

the causes & patterns of racial, ethnic, and socioeconomic achievement disparities (learning from big data)

sean f. reardon

Frontiers of Social Innovation Conference

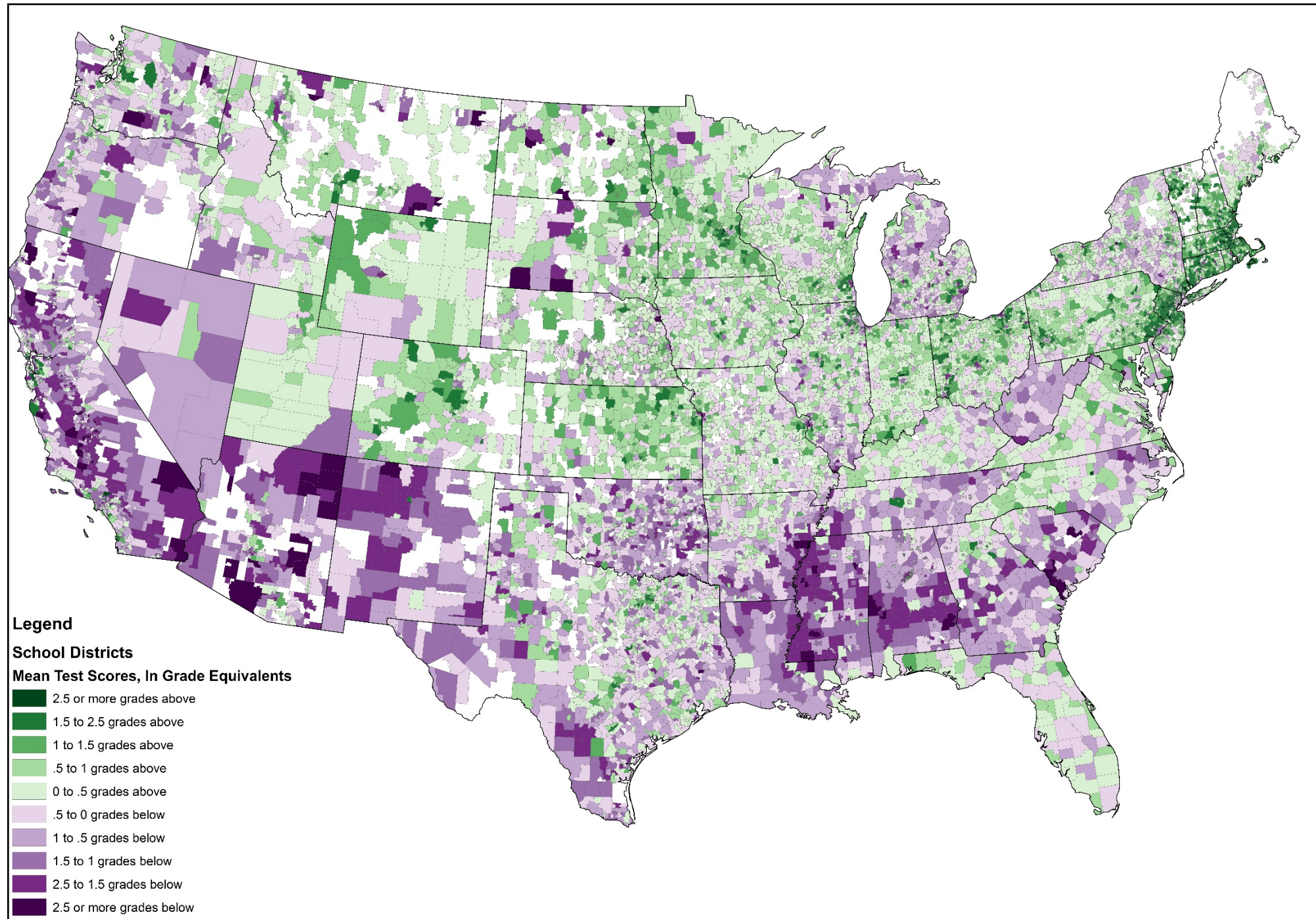
Stanford University

May, 2016

The Problem:

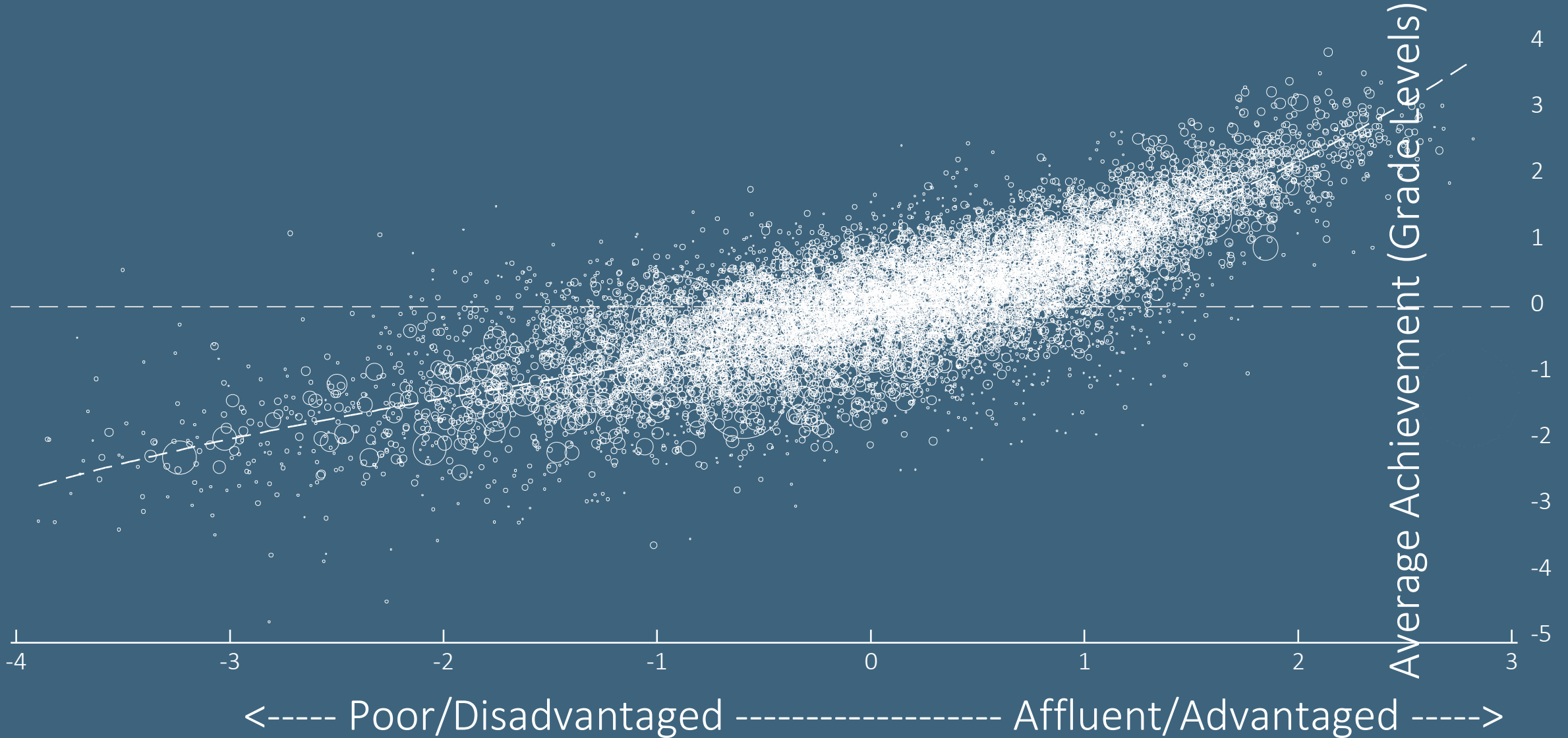
- A lot of tests (>50M/year)
- But 50 states
x 6 grades
x 2 subjects
~600 different tests/year
- This makes comparing student achievement across schools almost impossible...





