

# Does Money Matter? Clean Evidence from School Finance Reforms

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# Motivation

Since Coleman 1966, many have questioned whether school inputs matter.

The claim that there is no relationship between school resources and student outcomes has subsequently been made by many well-known scholars and policy-makers.

There are 3 reasons why they COULD be correct:

1. Increased spending is wasted by bureaucracy.
2. Spending levels are above the point where increases really matter.
3. Most problems in education can only be remedied in the home.

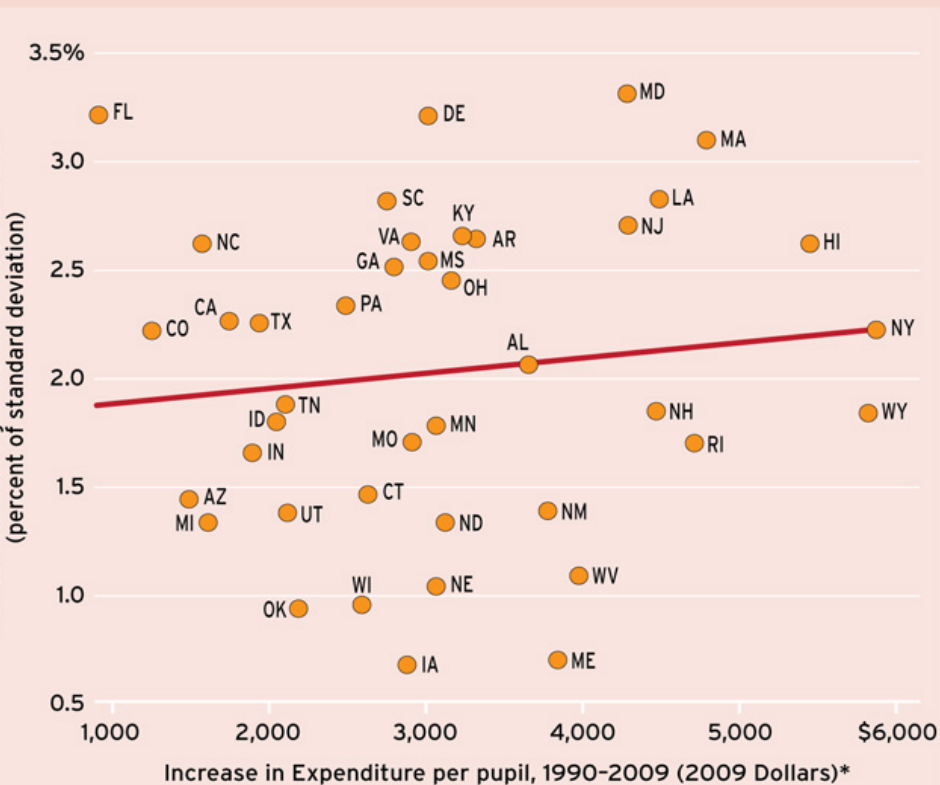
**However, the evidence supporting this claim is weak.**

**We will show that money (and other school inputs) does matter.**

# Some Studies Find Small Effects

## Money Is Not the Answer (Figure 4)

Spending more does not necessarily lift test scores.



