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THE
CENTER
FOR
STATE
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LOCAL
FINANCE

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Economic Impact of Start-up Charter Schools in Georgia



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Economic Impact Study Research Questions

The State Charter Schools Commission of Georgia commissioned Georgia State University Center for State and Local Finance to research the following questions.

Do charter schools provide economic benefits to:

- Students who attend them?
- Communities they serve?
- Georgia?

Structure of Research to Date

- Report 1: Broad review of the existing literature on the economic impacts of charter schools, including academic achievement - 2016
- Report 2: Economic impact of start-up charter schools on the communities they serve through changes to property values - 2016
- Report 3: Economic impact that start-up charter schools have on students' academic milestones – 2017
- Report 4: Economic Impact that start-up charter schools have on the students' future wages - 2021

Report 1: Review of the Literature

Researchers reviewed literature available nationally to glean common findings among researchers.

Results:

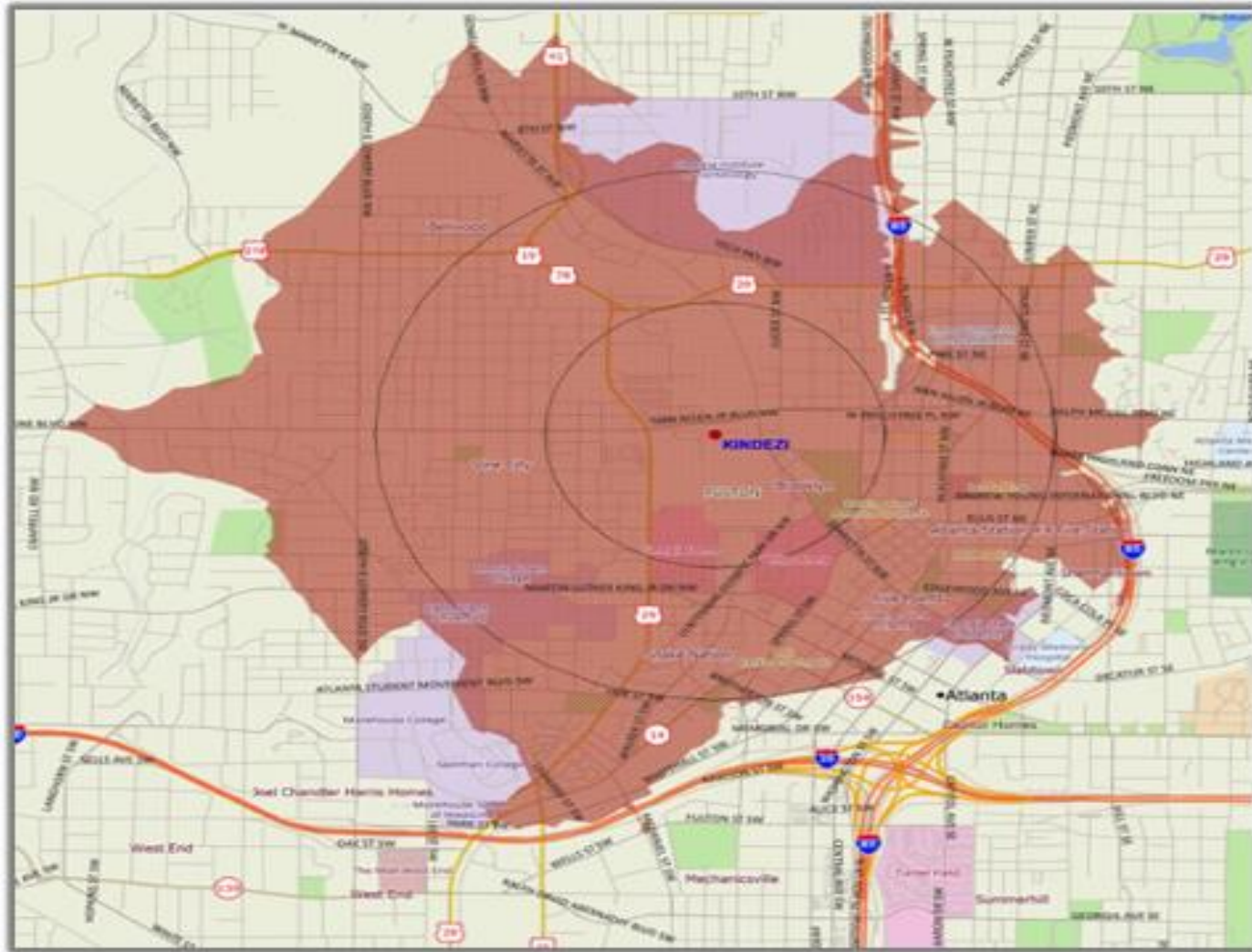
- Tests scores most studied — mixed results
 - Achievement across multiple schools have found no, small positive, or even small negative effects of charter school enrollment.
- **Student achievement improves as charter schools mature**
- Studies also have documented **student achievement gains in urban charter schools that employ an education model known as No Excuses**
- Recent literature provides evidence that **charter schools have been able to improve student life outcomes, including high school graduation rates and earnings**

