REACH National Center for Research on Education Access and Choice

# Creative Destruction?

## A National Analysis of Closure and Takeover of Traditional Public, Charter, and Private Schools

**Douglas N. Harris,** *Tulane University*
**Valentina Martinez Pabon, Tulane** *University*

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# Motivation

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- One-quarter of US students now attends a school other than the traditional public school (TPS).
- This more market-driven system could force the worst-performers to close and increase school quality over time: "creative destruction."
- On the other hand, schooling does not satisfy the usual conditions for well-functioning markets, so market forces might not improve efficiency
- Entry/exit of schools provides a useful window to the efficiency question–if the market-based system is working, low-performing schools should close

# Research Questions

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- What are the levels and patterns of opening, closing, and taking over schools, across choice sectors and across the country?
- What characteristics of schools predict turnover? In particular, are low-performing schools more likely to close?
- Does the quality/closure relationship vary by sector?

- Our answers so far are <u>VERY PRELIMINARY</u>

# Literature Review

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- Many studies of individual school districts
  - Most do not test whether schools being closed are better or worse than the rest
- Most similar to the present study is CREDO (2017)
  - Also uses national sample; essentially all charter and traditional public schools in 26 states
  - Finds that low-performing charter schools are more likely to close than low-performing TPS
- However, CREDO study…
  - Only simple correlations predicting closure/takeover
  - Uses test levels as the main measure of quality
  - Includes only charter and TPS

# National Longitudinal School Choice Database (NLSCD)

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- Annual near-census of all schools in the country from 1990 to 2017 – still in progress
- The NLSCD will combine many different data sets:
  - The federal Common Core of Data (CCD)
  - A separate federal data set that includes the universe of private schools, related to the Private School Survey (PSS)
  - Proprietary data from the National Alliance for Public Charter Schools (NAPCS)
  - Measures of schools' quality provided by the non-profit organization, Great Schools

# What do we mean by closure and takeover?

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- Closure refers to buildings that are no longer being used as schools and where personnel have not simply moved to another building
  - With TPS, most likely due to govt action
  - With charter, more likely market forces
- Takeover refers to the buildings that remain open as schools, but under different personnel or governance (TPS-to-charter or charter-to-charter).
  - Rare with TPS because of: political pressures, union contracts, and tenure protections,
  - With charters, due to a mix of govt and market pressures

# Identifying Closure

- Closure (preferred estimate)
  - Start with the schools listed with operational status of closed  (operational in previous year but not in operation on the current year)
  - Assumes schools that are reported as changed LEA and change their location are closed
  - Assumes schools that disappear from one year to the next of the data, based on the NCES ID, are closed.
  - Assumes in case of coding errors that schools are open
- Closure (alternate estimate)
  - Same as above except that assumes that schools that are reported as changed LEA are open

