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MARKET SHARE OF CHARTER SCHOOLS: IMPACT OF STATE POLICY

EMMA ROHAN
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Reviewed and approved* by the following:

Dr. Eric Plutzer
Professor of Political Science
Thesis Supervisor

Dr. Michael Berkman
Professor of Political Science
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

The landscape of education in the United States is transforming. Charter schools, situated at the border between public and private, provide a unique opportunity to study one manifestation of this changing landscape. My thesis aims to answer the question: how do differences in the education policy environments between states explain the variance in different types of charter schools in those states? Using data from the National Center of Education Statistics, the National Alliance for Public Charter Schools, and the Center for Education Reform, this study evaluates the extent to which a state's charter policy landscape and funding regime predicts the state's market share of for-profit, non-profit, and independent charter schools. The charter school favorability index, which is comprised of the highly correlated variables of funding favorability, authorizer flexibility, operational autonomy, and charter growth, is a consistent predictor of higher overall charter school density, yet there is a consistent negative impact on the density of independent charter schools. If states with laws that ostensibly favor charter schools see a reduced density of independent charter schools, this study poses the question: which type of charter school do these laws favor? Possibilities for future research are discussed.

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Chapter 1

Introduction

The landscape of education in the United States is transforming. Threads of privatization are interwoven into the provision of public education, institutionalized by the recent waves of national standards-based reform efforts. Privatization refers to the government's contracting out of local public services to private providers, and over the past twenty years, education policy has shifted to increasingly promote competition and private interests in a historically public sphere. The school choice movement fits cozily into this new public-private environment.

Charter schools, situated at the border between public and private, provide a unique opportunity to study one manifestation of this changing landscape. Publicly funded yet privately operated, charter schools are exempt from certain state and local regulations in return for higher accountability for student performance. While charter schools represent just one of the many forms of school choice, what distinguishes this movement is its rapid expansion and institutionalization into the educational landscape of the United States. Unheard of just thirty years ago, charter schools have become a familiar and established sector of American education.

Since the inception of the charter school movement in the United States, scholars have attempted to make sense of the heterogeneous charter school phenomenon. Some charter schools are opened by large, for-profit management organizations responsible for the operation of hundreds of schools, whereas others are opened by independent community groups who are responsible for only one school. While expanded choice is proclaimed to be an opportunity for parents to exercise agency over their children's education, a parent's choice is contingent upon

the available options in their community. The decision-making process of when and how to open a new school by an individual, group, or management organization is not well-understood. My thesis aims to answer the question: how do differences in the education policy environments between states explain the variance in different types of charter schools in those states?

Chapter 2

Literature Review

The first charter school opened in Minnesota in 1991; before that, no state laws permitted charter schools. Since then, 43 states and the District of Columbia have adopted laws allowing charter schools as alternatives to traditional public schools. According to the National Conference of State Legislatures, "there were 5,997 charter schools in the 2012-2013 school year, making up 6.3 percent of all U.S. public schools. The most recent data showed 4.6 percent of public school students attended charter schools" (2017).

This rapid growth of charter schools must be understood in the context of both state and federal education policy. Since the passage of Elementary and Secondary Education Act of 1965, the national government has increasingly consolidated its influence over education policy, and has created incentives for states and local government to enact policies that advance their political agendas, which have created a fertile environment for the growth of this movement.

Under the 2002 ESSA re-authorization, called "No Child Left Behind" by President George W. Bush, states were compelled to adopt statewide achievement standards to measure and evaluate the performance of schools, attaching sanctions to, and even closing schools that failed to meet "Adequate Yearly Progress" in the name of accountability. The void left by school

closures created an opening for charter and contract schools, acknowledging the "value and vitality" of these alternative schools in No Child Left Behind (U.S. Department of Education, 2007).

The Obama administration continued to serve the interests of private service providers. Using the unpopularity of No Child Left Behind as political leverage, Secretary of Education Arne Duncan offered mandates to states that complied with his education policy goals, such as implementation of the Common Core Standards. This administration further encouraged the passage of charter school legislation by attaching incentives through states' applications to Race to the Top funding (U.S. Department of Education, 2009). While the Every Student Succeeds Act, the 2015 ESSA reauthorization, pulls back from the imposition of national policy interests on state governments, the education system and the private service providers have become interdependent (Kornhaber, Barkauskas & Griffith, 2016).

