

Does Money Matter? Clean Evidence from School Finance Reforms

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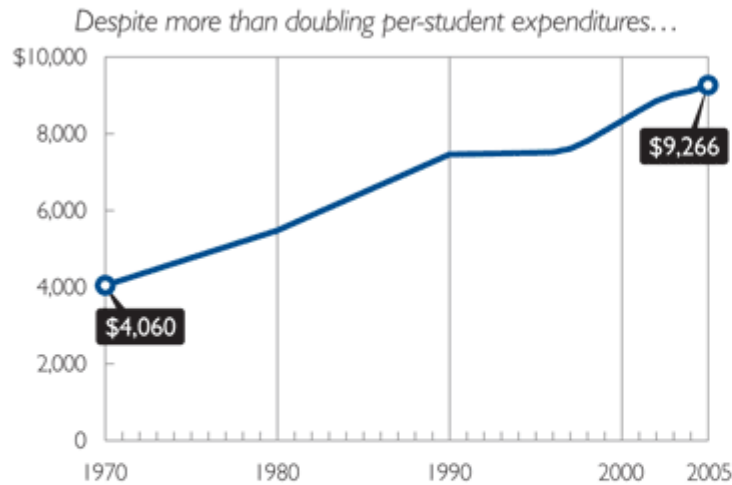


Many Studies Find Small Effects or No Effect

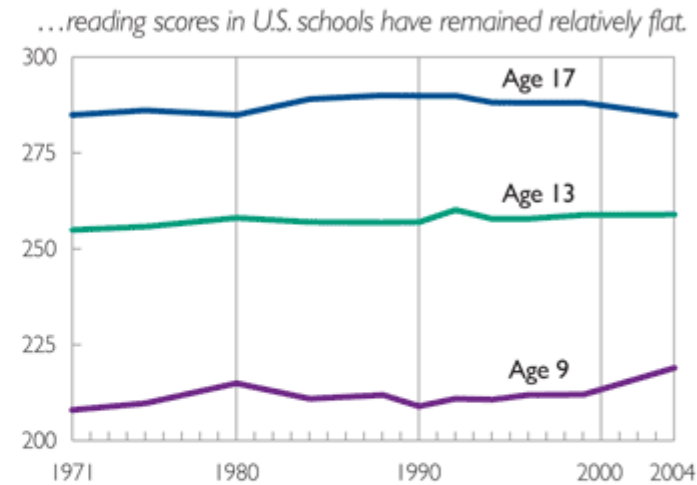
Money Is Not the Answer (Figure 4)

Spending more does not necessarily lift test scores.

The "Link" Between Education Spending and Student Performance



Per-Student Expenditures in American Public Schools, 1970–2005, in Constant 2006–2007 Dollars