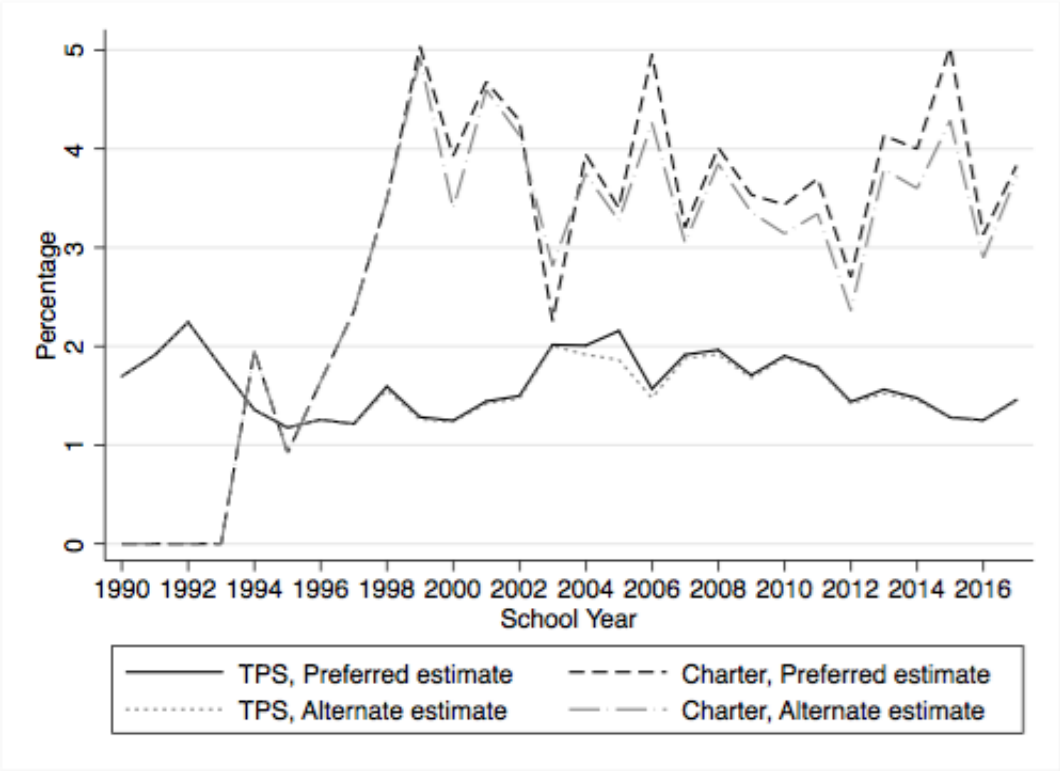
# Identifying Takeover

- Takeover (preferred estimate)
  - Start with the schools that report a change in their charter status (TPS to charter or charter to TPS).
  - Omits schools from Arizona in 2003 were a large number of schools reported a change from TPS to charter
- Takeover (alternate estimate)
  - Same as above except includes charter schools that keep their NCES ID but change their name and location
  - Includes all states and years

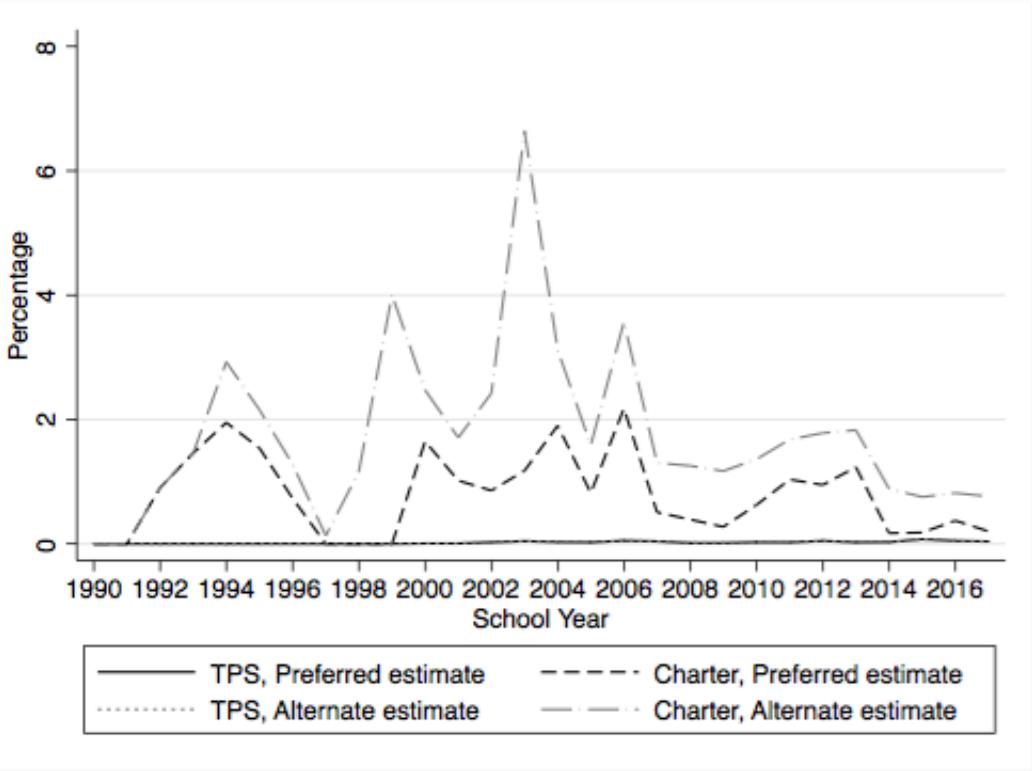
# Closure and Takeover Rates 1990-2017

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Closed schools as % of total schools

