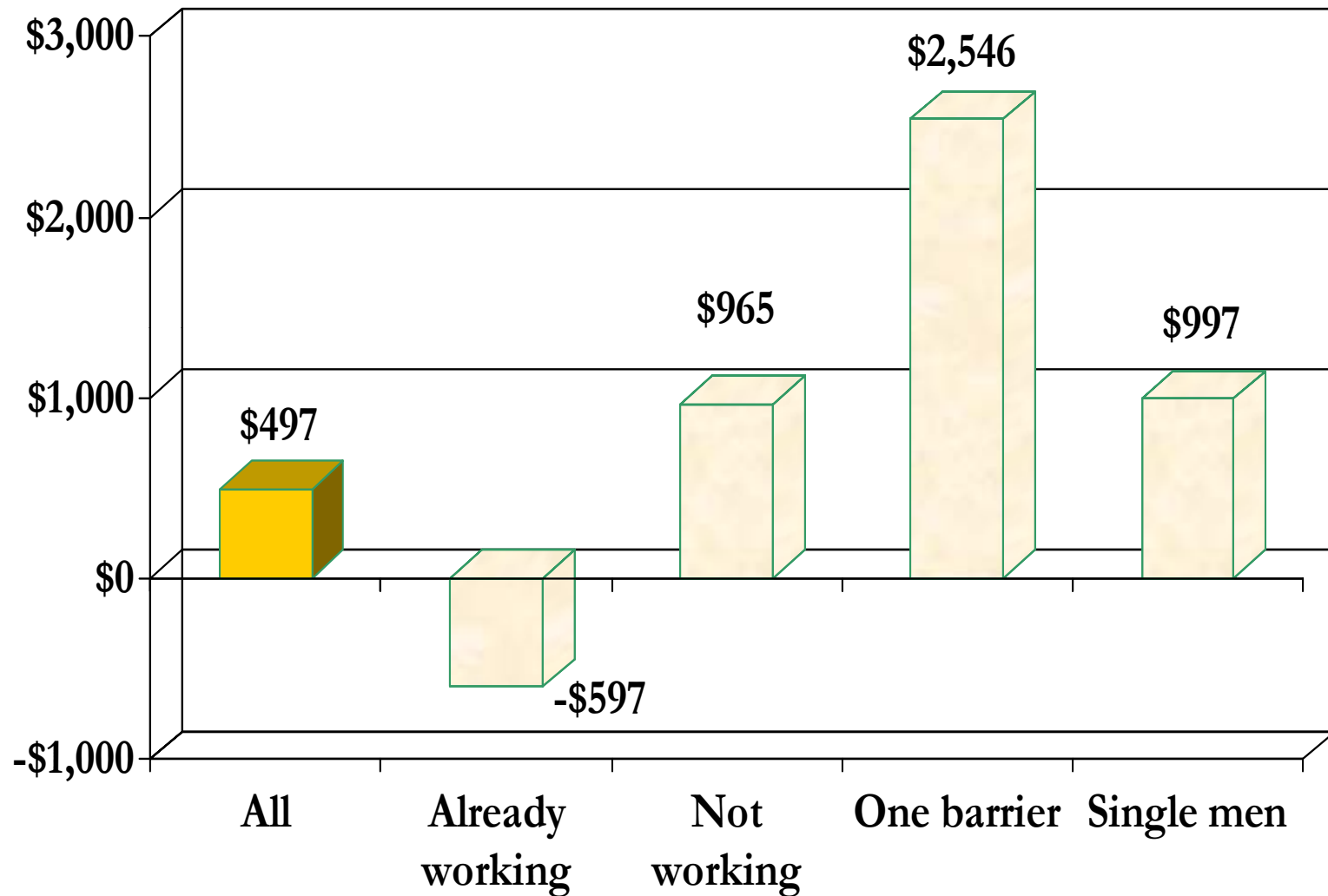
- **What New Hope provides:**

- Earnings supplement
- Child care subsidy
- Health insurance subsidy
- If needed, a temporary community-service job
- Respect and help from New Hope staff

