We Ask the Most of Parents When They Have the Least & It Matters Most

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UNIVERSITY OF MINNESOTA Driven to Discover℠

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People drive community success

Wise investment in people can drive community success

Outline

1. Income-based gaps in skill open up early in life but are not inevitable

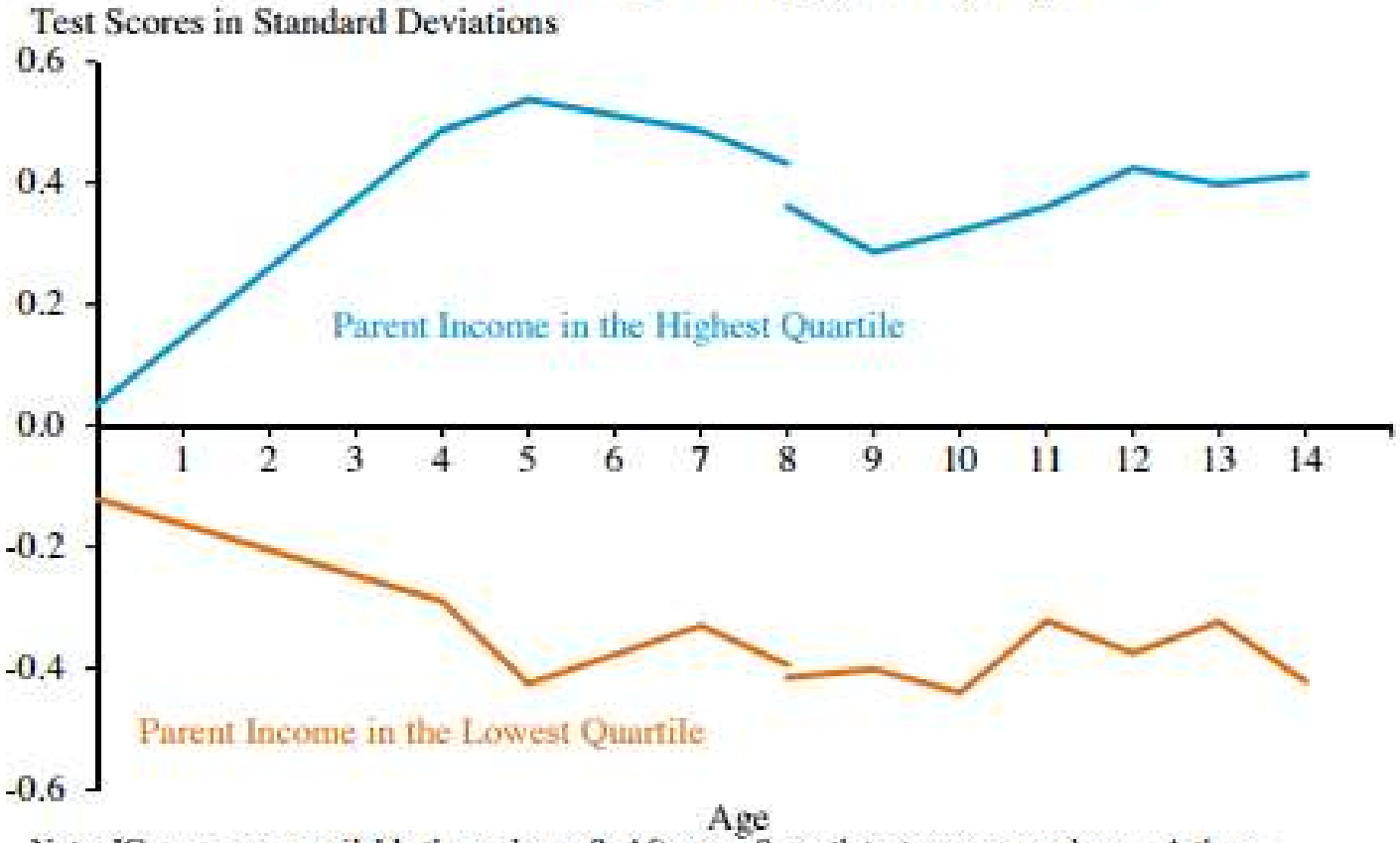
2. We ask the most when families have the least

3. Impact of early childhood care investments can be high

Income-based gaps open early & stabilize

Figure 4-7

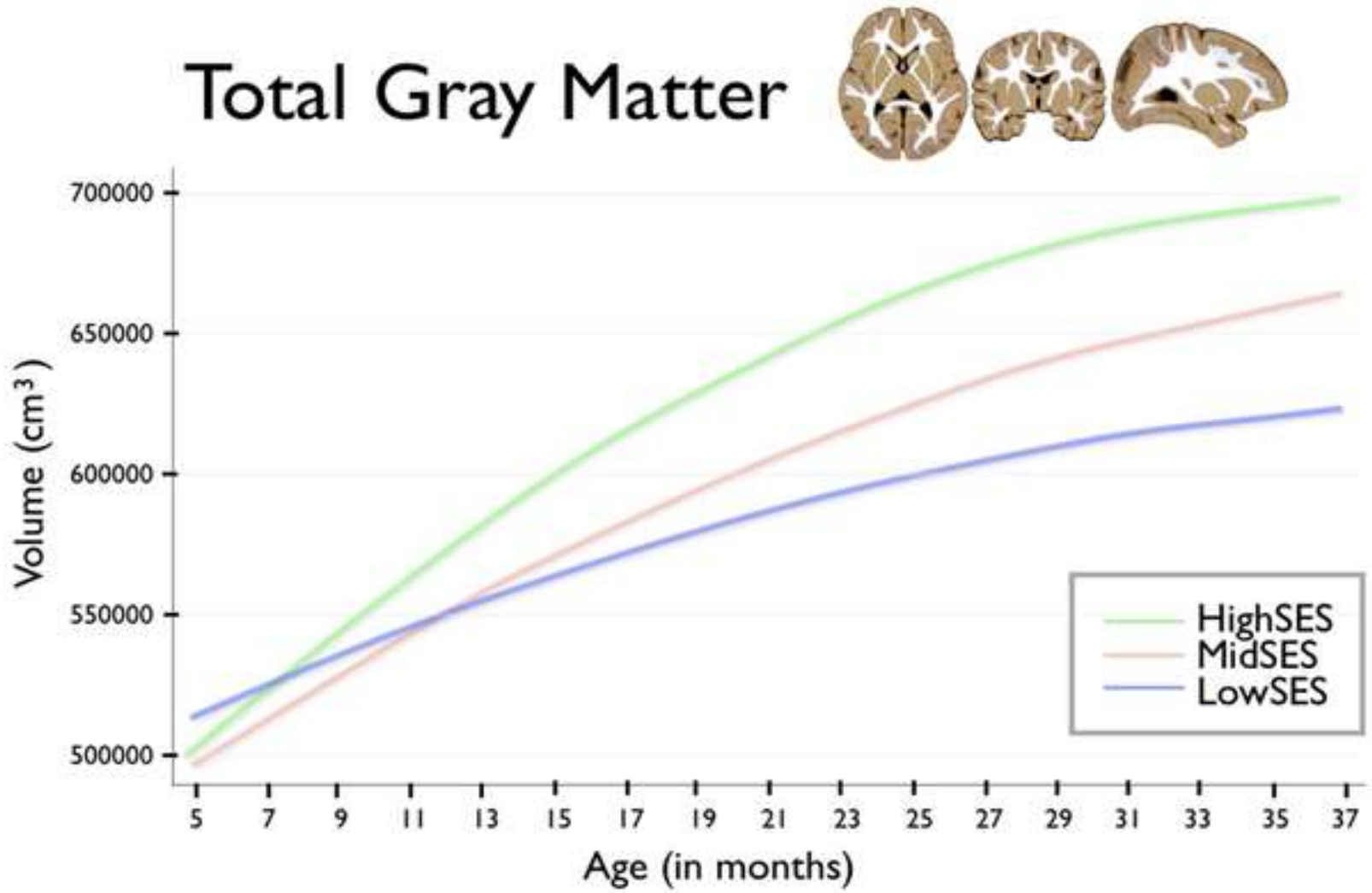
Achievement Gap is Largely Set by Age 5



Note: IQ scores are available through age 8. After age 8, math test scores are shown. A three year moving average is used for math scores.
Source: U.S. Collaborative Perinatal Project from Fryer and Levitt (2013) (through age 8); NLSY79 Child and Young Adult Supplement from Cunha et al. (2006) (after age 8); CEA calculations.

Council of Economic Advisers (2016) Economic Report of the President: Chapter 4

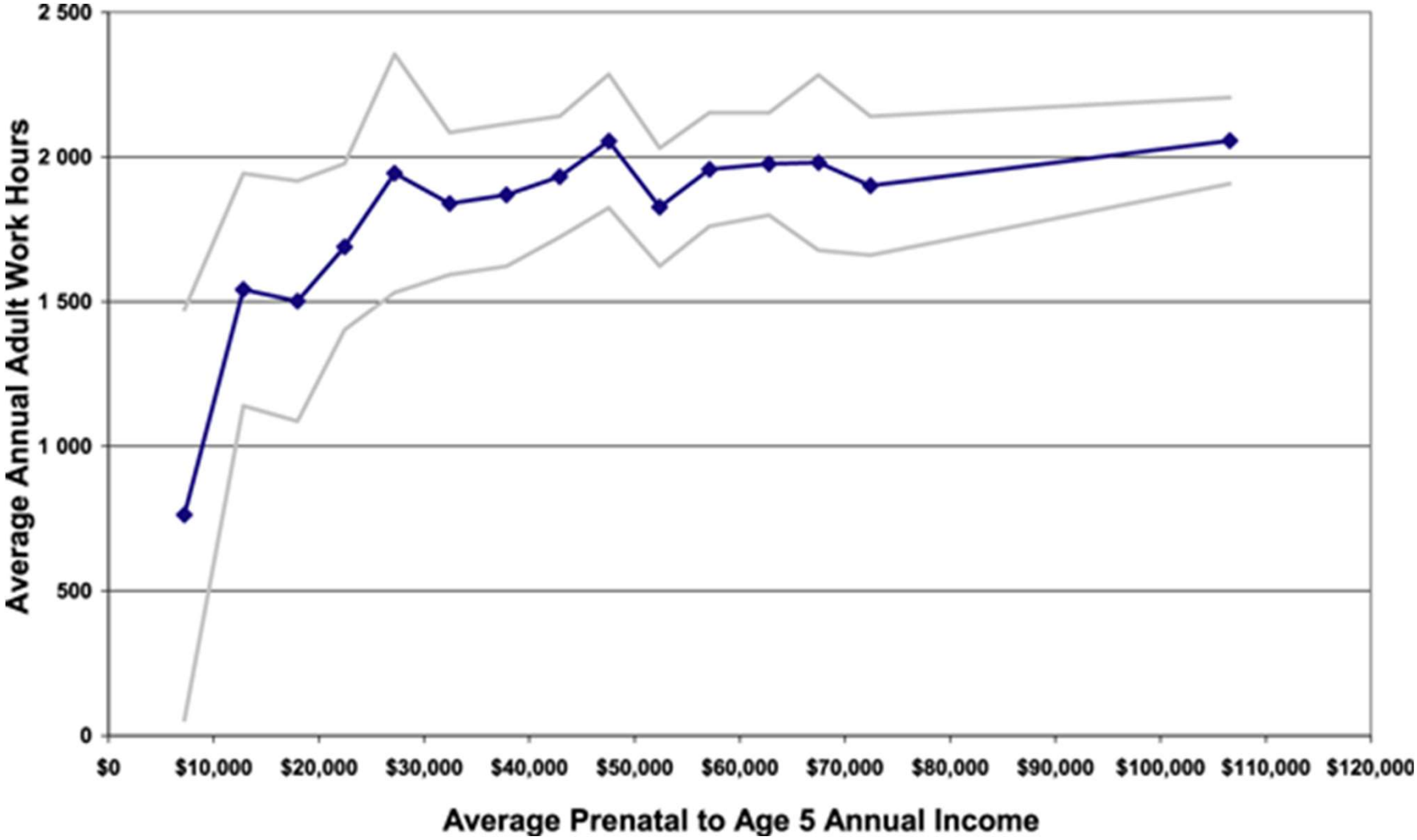
Income-based gaps open early (1)