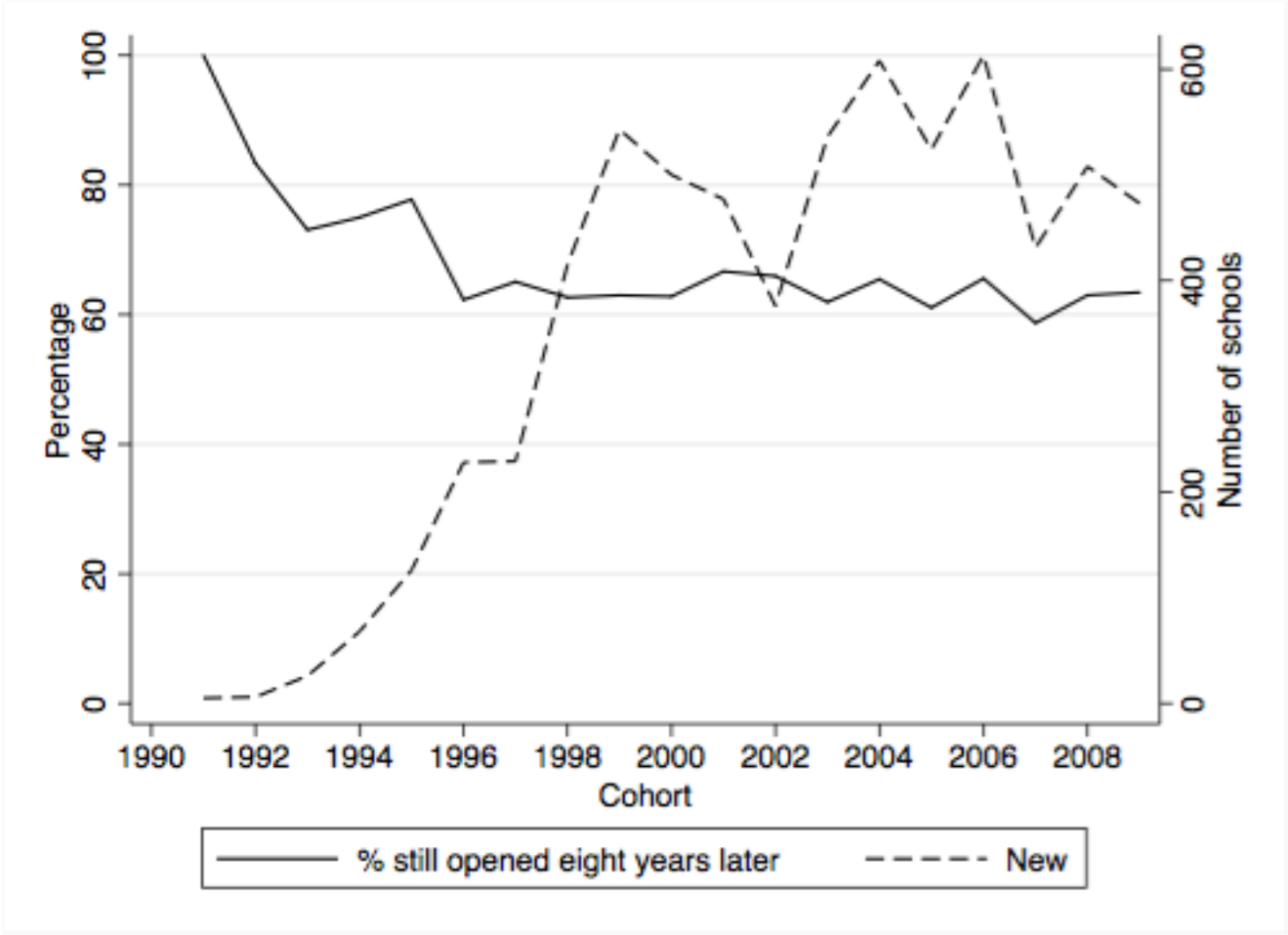



Takeover schools as % of total schools



# Charter Closure/Takeover: Cohort Approach

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# Quality Measures

- Enrollment levels – measure of demand (though conflated with supply, i.e., number of seats available)
- Quality rating from Great Schools
- In the future…achievement levels and student growth