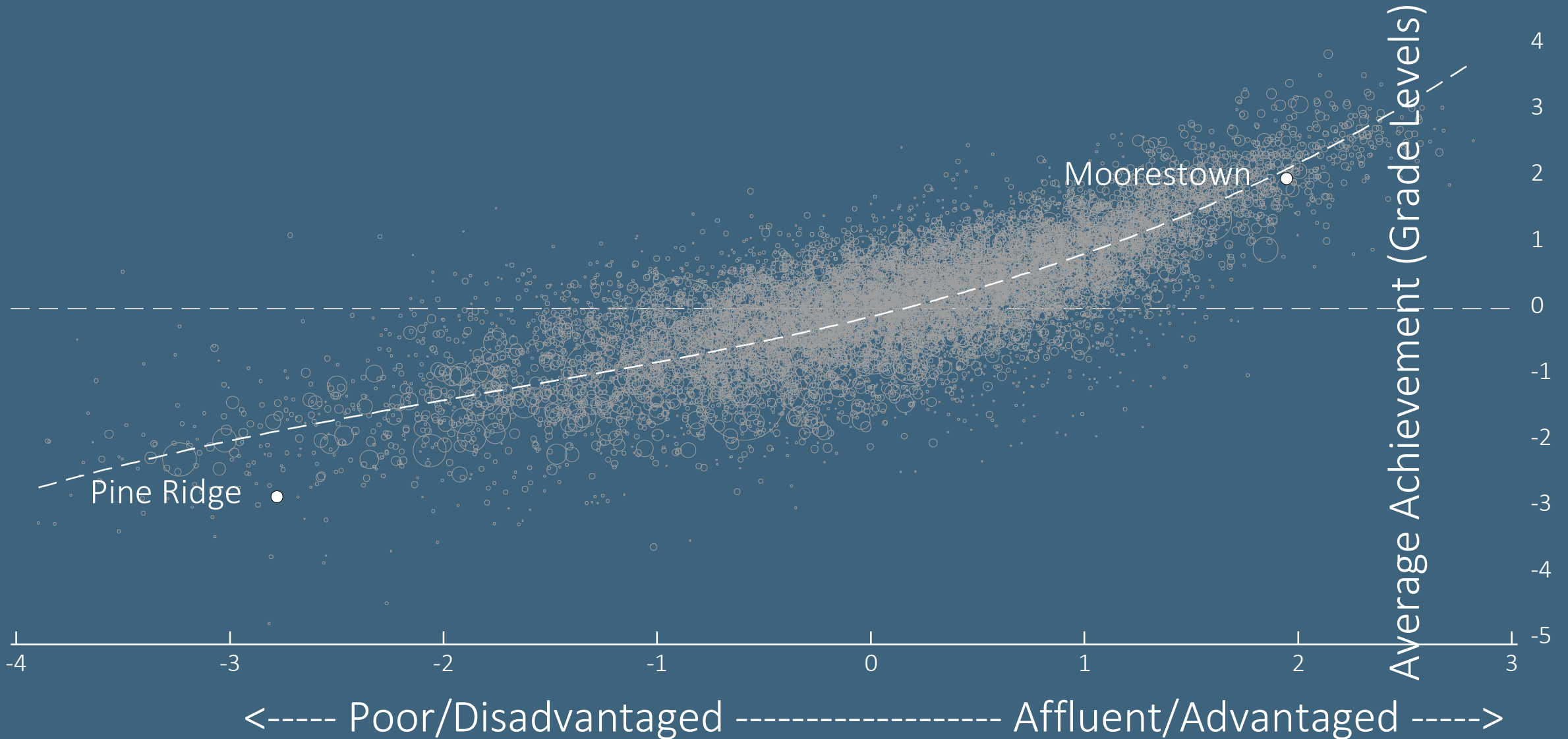
Academic Achievement and Socioeconomic Status

US School Districts, 2009-2013



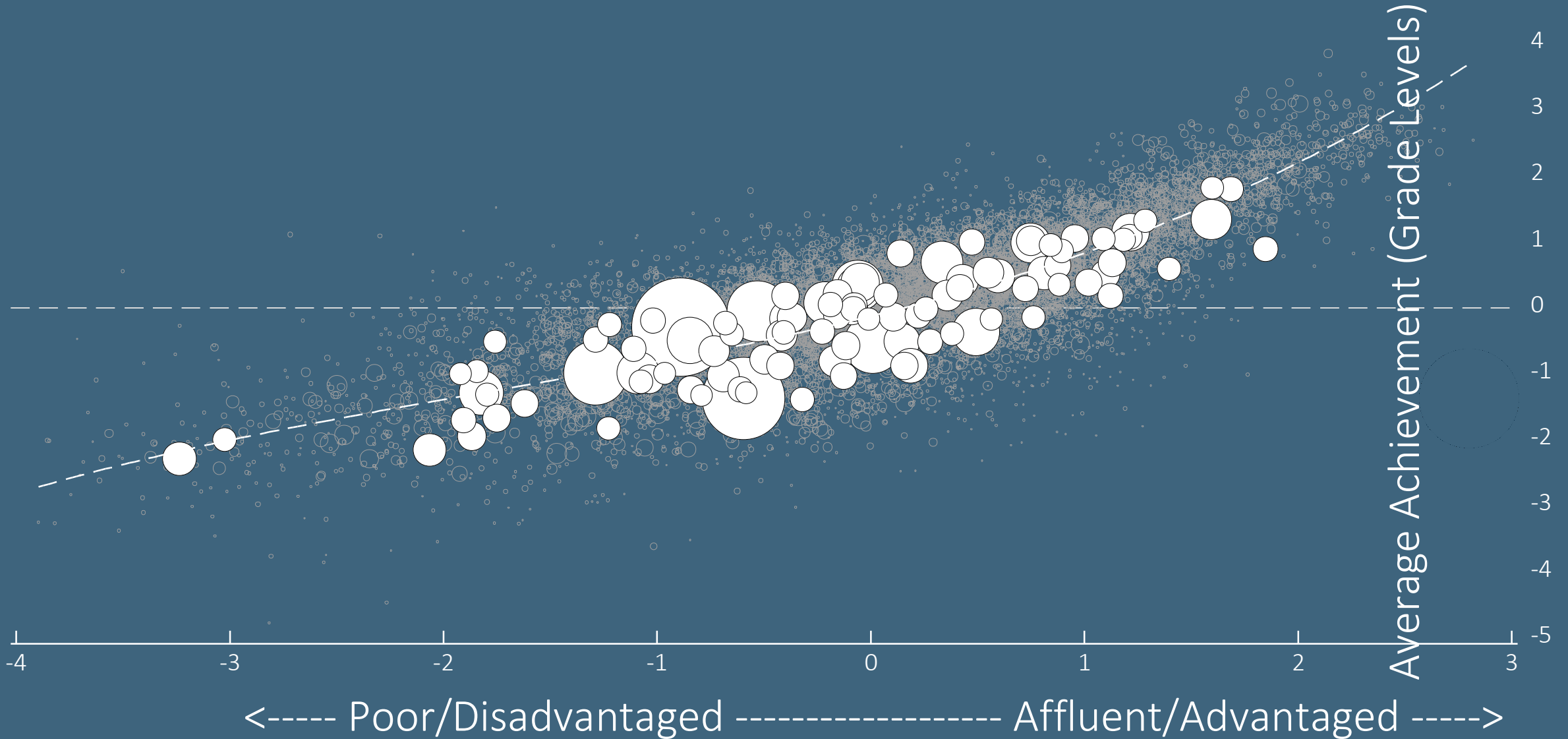
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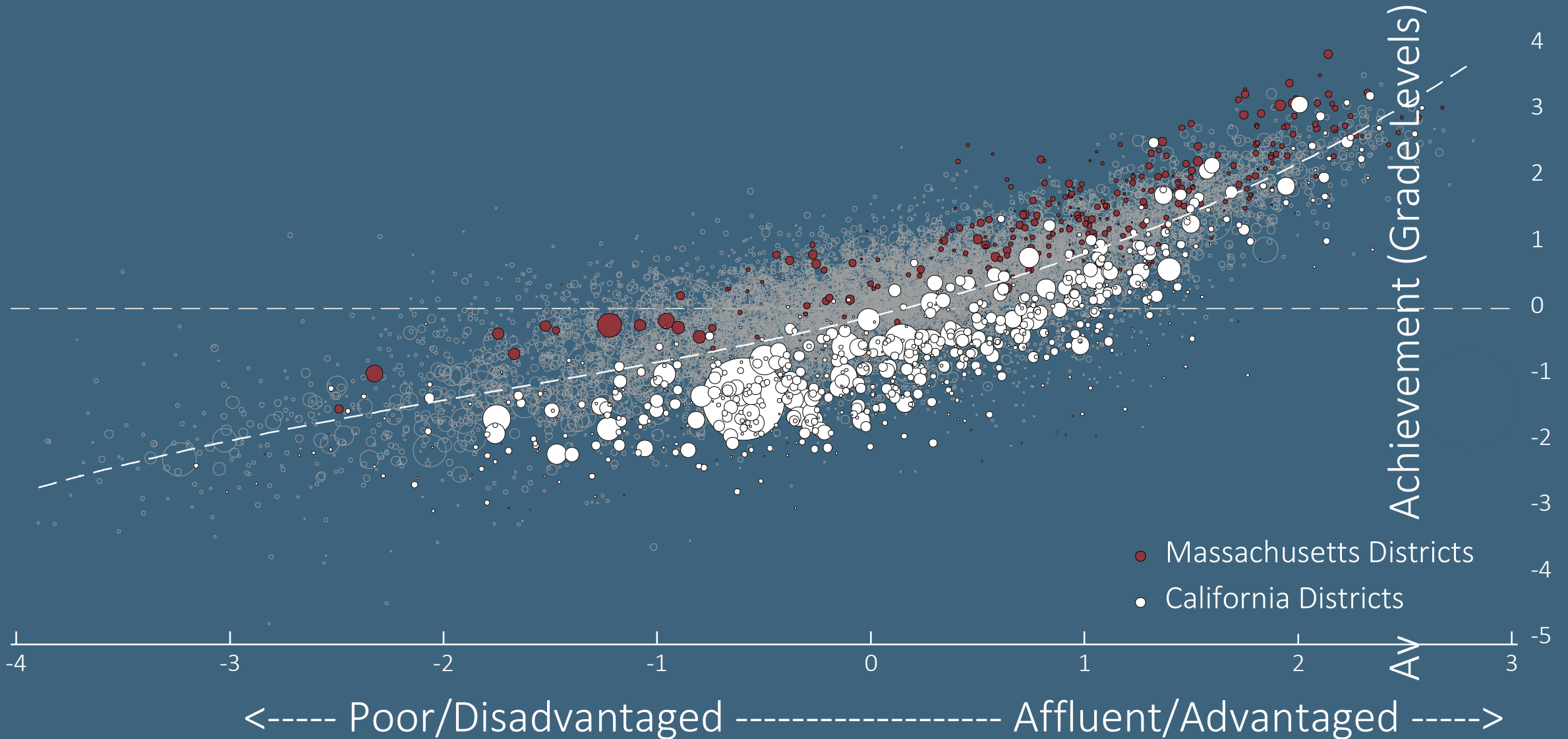
Academic Achievement and Socioeconomic Status

