Title: Achievement Effects of Charter-School Management Organizations (CMOs)

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Abstract Body

Limit 4 pages single-spaced.

Background / Context:
Description of prior research and its intellectual context.

Charter-school Management Organizations (CMOs), non-profit organizations that operate multiple charter schools, have been expanding over the past decade. CMO schools are now serving substantial numbers of students, a large fraction of whom come from low income and minority families. CMOs have attracted significant media attention and substantial funding from foundations and federal grant programs, in part because some CMO schools have impressive student outcomes. There is a great deal of variation in CMO management strategies and educational practices. For example, CMOs vary in their size and growth rates, the amount of time they allocate for instruction, how they coach teachers and approach teacher evaluation, and whether they ask teachers to use specific instructional models, formative student assessments, or behavior strategies.

Purpose / Objective / Research Question / Focus of Study:
Description of the focus of the research.

The National Study of CMO Effectiveness is the first rigorous national evaluation of CMOs’ impacts. This presentation will summarize the findings from the study addressing three research questions:

1. What are the average impacts and range of impacts of CMO schools on student achievement?
2. Does attending a CMO school have a larger impact on more disadvantaged or low-performing students? Do impacts change as CMOs grow?
3. What CMO management structures and practices are positively associated with impacts?

Setting:
Description of the research location.

This study covered CMO schools in 18 metropolitan areas or school districts across 8 states in the United States.

Population / Participants / Subjects:
Description of the participants in the study: who, how many, key features, or characteristics.

To be included in the study, CMOs had to meet three criteria. First, each CMO had to have at least four schools open by the 2007-08 school year. Second, the CMO schools had to serve a general student population. For example, we excluded CMO schools serving primarily school drop-outs. Third, we only included organizations that had always been non-profit, excluding any that had ever been for-profit.

The findings that will be presented at the conference will focus on CMO schools that admitted new cohorts of students in grades four, five, six, or seven. The analyses covered over 13,000 CMO students in 68 middle schools affiliated with 22 CMOs.
**Intervention / Program / Practice:**
*Description of the intervention, program, or practice, including details of administration and duration.*

The study is evaluating the impacts of enrolling in a CMO school relative to enrolling in other public schools. On average, the CMOs in our study employ practices that differ from nearby district schools in several respects including: (1) they tend to have longer school days and academic years, (2) they tend to observe teachers and provide coaching more frequently, (3) they are more likely to evaluate school staff based on observation of their performance and student test scores, and (4) they are more likely to adopt school-wide student behavior policies.

**Research Design:**
*Description of the research design.*

Our analysis of CMO impacts on student achievement combined experimental methods making use of CMO admission lotteries and quasi-experimental methods using matched comparison groups. To gauge the validity and reliability of the quasi-experimental impact estimates, they were benchmarked against the experimental estimates in the same CMO schools. The quasi-experimental methods were then applied to a larger number of CMO schools including those where it was not possible to implement a randomized experimental design.

**Data Collection and Analysis:**
*Description of the methods for collecting and analyzing data.*

To estimate CMO impacts, we used student-level administrative data provided by state departments of education, school districts, and CMOs spanning 1997-98 through 2009-10 academic years (when available). The study’s outcomes of interest include standardized student test scores in reading, mathematics, social studies, and science for up to three years past initial enrollment for CMO students (or being eligible to enroll for non-CMO students), high school graduation, and postsecondary enrollment. However, the focus of this presentation will be restricted to math and reading outcomes after 2 years of enrollment and science and social studies outcomes after 3 years of enrollment.

To obtain a matched comparison group, we used propensity score matching procedure that was previously validated using benchmark experimental estimates in the same CMO schools. A separate propensity score model was developed for each CMO using an automated stepwise model selection procedure in SAS. The selection procedure used a pool of two baseline test scores, student characteristics, and any potential 2-way interactions between these covariates to come up with the best fitting propensity model. The pool of covariates included: baseline math and reading test scores, student’s demographic characteristics (such as sex, race/ethnicity, disability status, English language learner status, and student’s eligibility for free- or reduced-price lunch), an indicator of whether a student attended a charter school at baseline, grade, cohort, and jurisdiction. All students were matched within strata defined by grade, cohort, and jurisdiction. The analyses of descriptive statistics for the CMO and “matched” non-CMO sample demonstrated equivalence on baseline test scores and other important baseline characteristics.
Our CMO-specific impact regression models included pre-baseline and baseline test scores in reading and math and other student characteristics to control for any remaining imbalances between the two groups of students. The standard errors were adjusted for clustering of students within schools. The overall impacts across all CMOs were calculated by averaging the CMO-specific impacts for a given outcome. We also examined whether CMO-specific impacts vary by student’s sex, race/ethnicity, eligibility for free- or reduced-price lunch, prior achievement, and the number of schools that CMO operates in a given year, by including an interaction between the subgroup indicator and treatment group status into the CMO-specific impact model.

To examine CMO policies and practices, the study conducted surveys of CMO headquarters staff, principals, and teachers. In addition the study surveyed principals in nearby district schools to assess differences in CMO and district practices. Using regression models, we examined whether the differences between CMO and district practices are associated with estimated year-2 math and reading impacts. These analyses are currently in progress.

**Findings / Results:**
*Description of the main findings with specific details.*

This work is in progress. We will share findings with the discussant by February.