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The Relationship Between Regulation and Charter School Innovation

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Abstract

Charter schools were originally intended to improve the American public education system by offering innovative models that could be replicated. Charter critics and proponents alike, however, question the degree to which charter schools are truly innovative and whether they meaningfully differ from one another or traditional public schools. While alarm has been raised about apparent conformity among charter schools, scant literature explores how this conformity came to pass. We test the hypothesis that innovation might be particularly hampered in states with stringent charter school authorizing regulation, which may induce charter authorizers and leaders to prefer schooling models that are pleasing to powerful authorizers and focus narrowly on standardized test results. To test this hypothesis, we develop a typology for charter schools that scores how innovative they are based on their curriculum, pedagogy, learning modality, themes, and population served. We evaluate how these innovation scores correlate with charter authorizing regulations as measured by National Association of Charter School Authorizer (NACSA) scores. Overall, there is a strong and negative association between charter school regulation and innovation.

Background

Charter schools, which are independently managed but taxpayer-financed schools of choice that are open to all students, have been a central component of American education reform going back to their inception in 1992. Even from its earliest days, the charter movement was defined by two distinct missions. Specifically, to what degree is the central purpose of charter schools to achieve and replicate academic excellence (i.e. strong standardized achievement) versus to what degree is it principally intended to offer a curriculum and schooling experience that is unique from what is otherwise afforded in the traditional public school system? These questions remain unsettled and they continue to be a source of tension for advocates, policymakers, and stakeholders. After all, "experimentation and innovation, by their nature, beget many failures." (Morris, 2012).

How these two competing visions are weighed against one another has significant implications for how charter schools should be authorized, evaluated, and replicated. Presently, states tend to favor a narrow focus on test score performance over innovation[1] in their charter evaluation regimes. While some states require applicants who aspire to open charter schools to chronicle the ways in which their school would be innovative, the practice is not universal. Moreover, evidence that innovation is modest within the charter sector (Horn & Miron, 2000; Lubienski, 2003; Network for Public Education, n.d; Preston et al., 2012) perhaps indicates that innovation statements are a bureaucratic check-marking exercise rather than a factor that weighs heavily in authorizer decision-making.

On the other hand, numeracy and literacy, as measured by standardized tests, have been crystalized as the yardstick against which the performance of all public schools are typically measured (Goldhaber & Özek, 2018). Standardized test scores weigh heavily into how public charter schools are evaluated by policymakers and key stakeholders. A substantial number of public charter schools are shuttered through non-renewal or revocation because they fail to meet satisfactory levels of student achievement (Gau, 2006). Moreover, charter replication is sometimes exclusively reserved for public charter schools

[1] Similar to Preston et al. (2012), innovation here refers to dissimilarity. The less frequently a characteristic is observed among the schools in the dataset, the more innovative the practice.

that demonstrate particularly strong track records of academic achievement, as measured by standardized test results (Cohodes, Setren & Wallers, 2021).

Literature Review

Achievement

While charter authorizing places a greater premium on standardized test performance than innovation, the question of whether states have struck the proper balance is largely normative rather than empirical. Still, there is some instructive empirical literature that might help inform the discussion. A robust literature supports the conventional wisdom that stronger academic achievement in primary and secondary school is associated with a reduced incidence of risky behavior such as teen pregnancy and smoking (Heckman, Strixrud & Urzua, 2006) and higher earnings (Chetty et al., 2010; Currie & Thomas, 2001; Duckworth et al., 2012), partially due to greater college attainment (Dougherty, 2003; Murnane et al., 1995). These studies suggest that prioritizing academic achievement from public charter schools could maximize their social and economic benefits.