While the federal government has created the space for this movement to expand, state governments are responsible for passing legislation that allows for the creation and operation of charter schools under their jurisdictions. The state laws that govern these schools vary tremendously, differing with respect to what types of organizations can open charter schools, the bodies that authorize them, and the degree of autonomy they are granted. "Most advocates claim that the number of schools is related to the type of law passed. Some say more autonomy and authorizers allowed by state law produce more charter schools" (National Conference of State Legislatures, 2017).

Charter school proponents advocate for their flexibility, responsiveness, opportunity for innovation, and expanded accessibility for families who want alternatives. In theory, charter schools should be able to attract a large number of students from a wider range than traditional

public schools, suggesting greater opportunity for racial and socioeconomic diversity by detaching a student's school from their zip code. However, research has shown that these patterns do not necessarily play out. In an assessment of charter school enrollment trends in Pennsylvania, Schafft, Frankenberg, Fuller and their colleagues (2014) find important racial patterns in both urban and rural districts: "Brick and mortar charter schools with high non-white student concentrations are disproportionately likely to be located in low-wealth areas. Rural charter schools are also disproportionately non-white in comparison to traditional rural K-12 school districts."

Proponents assert that charter schools will meet a demand in the market for students whose traditional public schools do not adequately serve them. This argument rests on the assumption that charter schools will open where there is a demand for them, such as where the local traditional public schools are poorly funded and under-performing. Contrary to that logic, recent research on charter school deserts provides important insight on the geographical patterns of charter school establishment. Charter school deserts are areas with moderate or high poverty and no presence of charter elementary schools (Saultz, Mensa-Bansu, Yaluma & Hodges, 2018). These are areas where students who would benefit from these educational options are not able to access them. In this thesis I am motivated to see if the claims of charter school advocates and the realities of their locational decisions match, and more generally to explore what factors are impacting their geographic distribution.

Charter schools are an example of a more general phenomenon: the privatization in the delivery of public goods and services. To guide my research, I draw upon previous work on charter schools that see them through the lens of privatization of public services. In their comparison of public and non-profit charter school board governance in three states, Ford &

Ihrke (2015) find that there is reduced democratic accountability in charter school governance; they tend to be more ideologically homogenous, put less emphasis on interactions with the public, and are less likely to view their executive as responsible for governance in key areas. Au & Ferrare (2014) find that political elites tend to have disproportionate influence over the educational policy context toward charter schools than the average voting population; this influence precedes and informs the policy context that serves as the independent variables in my study. DiMartino & Scott (2013) create a privatization typology that captures the social, economic, and political dimensions of the growing public/private policy environment in education, and warns of the challenges that private contracting poses to democratic accountability. While my thesis does not attempt to capture the intermediary political actions that result in different policy environments, it captures the direct translation of those policies into the options available to students.

Chapter 3

Theory

Why distinguish between different types of charter schools?

To explore charter schools, one must understand how they operate, and who is responsible for their operation. There are many examples of charter school formation, but they vary greatly in their patterns of establishment and the governing bodies that operate them, generally referred to as education service providers (ESPs). These are private organizations or firms that manage public charter schools, operating under a contract which determines the terms of their executive authority over the school in return for a commitment to producing measurable outcomes (Miron & Gulosino, 2013). For the purpose of this thesis, I will distinguish between the three types of charter schools: independent charters; education management organizations (EMOs), which are for-profit organizations that operate charter schools; and charter management organizations (CMOs), nonprofit organizations that perform the same function.