American Student NAEP Reading Scores, 1971–2004

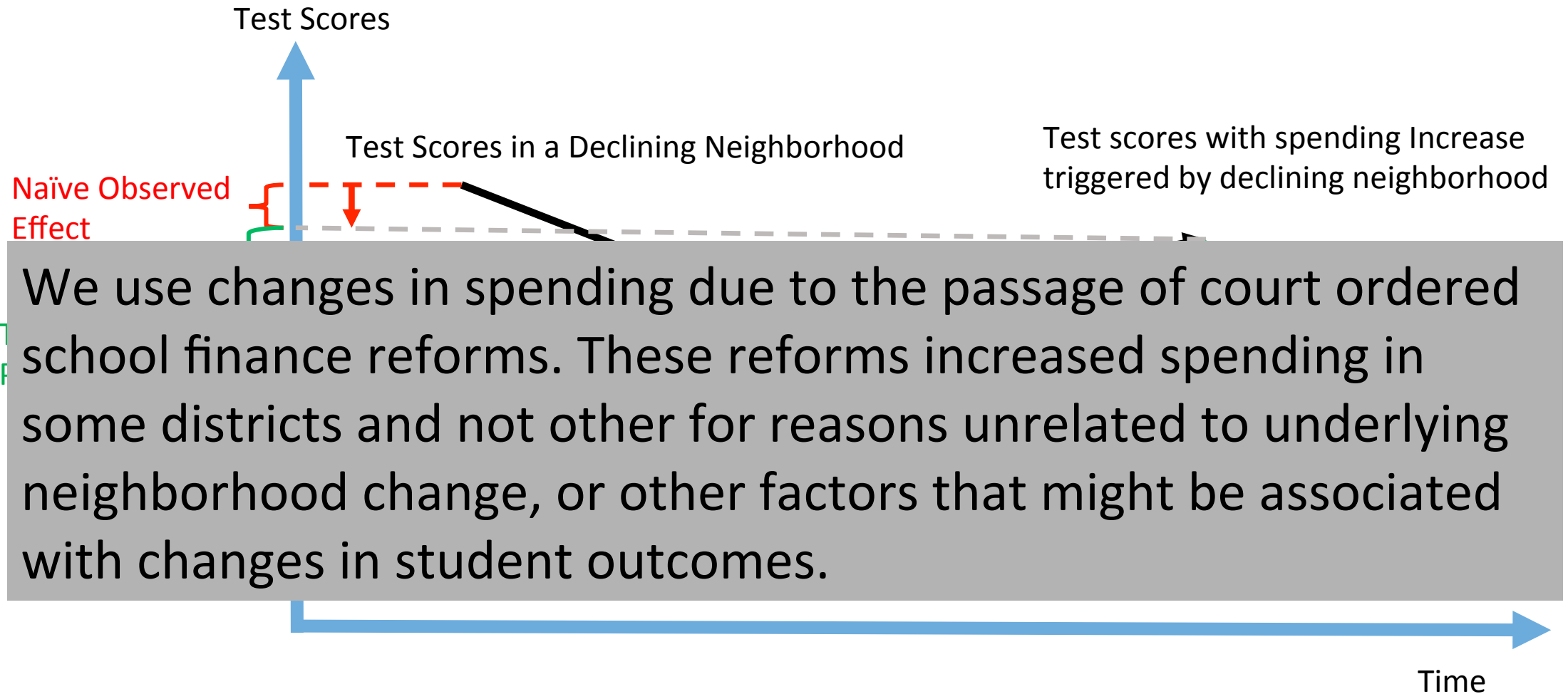
Sources: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, "National Trends in Reading by Average Scale Scores," updated July 6, 2005, at <http://nces.ed.gov/nationsreportcard/itt/results2004/nat-reading-scalescore.asp> (April 14, 2008), and *Digest of Education Statistics: 2007*, Table 174, at http://nces.ed.gov/programs/digest/d07/tables/dt07_174.asp (August 19, 2008).

Chart 4 • B 2179 heritage.org

*Expenditure increments are adjusted for inflation

SOURCE: Authors' calculations based on National Assessment of Educational Progress and Digest of Education Statistics

