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# What Makes Charter Schools Effective?

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# How do lottery-based studies of charter schools work?

- Most charter schools in the U.S. are oversubscribed and hold lotteries among applicants.
  - In a lottery-based study, we follow the lotteried-in and lotteried-out students.
    - The lotteried-in attend charter schools.
    - The lotteried-out stay in regular public schools.
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## Why is lottery analysis the Gold Standard?

- Lotteries generate the ideal “control group” for charter school students
    - Lotteried-in and lotteried-out students are alike on every observable dimension: race, ethnicity, gender, poverty, disability, English learner status, etc.
    - They are *also* alike on dimensions we do not observe: motivation, aptitude, “fit” in the regular public schools
      - This is what randomization buys us.
      - With a lottery-based study, no one can claim a charter school’s effects are due to “cream-skimming”.
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# Why is lottery analysis vastly superior to other methods?

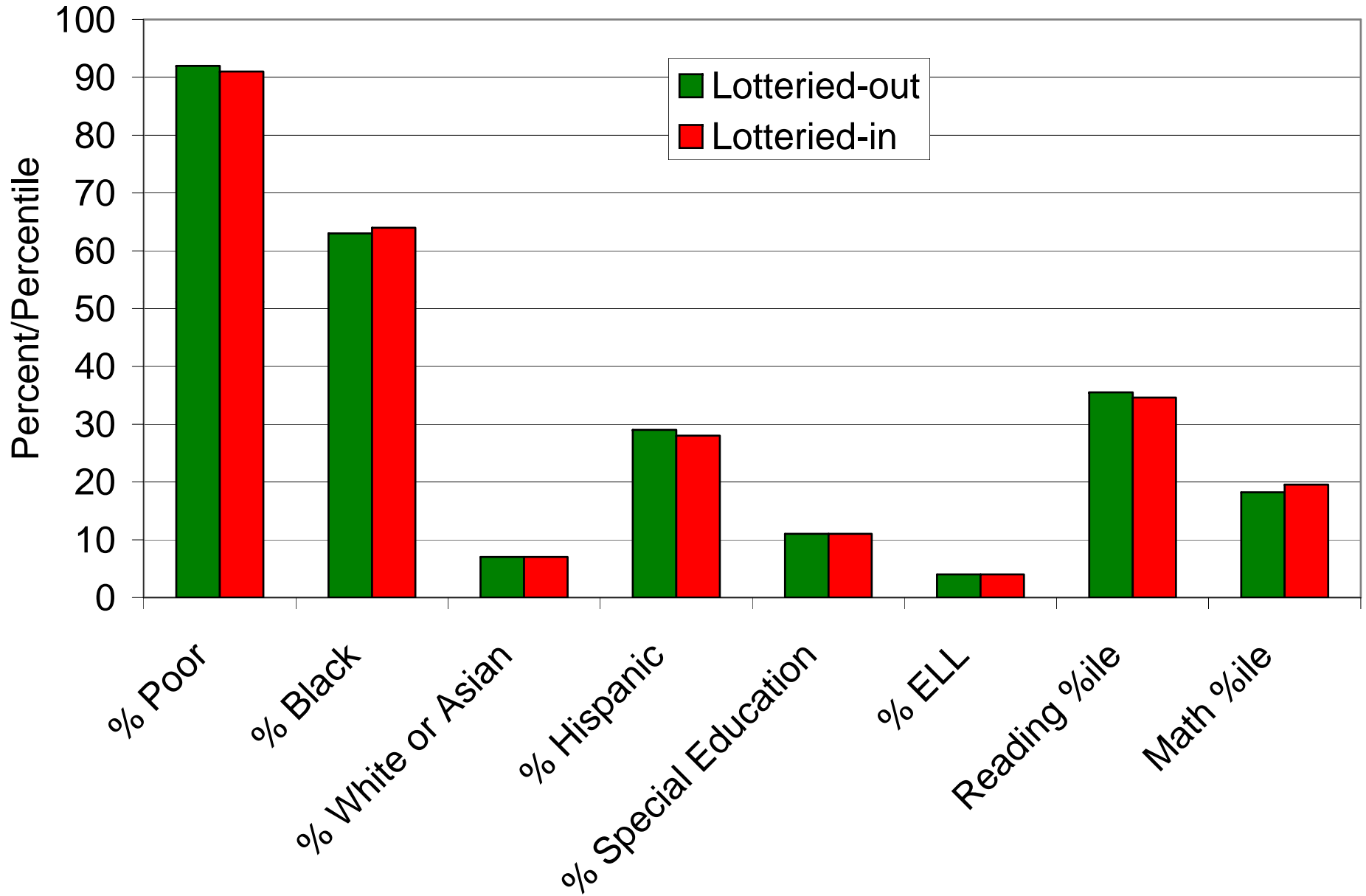
- Most methods of evaluating charter schools require the researcher to find control students he thinks are appropriate. There is no good way to do this and the “controls” are never like the charter school students on dimensions we do not observe: motivation, aptitude, etc.
    - This is why “matching” studies are unreliable.
  - Pure value-added studies produce results that are very biased.
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## The lottery-based study we are currently conducting in NYC