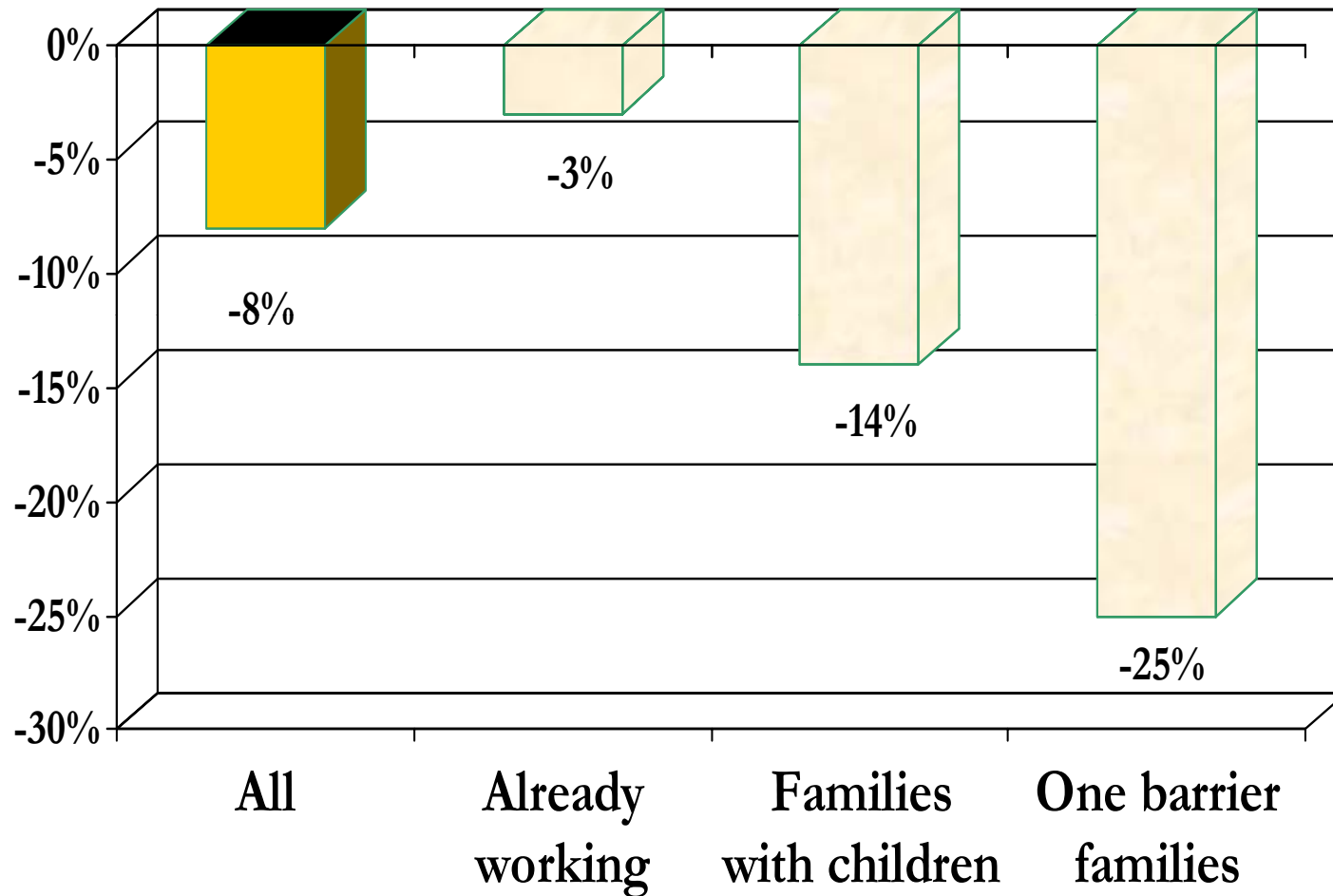
- **Who is eligible:**

- *All* adult men and women with low family incomes