Hanson JL, Hair N, Shen DG, Shi F, et al. (2013) Family Poverty Affects the Rate of Human Infant Brain Growth. PLoS ONE 8(12): e80954. doi:10.1371/journal.pone.0080954
http://www.plosone.org/article/info:doi/10.1371/journal.pone.0080954

PLOS | ONE

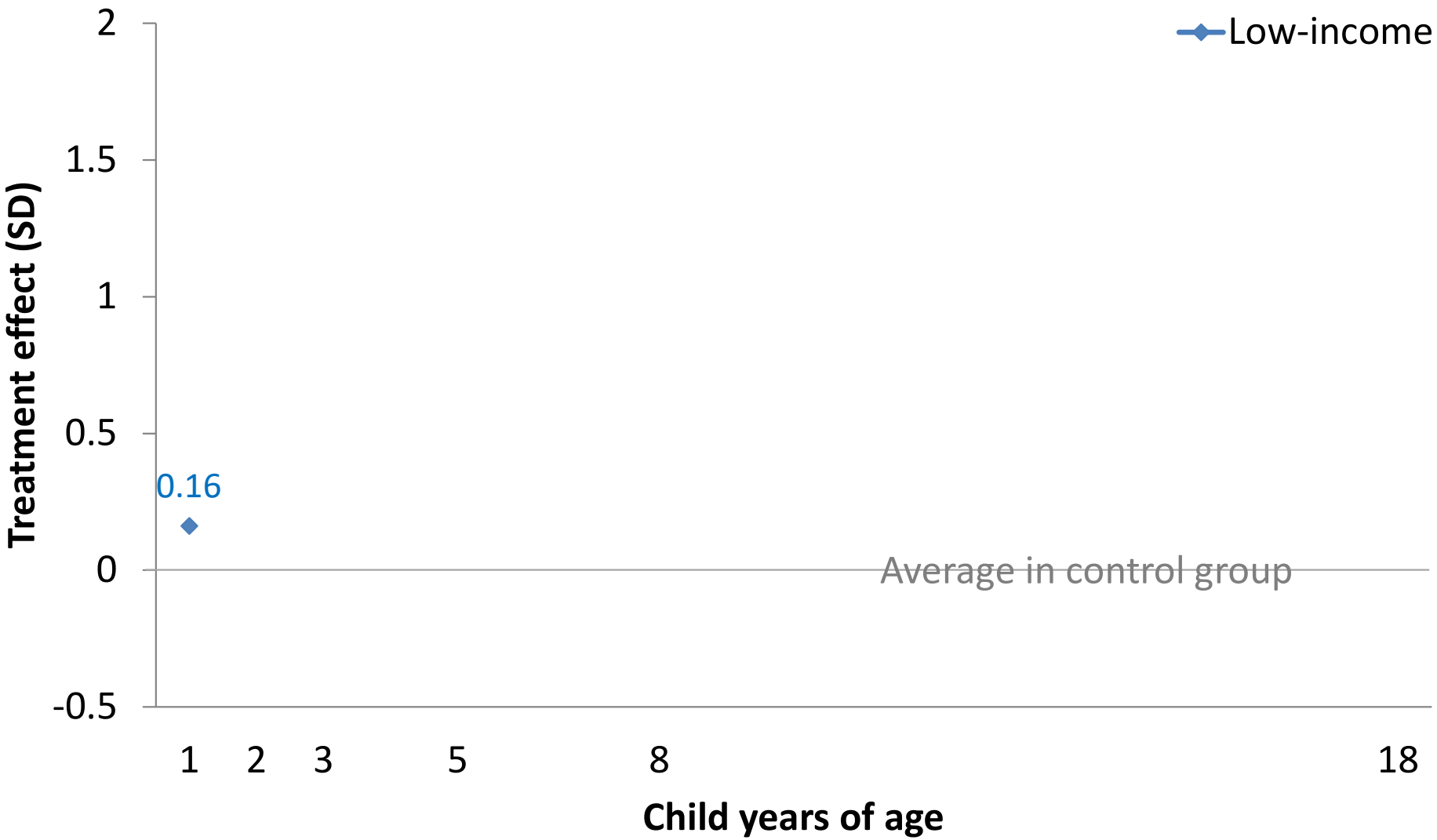
Early-Childhood Poverty and Adult Employment



Child Development
Volume 81, Issue 1, pages 306-325, 4 FEB 2010 DOI: 10.1111/j.1467-8624.2009.01396.x
http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8624.2009.01396.x/full#f2

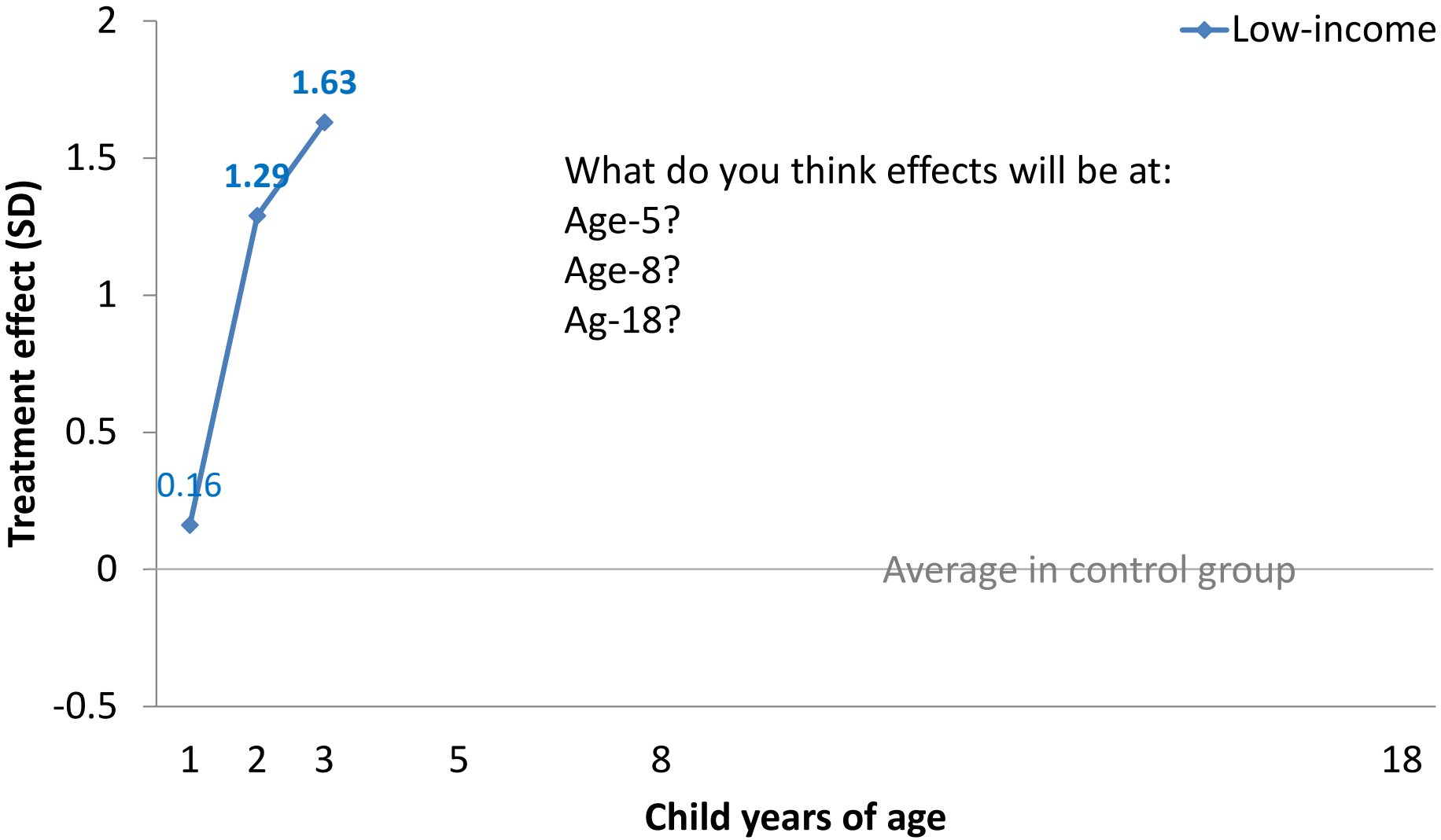
Better early experiences can break these relationships

High LBW: little effect on "IQ" at start of child-care intervention



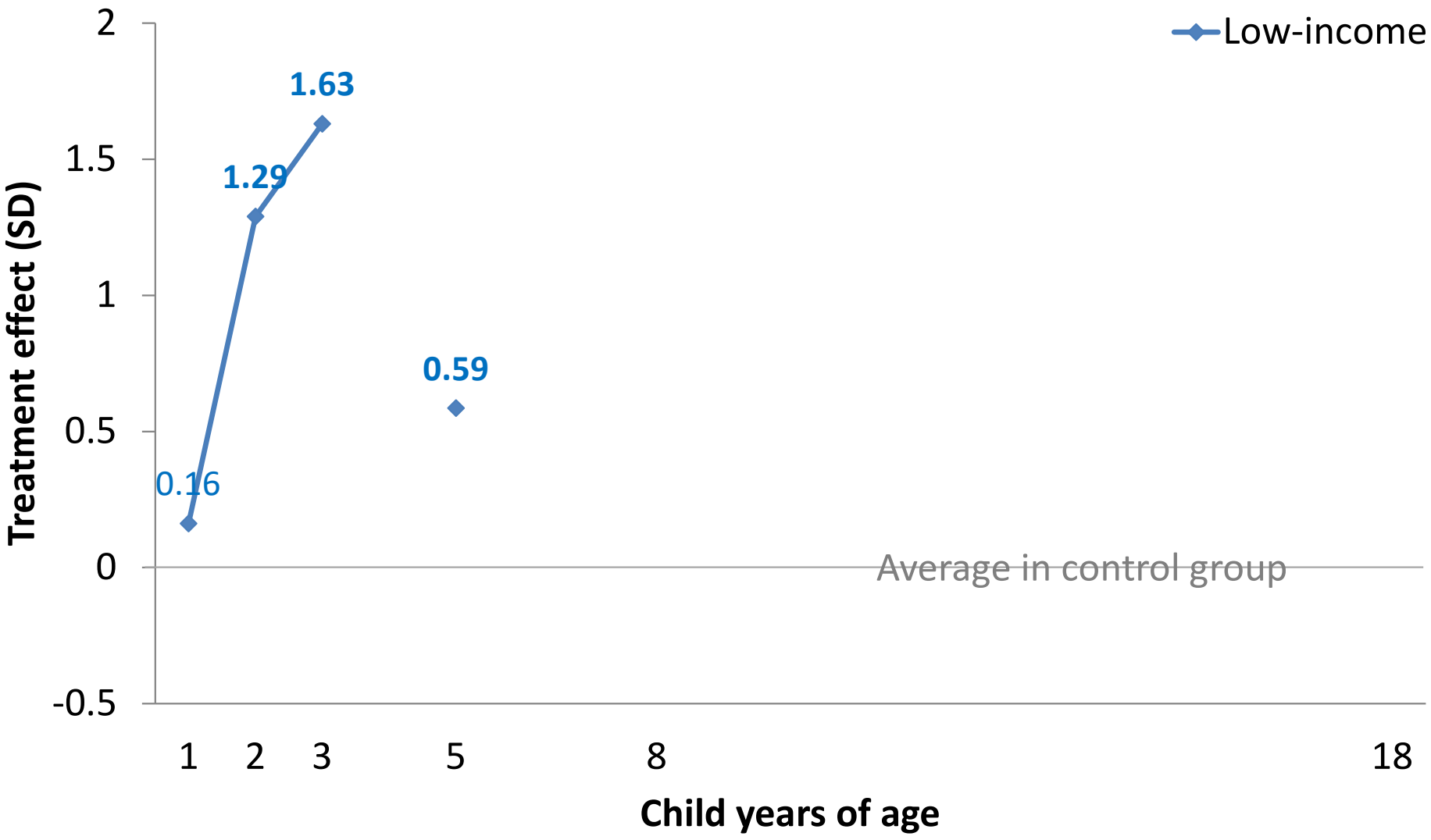
Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