- We study NYC charter schools from 2000 onwards
  - 97% of their applicants participate in lotteries
  - We focus on students' statewide exam scores and on high school graduation.
  - We look for a per year effect.
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# The lotteries *are* random



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## NYC charter schools raise achievement by:

- About 0.09 standard score points *per year* in math
  - About 0.06 standard score points *per year* in reading
  - 3 to 4 points *per year* on Regents exams
  
  - For every year they spend in charter school, NYC students are 7% more likely to graduate from high school.
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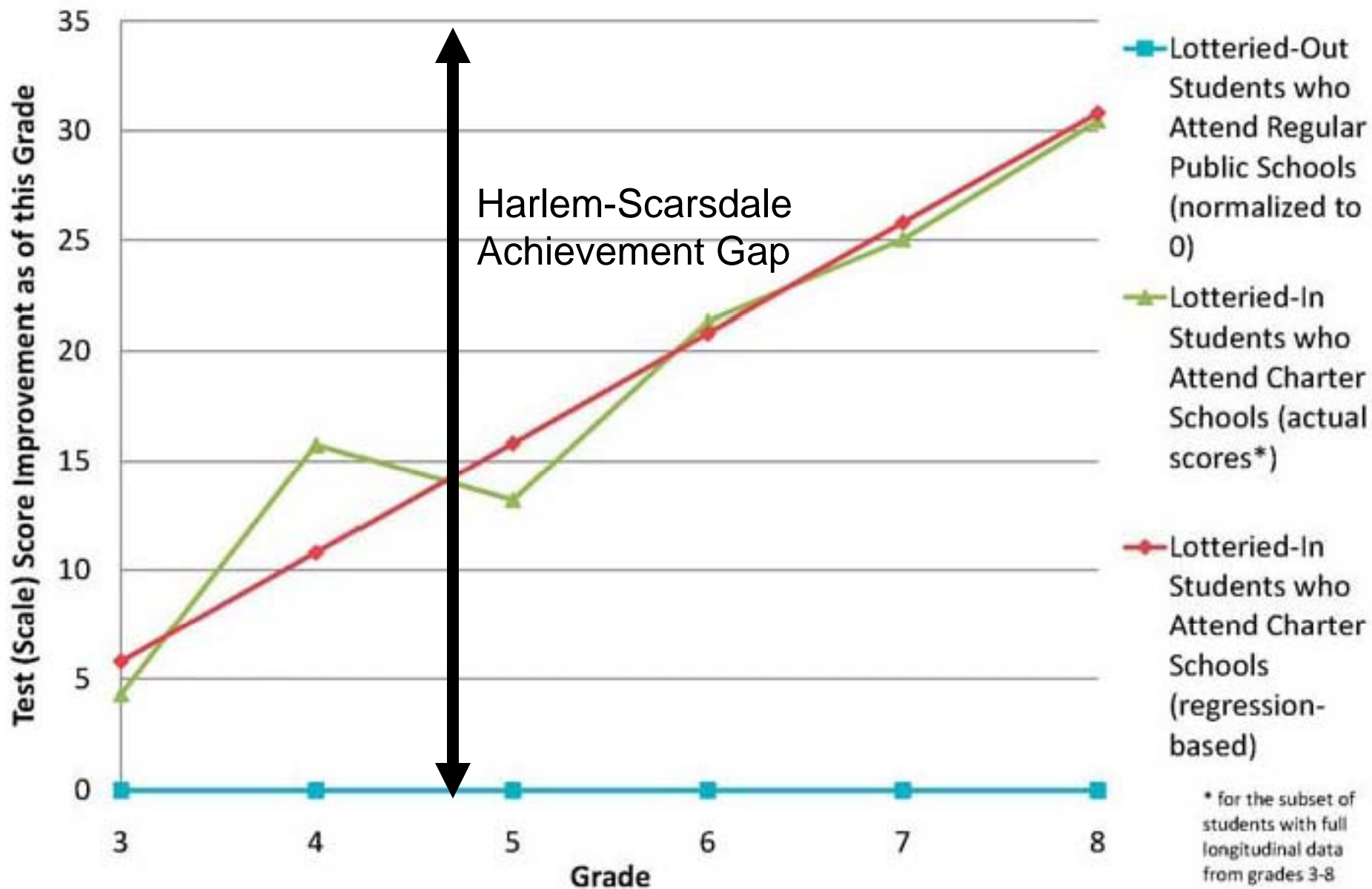
**These effects are moderate if we think of a single year.**