100 Largest US School Districts, 2009-2013

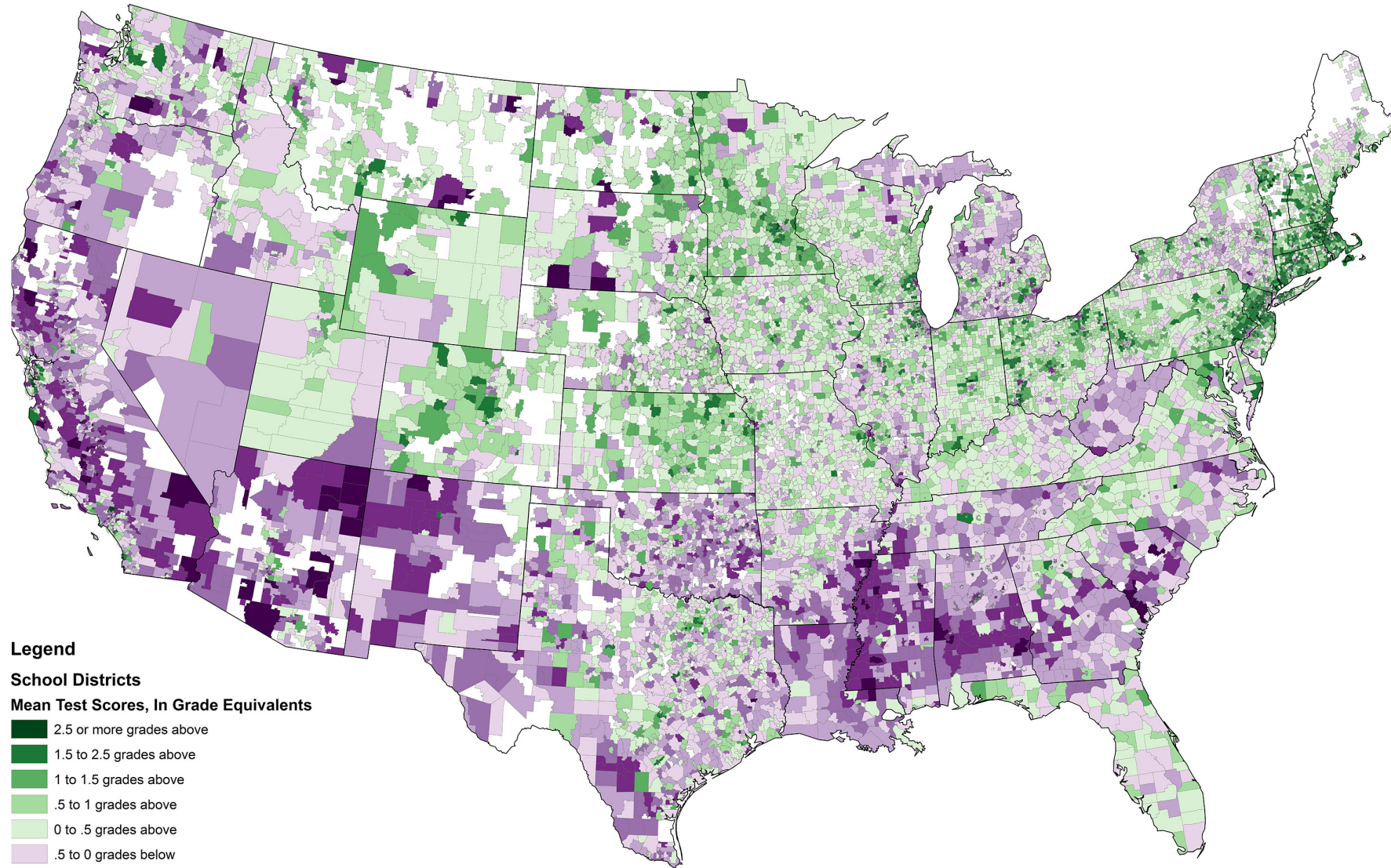


Academic Achievement and Socioeconomic Status

California and Massachusetts School Districts, 2009-2013



Average Test Scores, by School District, Grades 3-8, 2009-2013



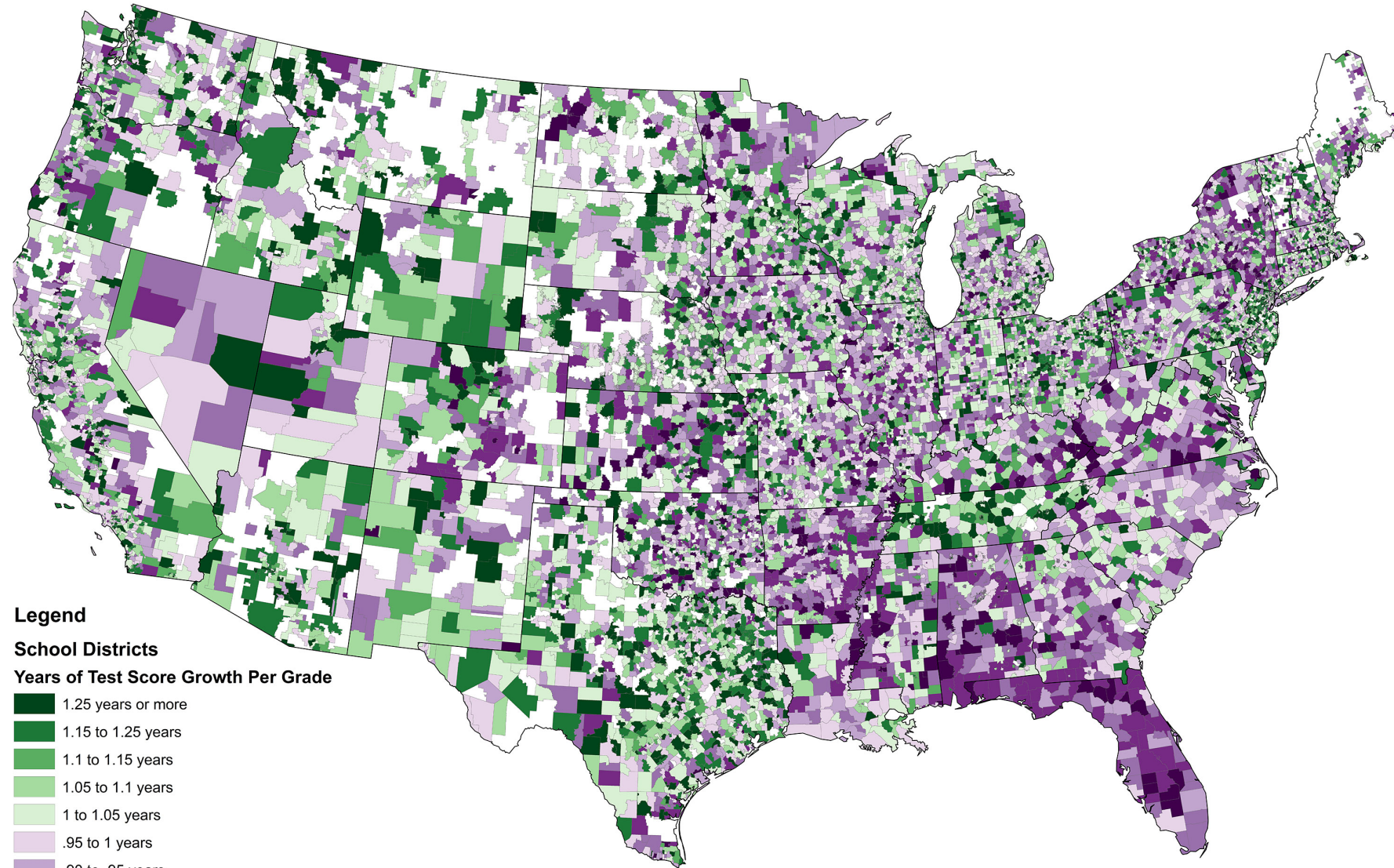
Legend

School Districts

Mean Test Scores, In Grade Equivalents

- 2.5 or more grades above
- 1.5 to 2.5 grades above
- 1 to 1.5 grades above
- .5 to 1 grades above
- 0 to .5 grades above
- .5 to 0 grades below
- 1 to .5 grades below
- 1.5 to 1 grades below
- 2.5 to 1.5 grades below
- 2.5 or more grades below

Average Rate of Test Score Growth Per Grade, School Districts, Grades 3-8, 2009-2013