Expenditure increments are adjusted for inflation

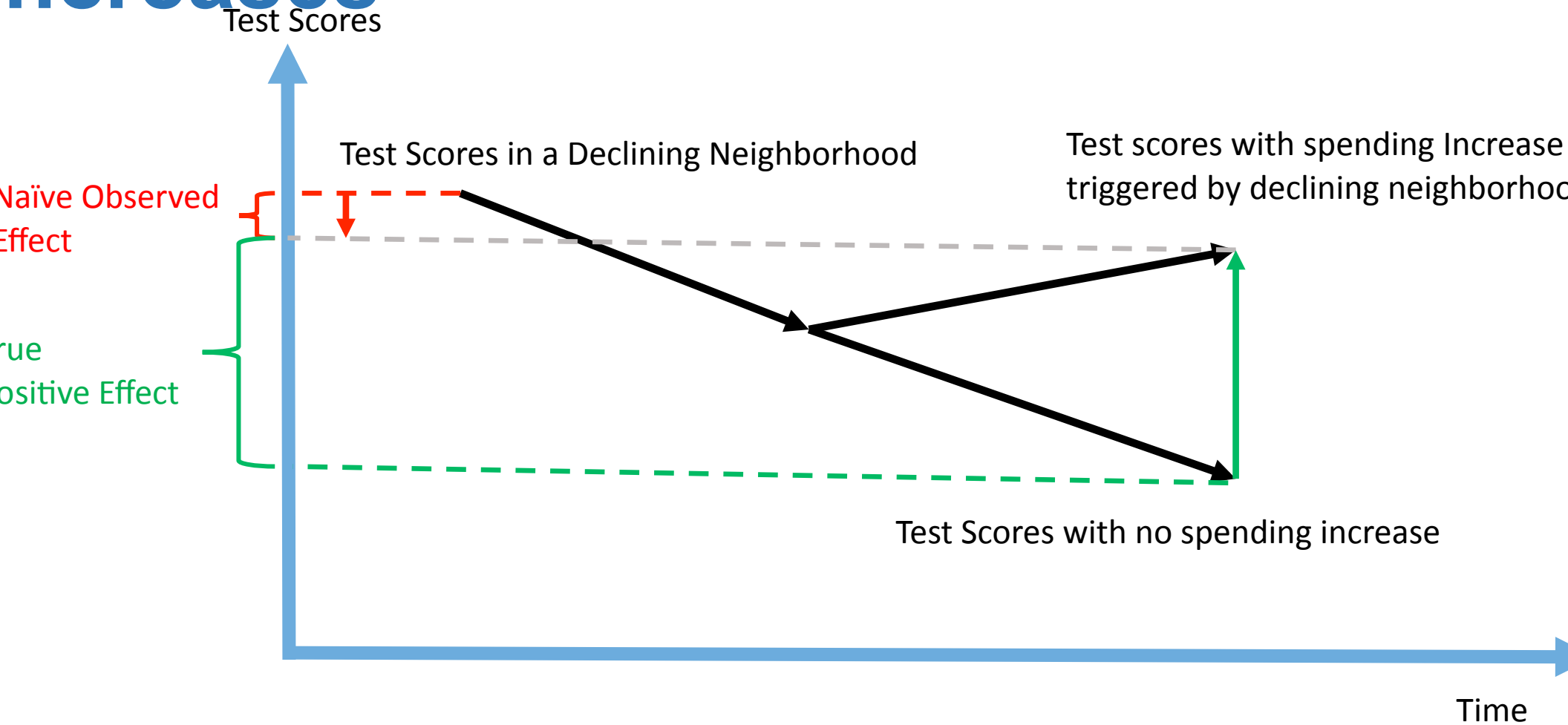
SOURCE: Authors' calculations based on National Assessment of Educational Progress and Digest of Education Statistics

While charts like these are suggestive, they are not conclusive, and have known flaws.

1. Many other things may be happening at the state level that could influence both spending levels and student outcomes.
2. Test scores are not the best measure of the skills.
  - Ideally we would like to see effects on real economic outcomes.

