HOLD BACK TO MOVE FORWARD?

EARLY GRADE RETENTION AND STUDENT MISBEHAVIOR

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- Accountability has become a mantra in public education
  - School-level: state accountability systems and NCLB
  - Teacher-level: RttT
  - Student-level: grade retention based on test scores

- Grade retention –
  - Academic benefits: positive effect on test scores in the short run (Jacob and Lefgren (2004, 2009); Greene and Winters (2007, 2012), and Schwerdt and West (2012)).
  - Adverse effects: reduces high school graduation among 8th graders (Jacob and Lefgren (2009), no effect of early grade retention on attendance Schwerdt and West (2012).

- Effects on student misbehavior–
  - RD design using the test-based grade promotion policy in Florida.

- Just Read, Florida!
  - Enacted in 2001
  - 3rd grade promotion tied to the reading score in FCAT-SSS.
  - Retained if the scores fall into the lowest reading achievement category (out of five categories).

- Good cause exemptions
  - Performance on an alternative test
  - Limited English proficiency students with less than 2 years in the ESOL program
  - Special education students with certain disabilities
  - Teacher-developed portfolio
  - Already retained twice between KG and 3rd grade

- Student-level administrative data
  - Follow 7 cohorts of first-time 3rd graders between 2003-04 and 2009-10
  - Student demographics, LEP and SPED status, FCAT-SSS scores in reading and math, and student disciplinary incidents

- Disciplinary incidents
  - Type of disciplinary/referral action taken
  - Duration of suspension if suspended
  - Actions include corporal punishment, in-school or our-of-school suspension, placement in a different program, and expulsion.

- Three patterns
  - Significant jump in incident rates between elementary and middle schools
  - More frequent use of corporal punishment in early grades
  - 80-90% of incidents result in suspensions

- Interested in likelihood and severity of incidents

- **Regression discontinuity design**
  - Fuzzy RD due to good cause exemptions
  - Compare just-retained students with just-promoted around the retention cutoff