Report 2: Economic Impact That Charter Schools Have On Property Values - 2016

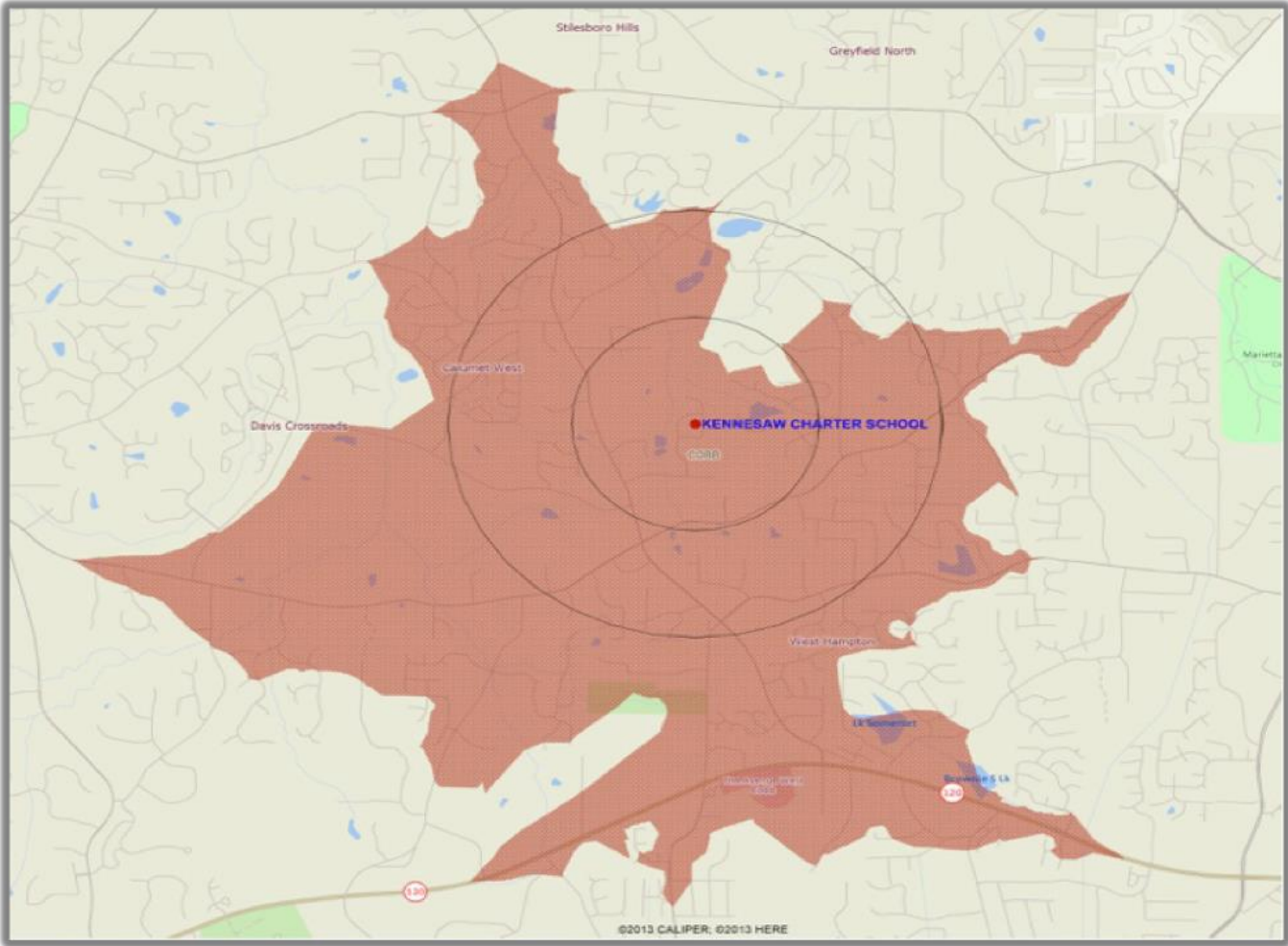
Researchers analyzed the variation in sales prices of houses in different attendance zones, as well as the variation in house values based on the distance from the charter schools. Where appropriate, the researchers also analyzed the differences in house prices before and after the opening of a start-up charter school. The majority of the 52 schools examined are located in large suburbs and cities, with 28 located in metro Atlanta.