# Quality Ratings from Great Schools (avg across 2008-2010)

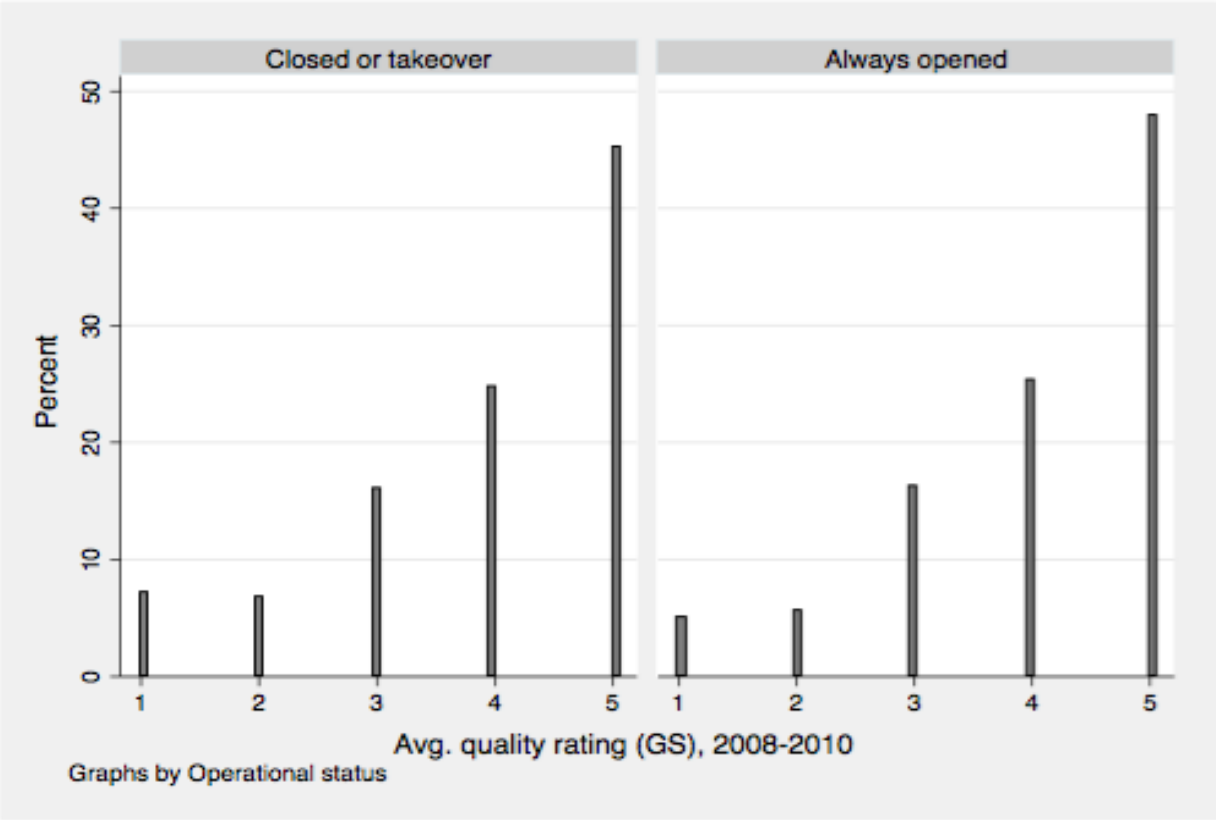
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Summary statistics of the quality rating (GS)