Independent ESPs arguably best represent the innovative spirit and connection to local interests that charter school advocates celebrate. Independent charter schools tend to fall into one of five broad categories (Henig et al. 2005): 1) groups of teachers and administrators who create new schools, including those who convert traditional public or private schools into charters, 2) grassroots community organizations, 3) local business organizations such as chambers of commerce of economic development authorities, 4) nonprofits that provide other social services, such as job training or children's services, or 5) faith-based organizations. While the majority of all charter schools in the United States are independent, the number of freestanding charter

schools are plateauing while those operated by CMOs and EMOs are growing in number, and the share of this type of charter schools in the overall market is declining (Charter Schools in Perspective, 2015). This can be in part attributed to the burden on teachers and administrators in running standalone schools with minimal outside support (Wells, 2002). Independent charter schools tend to be operated by individuals or groups responding to a perceived need in their community, pursuing "the interests of a geographically defined group of citizens who share certain interests and values relating to ethnicity, race, housing tenure, and socioeconomic class" (Roch & Sai, 2015). Moreover, independent charter schools in areas that receive less funding support are often dependent upon donations from other local nonprofit organizations, such as museums and universities (Finn et al., 2005). There is reason to believe, then, that charter schools funded by community organizations are likely to be more responsive to the needs of the community in carrying out their educational services.

Management organizations (MOs) are a response to the limited capacity of independent charter schools; by overseeing multiple charter schools and building capacity for the challenges of running a school, these MOs build economies of scale to manage larger numbers of schools. "For-profit EMOs are businesses that seek to return a profit to the owners or the stockholders who invest in them. By contrast, [CMOs] tend to have missions related to social objectives or see their purpose as the expansion of charter schools" (Miron & Gulosino, 2013).

For-profit EMOs are opened by private ESPs with individual motives for participating in the education market. The owners of EMOs keep the profits that their organizations generate, and other external factors, such as corporate investor priorities, may further impact the behaviors in which EMO operators may engage. (Roch, 2015; Cooman et al., 2011). Because profit is a

priority, EMOs are less likely to enroll students who are more costly to educate, such as high school students and students with special education needs. (Ertas & Roch, 2014).

Nonprofit CMOs may engage in different behaviors based on the financial motives of their organizations. Unlike the for-profit sector, profit cannot be distributed to owners and employees at the will of the leadership of the organization. As surplus funds must be re-invested within the CMO, "individuals may have only limited incentives to increase this surplus since it is distributed broadly across the organization and part of it may be lost in its translation into future goods or services" (Roch, 2015; Hoxby, 2003). "While most [CMOs] have similar management agreement and fee structures, a small subset of [CMOs] have received extensive funding from philanthropic sources as they attempt to bring what are deemed as successful school models to scale" (Miron & Shank, 2017). These grants may further reduce the pressure to maximize economic efficiency in nonprofit CMOs. While CMOs have historically been a small number of these management organizations, their share of the market has been expanding as the philanthropic sector has shifted its gaze toward charter schools as an educational reform strategy. There are many more reasons than those described above to distinguish between the for-profit and nonprofit sectors, such as structural differences relating to ownership, reason for existence, organizational goals and methods, source of control, and organizational structure (Cooman et al., 2011; Karl, Peluchette, Hall, & Harland, 2005). However, it may be more useful to look at these sectors as two ends of a spectrum rather than a binary. In their analysis of enrollment behaviors of market- and mission-oriented nonprofit charter schools in the District of Columbia, Lacireno-Paquet, Holyoke, Moser, & Henig (2002) find that market-oriented charter schools may be "cropping off" service to students whose language or special education needs may make them more costly to educate. This article provides further context and justification for associating

potential motivations of CMOs and EMOs, despite the former's "nonprofit" status. The District of Columbia is a jurisdiction whose laws do not permit the operation of for-profit charter schools; so, even within the subcategory of nonprofit charters, an educational service provider may be more or less "profit-oriented." These researchers measure a charter's market-orientation through several indicators, including whether or not the cofounder was originally a for-profit organization, whether or not that organization still partners with the school, whether or not the school acquired a for-profit partner after opening, among a number of other measures. This analysis illustrates that even within a seemingly mission-oriented subcategory of charters, there is room for nuanced investigation. While nonprofits cannot earn profits, for example, they are not able to indefinitely sustain losses, which could lead to struggling schools to use similar cost-cutting techniques as the for-profits described above. Additionally, while these schools cannot retain profits and distribute to its shareholders, they can be directed toward increased salaries for organization executives and principles. Because of the nature of the data I use in my analysis, this nuance is not sufficiently captured. Therefore, I interpret the results with this perspective in mind.