The conventional wisdom on the relationship between standardized tests and important later in life outcomes (ostensibly, what policymakers and families truly care about) is not without its doubters (DeAngelis, 2021; Hitt, McShane, & Wolf, 2018). Watts (2020) argues that the relationship might be over-exaggerated due to the confounding influence of family environment. Other researchers warn that the disconnect between achievement and later in life outcomes might be even greater in schools of choice, where achievement is not necessarily the greatest priority to parents (Holmes Erickson, 2017). Greene (2016) for example highlights several recent evaluations of school choice programs that present sizable disconnects between achievement and other outcomes. Specifically, studies indicate that public charter schools in the "no-excuse" mold yield substantial achievement effects but no impacts on college enrollment (Angrist et al., 2014; Dobbie & Fryer, 2014), high school graduation rate (Tuttle et al., 2015) and earnings (Dobbie & Fryer, 2016). Conversely, an evaluation of Florida charters detects no impact on test scores but increases in high school graduation rates, college attendance, and earnings (Sass et al, 2014). Similarly, a private school choice program in New York City demonstrates a modest test score gain superseded by a large increase in college enrollment (Chingos & Peterson, 2013). Evaluations of private school choice programs in Washington DC and Milwaukee demonstrate limited impact on achievement but substantial impacts on graduation (Wolf et al, 2013; Cowen et al, 2013). The Milwaukee private school choice program also reduced the incidence of criminality among program participants (DeAngelis & Wolf, 2019; 2020).

Various theories have been proposed about why standardized tests might be poorly predictive of other important outcomes, including the imperfection of standardized tests as a measure of skills and/or knowledge (Jackson, 2016; Heckman, Stixrud & Urzua, 2006; Beuermann & Jackson, 2019; Byrd & Varga, 2018), the degree to which the tests discount knowledge in subject areas other than English and math (McCluskey, 2015), and that high-stakes testing regimes that could induce educators to "teach to the test" rather than prioritize learning (Sondel, 2015; Miller & Seraphine, 1993). Whatever the cause, and the extent of the disconnect between standardized tests and other outcomes, it is clear that the importance of standardized test performance as an indicator for school quality is complex and often politicized terrain.

Innovation

Little evidence exists on the social and/or economic benefit of variety in the public charter school marketplace. Some evidence indicates that innovation is not necessarily tied to stronger achievement, and that the opposite may be true. Berends et al. (2010), for example, devise a measure for innovation in charter schools and conclude that it is negatively associated with achievement, leading them to conclude that "innovation for innovation's sake should not be the sole focus of schools, whether charter or not." (p. 303).

On the other hand, in studying a school choice program in Barbados that accommodates school preferences according to prior achievement, Beuermann and Jackson (2019) conclude that students do not benefit academically from being granted access to schools higher on their rank ordered list, but that higher list selections are associated with improvements in labor market outcomes, educational attainment, and health. The results indicate that families are discerning judges of the educational experience that best suits the needs of their child. Arguably, then, students might benefit in the long run if families can select from a diverse schooling ecosystem that empowers them to best match a school to the needs of their child, even if the benefits are not manifested through test score improvements.

The factors that spur or hamper innovation within charter schools are not especially well understood. Evidence indicates that test-based accountability induces isomorphism whereby schools emulate the practices of "successful" schools (i.e. those with high test scores) to secure legitimacy (Griffin & Wohlstetter, 2001; Wohlstetter & Griffin, 1998). Isomorphic pressure might explain, for example, the popularity of "no excuse" branded charter schools (Aprile, 2019).

Regulations could also lead to homogenization in the private school sector (Burke, 2016; DeAngelis, 2020). Leveraging data from the Private School Universe Survey, DeAngelis and Burke (2017) find that private schools are more likely to identify as less specialized after they switch into private school voucher environments, and that the homogenizing effects may be stronger in more heavily regulated program environments.

No research to date, however, has explored whether the regulatory charter school authorizing regimes-which vary considerably from state to state-exacerbate the pressure toward uniformity. Charter school authorizers are critical market gatekeepers who arbitrate which charter schools should open and when, if necessary, they should close. Recent literature indicates that charter authorizing regulation is a powerful if sometimes underappreciated force vis-à-vis the operations and lifecycles of charter schools (Kingsbury, Bradley-Dorsey, & Maranto, 2021).