# Bias Due to Compensatory Spending

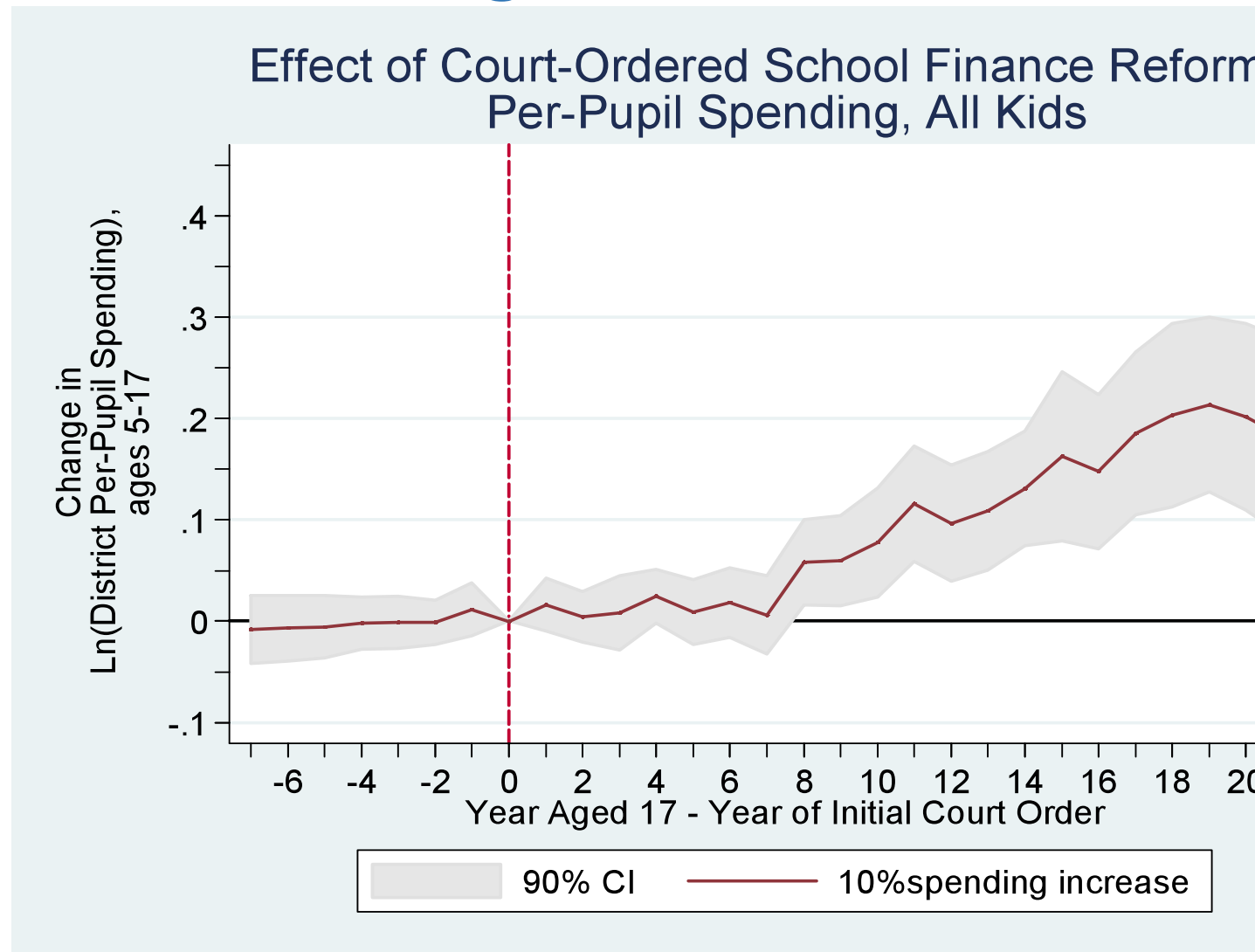
## Increases



# We Use Spending Increases That are Unrelated to Other Changes

model how different kinds of reforms affect different kinds of districts. We then identify districts that experience increases in spending due to the passage of court-ordered reforms.

**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 locally predict spending changes.**



NOTE: Effects are relative to similar districts in non-reform states.

# We Look at Long Run Outcomes (not test scores)

We link school spending data and information collected on all reforms to a nationally representative survey of individuals born between 1955 and 1980 and tracked over time through 2011.