Some research has found that charter schools take certain characteristics into account when deciding where they will open their schools (Henig & MacDonald, 2002). Examining the locational decisions of different types of charter schools in the District of Columbia, the authors find key differences in the factors that attract charters based on their mission or market-orientation: "Compared to mission-oriented schools, market-oriented charters seem more likely to locate in or near tracts with high ownership and less likely to locate near heavy concentrations of Hispanics." While this study is location-specific to Washington, D.C., there is reason to believe that similar considerations would be taken in different contexts. My research aims to

broaden the scope of Henig & MacDonald's (2002) research by applying a similar analysis to a

larger sample. My thesis does not explore the various social and political factors involved in the

creation of charter school policy in different states. Many previous studies (Renzulli & Roscigno,

2005) have considered the different interstate and intrastate processes that inform this policy

adoption. My thesis takes these state policies as a given and aims to investigate the impact these

policies have on the actual creation of charter schools. I acknowledge that by taking a broad look

at the state-by-state context of charter school establishment patterns, I overlook many of the

intricacies that happen at smaller scale levels.

Table 1. Summary Table of Charter Schools

School Type	Total number of schools	Percent of all charter schools	Percent of all public schools
EMOs (for profit)	882	12.6%	0.93%
CMOs (non-profit)	1,639	23.5%	1.74%
Independent charters	4,418	63.3%	4.68%
Traditional Public schools	94,466	NA	100%

How might charter school policies predict different charter school types?

Charter school laws facilitate the operation of charter schools in different ways. However,

there is a great deal of variability in what those laws look like between states. If we have

established that different types of charter school operators may engage in different behaviors

depending on their incentives, then it is reasonable to believe that charter school policies would

incentivize or disincentivize them in different ways. For example, Pennsylvania's charter school

policy does not allow the operation of for-profit charter schools. While this would obviously be

bad news for an EMO such as Imagine Schools, a nonprofit charter organization such as

ASPIRA could happily fill the void in that potential market. Independent charter schools are not

likely particularly fazed by a law that bans for-profit charter schools, but may be distressed by a law that caps the number of charter schools that are allowed to operate in the state at one time; a charter school with a network and proven track record is more likely to keep its spot in the limited number of charter schools, which could push an independent charter with no experience out of the market. In Table 3, a description can be found of each subcomponent used in the Center for Education Reform's disaggregation of state charter school laws to more comprehensively illustrate the state charter policy landscape.

My thesis attempts to explain the variability of charter school options between states using the educational policy context of those states. How do charter policies help explain these differences while holding other elements of state education policies constant? My thesis will contribute to our understanding of the factors that pull different types of charter schools to open in different states.

Chapter 4

Hypotheses

If charter schools justify their existence by claiming to meet the needs of the students in the areas where they open, it is worth examining the extent to which other factors influence that decision-making process. I intend to evaluate the extent to which a state's charter school policy landscape and funding regime predicts the state's market share of EMOs, CMOs, and independent charter schools.

I make a number of predictions in my first model, which includes only state charter policy as the independent variables:

1. As state charter school policies become more favorable to charter schools, the overall charter density will increase.

2. As a state charter school policies allow easier entrance to the market, the density of independent charter schools will increase.

3. As state charter school policies become more favorable to charter schools, the density of CMOs and EMOs will increase.

4. As state charter school policies become more favorable to charter schools, the density of independent charter schools will neither increase nor decrease.

As independent variables are added in my second and third models, I have a number of additional predictions:

5. As a state's per-pupil spending increases, the density of EMOs will increase.

6. As a state's per-pupil spending increases, the density of independent charter schools and CMOs will neither increase nor decrease.

7. As a state's education spending becomes more inequitable, the overall density of charter schools will increase.

8. The effect of state education spending on overall charter density will increase as inequity in the funding regime increases.