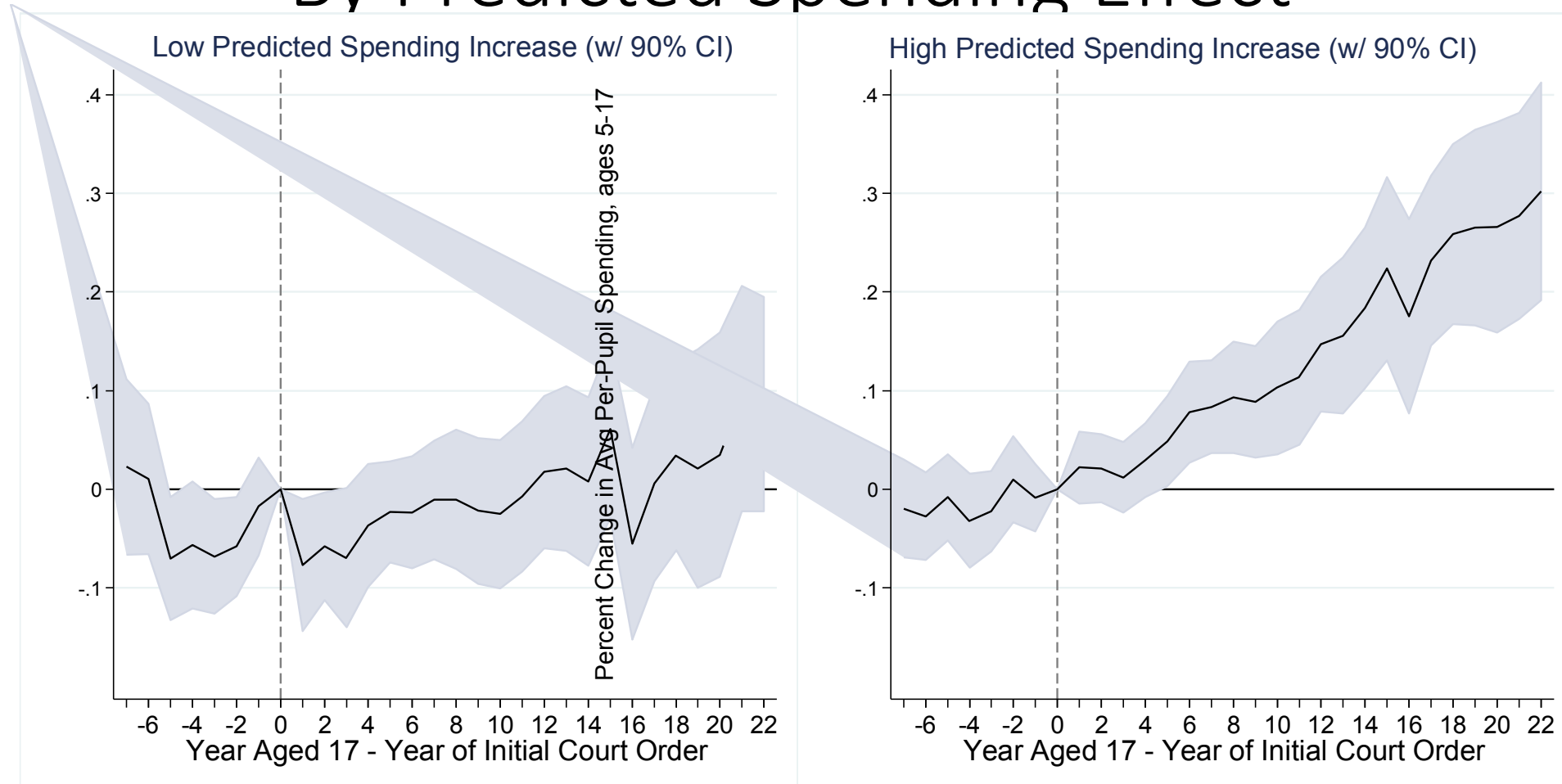
Bias Due to Compensatory Spending Increases