During child-care intervention: enormous effects on IQ measures



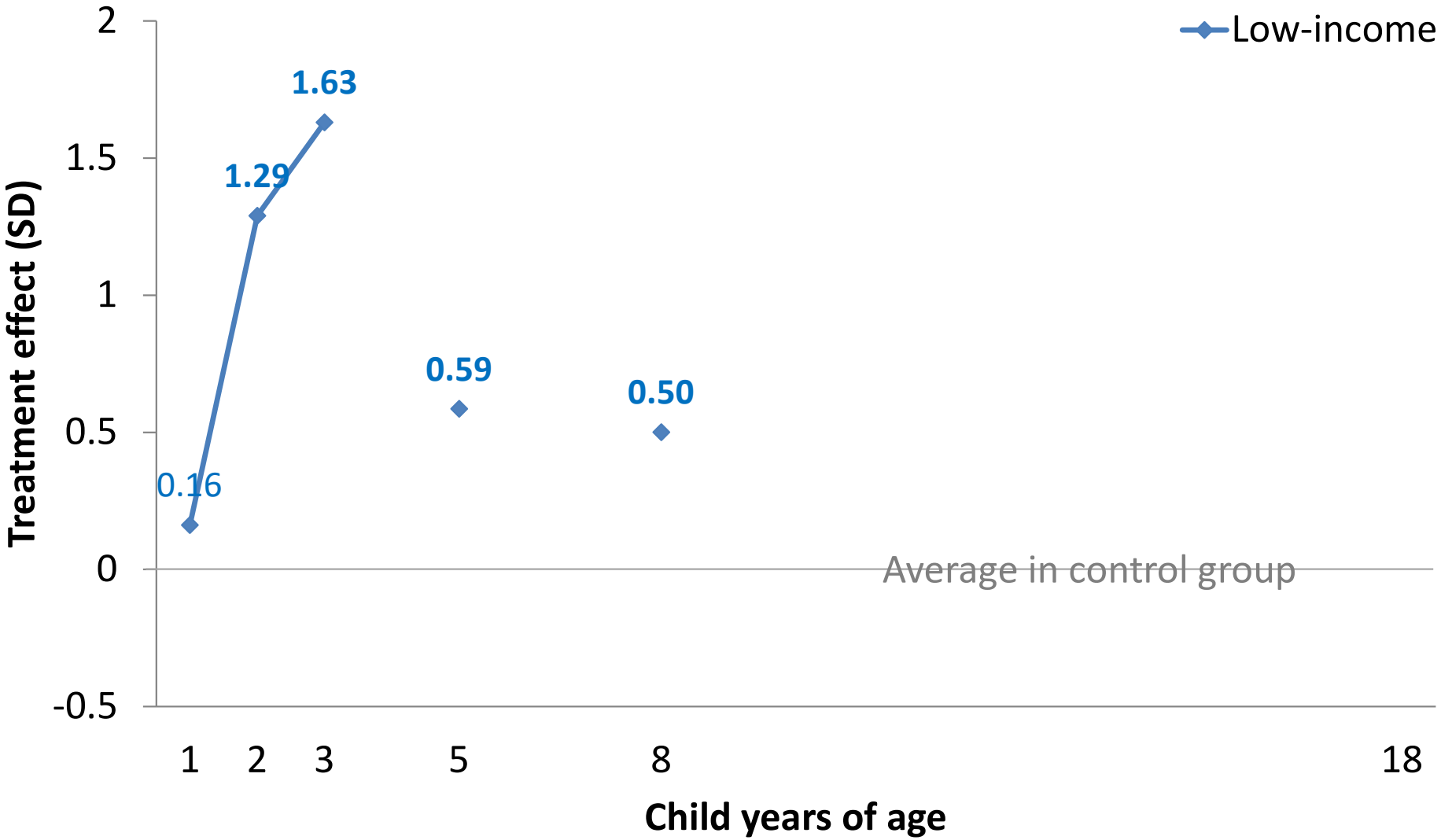
Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

2 years after intervention end: large, positive effect at school-entry



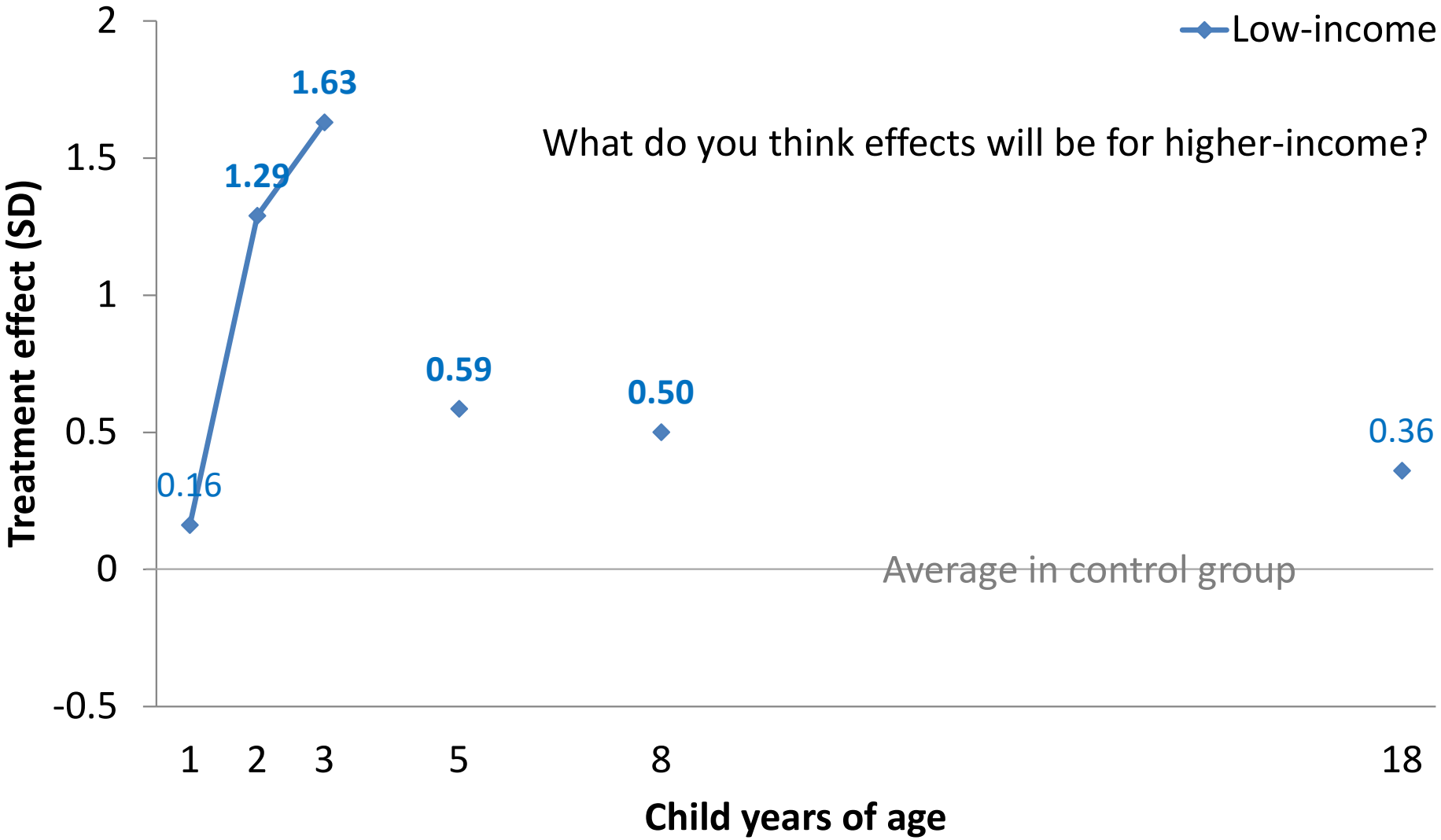
Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