Borrowing insight from existing literature, we hypothesize that overall levels of charter authorizing regulation is negatively associated with innovation.

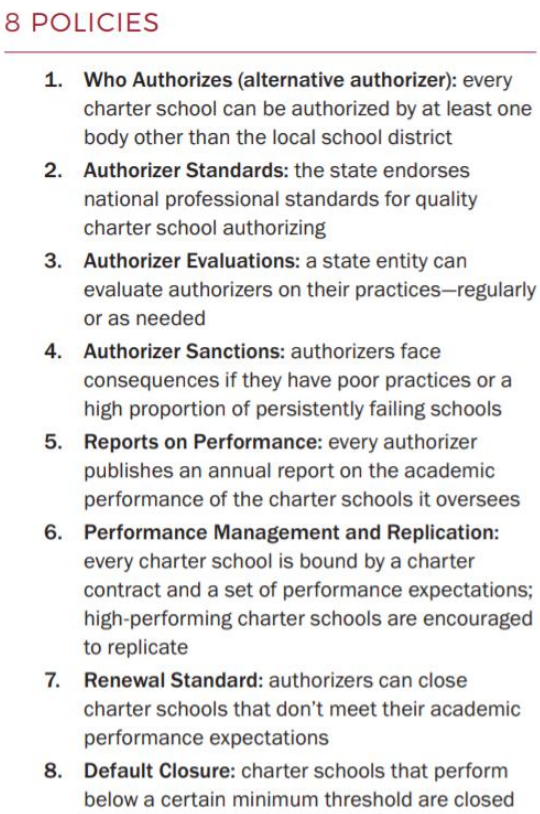
Data

Measuring Regulation

Levels of charter authorizing regulation are proxied by state scores issued by the National Association of Charter School Authorizers (NACSA). NACSA is an influential advising body that advocates for more robust regulation and oversight for charter authorizers (Forster, 2018; Ladner, 2018; Wolf et al., 2021), including sanctions for those who are deemed to make poor authorizing decisions and statutes that compel schools to close if they don't meet certain performance metrics, regardless of the sentiments of the authorizer or school community. NACSA issued scores ranging from 0 to 33 for each state between

2014 and 2016 that were "based on a framework of policies in law, regulation, and/or rules." (NACSA, 2016, p. 6).

Table One: NACSA recommended policies



8 POLICIES

1. **Who Authorizes (alternative authorizer):** every charter school can be authorized by at least one body other than the local school district
2. **Authorizer Standards:** the state endorses national professional standards for quality charter school authorizing
3. **Authorizer Evaluations:** a state entity can evaluate authorizers on their practices—regularly or as needed
4. **Authorizer Sanctions:** authorizers face consequences if they have poor practices or a high proportion of persistently failing schools
5. **Reports on Performance:** every authorizer publishes an annual report on the academic performance of the charter schools it oversees
6. **Performance Management and Replication:** every charter school is bound by a charter contract and a set of performance expectations; high-performing charter schools are encouraged to replicate
7. **Renewal Standard:** authorizers can close charter schools that don't meet their academic performance expectations
8. **Default Closure:** charter schools that perform below a certain minimum threshold are closed

Retrieved from http://www.qualitycharters.org/wp-content/uploads/2016/12/On-The-Road-to-Great-Charter-Schools-State-Policy-Analysis-2016.pdf

We use these scores as a proxy for regulation. As such, we restrict the sample of charter schools to those that opened between 2015-16 and 2017-18[2]. We use the Elementary and Secondary Information System (ElSi) provided by the National Center for Education Statistics (NCES) to compile the roster of charter schools opened during that period, of which there are 1,438.