Empirical Method

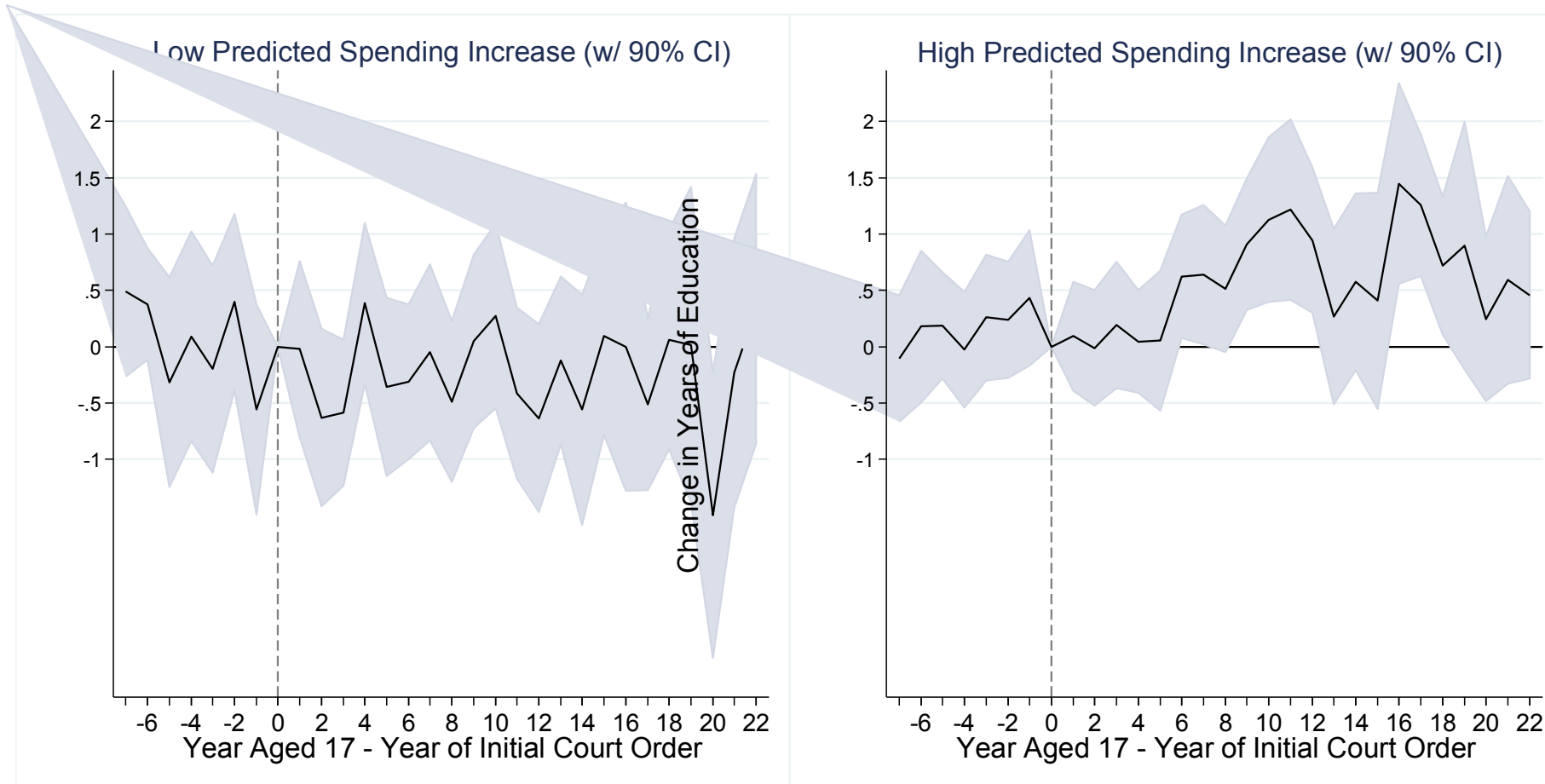
1. Use the School Finance Reforms (SFRs) between 1970 and 2000 as an external “shock” to per pupil spending.
2. Identify which school districts will experience larger versus smaller changes in school spending (due to the reforms).
3. Link school spending data to a nationally representative data on individuals born between 1955 and 1980 and tracked over time through 2011 .
4. Test whether exposed cohorts have better outcomes relative to unexposed cohorts in those districts that experience larger reform-induced spending increases.
5. **KEY: Spending increases in these districts due only to the passage of a court mandated reform have nothing to do with neighborhood decline or other changing factors that typically predict spending changes (and may also affect student outcomes).**

Effect of Court Ordered SFRs on School Spending By Predicted Spending Effect



- Spending in districts with high and low reform-induced spending increases were on similar trajectories pre reform **but very different trajectories after reforms.**