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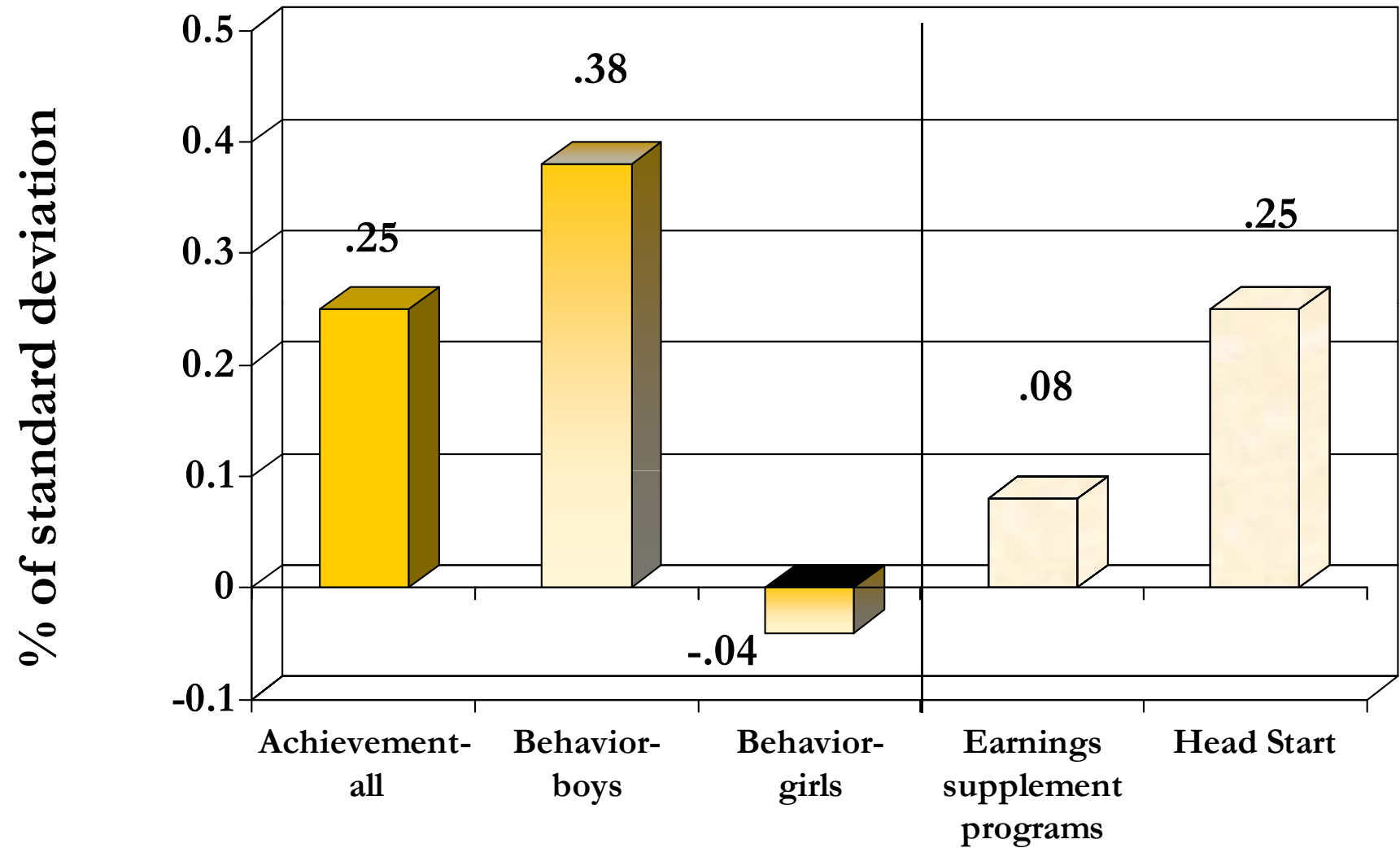
Annual earnings impacts