If there is a real causal effect of spending on outcomes, exposed cohorts (*of school age at the passage of reforms*) in districts that increase spending due to reforms should have better outcomes than unexposed cohorts (*older than school age at the passage of reforms*).

- A natural test for whether our spending increases are clean is if unexposed cohorts look similar in reform and non-reform states.

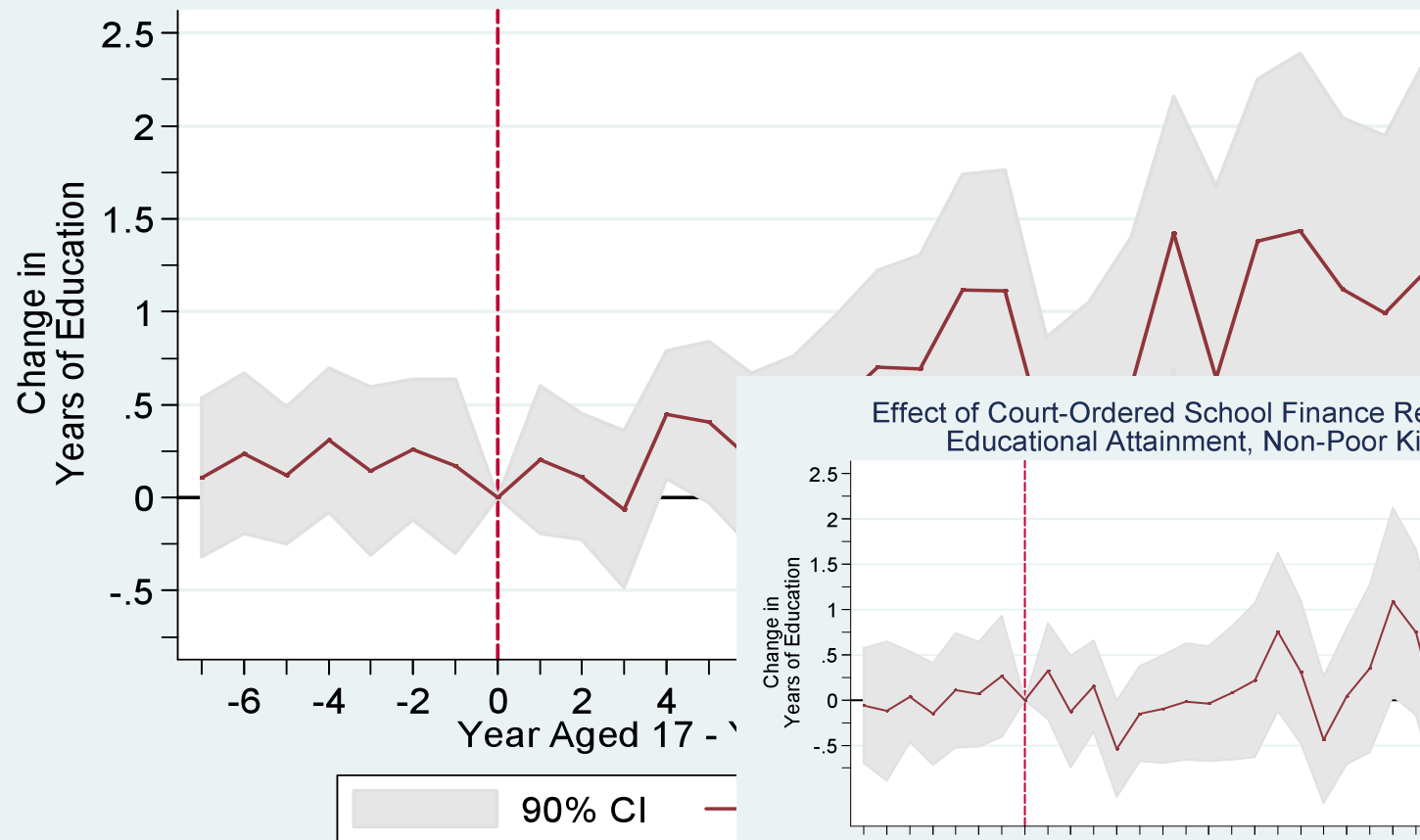
# Effects on Educational Attainment

Children from low income families who are exposed to increases in school spending due to court-ordered school finance reforms see increases in years of educational attainment.