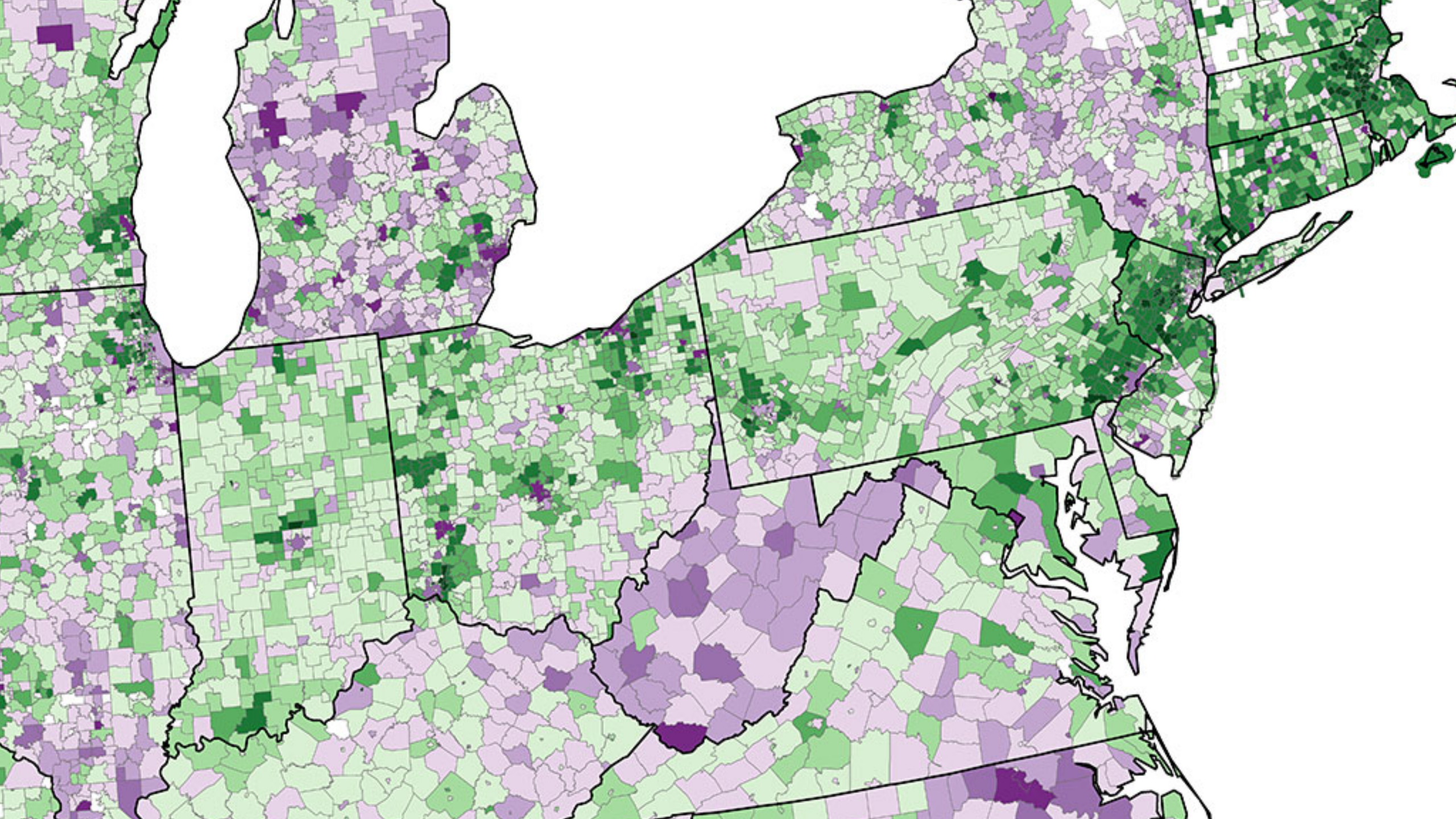


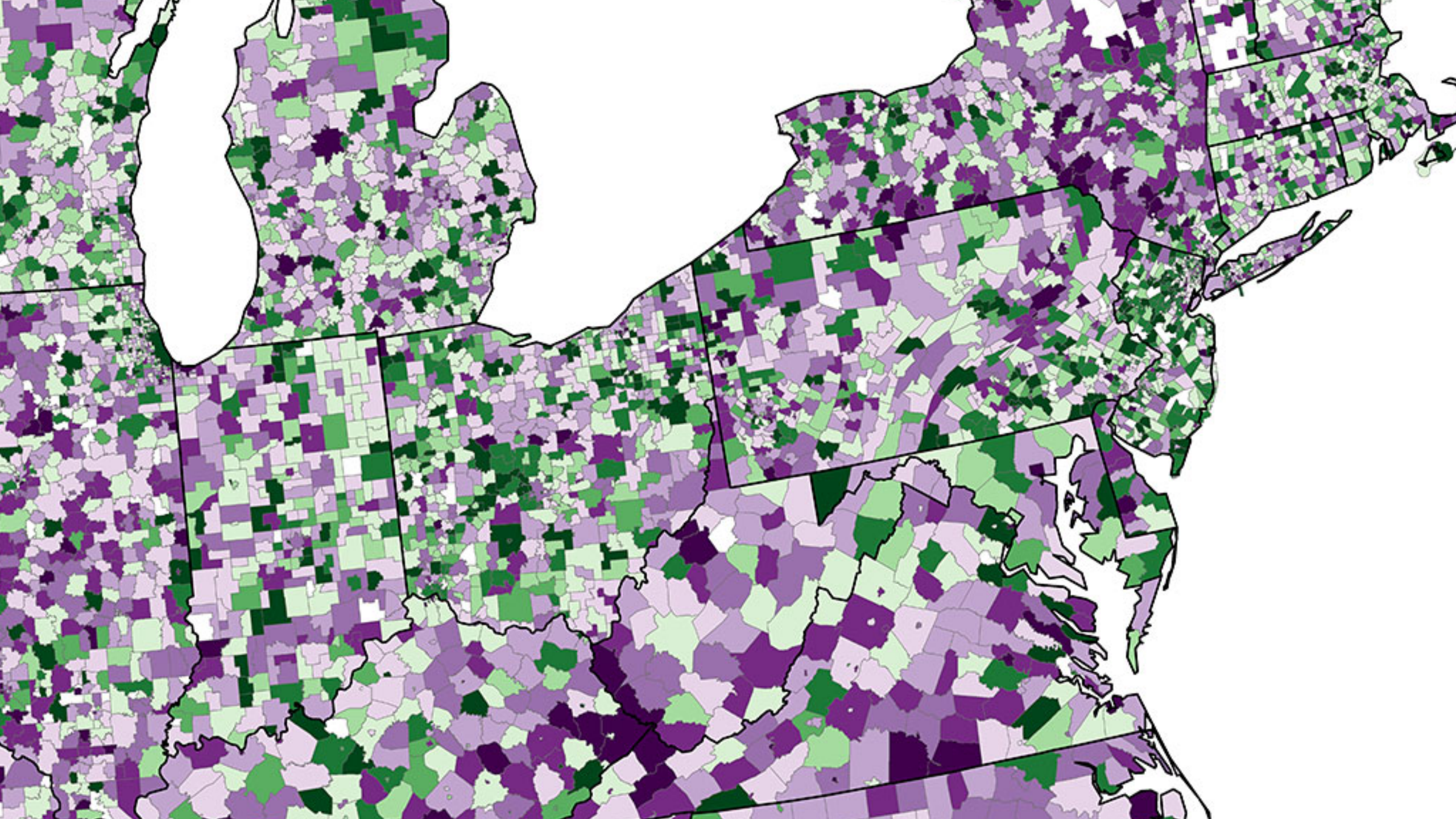
Legend

School Districts

Years of Test Score Growth Per Grade

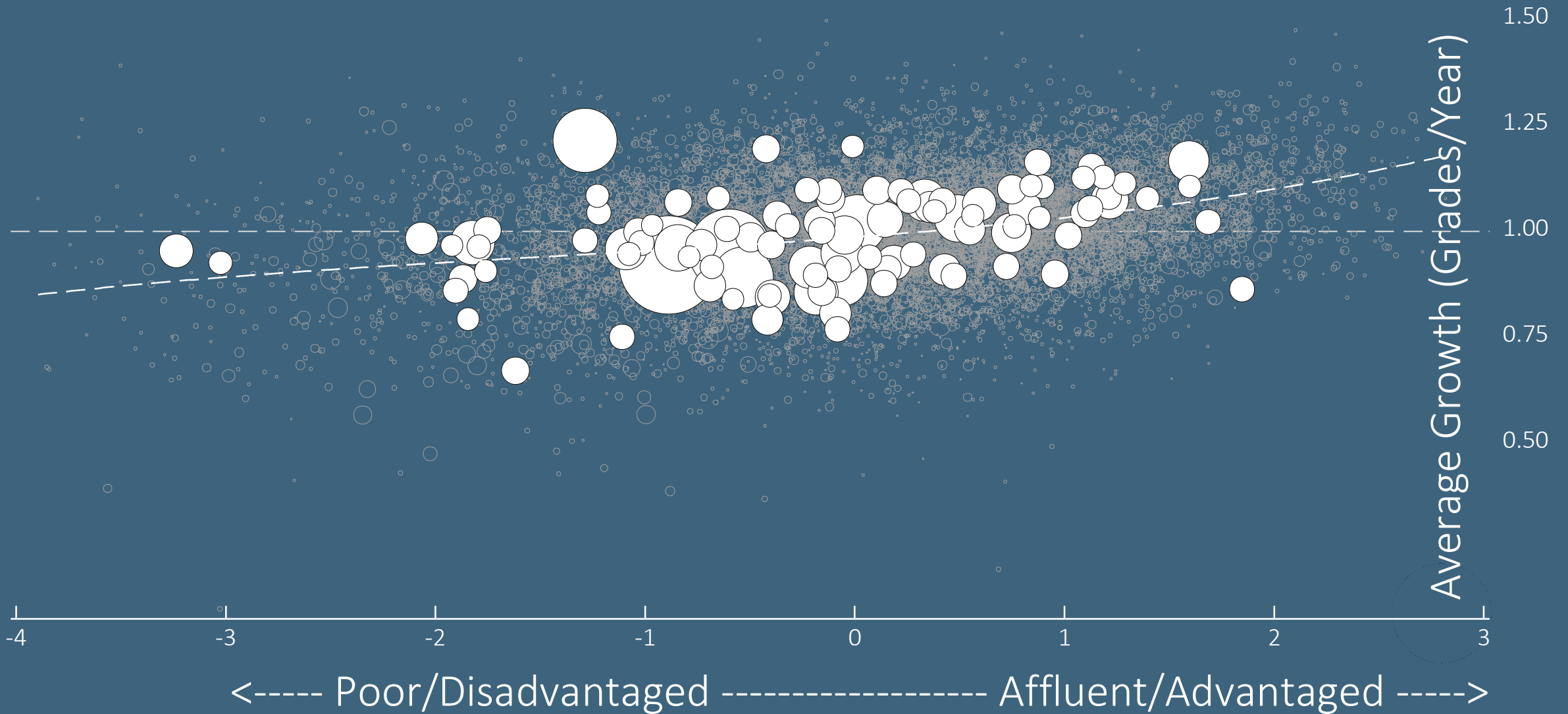
- 1.25 years or more
- 1.15 to 1.25 years
- 1.1 to 1.15 years
- 1.05 to 1.1 years
- 1 to 1.05 years
- .95 to 1 years
- .90 to .95 years
- .85 to .90 years
- .75 to .85 years
- .75 years or lower