Poverty impacts

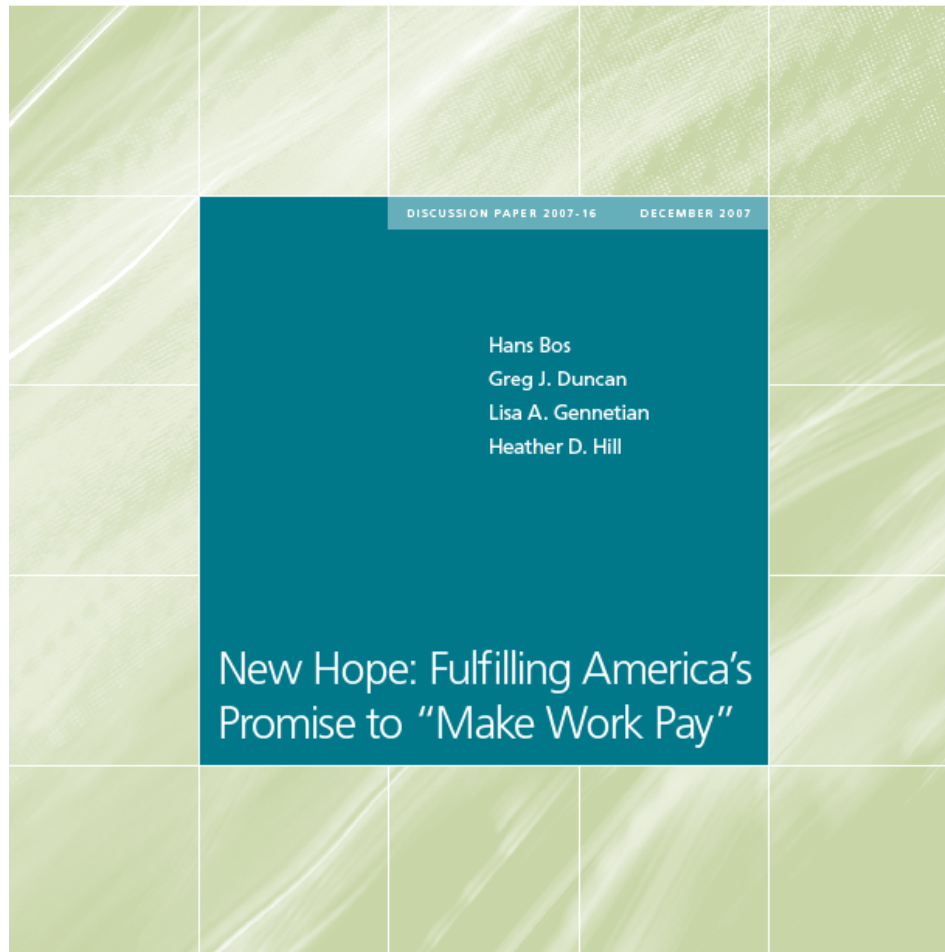


Child impacts (teacher report)



	Participants	Taxpayers	Net to Society
Program Components			
New Hope earnings supplement	+284	-284	0
Health insurance	+875	-875	0
Child care	+470	-470	0
Program administration	0	-1,717	-1,717
Earnings, taxes and transfers			
Pre-tax earnings (includes CSJ earnings)	+497	0	+497
EITC less taxes paid	+40	-40	0
Cash transfers plus Food Stamps	-78	+78	0
TOTAL	+\$2,088	-\$3,308	-\$1,220

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Prominent possible benefits			
Value of higher child achievement	+\$1,036	+\$259	+\$1,295
Value of better child behavior		Saving 1 in 16 New Hope boys from high risk would generate \$3,308 in taxpayer savings	Saving 1 in 31 New Hope boys from high risk would generate \$1,220 in savings to society
Other possible benefits	Increased self-sufficiency, improved physical and mental health of adults and children, the societal value of equalizing opportunity		



Fulfilling America's 'Make Work Pay' Promise with New Hope

Hans Bos, Greg J.
Duncan, Lisa A.
Gennetian and
Heather Hill

Download at
brookings.edu

What about more general income transfers in early childhood?