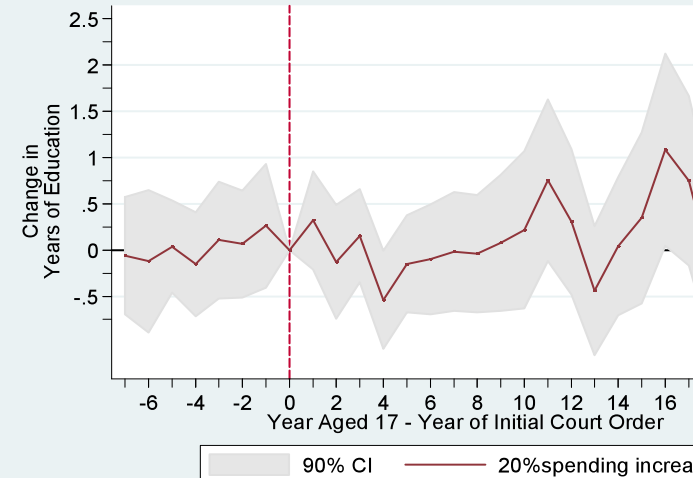
A 1 percent increase in school spending leads to an additional 0.1 years of education.

There are positive effects on educational attainment for children from non-poor families.

### Effect of Court-Ordered School Finance Reform on Educational Attainment, Poor Kids



### Effect of Court-Ordered School Finance Reform on Educational Attainment, Non-Poor Kids



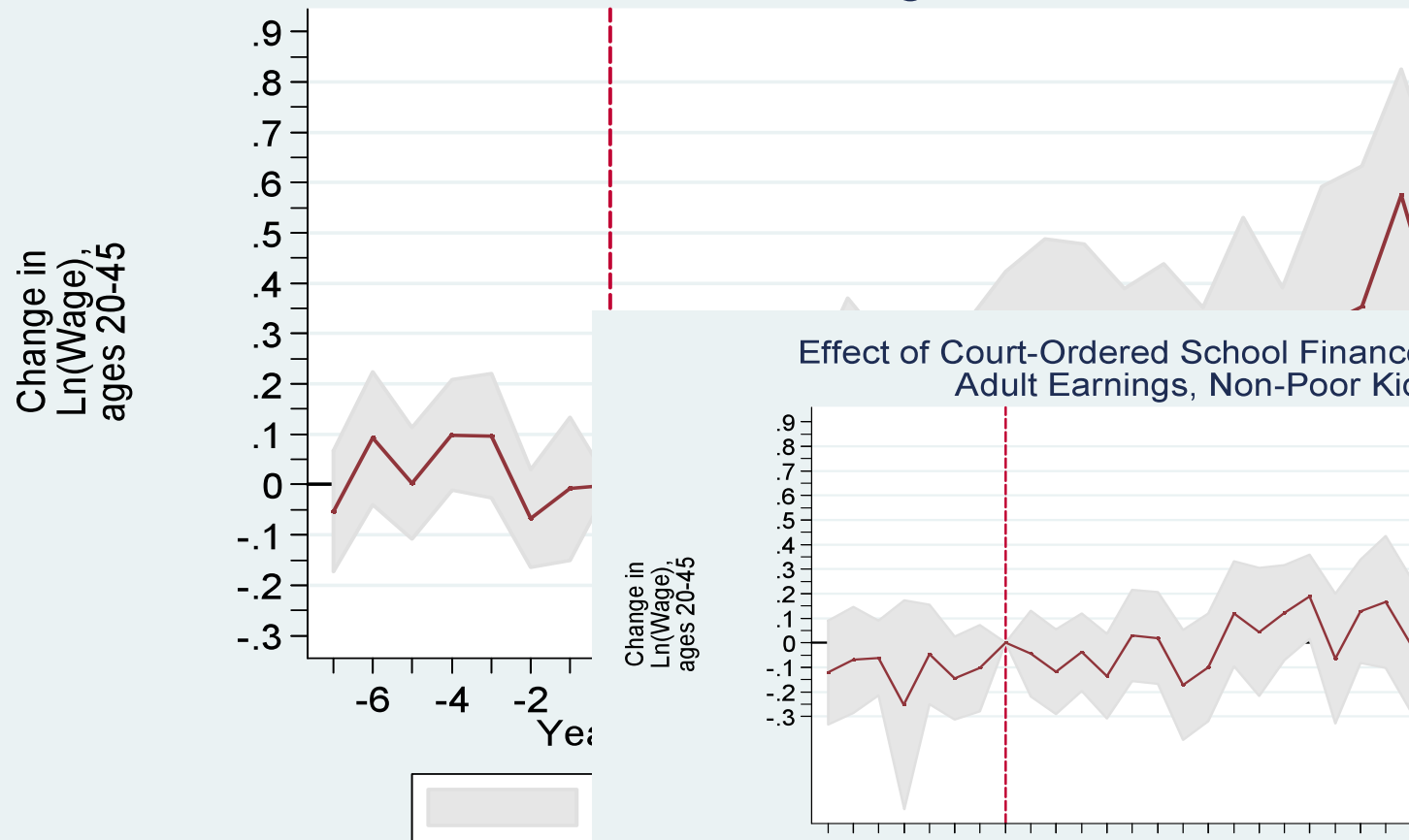
# Effects on Annual Earnings (ages 25-45)