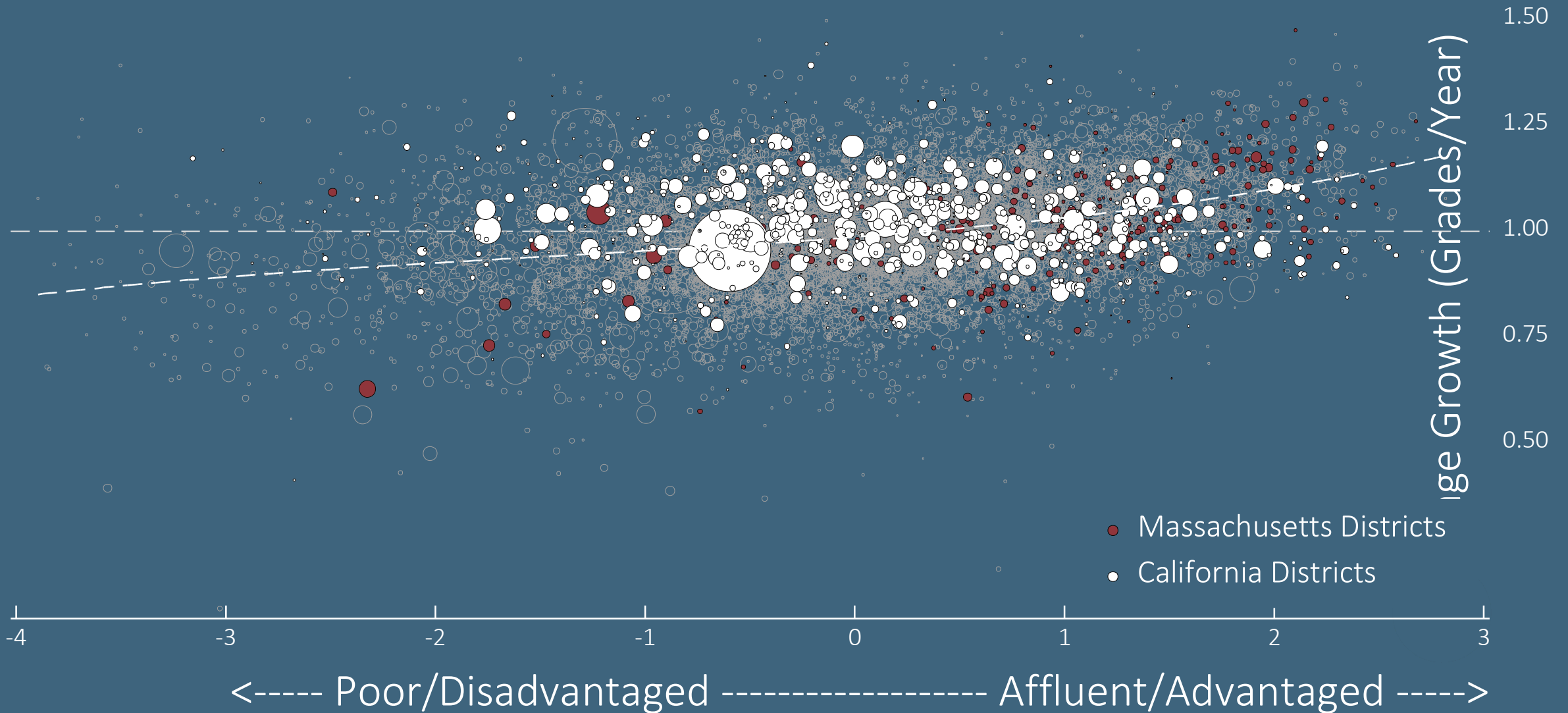
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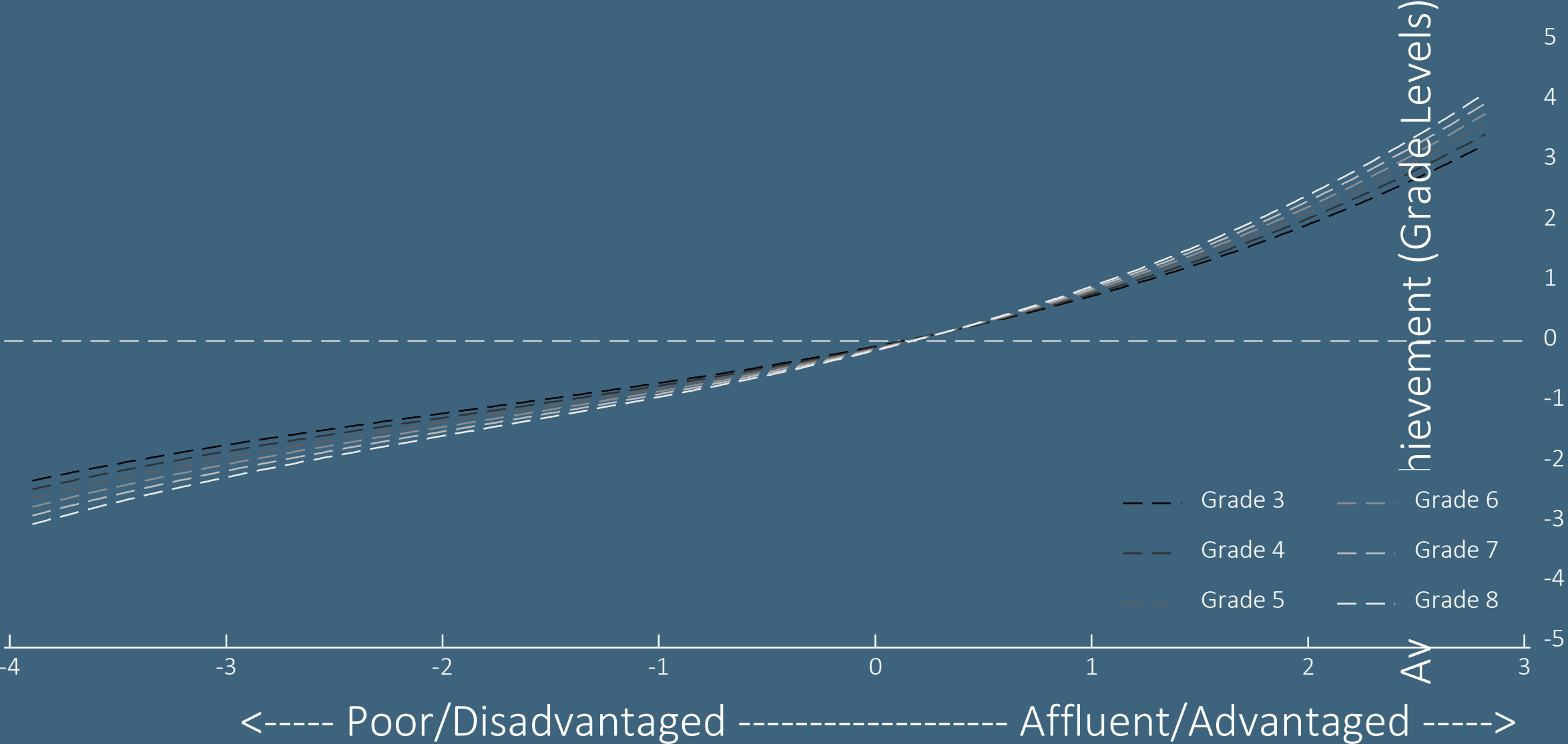
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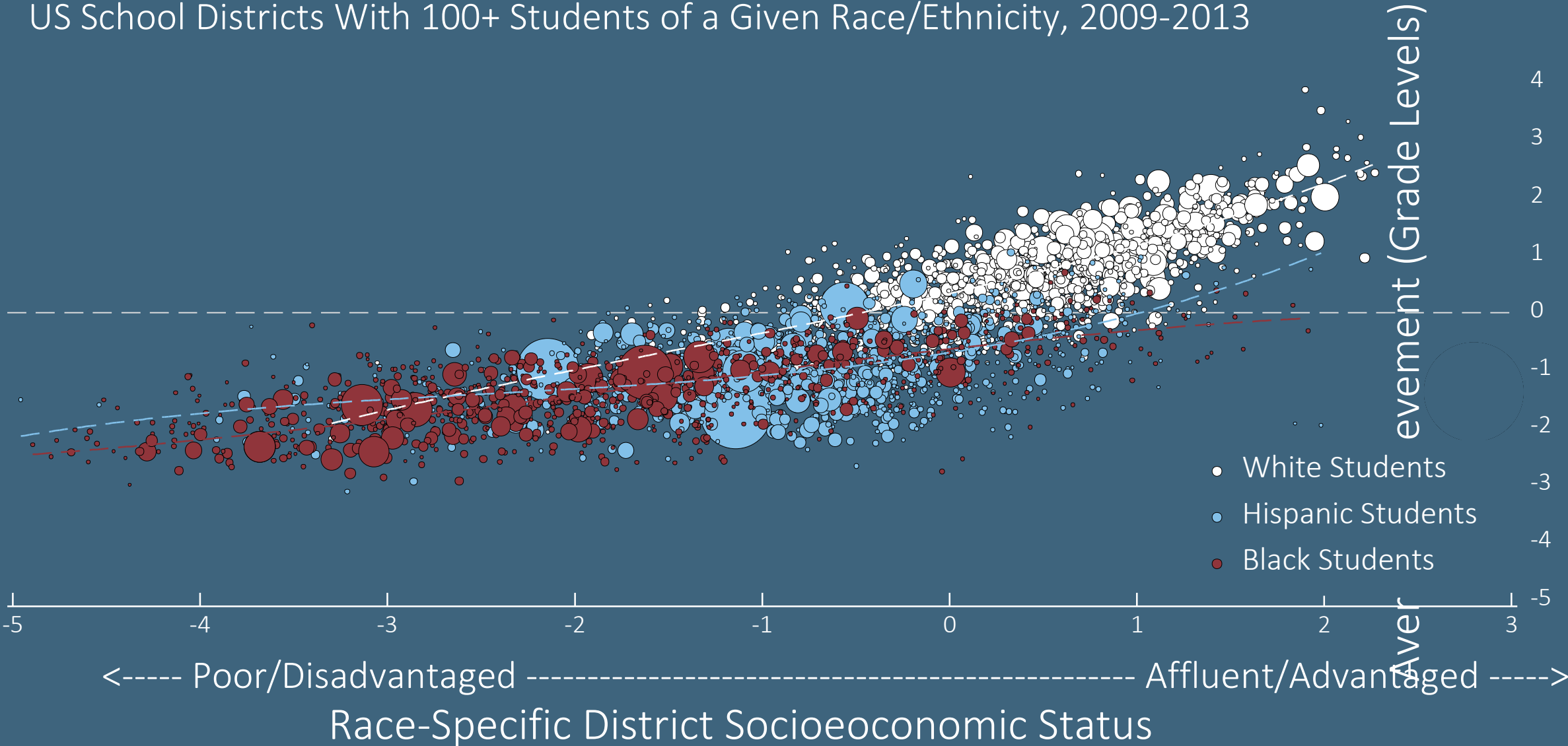
District SES-Achievement Gradient, by Grade