But attending charter school for multiple years can close the achievement gap.

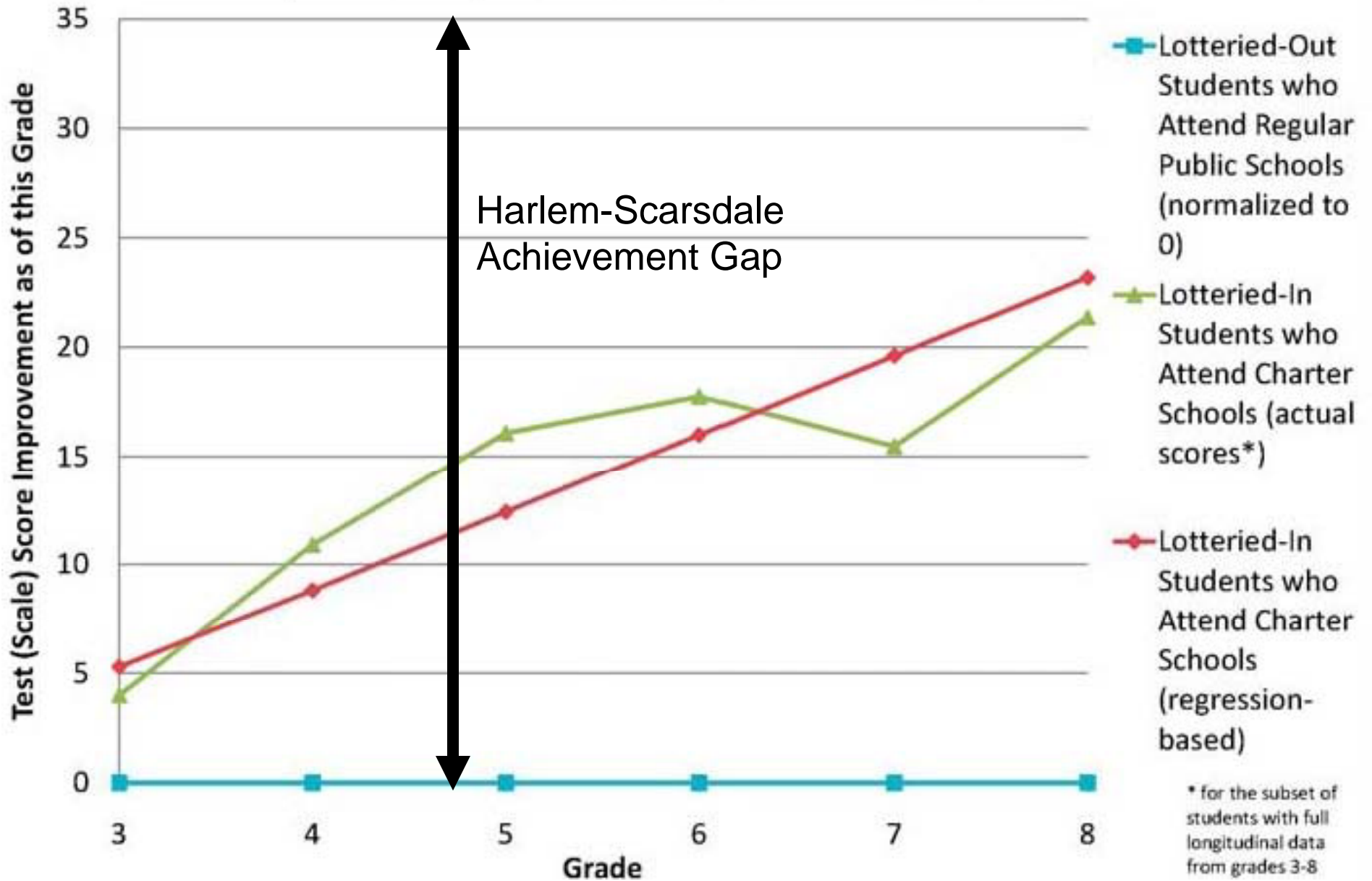
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## Estimate-Based Math Progress of Lotteried-Out Students Versus (Lotteried-In) Students Who Attend Charter Schools