Children from low income families who are exposed to increases in school spending due to court-ordered school finance reforms see increases in annual earnings.

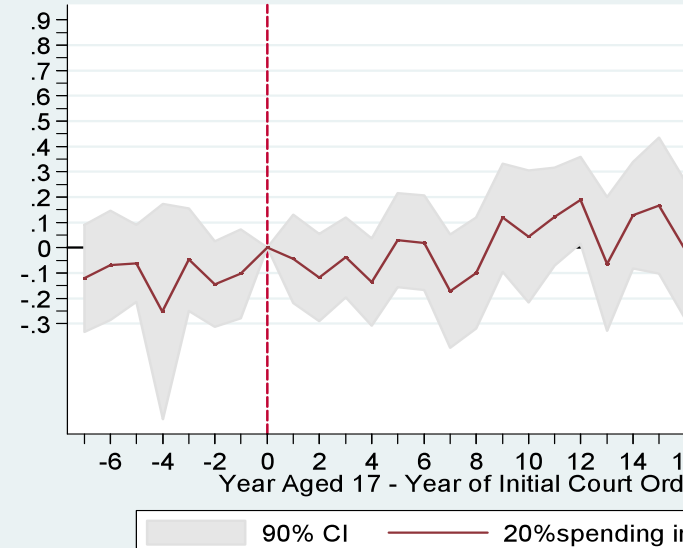
A 1 percent increase in school spending leads to 20 percent increase in annual earnings.

Positive effects on earnings are seen for children from non-poor families.