Effects on Years of Educational Attainment

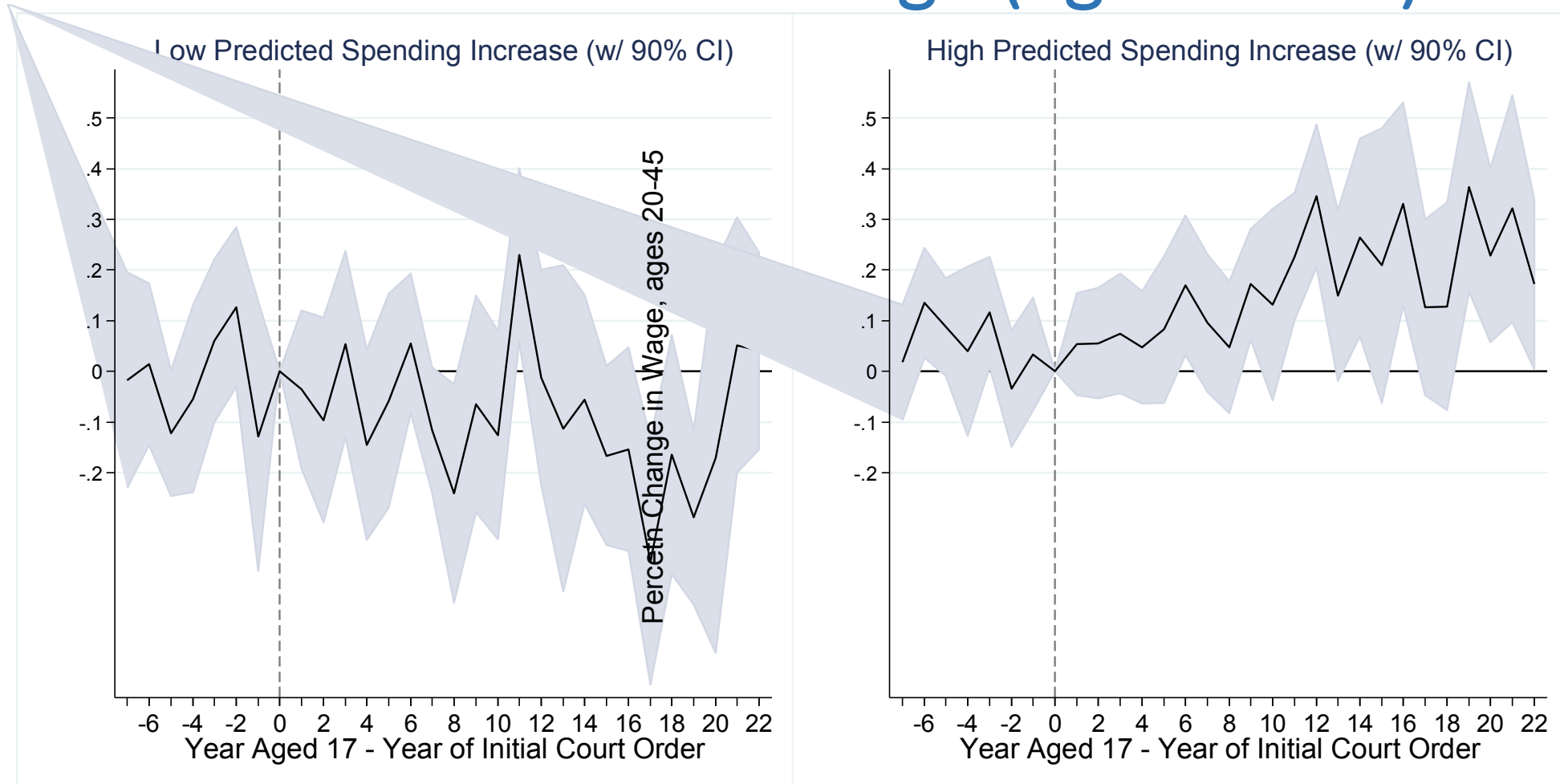


Children exposed to reform-induced spending increases see increases in educational attainment.

A 10 percent increase in school spending leads to an additional 0.31 years of education.

For children from low-income families, this increase is 0.46 years of education.