Chapter 5

Data

Dependent Variables

My main dependent variable is charter schools as a proportion of all schools in all 44 states with charter enabling legislation. The average is 6.3% which is reflected in Minnesota and North Carolina. The lowest is 0.2% in Iowa. The highest is 23.2% in Arizona. I will refer to this variable as "overall charter density".

My second dependent variable is the proportion of each type of charter schools the charter sector of each of these states: CMOs, EMOs, and independent charters. The average for CMOs is 16.7%, which is most closely reflected by the states of Missouri and Colorado. The lowest is 0% in several states, such as Hawaii, Idaho, Alaska, and Maine. The highest is 66.7% in Mississippi. I will refer to this variable as "CMO density". The average for EMOs is 8.8%, which is reflected most closely in Oklahoma. The lowest is 0% in a number of states, such as Virginia, Washington, Wyoming, Colorado, Connecticut and Mississippi. The highest is 58.9% in Michigan. I will refer to this variable as "EMO density". The average for independent charters is 73.8%, which is reflected most closely in California. The lowest is 32.4% in Texas. The highest is 100% in New Hampshire, Virginia, Wyoming, and Alaska. I will refer to this variable as "independent density".

I use the NAPCS charter school database to determine whether a school is independent, operated by a charter management organization (CMO) or an educational management organization (EMO). Of the 6,941 charter schools in the United States contained in the data

dashboard maintained by the National Alliance for Public Charter Schools, independent charter

schools comprise 63.7% of all charter schools, CMO-operated charter schools comprise 23.6%

of all charter schools, and EMO-operated charter schools comprise 12.7% of all charter schools.

Table 2. Dependent variables

Measure	Brief Description	Data source	Mean	SD	Min	Max
Charter density	Total charter schools as a proportion of all schools in 2018	NCES Common Core of Data (total schools), National Alliance for Public Charter Schools (total charter schools)	6.3%	4.9%	0.2%	23.2%
CMO density	Total CMO charter schools as a proportion of all charter schools in 2018	National Alliance for Public Charter Schools	16.7%	18.2%	0.0%	66.7%
EMO density	Total EMO charter schools as a proportion of all charter schools in 2018	National Alliance for Public Charter Schools	8.8%	11.7%	0.0%	58.9%
Independent density	Total independent charter schools as a proportion of all charter schools in 2018	National Alliance for Public Charter Schools	73.8%	20.4%	32.4%	100.0%

Independent Variables

My independent variables comprise the education policy landscape in a given state as it pertains to charter schools. The subcomponents of this measure include components of state laws pertaining to charter schools, and the overall education policy of a state.

My first independent variable measures easy of entry into the education market. This policy is scored by the Center for Education Reform (CER). The score is a proportion of the points earned by the state out of a total possible ten points. I will refer to this as a state's "market entry score". As shown in the first panel of Table 3, it runs from a low of 0 in Maryland to a high of 1 in many states, such as Alaska, Florida, Georgia, Minnesota, and North Carolina. The mean states scores a value of 6.7; Utah and Idaho hover around this score at 7 points. For the sake of comparability to the second independent variable which is measured on a scale of 0 to 1, I rescaled this variable to match it.

My second independent variable measures the overall charter favorability of a state's charter school landscape. I create an index based on four correlated policy measures scored by CER: Funding Favorability, Authorizer Flexibility, Operational Autonomy, and Charter Growth (this measure excludes ease of entry). When combined, the score is measured in a proportion; a state with a "perfectly favorable" charter school policy would be indicated by a score of 1. As shown in Table 3, it runs from a low of 0.05 in Virginia to a high of 0.70 in Michigan and the mean state scores a value of 0.39, to which the closest states are Delaware, Georgia, and Indiana. I will refer to this variable as the "favorability index".

My third independent variable is state education spending. This variable is measured by the median of per-pupil expenditures in a state from a dataset from a Report on Revenues and Expenditures for Public Elementary and Secondary School Districts for the 2010-2011 school year by the U.S. Department of Education National Center for Education Statistics (Cornman et

al., 2013). The mean is $10,880 per pupil. The lowest is $6,878 in Utah, and the highest is

$25,132 in Alaska. In order to more meaningfully capture changes in education spending, I have

rescaled this variable in my analysis so that each unit change represents one thousand dollars in

per-pupil spending. Therefore, the range of this variable runs from 6.9 to 25.1.