- Data: Rich data set that includes over **1 million home sales from 2004-2013**
- Sales include **15 school districts and 52 start-up charter schools**
- Study relies on a fixed effects design to control for unobserved neighborhood effects

Report 2: Five-minute Drive Time Distance in an Atlanta Urban Area and Half-mile and One-mile Rings



Report 2: Five-minute Drive Time Distance Suburban Atlanta Area and Half-mile and One-mile Rings



Report 2: Results - 2016

	Atlanta City Start-Up Priority Zone Only	Atlanta City Start-Up Non-Priority Zone Only	Atlanta Suburb Start- Up Non- Priority Zone Only
Concentric Ring Distance			
Within 0.3mi v 0.3mi-0.6mi	0.0816**	0.0193	NA
Within 0.5mi v 0.5mi-1mi	0.0802***	-0.0909*	0.0423***
Within 0.7mi v 0.7mi-1.4mi	0.0112	-0.0692*	0.0601***
Within 0.9mi v 0.9mi-1.8mi	NA	NA	0.0263**

*** p<0.01, ** p<0.05, * p<0.1

Source: CoreLogic home sales 2004-13 and authors' calculations

Report 2: Results Summary 2016

- In the city of Atlanta, priority-zoned charter schools **increased property values by 8.2 percent** within a 0.3-mile radius, with the average home expected to sell for **\$11,846 more** than the same home 0.3 - 0.6 miles away.
- In the Atlanta suburbs, non-priority charter schools **increased property values by 4.2 percent** within a half-mile radius, with the average home expected to sell for **\$5,888 more** than the same home located a half mile to one mile away.
- Source: CoreLogic home sales 2004-13 and authors' calculations

Report 3 (2017): Start-up Charter School Impact on Academic Milestones and Lifelong Success

- The report uses Georgia's Academic and Workforce Analysis and Research Data System, or GA AWARDS, information to **analyze whether there is a causal relationship between attending a Georgia start-up charter school as a ninth-grader and achieving critical academic milestones often linked to future labor market success.**
- The study **compares start-up charter school students with those who previously attended a start-up charter school but switched to a traditional public school in ninth grade.**

Report 3: Student Counts & Milestone Attainment Dates - 2017

School Year	8th Grade Cohorts* Start-Up Charter	High School Graduation	Bachelor's Spring/ Wages Summer**
2006-2007	835	2011	2015
2007-2008	1,337	2012	2016
2008-2009	1,473	2013	2017
2009-2010	2,425	2014	2018
2010-2011	2,084	2015	2019
2011-2012	3,339	2016	2020

* Non-duplicated student count of 8th grade students.

**8th grader completing high school and a bachelor's degree in eight years could start working with a four-year degree the summer of this year.

Source: GA•AWARDS Data

Report 3: Treatment and Control Cohorts and Milestones Attained -2017

8th Grade Cohort	Control*	Treatment**	High School Grad. 5 yrs.**	2 Cons. Sem. Coll. 7 Yrs.**
2007	694	141	65%	57%
2008	1,223	114	62%	53%
2009	1,263	210	69%	57%
2010	1,976	449	56%	45%
2011	1,372	712	70%	52%
2012	2,267	1,072	56%	NA

*Control are 8th grade start-up charter school students that go on to attend a traditional public school or conversion charter school for 9th grade.

**Treatment are 8th grade start-up charter school students that go on to attend a start-up charter high school for 9th grade.

Summary Statistics for Treatment and Control Cohorts

	Treatment and Control Means after Matching		Standardized Percent Difference in Means**	
	Treatment Cohort	Control Cohort	After Matching	Before Matching
8th Grade Means				
Math Score	792.29	779.70	0.08%	10%
Percent Free Lunch	0.61	0.54	-0.32%	14%
Percent Gifted	0.03	0.11	0.00%	-31%
Percent Black	0.47	0.53	0.32%	-12%
Percent Hispanic	0.03	0.07	-1.43%	-20%
Percent White	0.45	0.34	0.08%	23%

Other Matching Criteria: English Score, Reading Score, Percent Limited English Proficient

**Standardized percent difference takes into account the standard deviation of the means.

Source: GA•AWARDS data and author's calculations

Reports 3 & 4: Results for Educational Milestones

Report 3 (2014)