Measuring Innovation

For the purposes of this paper, innovation is a measure of dissimilarity. The less frequently charter schools adopt a certain practice or characteristic, the more innovative are the schools that do adopt it. To measure innovation, we develop a typology along five dimensions to evaluate charter school

[2] We assume a one-year lag between charter authorization and opening. In other words, we assume that a school that opened for the 2015-16 school year was authorized in 2014 and subject to the charter authorizing regulations in place at that time. The time between authorization and opening varies considerably from school to school (and some that are authorized are never opened) but a review of charter school petitions conducted for previous research indicates that schools typically open in the calendar year after which they are authorized.

practices. Charter schools are evaluated according to pedagogy, curriculum, populations targeted, setting, and themes, as seen in Table Two. Schools are scored according to information that is made publicly available on their websites.

Table Two: Charter School Typology

Component	Characteristic	Description	n
Curriculum	STEM	School places particular emphasis on science, math, and technology.	173
	Core Knowledge	School has adopted or borrows heavily from the Core Knowledge sequence.	82
	International Baccalaureate	School utilizes the International Baccalaureate educational program.	53
	Language Immersion	School integrates a language other than English into core subjects.	60
	Vocational	School focuses on career and technical training.	97
Pedagogy	Constructivist	School explicitly utilizes the constructivist learning theory.	8
	Problem-based	School uses a teaching method whereby a problem is used to stage student learning.	10
	Project-based	School uses a teaching method that uses projects to stage student learning.	139
	Experiential	School utilizes a teaching method whereby students learn through experience (as opposed to didactic instruction).	29
	Montessori	School is explicitly advertised as one that uses the Montessori education philosophy.	35
	Waldorf	School explicitly uses a Waldorf/Steiner educational philosophy.	6
Targeted population	Dropout prevention and recovery	School specifically serves students who have dropped out of the education system or are at risk of dropping out.	119
	Students with disabilities	School specifically serves students with disabilities.	12
	Single gender	School exclusively serves students of one gender.	13
Setting	Virtual	Learning exclusively occurs online.	66
	Hybrid/blended	The school combines traditional in-person instruction with online educational materials.	160
	Place based	Students convene somewhere other than their home or a traditional brick and mortar school.	9
Themes	Technology	The curriculum emphasizes the use, adaptation, or creation of technology. Note that this does not include the use of computers or tablets as learning devices.	59
	Athletics	The school integrates athletics into the curriculum.	26
	Military	The school is a military-style academy.	3

	Art	The school integrates fine or performing arts into the curriculum.	57
	Entrepreneurship	The school places a particular emphasis on business or entrepreneurship.	8
	Environmental	The school integrates environmental themes into the curriculum.	19
	International	The school emphasizes global studies and global citizenship.	64

Characteristics are not mutually exclusive. A school could theoretically serve students from one gender who are at risk of dropping out. However, instances of multiple characteristics within a single category are rare. To ensure scoring fidelity, a second coder coded a random sample of 60 charter schools using the same typology. Each school presents 24 coding opportunities. Overall, the coders agreed in 1372/1440 cases (95%), easily exceeding commonly accepted thresholds (Lacy & Riffe, 1996). Agreement was somewhat lower concerning which features a school exemplified (82%) versus those that they did not exemplify (97%).

Though ElSi documents 1,438 schools that opened between 2015-16 and 2017-18, many of them could not be scored within the typology. Most commonly this occurred if the school had been shut down. However, there were also cases in which the school did not feature a website or the website simply provided limited information about school operations. Overall, 1,261 of the 1,438 schools were scored (88%).

To quantify overall levels of innovation for each school, we assign each identified characteristic a point value that is equivalent to the inverse of its prevalence. For example, 26 schools feature an athletics theme. A school featuring an athletics theme is therefore awarded 48.5 points, the inverse of the number of schools identified with the characteristic (26) divided by the total number of scored schools in the sample (1,261). Points are summed for each school and then standardized. Among the 1,261 schools in the sample, 395 of them exhibit none of the characteristics in the typology.