- Nonexperiment, PSID-based analysis of effects of early income on adult attainments
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Data and Sample

- ❑ Panel Study of Income Dynamics (PSID)
 - ❑ Children born between 1968 and 1975
 - ❑ Adult outcomes measured between ages 25 and as late as age 37 for the earliest cohort
 - ❑ Income measured prenatal to age 15; controls measured around or before birth
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Adult Outcomes

□ Achievement

- Completed schooling
 - After age 25: annual earnings, annual hours worked
 - Transfer income
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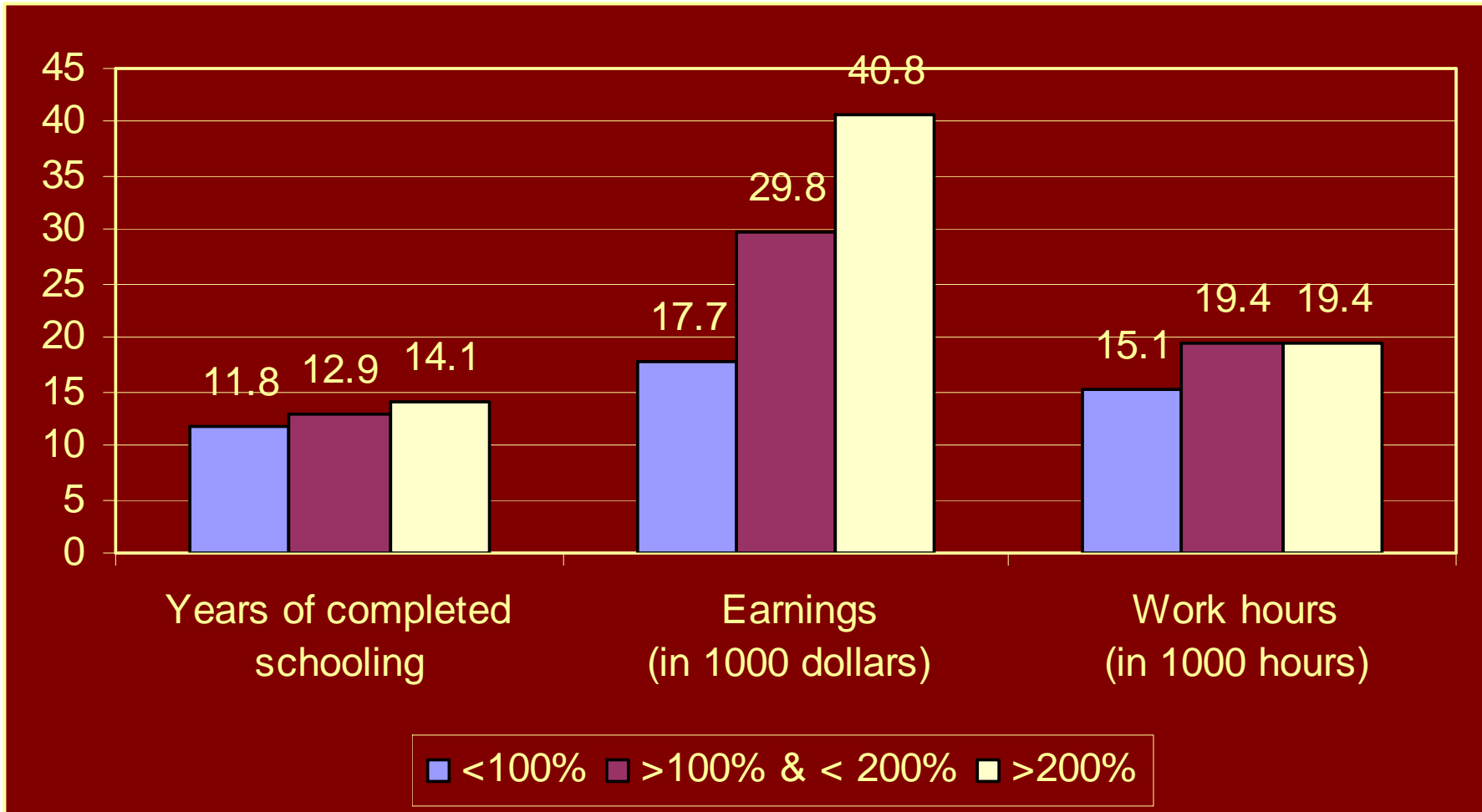
Independent Variables