Effects on Adult Wage (ages 25-45)



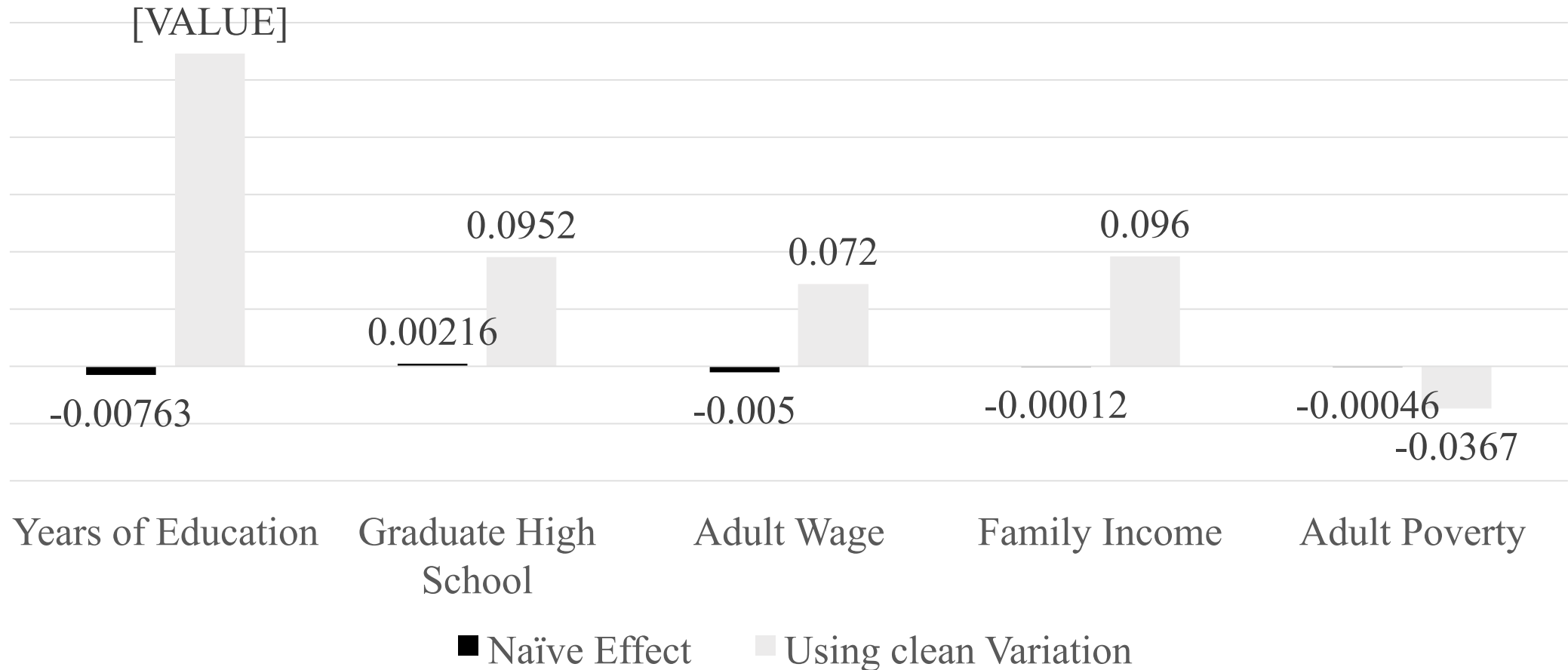
Children exposed to reform-induced spending increases have higher wages.

A 10 percent increase in school spending leads to a 7.7 percent increase in the wage.