- **Estimate discontinuity parametrically**
  - Selection variable is discrete, non-parametric estimator might lead to biased estimates (Card and Lee (2008))
  - Preferred specification – limited to students within 5 (and 20) points around cutoff and use linear (and quartic) polynomial
  - Standard errors clustered at the selection variable level
  - Check sensitivity to the specification using various bandwidths (1, 5, 10, 20) and polynomial orders (0, 1, 2, 3, 4)
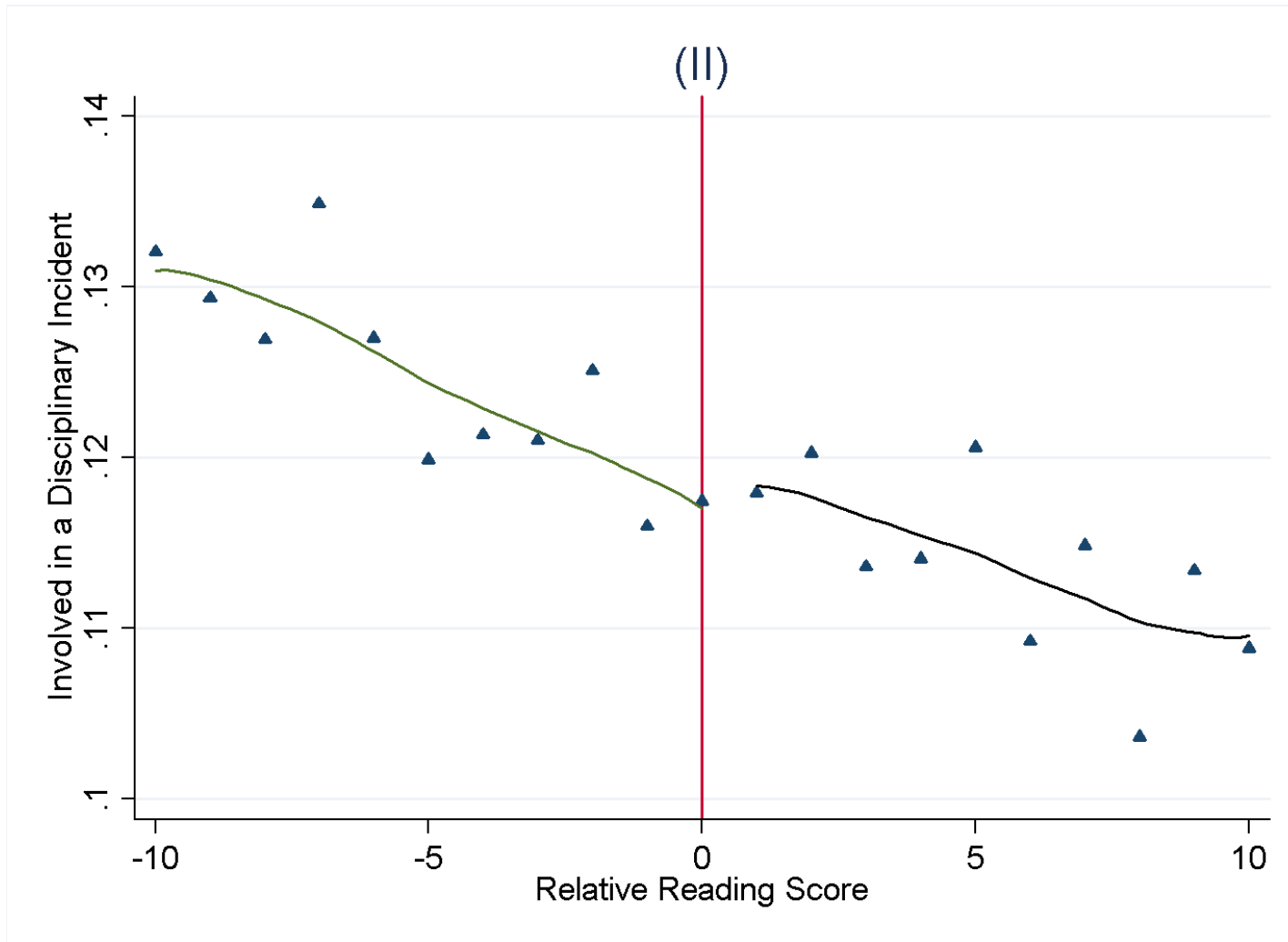
Retention and 3rd Grade Reading Scores
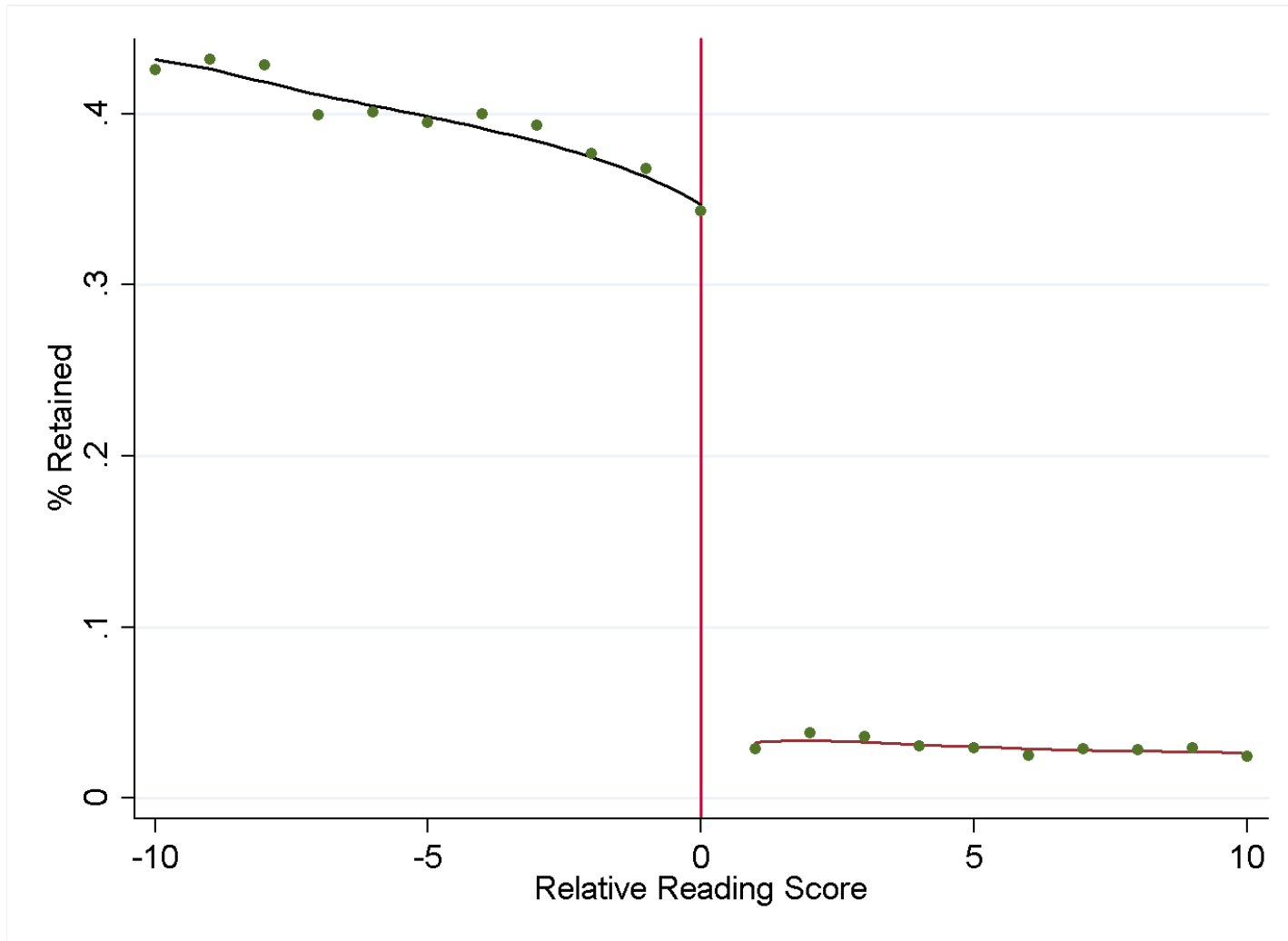
Retention and Disciplinary Incidents within Two Years
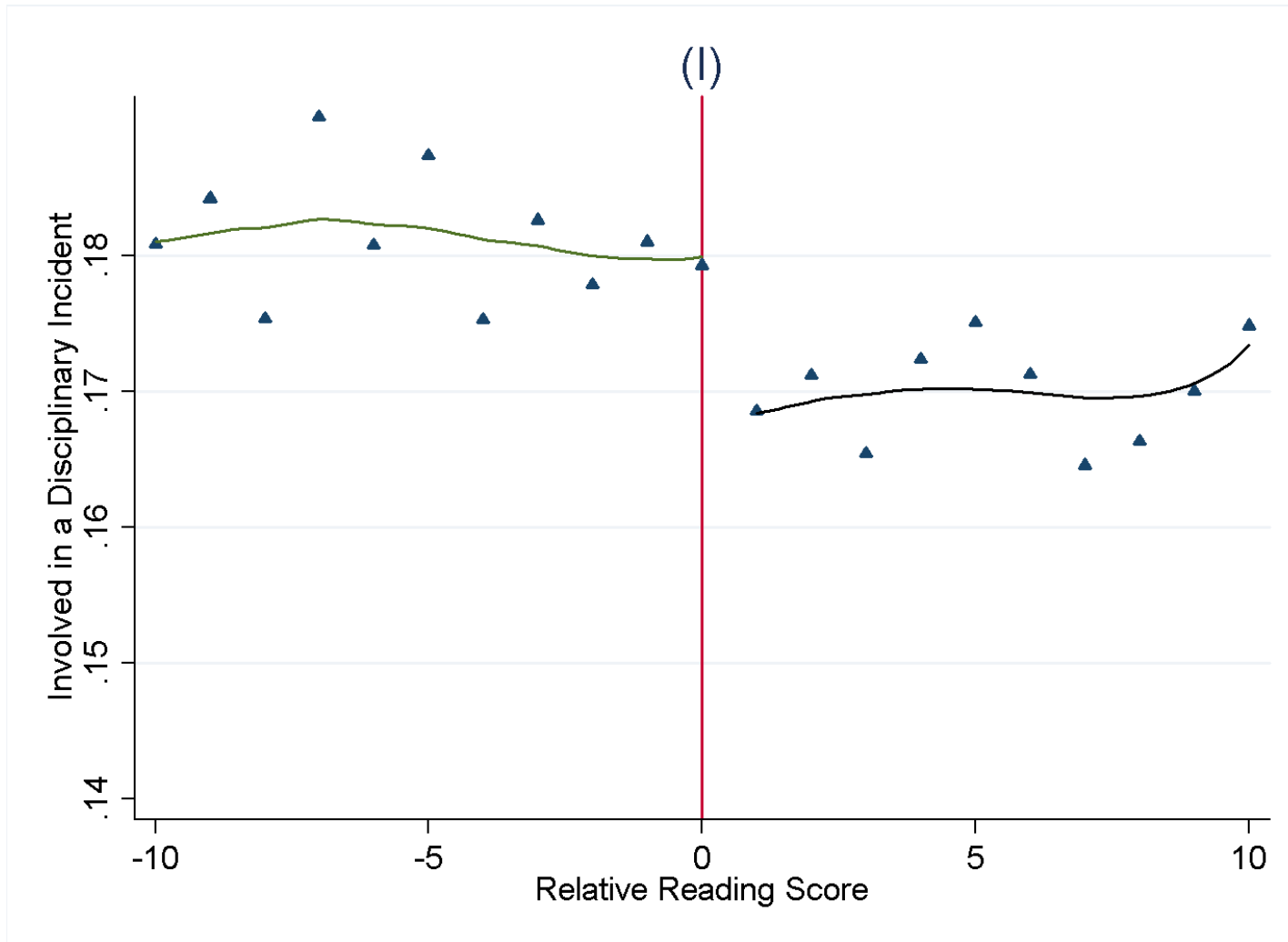
Retention and Disciplinary Incidents past Two Years