## Estimate-Based ELA Progress of Lotteried-Out Students Versus (Lotteried-In) Students Who Attend Charter Schools



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# Lottery-based studies are robust

- The results are not affected by:
  - Attrition
  - Returning to the traditional public schools
  - Grade retention
  - Schools with various “win rates”
  - Students who decline a charter school place

See the technical report for more.

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# What causes NYC charter schools' typical, positive effect on achievement?

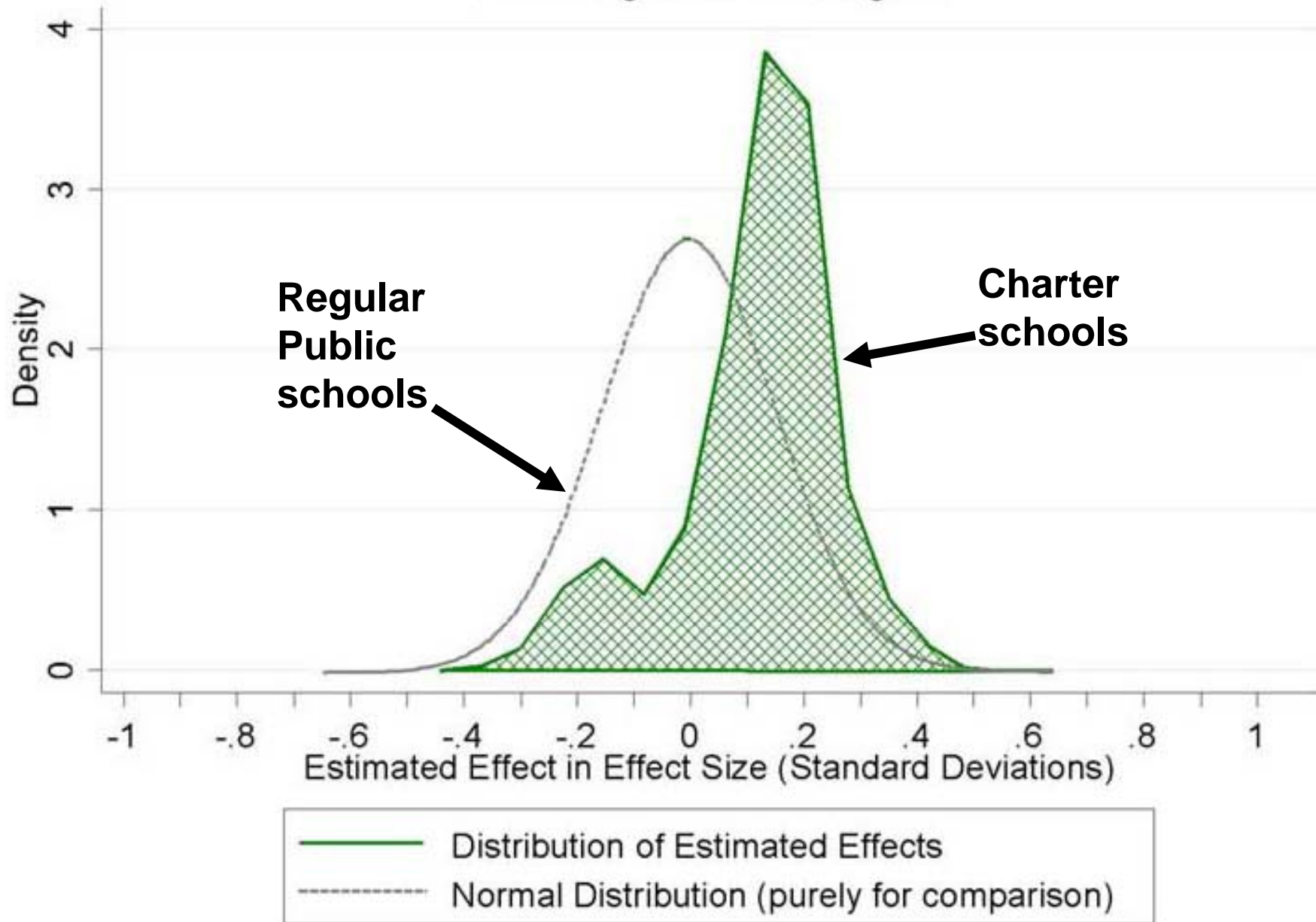
- It's things that charter schools have in common:
    - Governance like that of non-profits, with authorizers and city/state/federal accountability layered on top
    - Families who don't have to stay (and who can take the budget with them)
    - Autonomous management
    - Discretion over hiring teachers
    - Discretion over which teachers leave
    - Routine diagnostic assessment of students
    - School uniforms/strict dress codes
    - Lack of union work rules
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**Of course, not all charter schools have the same effects.**

