**Charter School Demand and Effectiveness: A Boston Update**

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**Link:** <http://seii.mit.edu/research/study/charter-school-demand-and-effectiveness-a-boston-update/>

# Key Findings

We studied the demand for and effectiveness of charter schools in Boston. We find:

* From school year 2009–10 to school year 2012–13, applicants per seat available increased from about two applicants per seat to three applicants per seat in middle school, and from about three per seat to four in high school.
* A majority of applicants are offered a seat, mostly off waitlists as opposed to on lottery day. About two-thirds of charter middle school applicants and 40 percent of high school applicants who are offered a seat accept it.
* Confirming prior work, we find large positive gains on MCAS for students who attend a Boston charter school, on the order of a 6 to 12 percentage point gain in proficiency per year. Gains are largest for minority students and English language learners, as well as in middle schools, students with lower prior MCAS scores.

# Research Questions

This paper is a follow-up to a 2009 report also released by The Boston Foundation, entitled, *Informing the Debate: Comparing Boston’s Charter, Pilot and Traditional Schools*. We ask several questions about charter school application and enrollment trends:

* What percentages of each year’s middle school and high school classes apply to a charter?
* What percentage of charter applicants receive an offer? How does this compare to the first-choice offer rate in the Boston Public Schools (BPS) assignment process?
* Where do charter applicants ultimately attend?
* What are the demographics of charter students as compared to Boston Public Schools students?

We also investigate charter school effectiveness:

* What is the per-year effect of charter school attendance on MCAS scores and proficiency levels?
* How do MCAS gains compare across groups of schools and groups of students?

# Data

We collected lottery records for Boston charters operating between 2002–03 and 2011–12. The charter school lottery sample covers 87 percent of charter school enrollment in the most recent three years of the study. We link the charter lottery data to state student information (SIMS) and test score (MCAS) data. We use MCAS data to estimate charter effectiveness per year. We use SIMS data to gather background characteristics of students in the sample and to match to the lottery records.

# Research Methods

We used the charter school waitlists, matched to state databases, to calculate our findings for the demand results. To calculate per-year charter school test score impacts, we employed an ”apples to apples” comparison by using the charter school lotteries. We compared test scores between those offered a seat and those not offered a seat, adjusting for charter school attendance.

# Detailed Results

Charter demand:

* From SY09–10 to SY12–13, applicants per seat available increased from two applicants per seat to three applicants per seat in middle school and from about three per seat to four in high school.
* The share of sixth graders in Boston who apply to at least one charter school increased from 15 percent in SY09–10 to 33 percent in SY12–13; for ninth graders, from 11 percent to 15 percent.
* A majority of charter applicants are offered a seat, mostly off waitlists as opposed to on lottery day. About half of middle schools students who apply are offered a seat. In high school, almost 70 percent of applicants are offered a seat. About two thirds of charter middle school applicants and 40 percent of high school applicants who are offered a seat accept it.
* To put this finding in context, 68 percent of BPS middle school students who submit preferences are offered their first choice school; 55 percent of high school students are offered their first choice school.

Charter effects on MCAS performance:

* The per-year effect of charter attendance on middle school proficiency rates is 12 percentage points in mathematics and 6 percentage points in English language arts. At the high school level, effects on MCAS proficiency are about 10 percentage points per year in both subjects. The charter effect on reaching the MCAS advanced level is 18 percentage points per year in math and 12 percentage points per year in ELA.
* A year of attendance at a charter middle school increases MCAS test scores by 0.25 standard deviations in math and 0.14 standard deviations in English language arts. In high school, the impacts are 0.25 standard deviations in math and 0.27 standard deviations in ELA per year.
* Gains are largest for minority students. In middle school, gains are larger for students with lower baseline MCAS scores. Gains are large for ELLs in both middle- and high school, though the high school sample is too small for precise estimates for this subgroup.

# Implications for Policy and Practice

Charter students tend to have somewhat higher early test scores than the general BPS population. Achievement gains are large for groups with low application rates, including English language learners and students with low previous achievement scores. Policies that target outreach and recruitment of all students in Boston would likely produce large impacts on student achievement.