| Variable | | Total % | TPS % | Charter % | Private % |
|---|---|---|---|---|---|
| Number of reports | 1 to 5 | 77.04 | 77.78 | 56.78 | 78.06 |
| | 6 to 10 | 15.51 | 15.34 | 21.64 | 14.94 |
| | 11 to 15 | 3.89 | 3.73 | 8.02 | 3.73 |
| | 16 to 20 | 1.56 | 1.46 | 4.52 | 1.37 |
| | 21 or more | 2.00 | 1.69 | 9.04 | 1.89 |
| | Mean | 4.72 | 4.56 | 9.69 | 4.36 |
| | Median | 3 | 3 | 5 | 3 |
| | Maximum | 1,771 | 1,771 | 583 | 552 |
| Community rating | Mean | 4.02 | 3.99 | 4.03 | 4.11 |
| | Median | 4.37 | 4.33 | 4.33 | 4.60 |
| | Standard Deviation | 1.13 | 1.13 | 1.03 | 1.13 |
| | Minimum | 1 | 1 | 1 | 1 |
| | Maximum | 5 | 5 | 5 | 5 |
| Number of schools | | 77,532 | 59,807 | 2,943 | 14,782 |

# Distribution of Great Schools Ratings

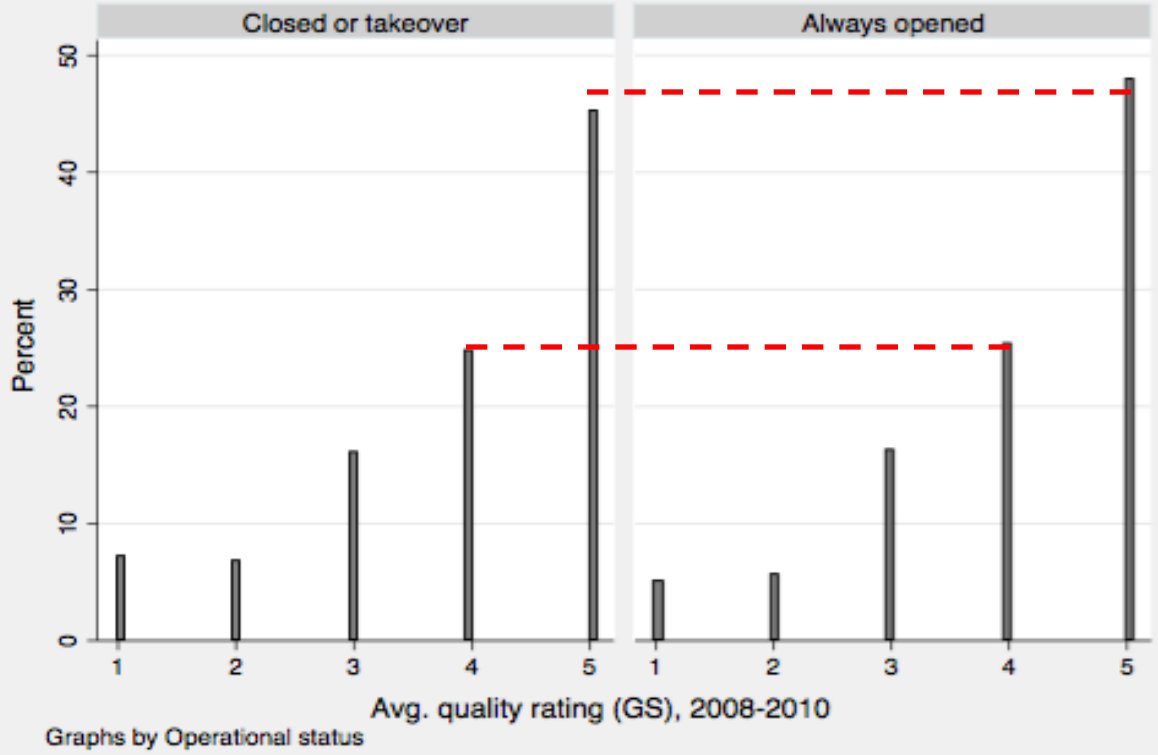
Traditional Public Schools



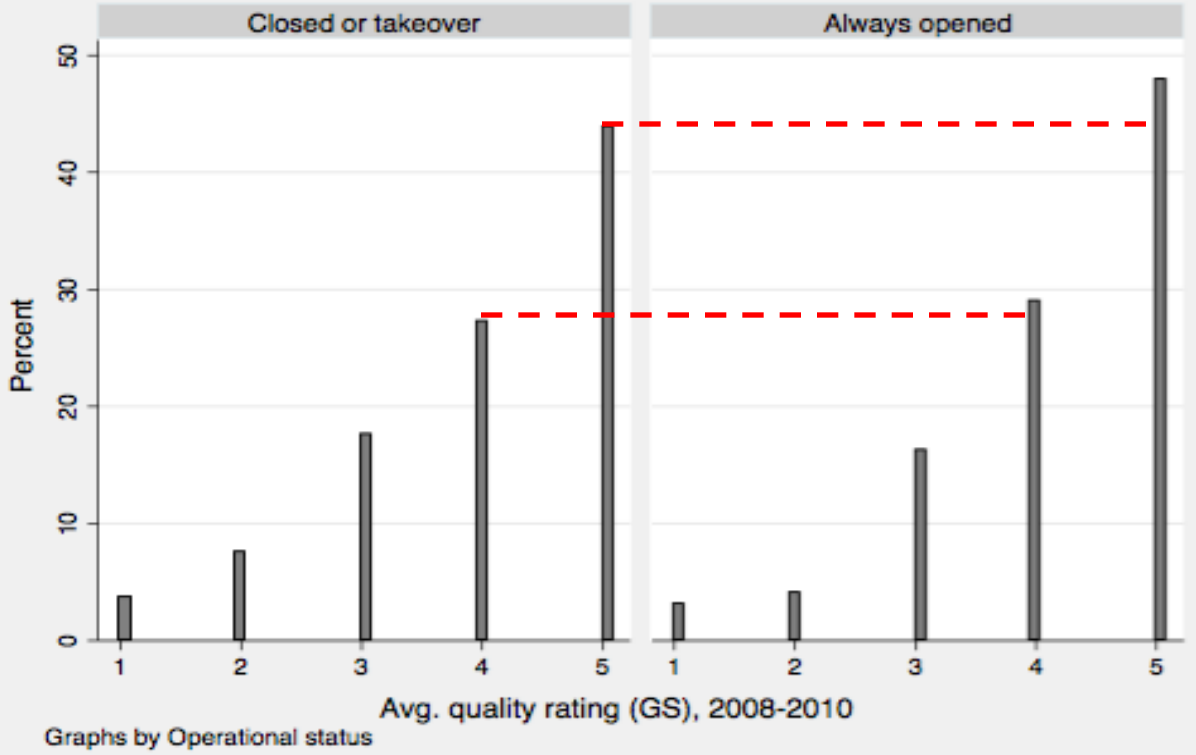
# Distribution of Great Schools Ratings

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Traditional Public Schools




Charter Schools



**Closures Only**

| Variables | (1) Closure rate | (2) Closure rate | (3) Closure rate | (4) Closure rate | (5) Closure rate | (6) Closure rate |