5 years after intervention end: large, positive effect



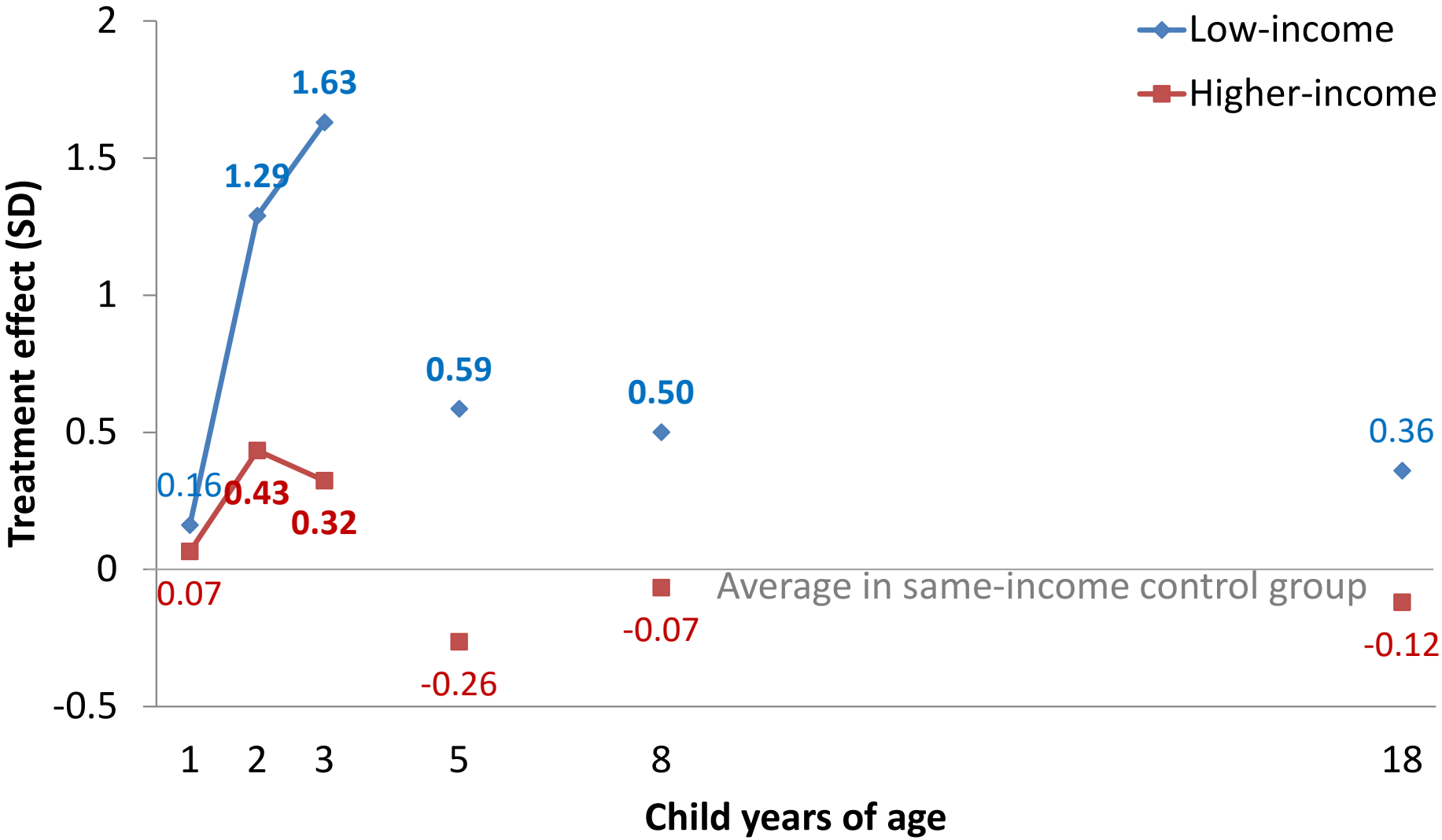
Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

15 years after intervention end: evidence of persistence



Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

For higher-income, effect on IQ trends much weaker



Duncan & Sojourner (2013) *Journal of Human Resources* : using ECLS-B weights

Returns can exceed those to stock market (5.8% since WW2)

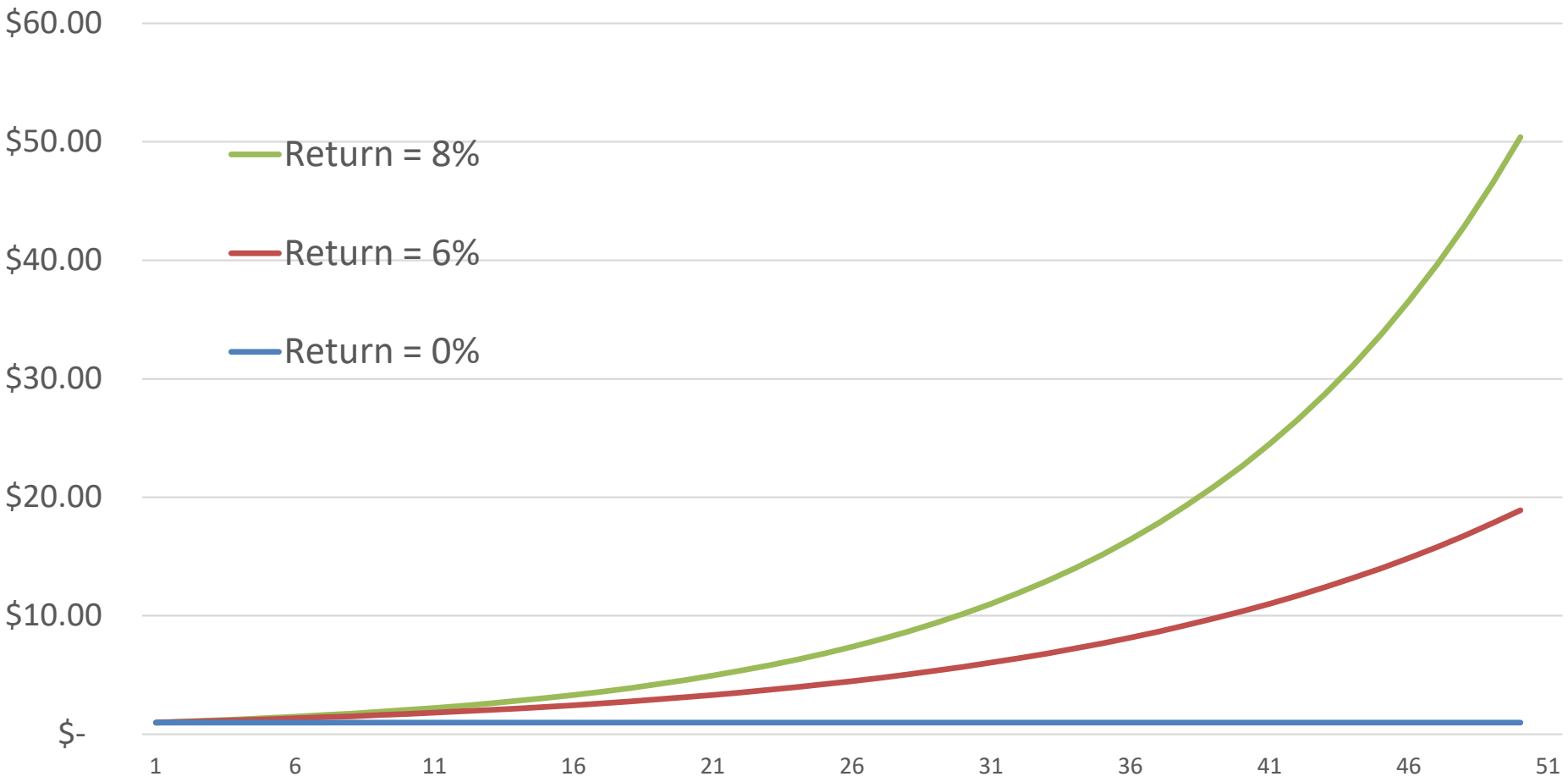
Table 8
Comparison with previous studies.

Author	Rolnick and Grunewald (2003)[a]	Belfield et al. (2006)[b]		This paper[c]					
Deadweight cost	0%	0%		0%			50%		
	All	Male	Female	All	Male	Female	All	Male	Female
Education cost	9034	14,382	2349	4325	11,318	(5547)	6434	16,819	(8227)
Earnings	43,583	68,429	82,690	78,010	42,965	127,485	78,010	42,965	127,485
Crime cost	101,132	386,985	14,602	66,780	101,924	17,164	75,062	112,248	22,564
Welfare cost	381	3118	(1333)	3698	2421	5502	5547	3631	8253
Total benefit	154,130	472,914	98,309	152,813	158,627	144,605	165,053	175,662	150,075
Initial program cost	17,759	17,759	17,759	17,759	17,759	17,759	26,639	26,639	26,639
Benefit/cost ratio, unadj.[d]	8.7	26.6	5.5	8.6	8.9	8.1	6.2	6.6	5.6
(s.e.)[e]	(n.a.)	(n.a.)	(n.a.)	(3.9)	(4.3)	(5.0)	(3.0)	(3.9)	(3.6)
Benefit/cost ratio, adj.[f]	n.a.	n.a.	n.a.	9.2	9.8	8.0	6.6	5.4	7.3
(s.e.)[e]	(n.a.)	(n.a.)	(n.a.)	(3.5)	(4.0)	(4.7)	(2.7)	(3.0)	(3.2)
IRR to society, unadj. (%)[d]	16.0	21.0	8.0	8.6	10.6	11.6	8.0	9.8	10.2
(s.e.)[e]	(n.a.)	(n.a.)	(n.a.)	(2.6)	(2.8)	(3.2)	(2.9)	(3.4)	(3.1)
IRR to society, adj. (%)[f]	n.a.	n.a.	n.a.	8.3	10.4	11.0	7.7	9.7	9.5
(s.e.)[e]	(n.a.)	(n.a.)	(n.a.)	(2.4)	(2.2)	(2.9)	(2.6)	(3.0)	(2.7)

Notes: All monetary values are in year-2006 dollars. Discount rate is assumed to be 3 percent following GAO (1991) and OMB (1992).

Heckman et al (2010)

8% is **much** more than double 6%



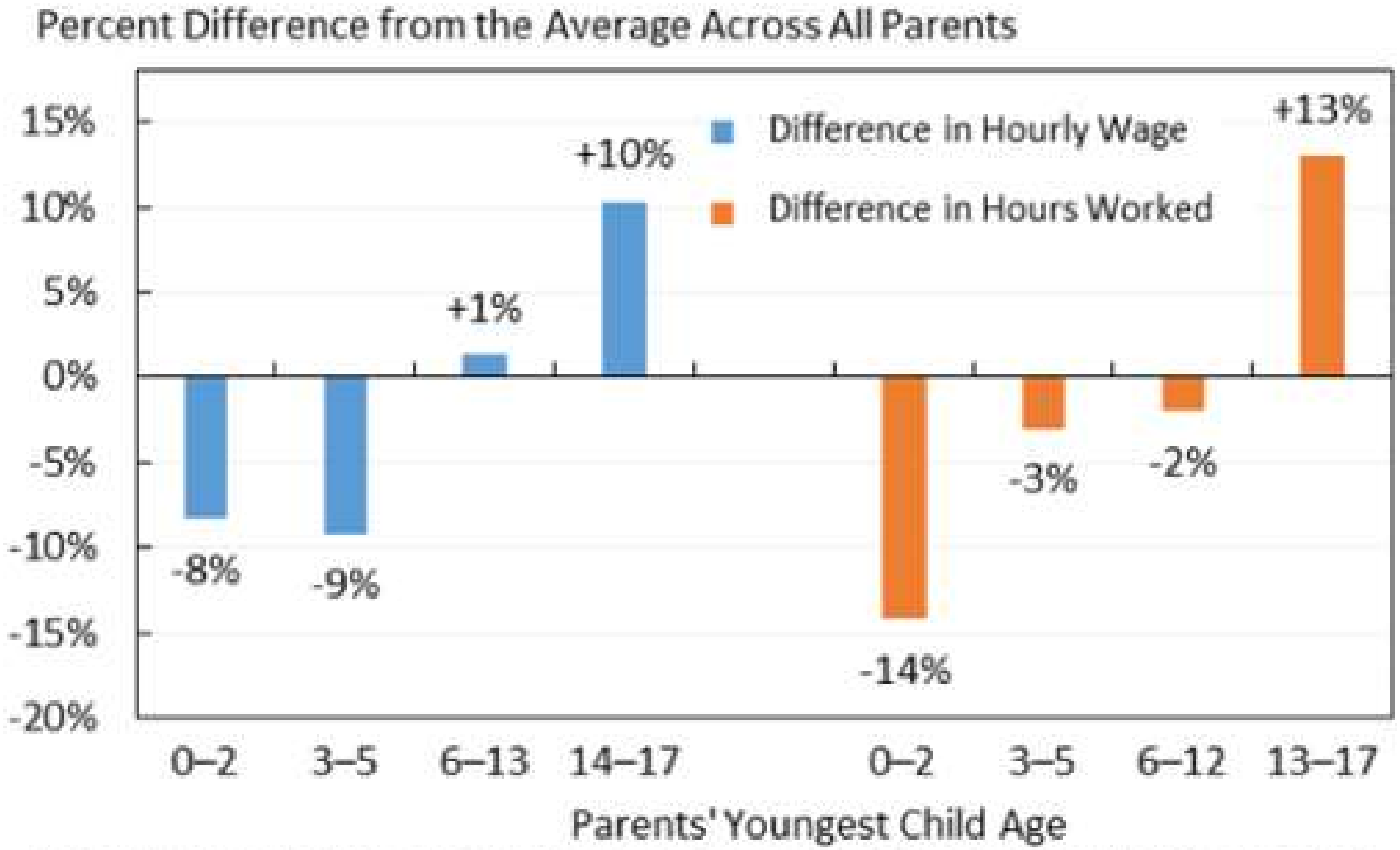
2.
We ask most when families have least


COUNCIL OF ECONOMIC ADVISERS ISSUE BRIEF
DECEMBER 2016

THE DISCONNECT BETWEEN RESOURCES AND NEEDS
WHEN INVESTING IN CHILDREN

- Least private resources early
- Least public resources early
- Most private responsibility early