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# Distribution of Charter Schools' Effects on Mathematics tests for grades 3 through 8



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# Can we learn from charter schools that are more successful?

Yes and no. We can get suggestions about what works, but we cannot learn the *causal* effects of schools' policies

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# Charter schools' policies *are* different

	<b>Average for NYC Charter Students</b>	<b>Average for NYC Regular Public Students</b>
Days in the school year	192	178
Hours in the school day	8	5.5
Saturday school	57%	0%
Minutes of reading each day	112	80
Long math period (90+ minutes)	50%	5% ?
Routine internal assessments	92%	10% ?
Parent contract	52%	0%
Small reward/punishment discipline	22%	?
Uniforms or strict dress code	89%	3% ?



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## Which policies show up in schools with strong positive effects?

- Long school year, long school day, Saturday school
  - Long reading & math periods
  - Small rewards/small punishments discipline
  - Teacher pay based on performance & duties (not just seniority & credentials)
  - A mission statement that emphasizes academic performance
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# Which policies do not necessarily show up in schools with strong positive effects?

- Years that the school has been in operation
  - Type of operating agency
    - Educational Management Organization
    - Charter Management Organization
    - Community Grown Organization
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**Why are NYC charter schools  
successful, compared to other  
charter schools?**

This question is based on a  
false premise.

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We have no idea whether NYC charter schools are more successful than 97% of other charters.

- ***Our evidence base on charter schools is appallingly and unnecessarily poor***
    - Most charter schools are evaluated using such unreliable methods that we have no idea what their true effects are.
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# What explanations could explain good but not unusual charter success?

- A solid charter school law
    - NY law is good but not remarkable.
    - Funding for charter schools is good but not notably better than in a number of other states
  - Authorizers are solid
    - NY authorizers conduct themselves in the way that good, pro-active authorizers do
  - Moderate strategy for expansion
    - NY is neither “let a 1000 flowers bloom” nor “few but good”
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## What things are peculiarly propitious for NYC charter schools?

- A supportive Chancellor and Department of Education
- High density of charter schools that learn from one another

Fortunately, these factors are not in limited supply.

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# Lessons

- Unless we change the standard of evidence, we will still be here in 20 years, dependent on anecdotes about what works and why.
  - Rigorously testing charter school-type policies in traditional public schools would help.
  - No obvious reason why the supply of effective charter schools will run out or why other areas cannot achieve same success as NYC.
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