|---|---|---|---|---|---|---|
| Charter | 0.0196*** | 0.0380*** | 0.0027*** | 0.0009*** | 0.0027*** | -0.0002 |
| | (0.0009) | (0.0010) | (0.0003) | (0.0002) | (0.0003) | (0.0010) |
| Total students | | | -0.0007*** | -0.0002*** | -0.0004*** | -0.0003*** |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x Total students | | | | | | 0.0005 |
| | | | | | | (0.0004) |
| % Minority | | | 0.0006*** | 0.0002 | 0.0005*** | 0.0003** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % Minority | | | | | | -0.0006 |
| | | | | | | (0.0009) |
| % free/reduced-price lunch | | | 0.0000 | -0.0002 | -0.0001 | -0.0003*** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % free/reduced-price lunch | | | | | | 0.0022** |
| | | | | | | (0.0009) |
| % Urban | | | 0.0001 | 0.0000 | 0.0001** | 0.0000 |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x % Urban | | | | | | -0.0006 |
| | | | | | | (0.0007) |
| Quality rating - GS | | | | 0.0007 | | -0.0002 |
| | | | | (0.0020) | | (0.0020) |
| Charter x Quality rating - GS | | | | | | 0.0182 |
| | | | | | | (0.0192) |
| Missing Quality rating - GS | | | | | 0.0010*** | |
| | | | | | (0.0001) | |