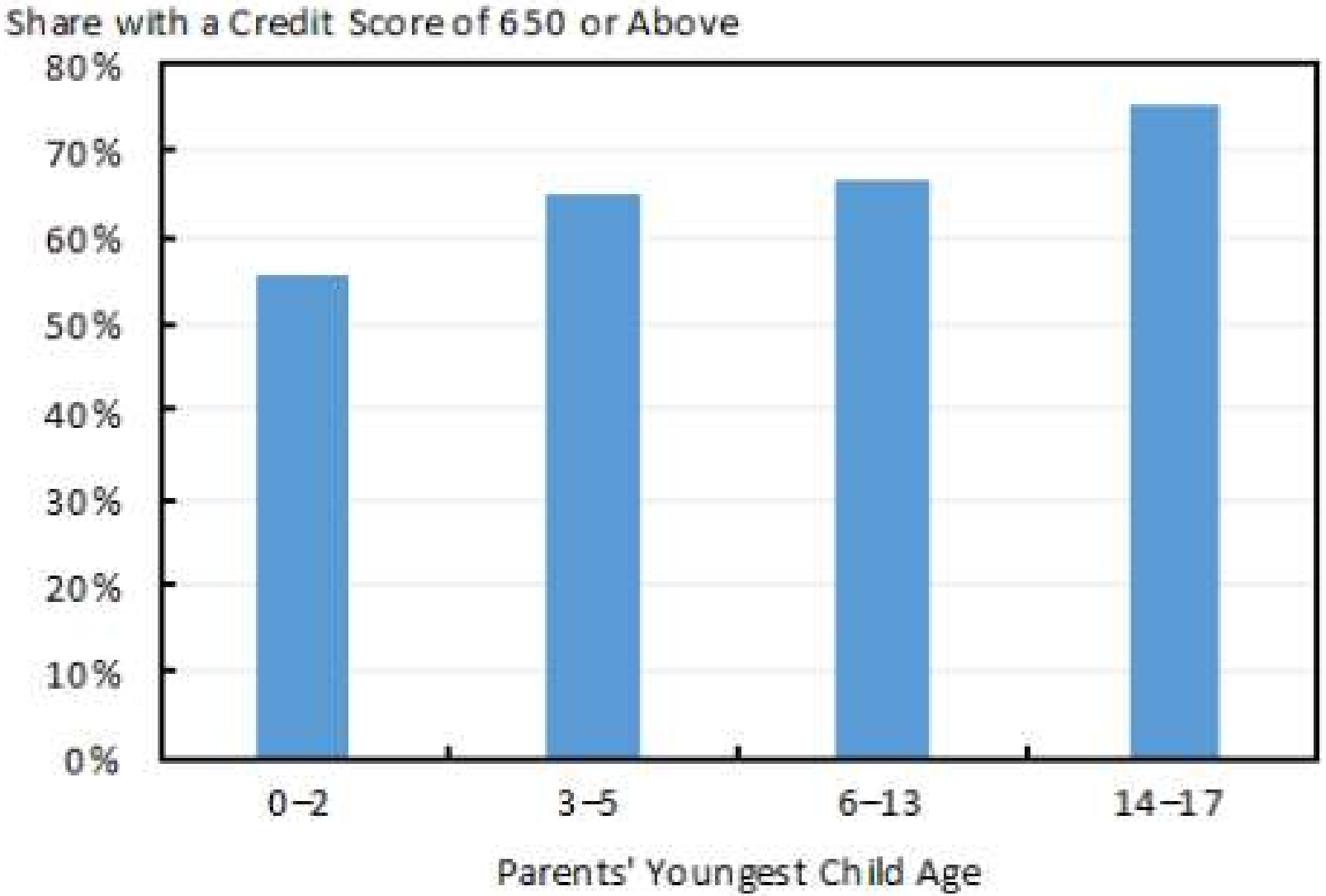
Current earning power



Note: Hours worked refers to average hours spent in work related activities. Hourly wage refers to the median hourly wage.

Source: CPS 2016; American Time-Use Survey 2015; CEA calculations.

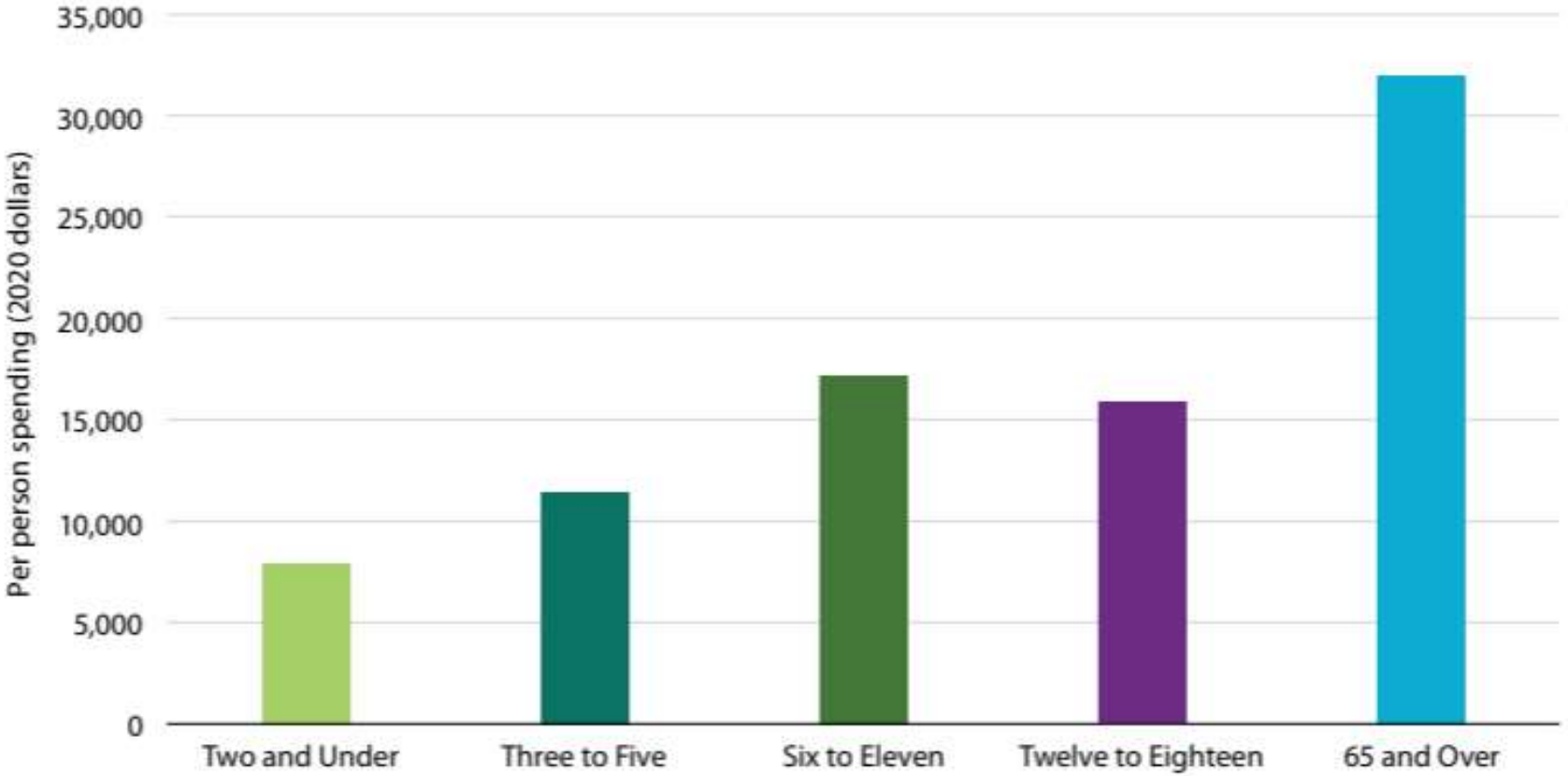
Access to future income



Source: American Life Panel's 2012 Survey of Consumer Payment Choice; CEA calculations.

FIGURE 1.

Total Public Spending in 2015, by Age Group



Source: Isaacs et al. (2018); Isaacs et al. (2019); author's calculations.

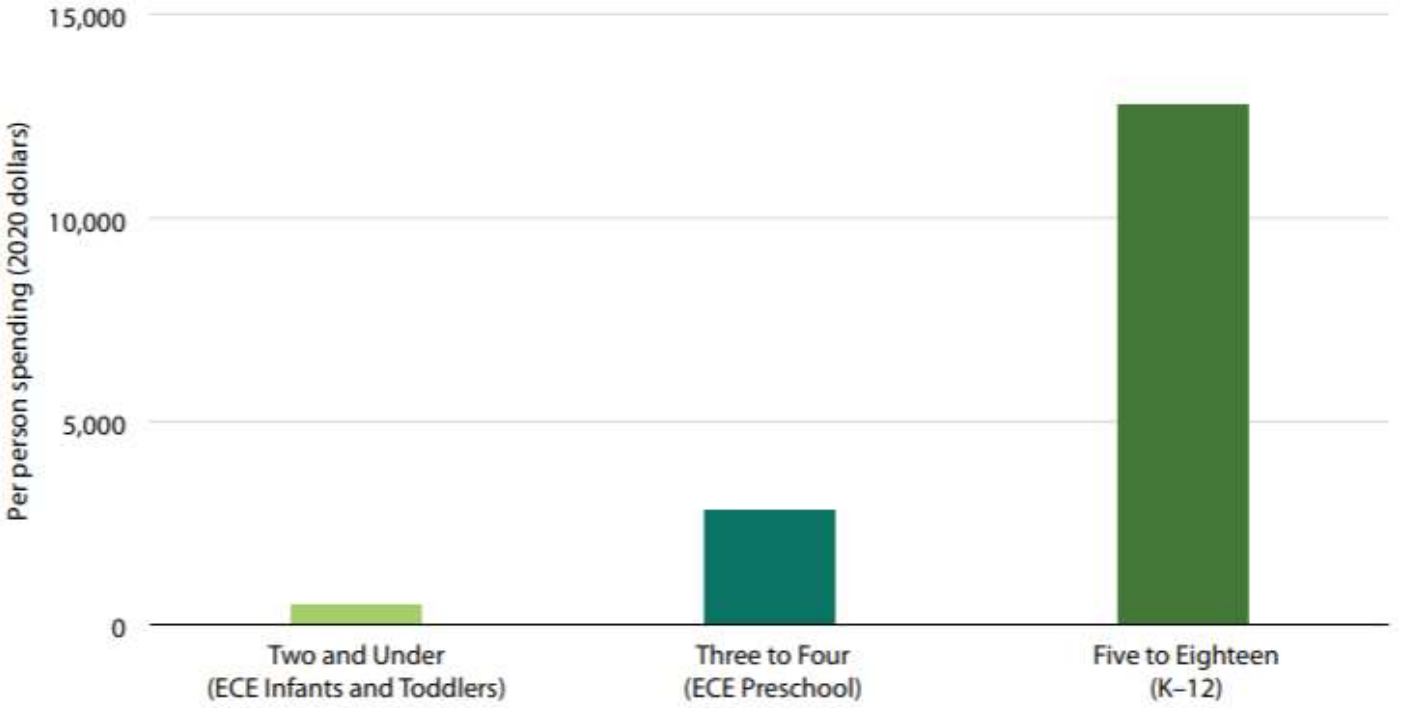
Note: The totals include information on federal, state, and local programs for 2015, inflated to 2020 dollars using the Bureau of Labor Statistics consumer price index. Per Isaacs et al (2019), the totals are computed using a conservative methodology designed to err in favor of counting expenditures on families toward children and in favor of undercounting spending on the elderly. Estimated spending on the elderly includes expenditure information from 16 federal and 2 state programs and does not attempt to estimate tax reductions benefitting the elderly. Isaacs et al (2019), Hahn et al. (2019), and our text provide more details.