US School Districts, 2009-2013



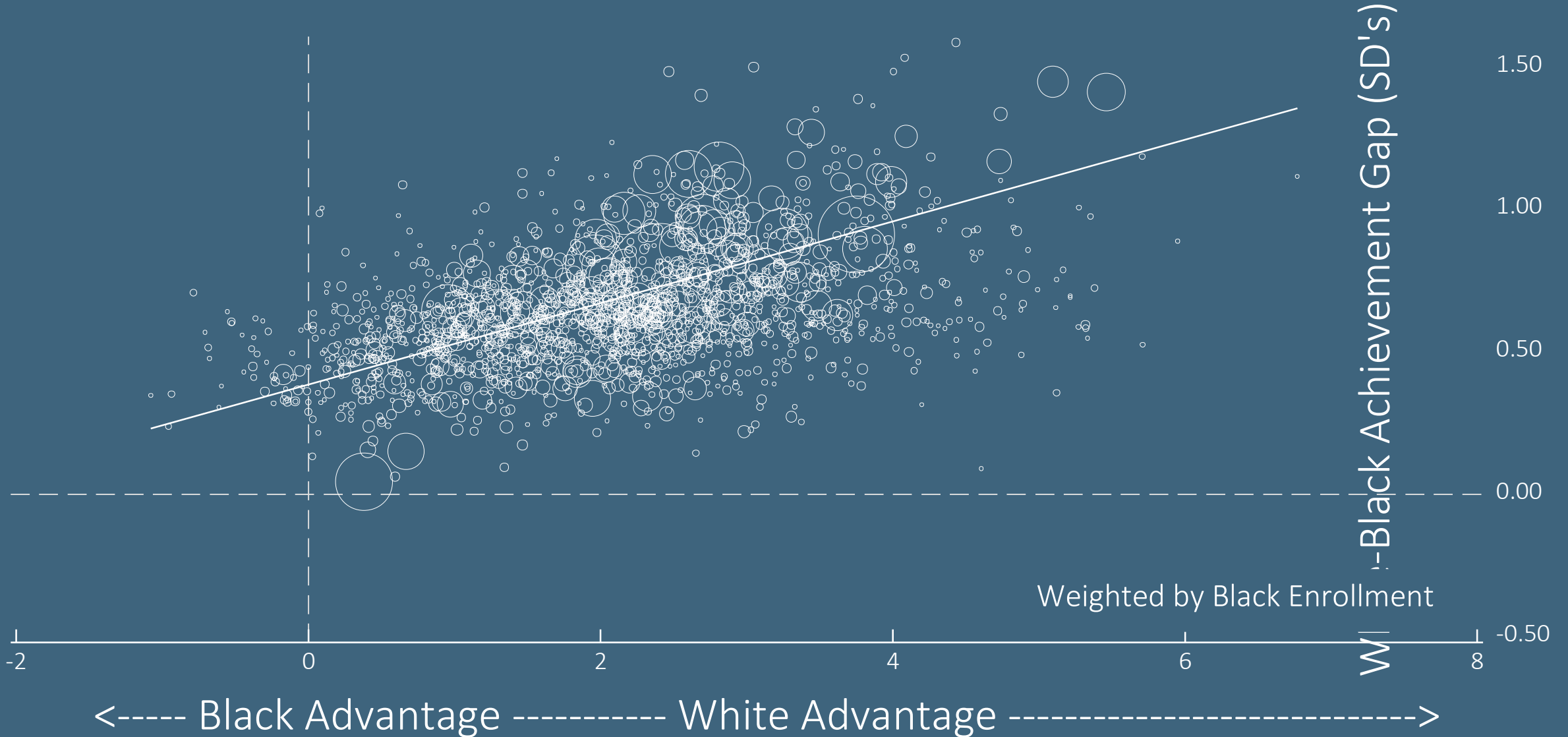
Academic Achievement and Socioeconomic Status, by Race/Ethnicity

US School Districts With 100+ Students of a Given Race/Ethnicity, 2009-2013



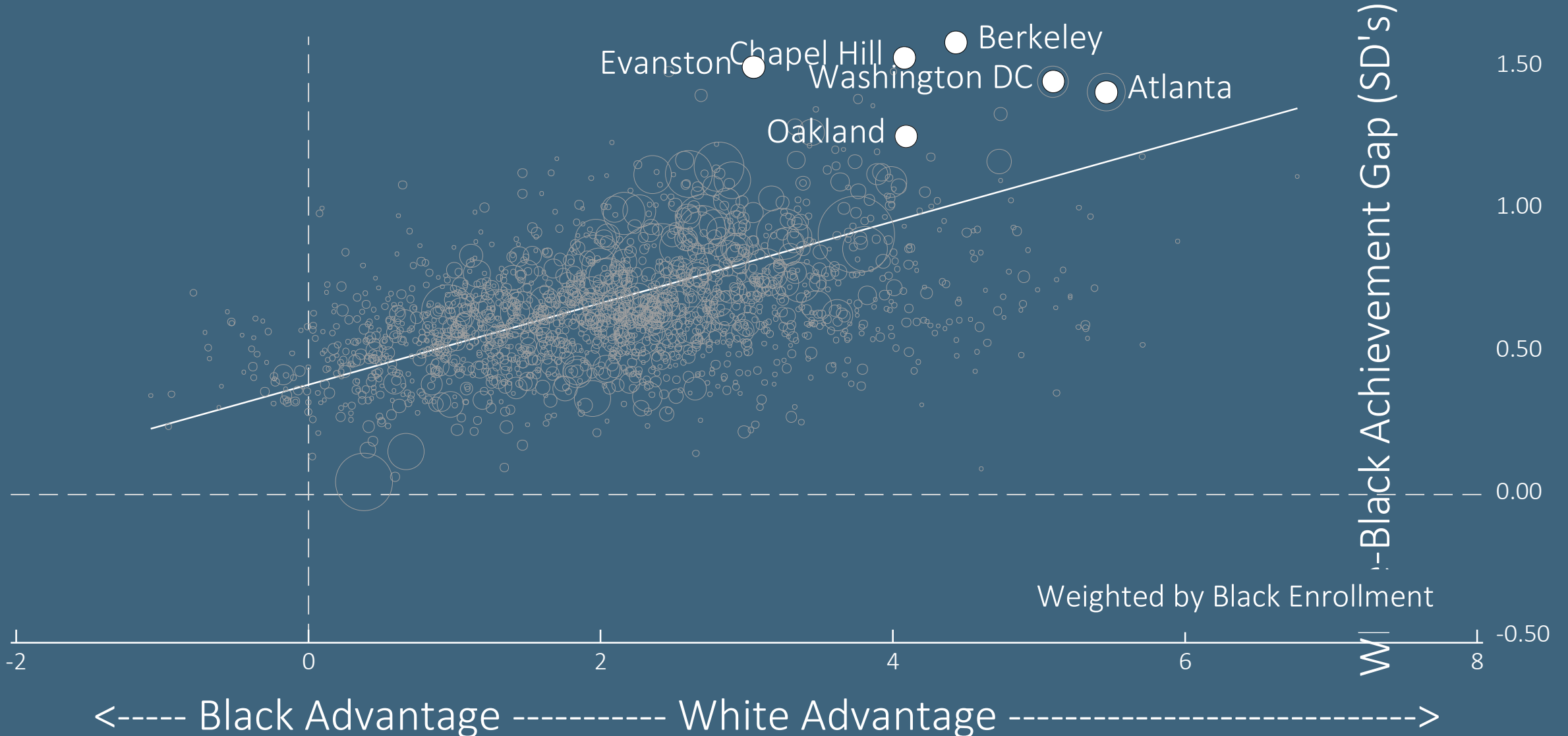
White-Black Achievement Gap and Socioeconomic Differences

