THE EVOLUTION OF CHARTER SCHOOL QUALITY

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Charter Schools Touted as Key to Reforming Urban Schools

• Relaxes operational constraints

• Potentially circumvents union influences

• Expanded parental choice strengthens market pressures
Countervailing Forces

• Uncertain initial quality
  • Supply of applicants
  • Decisions of state chartering authority
  • Benefits of relaxed operational constraints

• Variance in applicant quality
  • No blueprint for high-quality school
  • Applicants with little or no experience

• Parental weight on achievement growth
Key Questions

1. Are charter schools (in Texas) improving?
   YES

2. Do competitive forces appear important?
   YES

3. Do bad charters close?
   YES

4. Can we identify sources of improvement?
   SOMEWHAT
Plan of Talk

• Describe the Texas Charter Sector

• Discuss estimation of charter school quality

• Disaggregate dynamics

• Provide evidence on potential sources of charter school improvement and quality differences
1. Texas Charter School Structure

Diagram showing the structure of Texas charter schools, including the Charter Holder (America CAN!), Charter Districts (Dallas CAN, Houston CAN, Fort Worth CAN, San Antonio CAN, Austin CAN), and Charter Campuses with specific names and dates.
Chart: Charter School Stock and Flows

- Unlimited >75% at-risk charters
- State-wide Charter Cap
- # Charters
- # Active Charters
- Discontinued Charters
- New Charters

Data from the Texas Education Agency
Texas Administrative Data

- 2000 to 2011 micro-data on elementary and middle school students and schools
- Follow students throughout state over time
- Mathematics and reading tests administered each spring
  - test change from TAAS to TAKS in 2003
  - trends over time robust to focusing on shorter time period entirely within TAKS regime
Measures of school quality

• State accountability rating
  • widely known
  • based largely on test pass rates, so favors higher SES schools
• Value added to mathematics and reading achievement
  • Control for lagged achievement and demographics
  • Assumes lagged achievement accounts for unobserved confounding factors
Alternative Charter School Estimators

• **Matching** on distribution of traditional public schools of transitioning students
  • Accounts for unobserved differences in prior school quality and community factors
  • Potentially biased by unobserved family factors related to charter school enrollment decision

• **Lottery-based** random assignment
  • In absence of non-random attrition accounts for unobserved and observed differences
  • Needs over-subscription

• **Student fixed effects**
  • Misses student who do not switch sectors
Issues in the Identification of Changes Over Time

• Changes in quality of traditional schools
  • Competitive responses
  • Potentially stronger for matching and lottery estimates

• Assume stable bias from confounding factors
  • With better information, charter students drawn from better schools

• Appropriate comparison group
  • All v. feeder schools
Value-Added Model

\[ A_{igs} = \alpha_{ig} + X_{ig} \beta + P_{gs} \gamma + \delta_s + e_{igs} \]

\[ A_{igs} = \alpha_o + A_{i,g-1,s} \lambda + X_{ig} \beta + P_{gs} \gamma + \delta_s + e_{igs} \]
Value Added in Math
(Charters – solid; TPS – dashed)
Value Added in Math, Conditional on Years of Operation (Charters – solid; TPS – dashed)
Value Added in Reading
(Charters – solid; TPS – dashed)

Graphs by year
Value Added in Reading, Conditional on Years of Operation (Charters – solid; TPS – dashed)
Quality of Comparison Schools

For individual student movers: prior TPS VA and prior charter VA

- Not causal effect
- Implications for evaluations

<table>
<thead>
<tr>
<th></th>
<th>Math</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Charter VA</strong></td>
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<tr>
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<tr>
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For individual student movers: prior TPS VA and prior charter VA
Pattern of Charter School Quality Increases

• School Improvements

• Closings

• Entrants
  • substantial entry during 2000s

• Differences among CMOs
# Change Dynamics – Math VA

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<tr>
<th>Continuous ops</th>
<th>Value added 2001</th>
<th>Value added 2011</th>
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<tr>
<td># of schools</td>
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## CMO Expansions and Contractions

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<th>contraction</th>
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<td>-0.04</td>
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<td>((0.01))</td>
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<tr>
<td>CMO reading VA</td>
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<td>0.08</td>
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<td>(0.01)</td>
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<tr>
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<td>no</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>N</td>
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Some Explanations

- Dramatic drop in student churn
- Improvements in peers
- Operational choices
  - ‘no excuses”
New Students to School, 2000-2011

Excludes schools in first year of operation and the lowest grade offered at each school
Student Selection (charter – TPS)
Impact of changes

- Total change: 0.125 s.d.

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<th>Change 2000-2011</th>
<th>Coefficient</th>
<th>Impact</th>
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<tr>
<td>Reduced churn</td>
<td>20 percent</td>
<td>0.02 s.d./turnover</td>
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<tr>
<td>Better math peers</td>
<td>0.2 s.d.</td>
<td>0.15/s.d.</td>
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No Excuses
Key Questions

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   YES

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   YES

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   SOMEWHAT
Some Open Questions

• Details of operations
  • No Excuses
  • Uniforms, high expectations

• Quality of leadership

• Student behavioral issues

• Teacher and administrator quality and moves