Results

A cursory juxtaposition between NACSA score and innovation hints at the plausibility of a relationship, as seen in Table Three. For example, among states that opened at least 10 charters between 2015-16 and 2017-18, Utah takes the top spot as most innovative despite faring poorly on NACSA rankings. The next five most innovative also profile somewhat poorly by NACSA standards. The least innovative state, New Jersey, also profiles somewhat poorly by NACSA rankings. However, the next six least innovative states all profile favorably, meaning they have more stringent charter authorizing regimes.

Table Three: Innovation by State (among those that opened at least 10 charter schools between 2015-16 and 2017-18)

State	Std Score	Std. Dev.	NACSA Score Range (2014-2016)
NJ	-0.41	0.20	13
LA	-0.36	0.39	16-24
MO	-0.35	0.62	24-29

NV	-0.35	0.29	29-33
OK	-0.33	0.23	10-25
IN	-0.23	0.29	29-33
OH	-0.23	0.38	24-32
MI	-0.15	0.36	9-16
TX	-0.14	0.58	27
AZ	-0.13	0.43	9-18
AR	-0.13	0.74	12
FL	-0.04	0.86	16-18
CA	-0.02	0.78	11-13
PA	0.02	0.62	11
NY	0.03	0.85	7-16
TN	0.04	1.51	17-20
IL	0.05	0.71	11-14
OR	0.06	0.68	5
MN	0.21	0.95	26
SC	0.21	0.86	25
CO	0.35	1.83	9-10
WI	0.4	1.49	6-15
GA	0.57	1.61	7-20
NC	0.66	2.03	9-15
NM	0.69	1.37	14-15
UT	1.23	3.05	8

To formally test the hypothesis that more stringent authorizing regulation is associated with less innovation, we employ a regression model that expresses innovation as a function of NACSA score.[3] The estimate yields a coefficient of -.015 and a standard error of .004, rendering the estimate significant at the 99% confidence level, as seen in Table Four. The result indicates that a 1-point increase in NACSA score is associated with a 0.015 standard deviation decrease in innovation. The estimate slightly increases in magnitude when controlling for the year in which the school opened.

Table Four: Association between regulation and innovation

	I	**II**
NACSA	-.014***	-.016***
	(.004)	(.004)
Year Opened FE	N	Y

***p<.01

Further analysis distills the innovation score down to its five components (curriculum, pedagogy, setting, targeted population, and themes) and related characteristics to better understand the relationship between innovation and regulation, as seen in Table Five. Expressing each of the five component scores

[3] Once again, we assume that charters were subjected to the regulatory regime in place one calendar year before the school year in which they opened. For example, a charter that opened in 2016-17 is assumed to be subjected to the regulations in place in 2015. A sensitivity confirms that the results are the same if there is no lag between the events.

as a function of NACSA regulation specifically reveals statistically significant and negative influence regarding themes, setting, and pedagogy. On the other hand, the relationship between curriculum innovation and regulation is significant and positive owing to a higher prevalence of language immersion and the international baccalaureate program in highly regulated states.

Table Five: Association Between Regulation and Innovation Components

Component		Characteristic	
Curriculum	.01395*** (.00404)	STEM	.00621 (.00907)
		Core Knowledge	-.01956 (.01591)
		IB	.09713*** (.02104)
		Language Immersion	.04382** (.01817)
		Vocational	-.01750 (.01370)
Pedagogy	-.00985*** (.00351)	Constructivist	.00947 (.03000)
		Problem-based	-.03795 (.03756)
		Project-based	.00100 (.01143)
		Experiential	-.05562*** (.02103)
		Montessori	-.03665 (.02298)
		Waldorf	-.11517* (.06147)
Targeted Population	-.00460 (.00376)	Dropout prevention	-.01207 (.01096)
		Students with disabilities	.01263 (.02822)
		Single gender	-.06564 (.04532)
Setting	-.01109*** (.00324)	Virtual	-.07870*** (.01645)
		Hybrid	-.02074** (.00899)
		Place-based	-.04211 (.03687)
Themes	-.00898** (.00376)	Technology	-.02345 (.01512)
		Athletics	-.03044 (.02732)
		Military	-.12704