### Effect of Court-Ordered School Finance Reform on Adult Earnings, Poor Kids



### Effect of Court-Ordered School Finance Reform on Adult Earnings, Non-Poor Kids





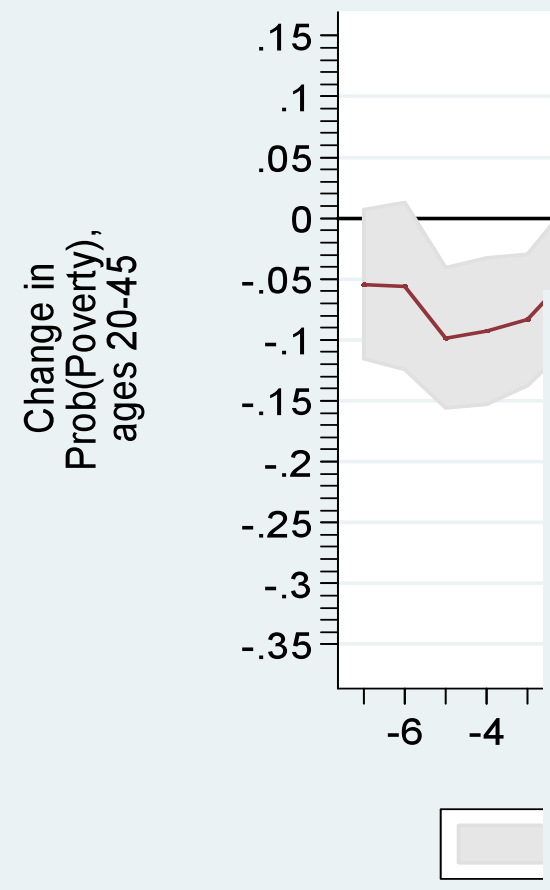
# Effects on Adult Poverty (ages 25-45)

Children from poor families are exposed to increases in school spending due to school finance reforms see large increases in adult poverty.

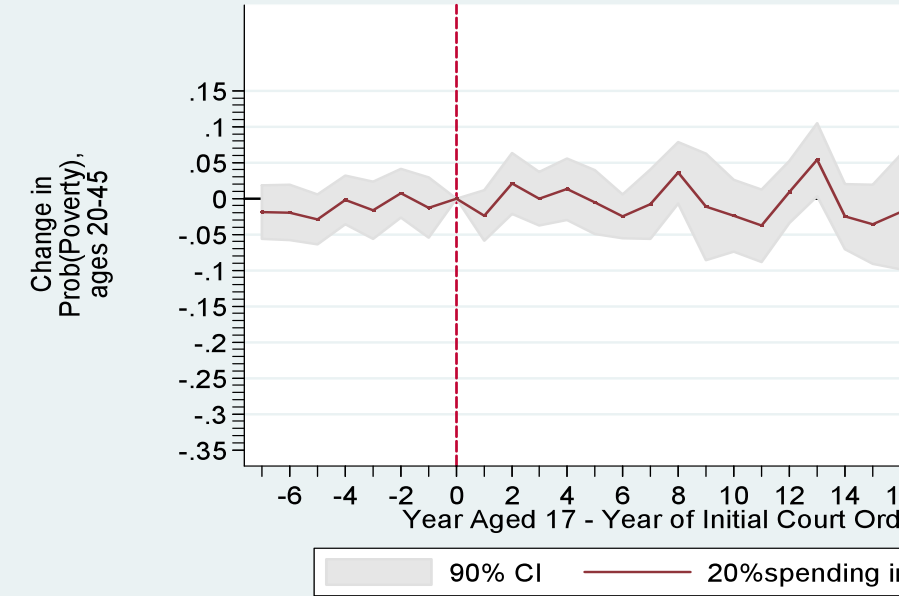
A 1 percent increase in school spending reduced poverty by 0.1 percentage points.

Effects on children from poor families.