- Average annual income in various childhood periods (2005\$)
 - Prenatal to age 5
 - Age 6 to age 10
 - Age 11 to age 15
 - Splines with knot at \$25,000
 - Allows for distinct linear effects for average incomes up to \$25,000 and for incomes \$25,000 and higher
 - Experimentation showed that \$25K best balances sample size and nonlinear effects
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Control Variables (all measured around or before birth)

- ❑ Birth year dummies
 - ❑ Race
 - ❑ Sex
 - ❑ Child's parents married and living together at birth
 - ❑ Child lived in the South at birth
 - ❑ Number of siblings
 - ❑ Child was first born
 - ❑ Years of completed schooling of household head at birth
 - ❑ Household head's score on sentence completion test in 1972
 - ❑ Dwelling cleanliness (average between 1968 and 1972)
 - ❑ Parental expectations/horizons index (average between 1968 and 1972)
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Correlations: Adult Achievement by P-5 Poverty



Ln Earnings regression

Income in \$10,000	<\$25,000	>\$25,000	Sig dif?
Prenatal to age 5	.573** (.158)	.027 (.018)	**
Age 6 to age 10	.082 (.120)	.019 (.021)	ns
Age 11 to age 15	.010 (.098)	.001 (.021)	ns
Equality of 3 <\$25,000 spline segments	$p = .035$	* $p < .05$; ** $p < .01$ All control variables included	

Annual Work Hours

Income in \$10,000	<\$25,000	>\$25,000	Sig dif?
Prenatal to age 5	454.0** (106.7)	16.4 (12.6)	**
Age 6 to age 10	-81.1 (97.2)	11.2 (12.6)	ns
Age 11 to age 15	134.7 (71.3)	-14.9 (11.8)	*
Equality of 3 <\$25,000 spline segments	$p = .007$	* $p < .05$; ** $p < .01$ All control variables included	