THE HAMILTON PROJECT
BROOKINGS

Public investments reinforce this age imbalance in private resources

FIGURE 2.

Federal, State, and Local Government Spending on Child Care and Education in 2019, by Age Group



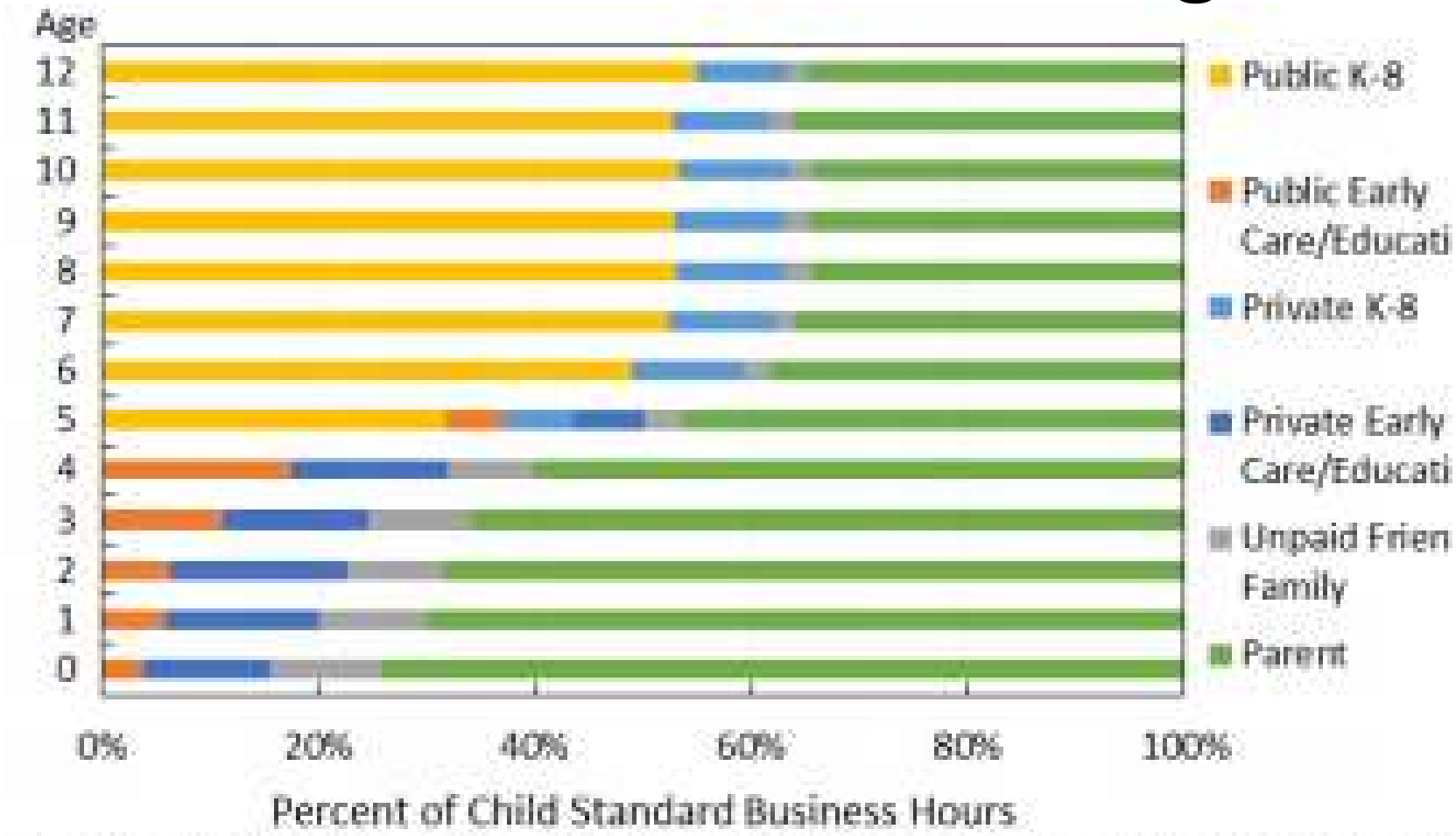
Source: Cascio and Schanzenbach (2013); Census (2020); Crandall-Hollick and Boyle (2021); Friedman-Krauss et al. (2020); Joughin (2019); NCES (2020); NSECE (2016); OCC (2019a; 2019b; 2021); Office of Head Start 2020; author's calculations.

Note: Expenditures include spending on the school-based prekindergarten programs, Child Care and Development Fund, (Early) Head Start, Child and Dependent Care Credit, and K-12 education. For additional details, see endnote four.

THE HAMILTON PROJECT BROOKINGS

Davis & Sojourner (2021) Increasing Federal Investment in Children's Early Care and Education to Raise Quality, Access, & Affordability. *Hamilton Project*

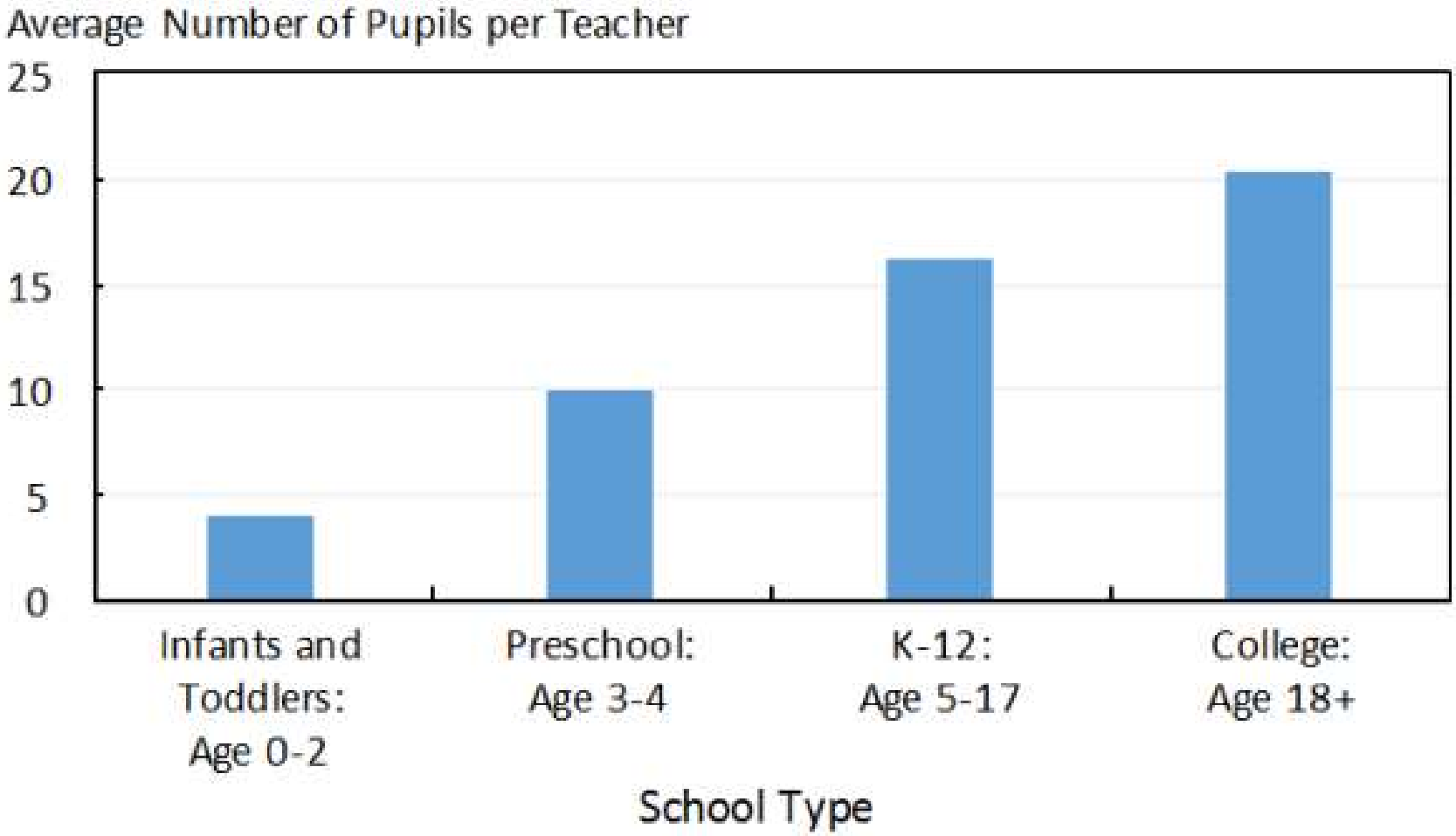
Publicly-financed care & education: 5 hours/child-wk under age 5



Note: We define standard business hours to be Monday to Friday, 8am to 6pm. Unpaid friends and family inclu all individuals who recieve no payment for caretaking. Public time refers to time spent with K-8, Pre-K, Head Sta organizational, and home-based individual providers where the overall cost to parents is $0, even if there is a c covered by the government. Private time refers to all other time spent with organizational or individual caregiv

Source: NSECE; CEA calculations

No way to do it cheaply & well: parent's income or another adult



Note: Infant and toddlers encompasses Early Head Start, preschool encompasses Head Start, and college encompasses institutions that predominantly grant certificates or associate or bachelor degrees.
Source: HHS; Department of Education; College Scorecard 2016; CEA calculations

What else could we possibly expect?

- Crises in child care market
  - **Shortages**: not enough slots
  - **Unaffordable**: Prices too high & slots too far for families
  - **Staff turnover or exits**: child care workforce instability
  - **Closings**: weak incentives for suppliers to operate

- Crises in young families' budgets
  - Hard for parents to work or afford to stay home

Wrapping up

- Early experiences have lifelong consequences. A scarce investment opportunity, not burden.