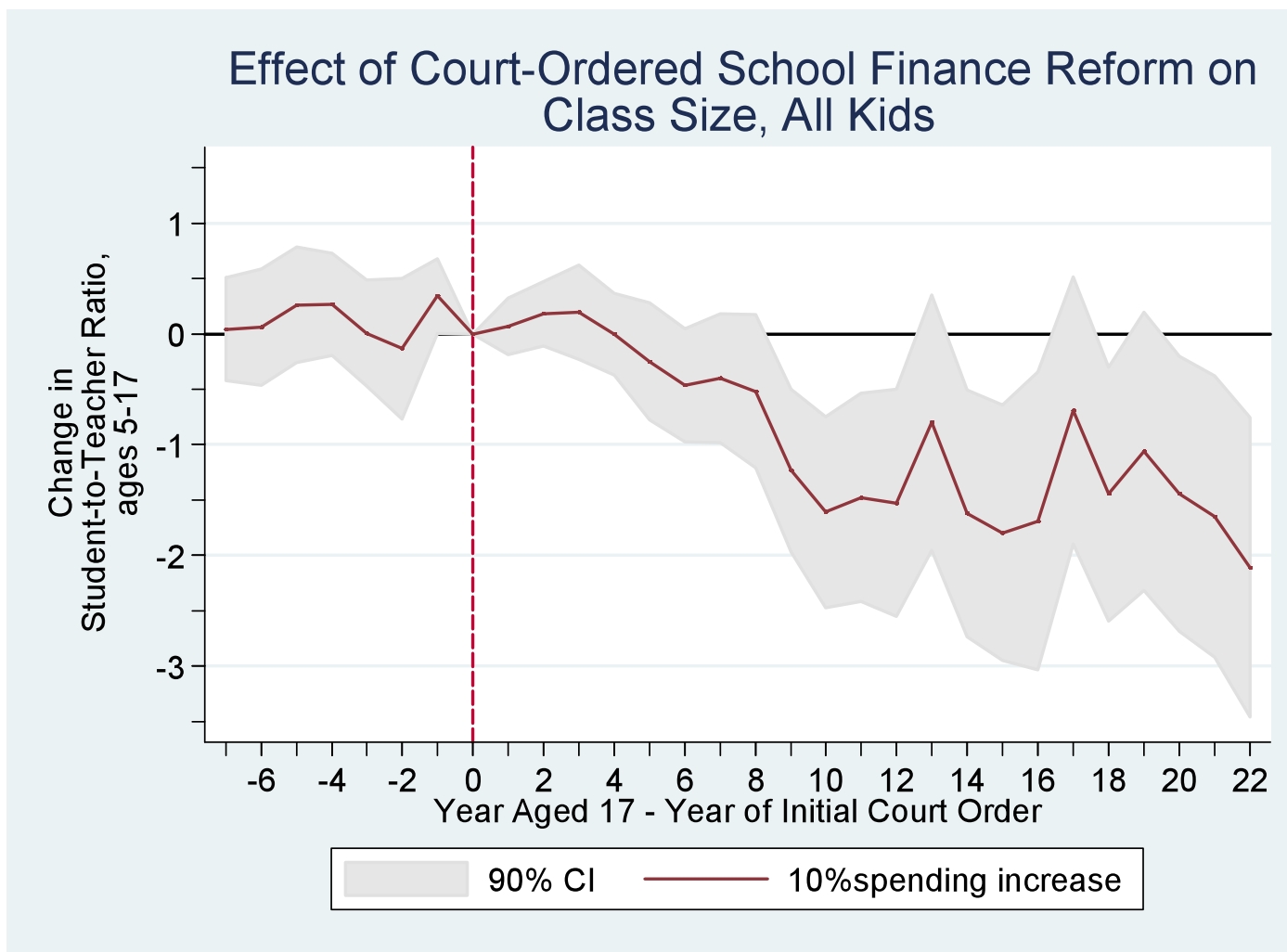
Effect of Court-Ordered School Finance Reform on Annual Incidence of Adult Poverty, Poor Kids



Effect of Court-Ordered School Finance Reform on Annual Incidence of Adult Poverty, Non-Poor Kids



# Effects work through improved resources



## To conclude....

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.
3. Policies that reduce school spending might save money today, but the cost will be felt several years from now in the form of less well educated students, less productive workers, and more dependency of social programs.
4. The magnitude of the estimated effects pass any reasonable cost-benefit analysis.