Estimating benefits of eliminating early poverty

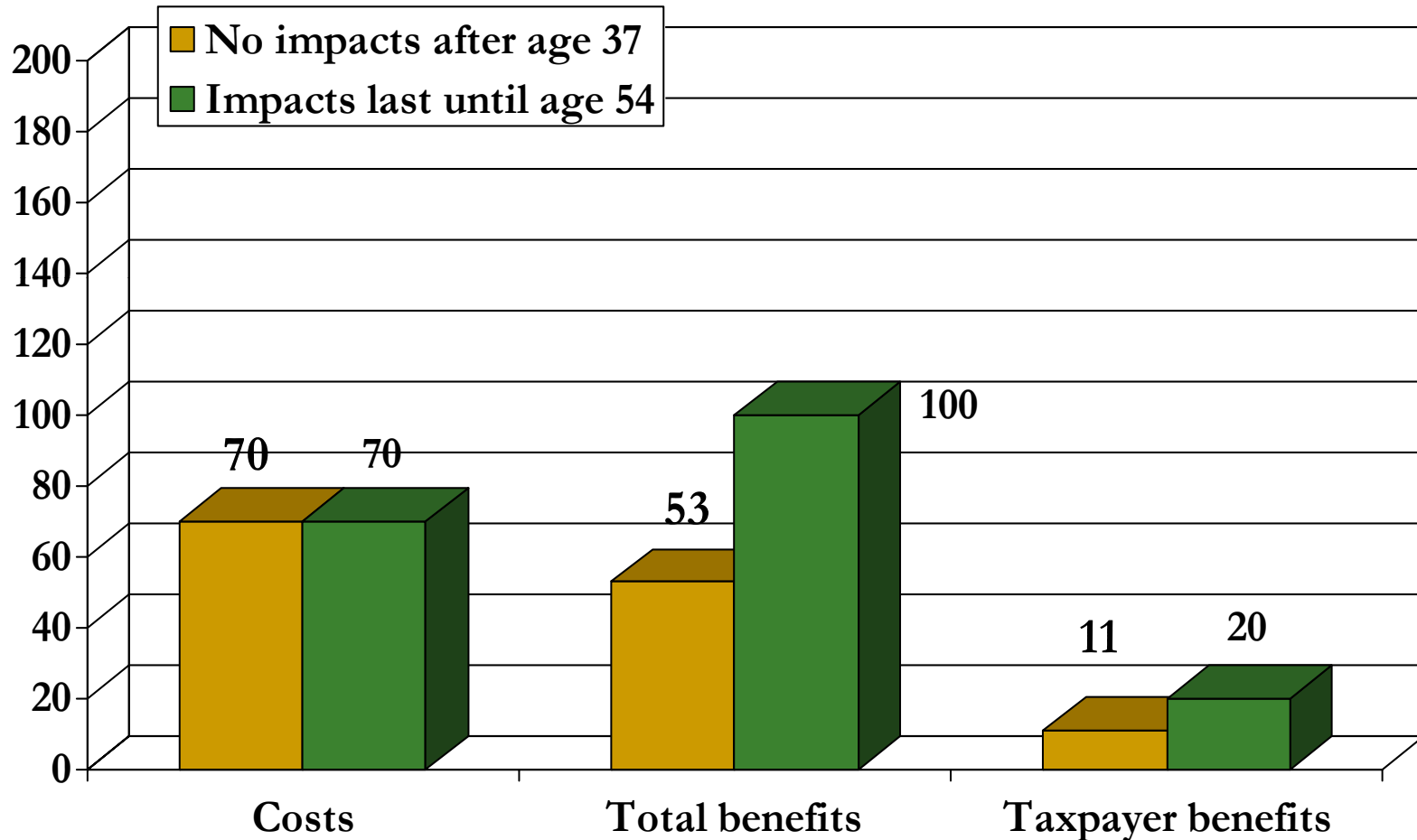
- Our models give us an estimated impact of increasing the incomes of poor children by \$X thousands per year in early childhood
 - Early-childhood poverty could be eliminated with \$4,326 per year per child between the prenatal year and age 5
 - \$7,066 per year would bring incomes up to 150% of poverty line
 - What would be the benefits of such transfers?
 - Higher earnings
 - Modestly lower transfers
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Benefits and costs – a partial accounting – assuming 3%