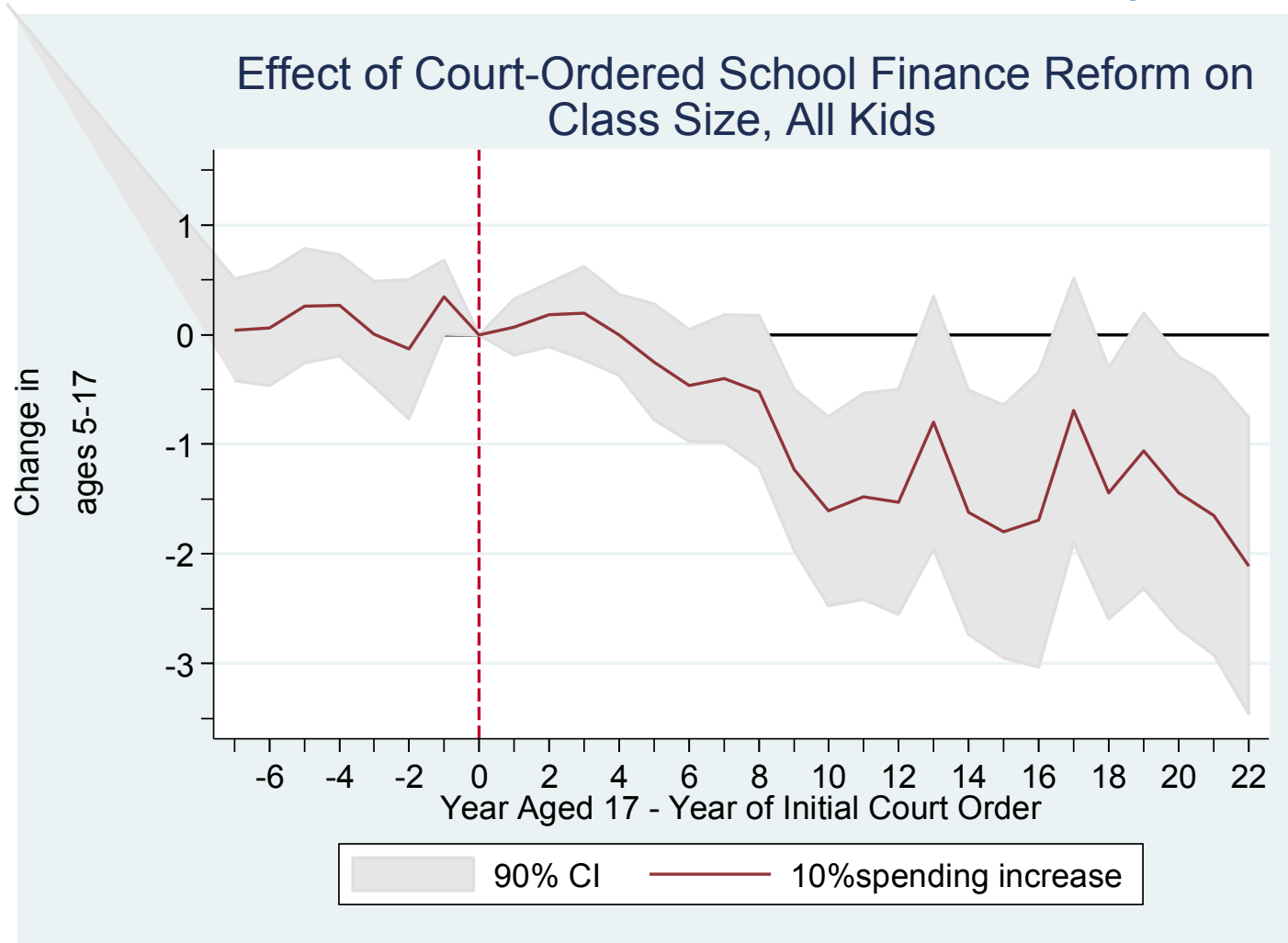
For children from low-income families, this increase is 9.6 percent.

Methods Matter!

Naive Estimates Versus Using Clean Reform-Induced Spending Changes (10 Percent Increase)



Effects Appear To Work Through Improved Resources: *How it is spent likely matters!*



Reform Induced increase in school spending are associated with:

- More instructional spending
- More spending on support staff
- Smaller Classes
- Higher Teacher Salaries
- Longer School Years

To conclude....

1. How money matters is important because
 1. Many states are currently in legal battles regarding how public schools are financed.
 2. State education budgets are often cut in times of financial distress.

Our findings show that

1. There is a strong positive causal relationship between increased school spending and improved adult outcomes.
2. Calculations reveal that the internal rate of return on education spending is about 9 percent (more than the long run return on stocks).
3. The effects are more pronounced for those from low income families such that improved education spend does reduce disparities in adult outcomes for those from advantaged and disadvantaged backgrounds.