**Closures Only**

| Variables | (1) Closure rate | (2) Closure rate | (3) Closure rate | (4) Closure rate | (5) Closure rate | (6) Closure rate |
|---|---|---|---|---|---|---|
| Charter | 0.0196*** | 0.0380*** | 0.0027*** | 0.0009*** | 0.0027*** | -0.0002 |
| | (0.0009) | (0.0010) | (0.0003) | (0.0002) | (0.0003) | (0.0010) |
| Total students | | | -0.0007*** | -0.0002*** | -0.0004*** | -0.0003*** |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x Total students | | | | | | 0.0005 |
| | | | | | | (0.0004) |
| % Minority | | | 0.0006*** | 0.0002 | 0.0005*** | 0.0003** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % Minority | | | | | | -0.0006 |
| | | | | | | (0.0009) |
| % free/reduced-price lunch | | | 0.0000 | -0.0002 | -0.0001 | -0.0003*** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % free/reduced-price lunch | | | | | | 0.0022** |
| | | | | | | (0.0009) |
| % Urban | | | 0.0001 | 0.0000 | 0.0001** | 0.0000 |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x % Urban | | | | | | -0.0006 |
| | | | | | | (0.0007) |
| Quality rating - GS | | | | 0.0007 | | -0.0002 |
| | | | | (0.0020) | | (0.0020) |
| Charter x Quality rating - GS | | | | | | 0.0182 |
| | | | | | | (0.0192) |
| Missing Quality rating - GS | | | | | 0.0010*** | |
| | | | | | (0.0001) | |

**Closures Only**

| Variables | (1) Closure rate | (2) Closure rate | (3) Closure rate | (4) Closure rate | (5) Closure rate | (6) Closure rate |
|---|---|---|---|---|---|---|
| Charter | 0.0196*** | 0.0380*** | 0.0027*** | 0.0009*** | 0.0027*** | -0.0002 |
| | (0.0009) | (0.0010) | (0.0003) | (0.0002) | (0.0003) | (0.0010) |
| Total students | | | -0.0007*** | -0.0002*** | -0.0004*** | -0.0003*** |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x Total students | | | | | | 0.0005 |
| | | | | | | (0.0004) |
| % Minority | | | 0.0006*** | 0.0002 | 0.0005*** | 0.0003** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % Minority | | | | | | -0.0006 |
| | | | | | | (0.0009) |
| % free/reduced-price lunch | | | 0.0000 | -0.0002 | -0.0001 | -0.0003*** |
| | | | (0.0002) | (0.0001) | (0.0002) | (0.0001) |
| Charter x % free/reduced-price lunch | | | | | | 0.0022** |
| | | | | | | (0.0009) |
| % Urban | | | 0.0001 | 0.0000 | 0.0001** | 0.0000 |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x % Urban | | | | | | -0.0006 |
| | | | | | | (0.0007) |
| Quality rating - GS | | | | 0.0007 | | -0.0002 |
| | | | | (0.0020) | | (0.0020) |
| Charter x Quality rating - GS | | | | | | 0.0182 |
| | | | | | | (0.0192) |
| Missing Quality rating - GS | | | | | 0.0010*** | |
| | | | | | (0.0001) | |