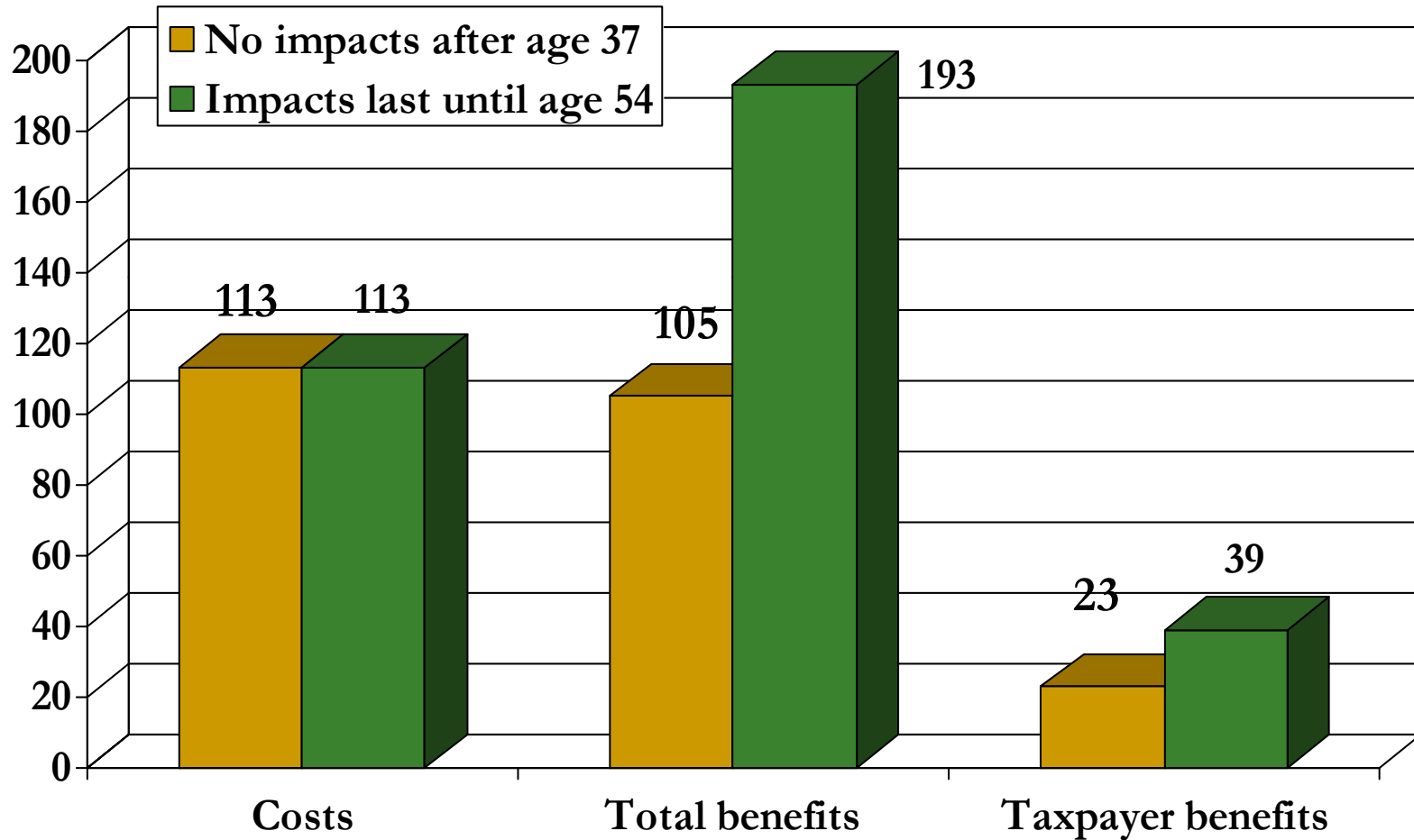
For today's young adults:

- Reverse-discounted cost of \$4,326 per year for 7 years amounts to ~**\$70,000** per person at age 25
 - \$7,066 per year -> ~**\$113,000** per person at age 25
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Costs and benefits per participant, in thousands, of 100% of poverty line transfers



Costs and benefits per participant, in thousands, of 100% of poverty line transfers



Policy considerations

- ❑ Earnings coefficients imply:
 - \$3,000 increase in income for 7 years between prenatal and 5th birthday year is associated with:
 - 19% higher adult earnings
 - 135 more work hours per year
 - ❑ Concentrate income transfers (e.g., child tax credit) on the p-5 periods?
 - ❑ E.g., French have a generous program for single mothers that ends at age 3
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