U.S. School Districts With at Least 200 Black Students, 2009-2013



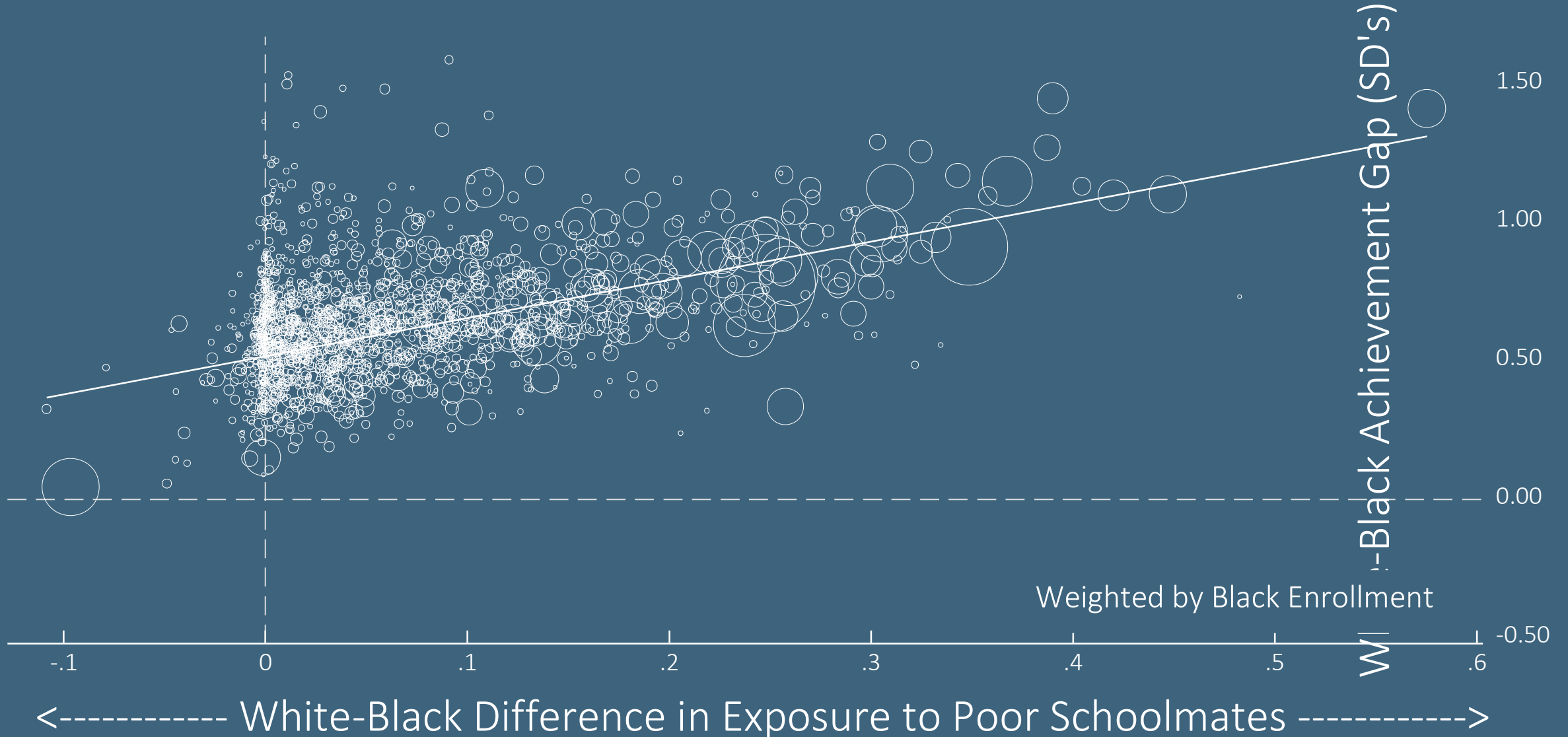
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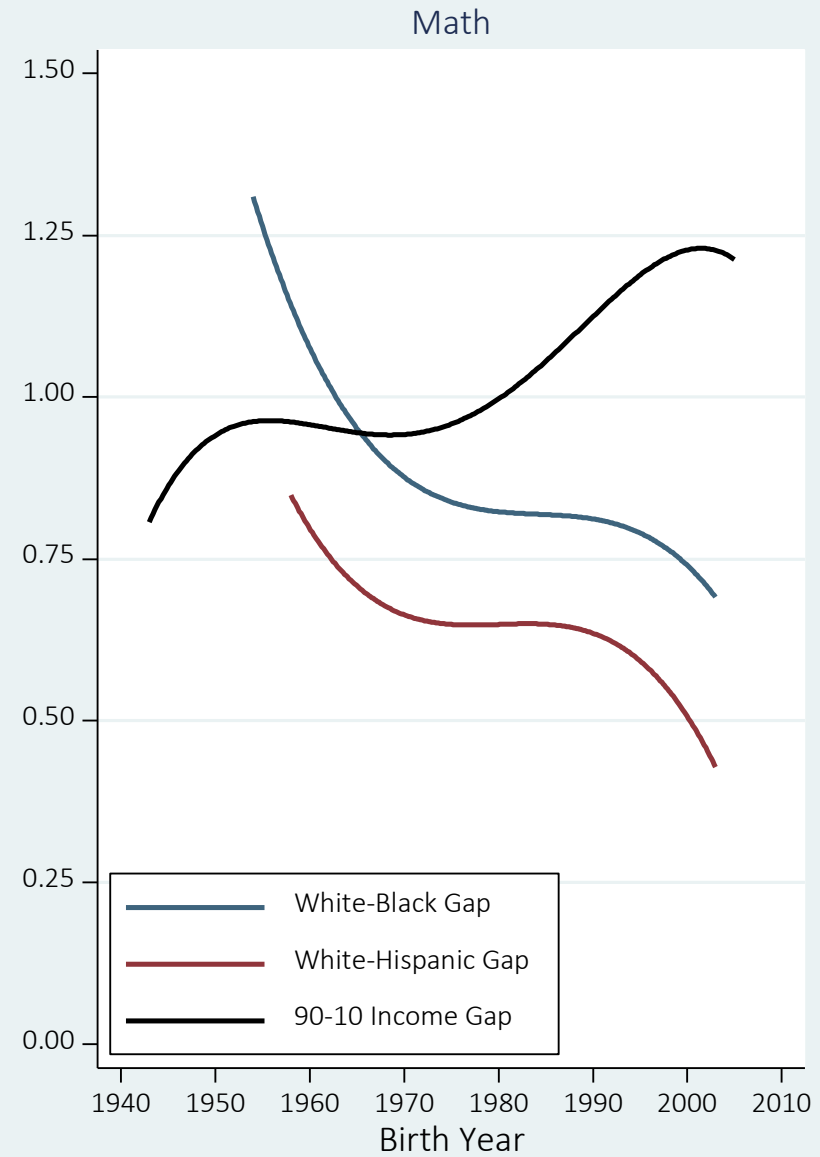
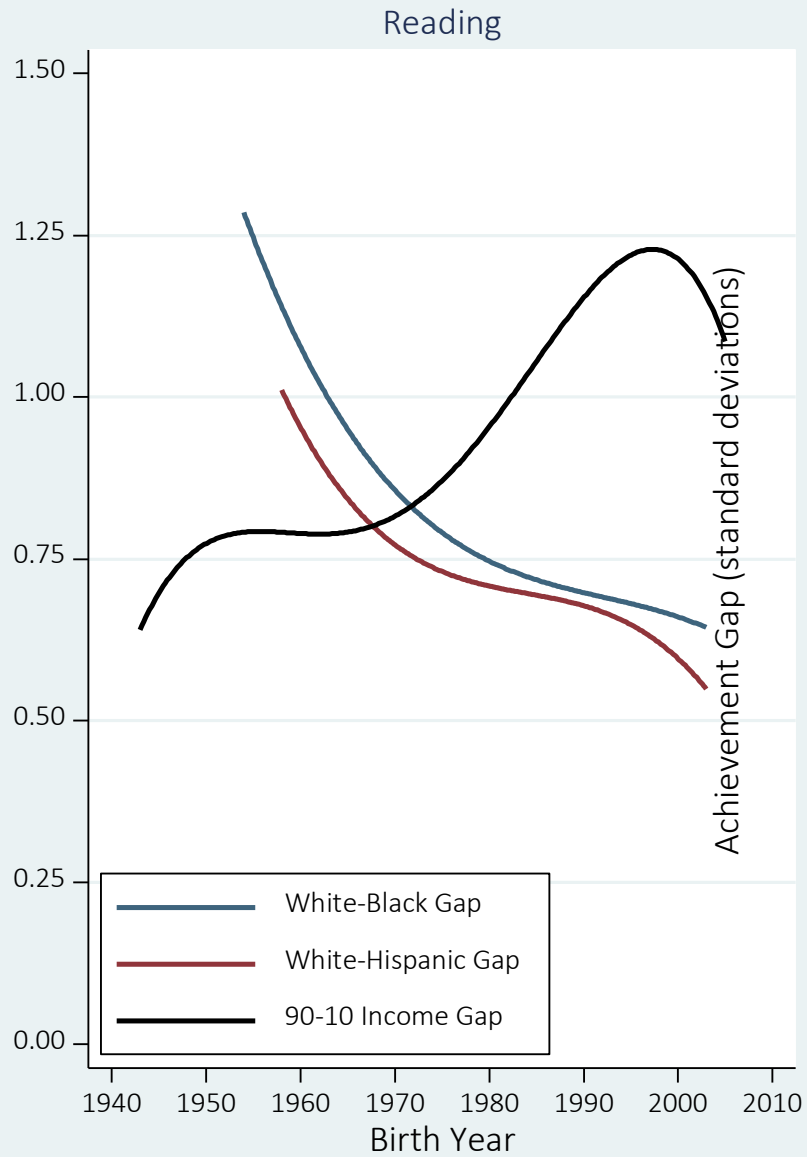