		(.07948)
	Art	-.01349
		(.01814)
	Entrepreneurship	-.06577
		(.04266)
	Environmental	-.02653
		(.02467)
	International	.04111**
		(.01673)

Discussion

Overall, the results support the hypothesis that innovation is comparatively modest in states with more stringent regulation around charter authorizing. Still, there are some important limitations. First, the study design cannot by its nature yield causal estimates of the impact that regulation has on innovation. Rather, the association is suggestive of a relationship. Second, there is no one way to devise a charter typology, and indeed other studies have utilized markedly different categorizations (White & Huang, 2021). To what extent the results in this analysis are robust to a different categorization is unclear.

This analysis indicates that authorizing regulation might be an influential and often underappreciated force when it comes to hampering innovation within charter schools. Still, questions remain. Most critically, why precisely does regulation induce isomorphism? The most sensible explanation is that the greater focus on "results" (i.e. achievement) in highly regulated states steers authorizers away from approving innovative petitions and instead steers them toward models which more consistently produce higher standardized test scores. A second explanation- not mutually exclusive from the first- is that the lower levels of innovation seen in highly regulated states might reflect that such states tend to show stronger preferences for new schools affiliated with management organizations that run the affairs of multiple networked charter schools as opposed to standalone operators. (Kingsbury, Maranto & Karns, 2020). To the extent that such organizations appear to be mainstream in their pedagogical and curricular practices, it is plausible that the lower levels of innovation in highly regulated states do not reflect an aversion toward innovation so much as deference toward high-achieving charter management organizations like Knowledge is Power Program (KIPP) or Individuals Dedicated to Excellence and Achievement Public Schools (IDEA).

No matter the cause, the negative association between regulation and innovation sheds some light on the debate between institutionalists and market theorists when it comes to school choice (Berends et al., 2010). Broadly speaking, market theorists argue that demand side pressure will spur innovation among overall improvements in school quality (Chubb & Moe, 1990). Institutionalists argue that expectations for a legitimate schooling experience tend to calcify within the highly bureaucratized public education system, hampering innovation even within the schooling quasi-marketplace (Finnegan, 2007). To the extent that a less regulated marketplace is more responsive to consumers rather than bureaucrats and policymakers, the analysis presented here hints at authentic and perhaps sometimes unfulfilled demand-side pressure for innovation.

Finally, while these results suggest that authorizing regulation hampers charter innovation, this analysis does not preclude other potential explanations for the dearth of innovation in the charter sector in

states with high regulation. The least innovative states are New Jersey and Louisiana, two states that profile as roughly average when it comes to charter authorizing regulation but also states that have attracted considerable philanthropic support for their efforts, especially in Newark and New Orleans, respectively (Matthews & Pinkerton, 2019; Strauss, 2018). Evidence suggests that such philanthropic efforts are often spearheaded by outsiders who exhibit limited consultation with or deference toward the communities that the schools serve (Rusakoff, 2015; Tompkins-Strange & Schwartz, 2016), perhaps highlighting again how the depletion of democratic control-whether through bureaucracy or venture philanthropy-hampers charter innovation. If charter innovation is something that stakeholders and advocates aspire toward, authorizing regulations stand out as a sensible starting point rather than ending point for reform.

Conclusion

Charter authorizing regulation is intended to ensure quality and prevent malfeasance. To what extent it succeeds in accomplishing these goals is a question worthy of further exploration. Whatever the answer, however, policymakers should weigh benefits against potential drawbacks. The analysis presented here indicates that more stringent regulation likely induces authorizers to favor familiar models of schooling that are deemed likelier to culminate in strong academic achievement. NACSA for their part has issued recent statements pledging greater deference to the communities that charters serve. Any authentic shift toward that end must include an unbiased and deliberate attempt to understand precisely what types of schools those communities desire and what forces are stymieing the establishment or persistence of such schools.

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