- We ask the most of families when they have the least. Crises are entirely predictable.

- Policies can improve children's development & parents' labor market participation.

Thank you!
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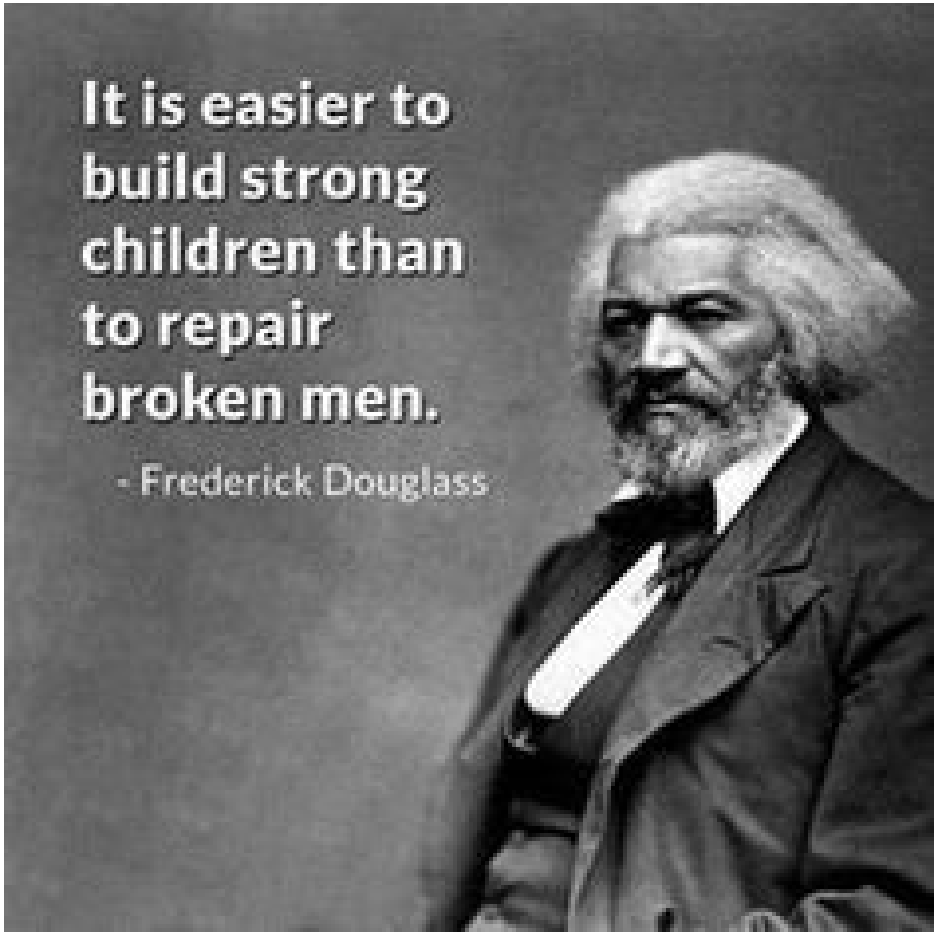
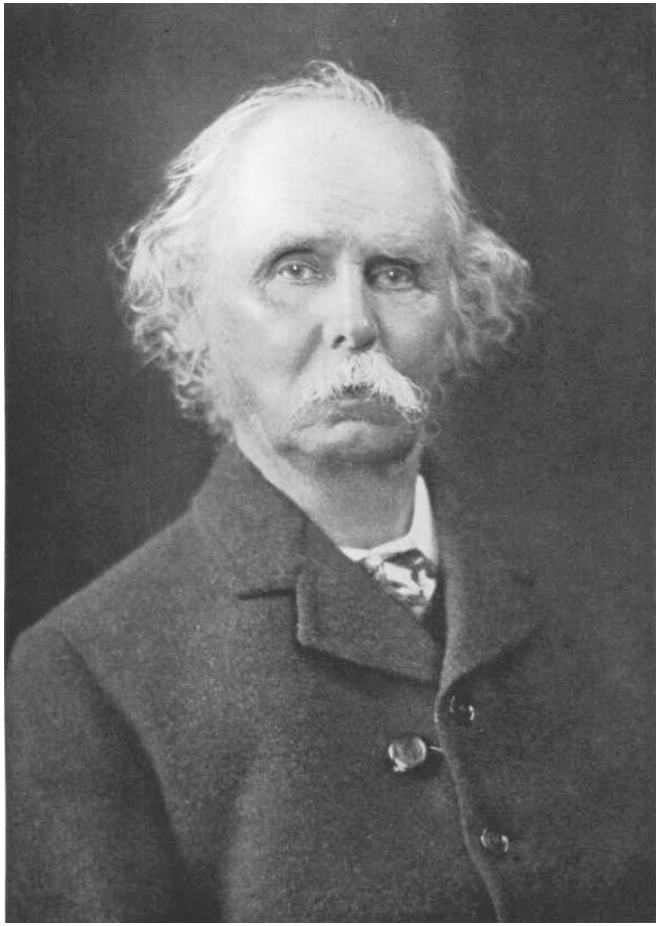


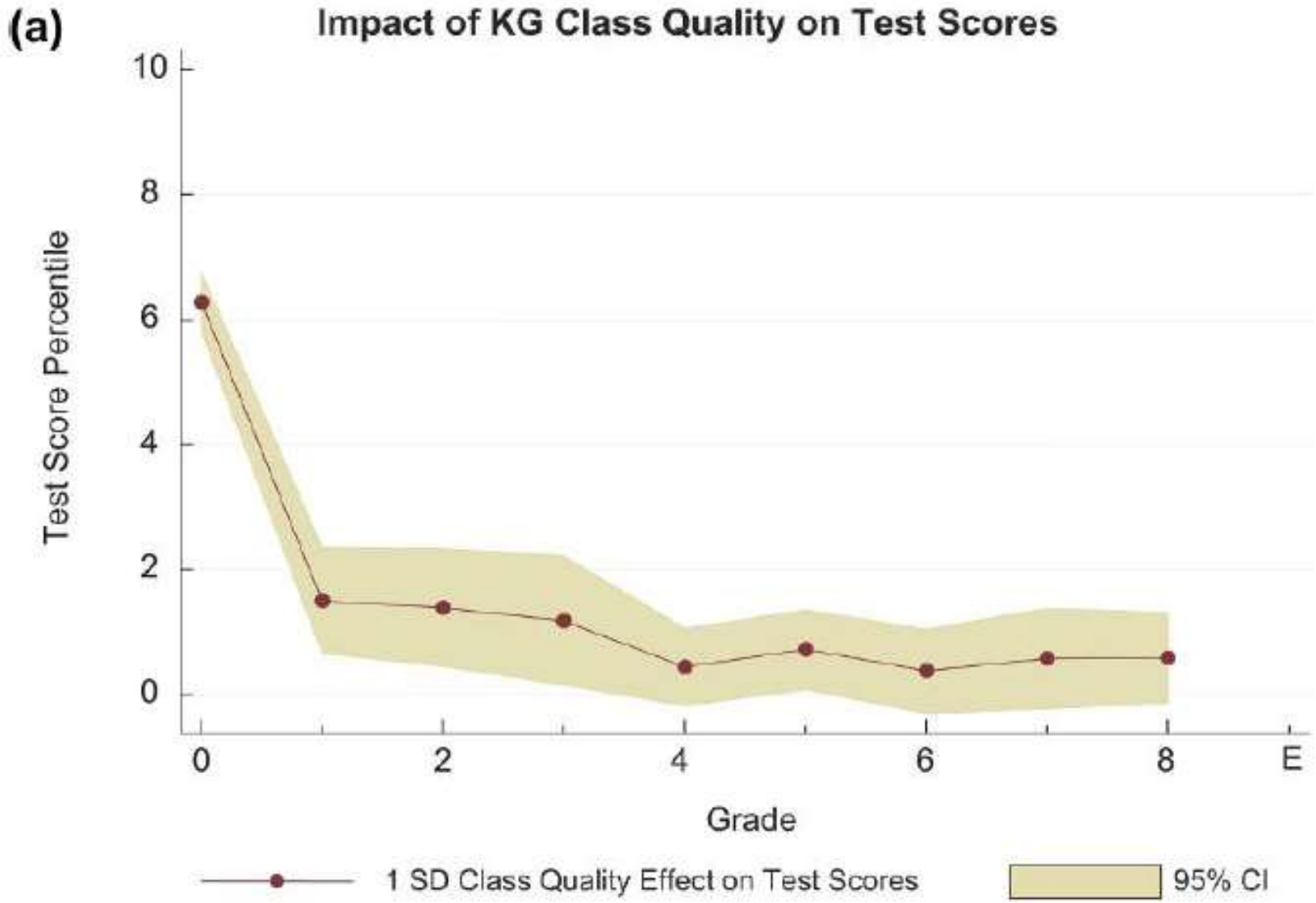


The most valuable of all capital is that invested in human beings.