White-Black Achievement Gap and Segregation

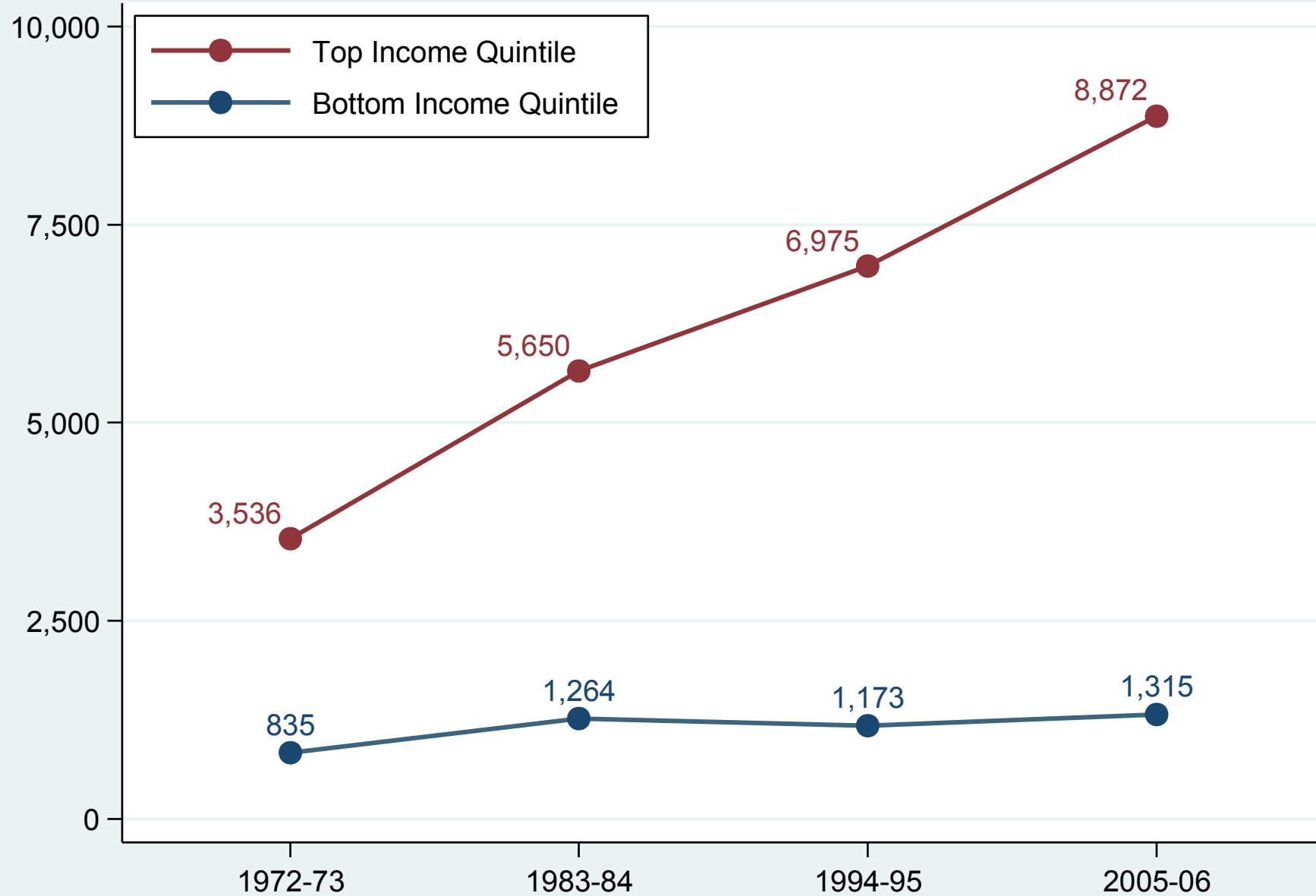
U.S. School Districts With at Least 200 Black Students, 2009-2013



Trends in Racial and Income Achievement Gaps, by Birth Cohort

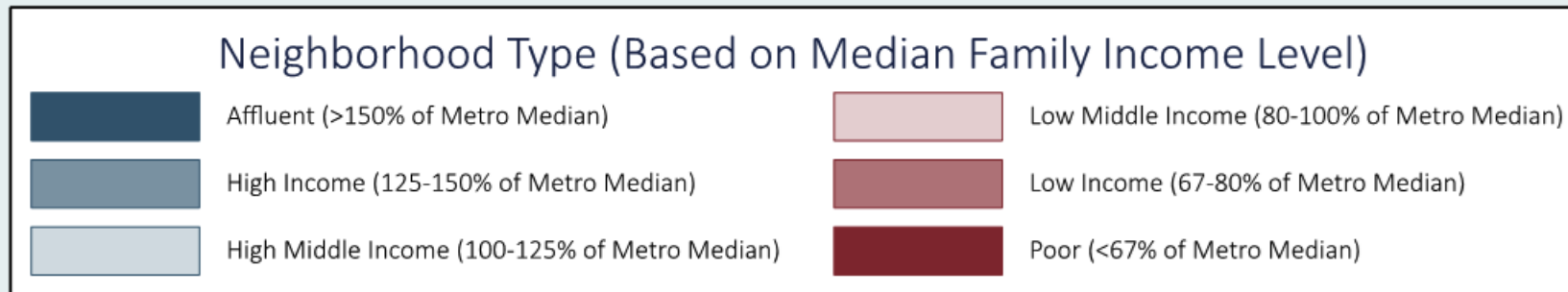
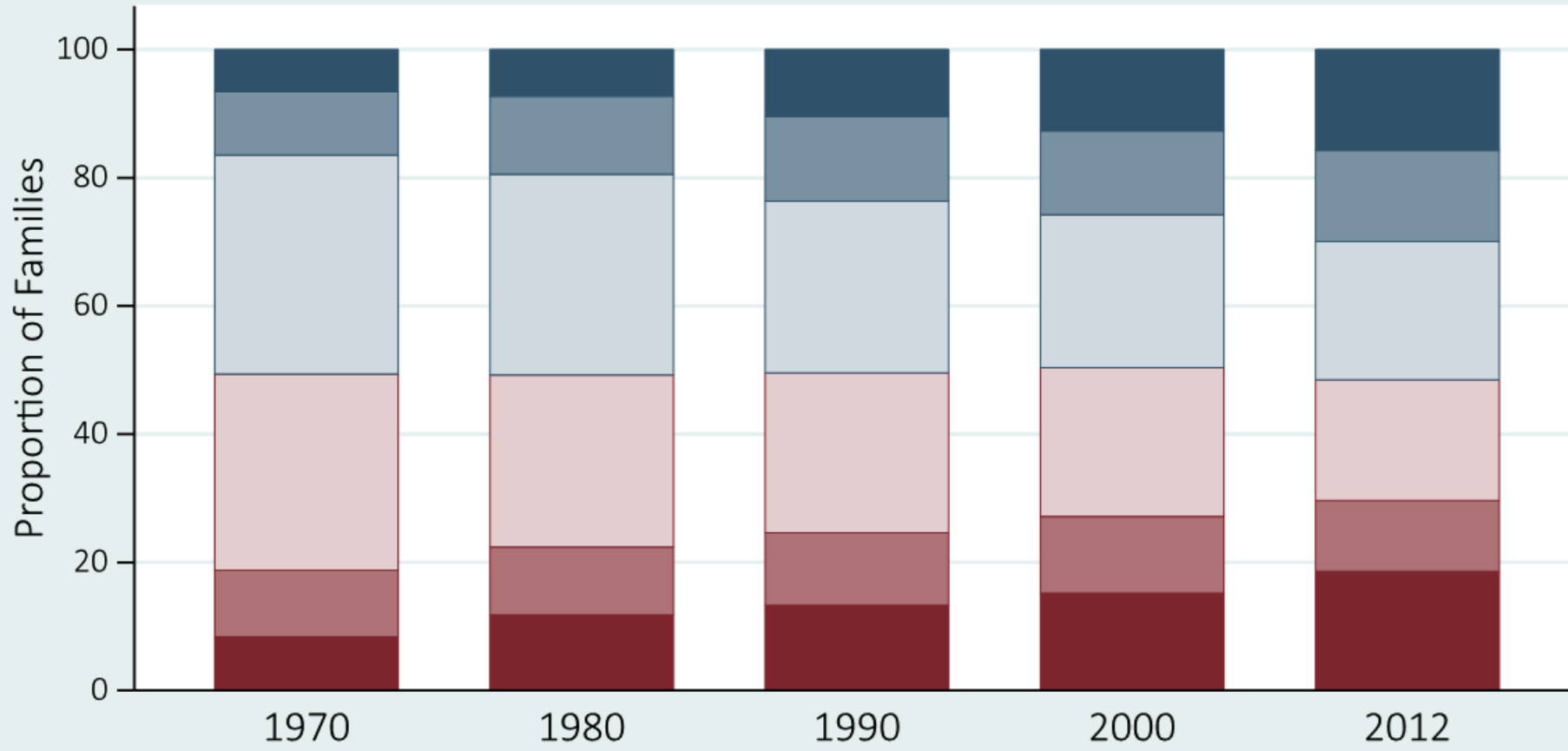


Family Enrichment Expenditures on Children, 1972-2006



Source: Duncan & Murnane (2011)

Proportion of Families Living in High-, Middle-, and Low-Income Neighborhoods Metropolitan Areas with Population > 500,000, 1970-2012



Academic Achievement and Socioeconomic Status

US School Districts, 2009-2013