VARIABLES	High School Diploma	College Ever	College Persist.	College Degree or Certificate
Start-up Charter Ninth Grade	0.0421***	0.0582***	0.0756***	0.0229*
	(0.0148)	(0.0191)	(0.0236)	(0.0125)
Observations	5,072	3,024	1,692	1,692

Report 4 (2021)

Start-up Charter Ninth Grade	0.0700***	0.0889***		0.0602***
	(0.0184)	(0.0208)		(0.0175)

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Source: GA•AWARDS data and author's calculations

Report 3 and 4: Results Summary

Comparing the two groups of students, the results show start-up charter school pupils were:

- 7 percentage points more likely to graduate from high school
 - Up from 4 percentage points in report 3
- 9 percentage points more likely to enroll in college
 - Up from 6 percentage points in report 3
- 8 percentage points more likely to persist in college for two consecutive semesters (data here is only for report 3)
- 6 percentage points more likely to earn a college degree or certificate
 - Up from 2 percentage points in report 3

Source: GA•AWARDS data and author's calculations

Report 4: Treatment and Control Cohorts and Observed Georgia Wages – 2021

8th Grade Cohort	Total Count		Georgia Wages***	
	Control*	Treatment**	Control*	Treatment**
2007	749	168	460	105
2008	1222	147	595	102
2009	1576	224	806	159
2010	1209	280	762	185
2011	1307	399	913	304

*Control are potential control students who attended eighth grade start-up charter schools. Eighth grade treatment and control cohorts do not equal 8th grade cohorts in table 1 due to missing test scores or other data that do not allow for matching.

**Treatment are eighth grade start-up charter school students that go on to attend a start-up charter high school for ninth grade.

***Wages for that student included indicating Georgia employment.

Source: GA•AWARDS data

Report 4. Summary Statistics for Treatment and Control Cohorts - 2021

8th Grade Means	Treatment and Control Means after Matching		Standardized Percent Difference in Means**	
	Treatment Cohort	Control Cohort	After Matching	Before Matching
English Score*	0.63	0.60	0.04	0.13
Math Score	0.60	0.56	0.04	0.14
Reading Score	0.62	0.60	0.02	0.08
Free Lunch	0.63	0.64	-1.7%	-13.0%
Gifted	11.9%	11.9%	0.00	0.00
Limited English Proficient	0.97%	0.97%	0.0%	-1.3%
Black	56.5%	56.2%	0.7%	-21.3%
Female	55.4%	56.0%	-1.3%	0.0%

*Test scores have been normalized within year and test relative to a distribution with a mean zero and standard deviation of one. This normalization was necessary because of changing testing regimes over the period.

**Standardized percent difference takes into account the standard deviation of the means.

Source: GA•AWARDS data and author's calculations

Report 4: Georgia Wages

VARIABLES	Quarterly Wages
Start-up Charter Ninth Grade	536.5*
	(275.5)
Observations	1,232

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: GA•AWARDS data and author's calculations

Report 4: Georgia Wages Results

Summary and Concerns

- Students that attend start-up charter 9th grade: \$538 additional wages per quarter
- Findings are positive at the 90 percent level
 - Checking other specifications within these control/treatment cohorts for robustness
 - findings can turn to zero
- Limited confidence from lack of observations or small effect?
 - New specification based on all Georgia 9th graders to test this question
 - Down side: potential selection bias

Report 4: Georgia Wages - Alternative

VARIABLES	Quarterly Wages
Start-up Charter Ninth Grade	810.0***
	(268.2)
Observations	64,113

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Source: GA•AWARDS data and author's calculations

- Start-up 9th grade students compared to 9th grade student estimated to have similar probabilities to attend charter schools but live in a zip code without access to start-up charter schools

Summary: Average Economic Benefits for Communities and Students Served by Start-up Charter Schools

Economic Impact of Start-up Charter Schools

- Atlanta Homes Priority Zone \$8,372
- Atlanta Homes Non-Priority Zone \$5,972

Economic impact on wages for the students that attend start-up charter 9th grade

- \$538 additional wages per quarter

Summary: Other Related Economic Benefits for Communities and Students Served by Start-up Charter Schools

Wage premium relative to no high school diploma per year

- High School Diploma \$9,000
- Associate's Degree \$13,650
- Bachelor's Degree \$30,650

Other benefits to State and Local Governments

- Higher wages lead to lower spending on public assistance programs
- Higher educational attainment lead to lower rates of incarceration

Thank you!

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Check out our research at cslf.gsu.edu or on
social media