Retention and Misbehavior – Same Age Comparison, Short Term Effects

	Linear		Quartic	
	(I)	(II)	(I)	(II)
Score range	5	5	20	20
1 year later -				
Disciplinary incident	0.031***	0.039***	0.046***	0.064***
	(0.008)	(0.009)	(0.014)	(0.012)
In-school suspension	0.009	0.009	0.013	0.016
	(0.009)	(0.009)	(0.011)	(0.011)
Out-of-school suspension	0.037***	0.045***	0.046***	0.062***
	(0.012)	(0.013)	(0.016)	(0.016)
2 years later -				
Disciplinary incident	0.050***	0.055***	0.048***	0.054**
	(0.010)	(0.011)	(0.017)	(0.020)
In-school suspension	0.034***	0.033***	0.040***	0.040***
	(0.003)	(0.004)	(0.009)	(0.009)
Out-of-school suspension	0.025**	0.028	0.018	0.025*
	(0.007)	(0.009)	(0.012)	(0.014)
Cohort FE	Yes	Yes	Yes	Yes
Student covariates	No	Yes	No	Yes
Within-school peer average	No	Yes	No	Yes

Retention and Incidents – Same Age Comparison, Long Term Effects

	Linear		Quartic	
	(I)	(II)	(I)	(II)
Score range	5	5	20	20
Three years later	-0.092[**]	0.012	-0.122[***]	-0.021
	(0.045)	(0.036)	(0.051)	(0.039)
Four years later	0.016	0.028	0.033	0.042
	(0.028)	(0.027)	(0.036)	(0.036)
Five years later	-0.009	-0.008	-0.007	-0.011
	(0.013)	(0.018)	(0.026)	(0.028)
Cohort FE	Yes	Yes	Yes	Yes
Student covariates	No	Yes	No	Yes
Within-school peer average	No	Yes	No	Yes

Retention and Incidents – Same Grade Comparison

	Linear		Quartic	
	(I)	(II)	(I)	(II)
Score range	5	5	20	20
4th grade	0.045***	0.046***	0.046**	0.050***
5th grade	(0.016)	(0.009)	(0.021)	(0.014)
	0.055***	0.056***	0.065***	0.063***
	(0.021)	(0.016)	(0.026)	(0.020)
6th grade	0.051	0.059**	0.025	0.031
	(0.042)	(0.030)	(0.046)	(0.034)
7th grade	-0.004	0.013	0.017	0.037
	(0.022)	(0.024)	(0.033)	(0.033)
8th grade	0.005	0.024*	0.017	0.032
	(0.023)	(0.013)	(0.029)	(0.020)
Cohort FE	Yes	Yes	Yes	Yes
Student covariates	No	Yes	No	Yes
Within-school peer average	No	Yes	No	Yes

Subgroup Analysis – Disciplinary Incidents, Same Age Comparison

	Linear	Quartic
Score range	5	20
FRPL eligible	0.062***	0.081***
	(0.013)	(0.019)
FRPL ineligible	0.026	0.044*
	(0.021)	(0.023)
White	0.048**	0.079**
	(0.021)	(0.026)
Black	0.076***	0.101***
	(0.020)	(0.027)
Hispanic	0.027*	0.031
Male	(0.015)	(0.023)
	0.065**	0.100***
	(0.032)	(0.033)
Female	0.039	0.037
	(0.024)	(0.028)
Cohort FE	Yes	Yes
Student covariates	Yes	Yes
Within-school peer average	Yes	Yes

Are the Effects Real?

- Differences in background characteristics
  - No significant differences in prior incidents and baseline observed student characteristics

- Manipulation of the selection variable
  - Principals, teachers and students have no control over scoring
  - McCrary test not feasible, selection variable discrete
  - No significant discontinuity in reading score density

- Differential attrition from the sample
  - Just retained might be more likely to leave the public school system, leavers likely to be different than stayers
  - No significant difference in attrition rate between just-retained and promoted
  - No significant difference between stayers at the cutoff along observed characteristics

Mechanisms behind the Effects

- The effect of being old for the grade
  - Exploratory analysis – use student birth dates and FL school starting age policy
  - Compare disciplinary incidents between August and September born
  - Show that a 12-month increase in relative age leads to one percent increase in incident likelihood

- Emotional distress – loss of friends, stigma
  - Found modest evidence
  - More time spent in current school lead to higher retention effect
  - Fewer friends retained leads to higher retention effect

- Early grade retention leads to achievement gains in the short run
    - These gains come with the burden of student misbehavior

- If retention policies lead to improved learning before 3rd grade
    - Decline in retention rates – from 12 percent in 2003 to 7 percent in 2013
    - Adverse effects become less concerning

- Combined effects of retention and instructional support
    - Might not be generalizable to other retention policies