Closures + Takeovers

| Variables | (1) Closure and takeover rate | (2) Closure and takeover rate | (3) Closure and takeover rate | (4) Closure and takeover rate | (5) Closure and takeover rate | (6) Closure and takeover rate |
|---|---|---|---|---|---|---|
| Charter | 0.0263*** | 0.0453*** | 0.0103*** | 0.0101*** | 0.0103*** | 0.0243*** |
| | (0.0010) | (0.0011) | (0.0006) | (0.0007) | (0.0006) | (0.0045) |
| Total students (in thousands) | | | -0.0004*** | 0.0001 | -0.0001 | -0.0004*** |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x Total students | | | | | | 0.0036*** |
| | | | | | | (0.0009) |
| % Minority | | | -0.0002 | -0.0011*** | -0.0002 | -0.0005*** |
| | | | (0.0002) | (0.0002) | (0.0002) | (0.0002) |
| Charter x % Minority | | | | | | -0.0088*** |
| | | | | | | (0.0026) |
| % free/reduced-price lunch | | | 0.0001 | 0.0003 | 0.0001 | -0.0000 |
| | | | (0.0002) | (0.0002) | (0.0002) | (0.0002) |
| Charter x % free/reduced-price lunch | | | | | | 0.0045* |
| | | | | | | (0.0026) |
| % Urban | | | 0.0000 | -0.0001 | 0.0001 | 0.0001 |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x % Urban | | | | | | -0.0065*** |
| | | | | | | (0.0025) |
| Quality rating - GS | | | | -0.0093** | | -0.0035 |
| | | | | (0.0038) | | (0.0027) |
| Charter x Quality rating - GS | | | | | | -0.1814** |
| | | | | | | (0.0741) |
| Missing Quality rating - GS | | | | | 0.0008*** | |
| | | | | | (0.0001) | |

Closures + Takeovers

| Variables | (1) Closure and takeover rate | (2) Closure and takeover rate | (3) Closure and takeover rate | (4) Closure and takeover rate | (5) Closure and takeover rate | (6) Closure and takeover rate |
|---|---|---|---|---|---|---|
| Charter | 0.0263*** | 0.0453*** | 0.0103*** | 0.0101*** | 0.0103*** | 0.0243*** |
| | (0.0010) | (0.0011) | (0.0006) | (0.0007) | (0.0006) | (0.0045) |
| Total students (in thousands) | | | -0.0004*** | 0.0001 | -0.0001 | -0.0004*** |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x Total students | | | | | | 0.0036*** |
| | | | | | | (0.0009) |
| % Minority | | | -0.0002 | -0.0011*** | -0.0002 | -0.0005*** |
| | | | (0.0002) | (0.0002) | (0.0002) | (0.0002) |
| Charter x % Minority | | | | | | -0.0088*** |
| | | | | | | (0.0026) |
| % free/reduced-price lunch | | | 0.0001 | 0.0003 | 0.0001 | -0.0000 |
| | | | (0.0002) | (0.0002) | (0.0002) | (0.0002) |
| Charter x % free/reduced-price lunch | | | | | | 0.0045* |
| | | | | | | (0.0026) |
| % Urban | | | 0.0000 | -0.0001 | 0.0001 | 0.0001 |
| | | | (0.0001) | (0.0001) | (0.0001) | (0.0001) |
| Charter x % Urban | | | | | | -0.0065*** |
| | | | | | | (0.0025) |
| Quality rating - GS | | | | -0.0093** | | -0.0035 |
| | | | | (0.0038) | | (0.0027) |
| Charter x Quality rating - GS | | | | | | -0.1814** |
| | | | | | | (0.0741) |
| Missing Quality rating - GS | | | | | 0.0008*** | |
| | | | | | (0.0001) | |

# Summary

- The average charter closure rate is roughly double the average TPS closure rate: 4% vs 2%
  - Rate stable for cohorts of charters opening 1996 to 2008
    - Improvement in charter authorization offset by expansion of charters?
- Enrollment level predicts closure and takeover
- Great Schools rating predicts charter takeover but not TPS closure/takeover
- Student demographics do not consistently predict closure/takeover

# Next Steps – Again, Very Preliminary

- More to do on validity of Great Schools ratings
- More to do on validity of closure/takeover indicators
- Add in private schools
- Add in student growth measures
- Survival analysis
- Add in decomposition of school improvement
  - For methodology, see Harris et al. forthcoming for New Orleans