- Alfred Marshall, *Principles of Economics*

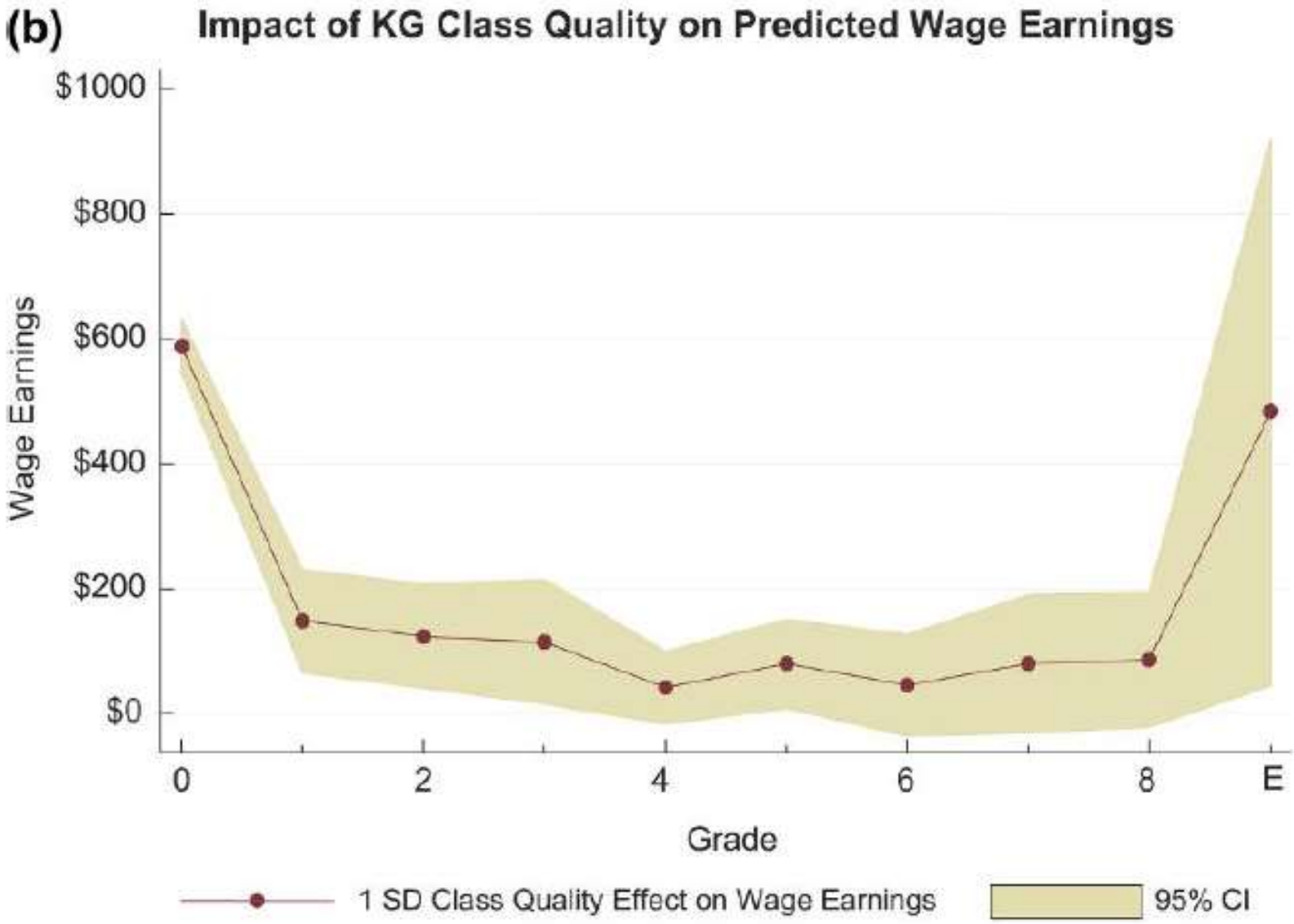
Appendix

2. What about test-score fade-out?



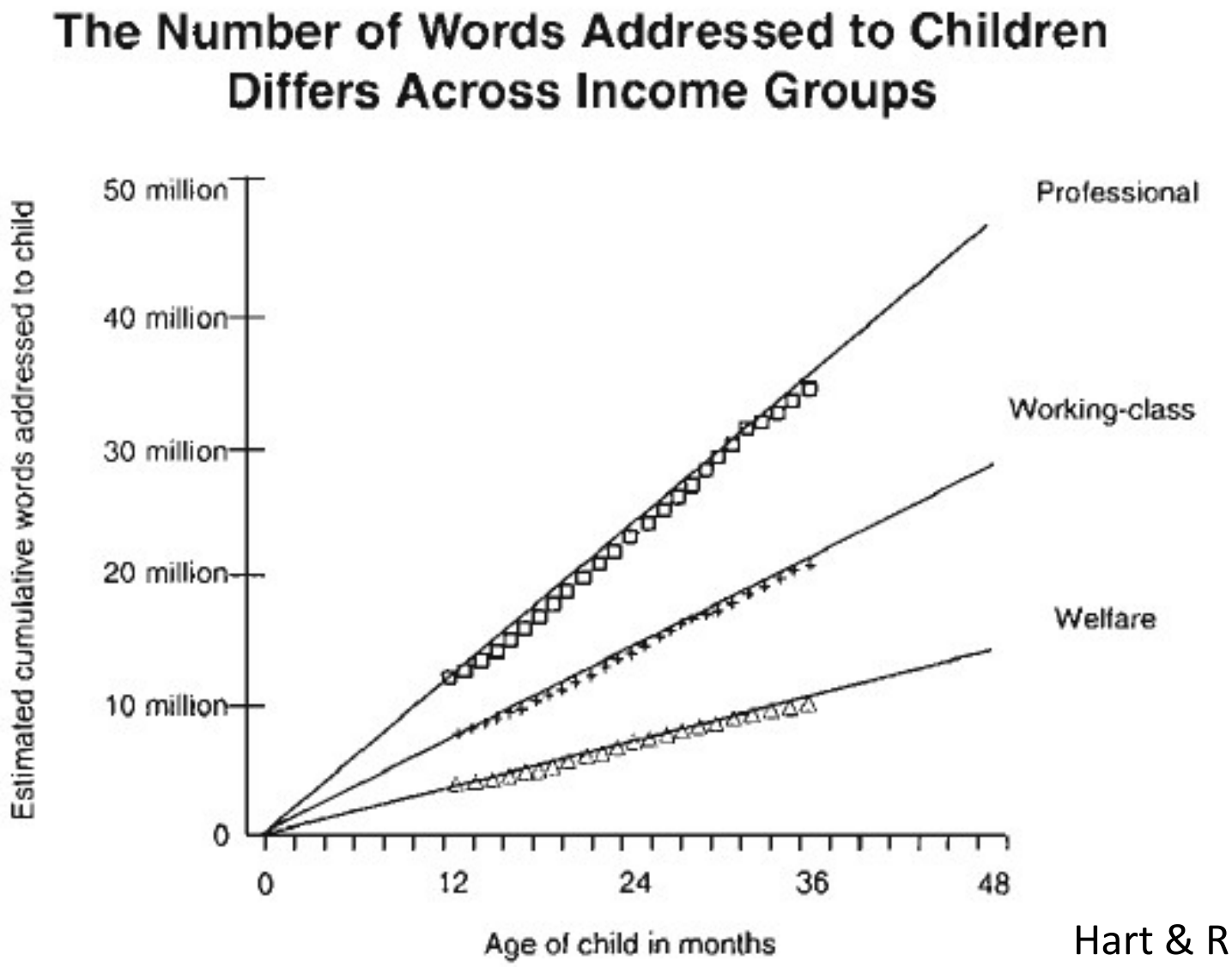
Chetty et al (2013) How does your kindergarten classroom affect our earnings? *Quarterly Journal of Economics*

Earnings impacts despite score fade-out



Chetty et al (2013) How does your kindergarten classroom affect our earnings? *Quarterly Journal of Economics*

Income-based **input** gap opens early too



Hart & Risley (2003)

Where are families with most need for better access to ECE services?

- Family-centered view of the ECE market

- Low access to ECE services marked by:
  - High **costs:** high **prices** and long **travel times**
  - Low **quantity** of services relative to presence of young children
  - Low **quality**

- Proper diagnosis supports proper remedy.

An experiment

The Infant Health & Development Program (IHDP) recruited a sample at birth and randomly assigned a treatment.

[Brooks-Gunn et al, 1994; McCarton et al, 1997; Gross et al, 1997]

Age 0-1: weekly home visit from staff

Age 1-3: child eligible for child development center (CDC)

- Free
- Full-day
- High-quality, Abecedarian curriculum
- Free transportation

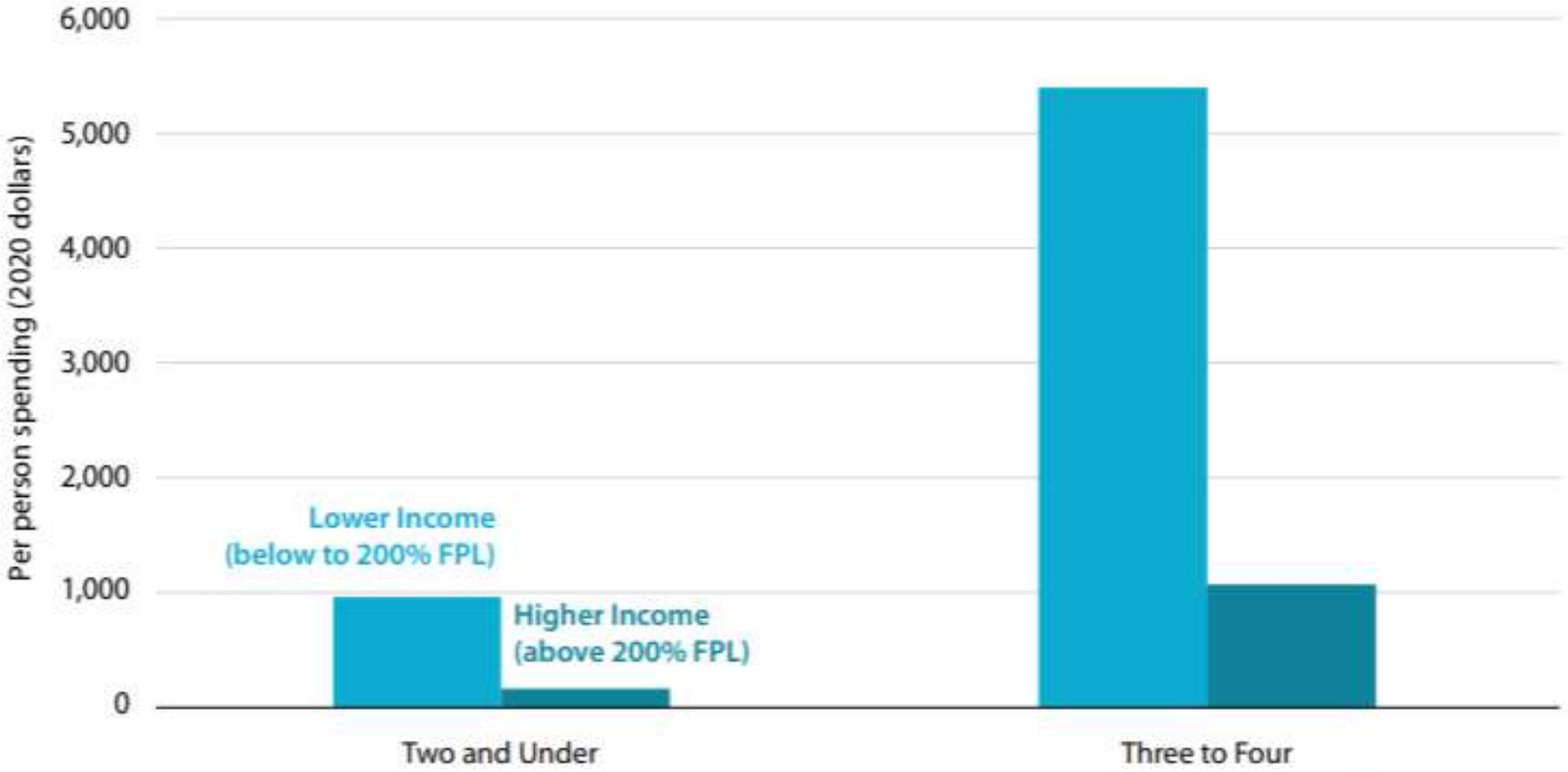
The experimental sample (N = 985): IHDP

Ethnically and economically diverse sample but only included children born:

- Low-birth weight (≤ 2.5 kg = 5.5 lbs)
- Premature (≤ 37 wks)
- In one of 8 research hospitals.
- Starting January 7, 1985 until fully enrolled
- Control = 608; Treatment = 377.

FIGURE 3.

Federal, State, and Local Government Spending on Care and Education, by Age Group and Income-to-Poverty Ratio



Source: Cascio and Schanzenbach (2013); Census (2020); Crandall-Hollick and Boyle (2021); Friedman-Krauss et al. (2020); Joughin (2019); NSECE (2016); OCC (2019a; 2019b; 2021); Office of Head Start 2020; author's calculations.

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BROOKINGS

How much does public invest annually in MN kids' care, by age-income?

Family income range: As % of poverty level	Age 0-2	Age 3-4	Age 0-4
Low: up to 185%	$2,243	$6,474	$3,936
Moderate: 185-300%	$200	$912	$485
Higher: above 300%	$320	$609	$436
Across incomes	$901	$2,511	$1,545

State of Minn. invests $10,000+ per child each of 13 years from age 5 to 17 + more from feds. Source: Grunewald & Sojourner (2020).