My fourth independent variable is state funding inequity. Disparity between school

districts is measured by taking the quotient of the 95th percentile and 5th percentile of per-pupil

expenditures for each state from the same dataset mentioned for the spending measure. A

perfectly equitable state would have no difference between its highest and lowest-spending

district, and would the equity measure would equal 1. The state that exemplifies this measure is

Hawaii, which has one unified school district. The state with the most equitable funding with

divided districts is Maryland, with a score of 1.3. The state with the greatest finding disparity is

Nevada, with a score of 5.6. The mean spending inequity score is 2.1, which is reflected in

Louisiana, New Hampshire, New Jersey, Wyoming, and Utah. I have not located a more recent

document that includes the 95th and 5th percentiles of per pupil expenditures, but the measure

given by this report likely still accurately reflects funding disparities.

Table 3. Independent Variables

Overall education policy

Measure	Brief Description	Data source	Mean	SD	Min	Max
Median per-pupil spending level	Median of per-pupil expenditures in a state in thousands of dollars: School Year 2011-12	U.S. Department of Education National Center for Education Statistics (Cornman et al., 2013)	11.00	3.50	6.90	25.10
Within-state spending inequity	Ratio of highest school expenditures to lowest school expenditures: School Year 2011-12	U.S. Department of Education National Center for Education Statistics (Cornman et al., 2013)	2.10	0.89	1.00	5.60
State share of education funding**	Percentage of education revenue coming from state government: School Year 2011-12	U.S. Department of Education National Center for Education Statistics (Cornman et al., 2013)	45.48	12.89	0.00	83.40

State laws pertaining to charter schools

Flexibility and independence of authorization**	High scores reflect flexibility and independence of authorizing body of charter schools; allows for multiple authorizers (rather than just school district authorizers) and authorizers can be independent bodies (not accountable to large, standard-driven authorizers); possible points: 15	Center for Education Reform (2017)	0.41	0.24	0.00	1.00
Ease of market entry	High scores reflect ease of entry into the market through minimal burden on charter operators to open schools and ability for new charters to enter the scene; possible points: 10	Center for Education Reform (2017)	0.68	0.33	0.00	1.00
Potential for charter growth **	High scores reflect growth potential of the charter school model through opportunity for replication of school models; possible points: 5	Center for Education Reform (2017)	0.41	0.26	0.00	1.00
Autonomy from traditional public school regulation**	High scores reflect operational autonomy from traditional public school regulations; blanket waivers from typical rules and regulations, such as length of school day, collective bargaining units, and teacher certification rules; opportunity for online or blended learning, single-sex schools, or alternative schools; possible points: 20	Center for Education Reform (2017)	0.56	0.20	0.10	0.90

** Variable not used in final data analysis

State laws pertaining to charter schools, continued

Favorable funding to charter schools**	High scores reflect state law's favorability toward charter school funding; score factors in how states fund charter schools, how funding formulas impact schools in practice, and the extent to which facilities funding is available; possible points: 15	Center for Education Reform (2017)	0.39	0.19	0.00	0.93
Favorability index	High scores reflect charter favorability based on four correlated policy measures: Funding Favorability, Authorizer Flexibility, Operational Autonomy, Charter Growth	Center for Education Reform (2017)	0.40	0.17	0.05	0.70
Total charter school landscape favorability score**	High scores reflect overall favorability of a state's charter school landscape: flexible authorization, growth and scalability, autonomy, and funding opportunity; possible points: 65	Center for Education Reform (2017)	0.49	0.18	0.09	0.86

** Variable not used in final data analysis

Table 4. Correlation of independent variables

	Per-pupil spending	Spending inequity	State share**	Authorizer flexibility**	Market Entry	Charter growth**	Autonomy**	Funding favorability**	Favorability Index
Per-pupil spending	1.00								
Spending inequity	0.20	1.00							
State share**	-0.16	0.07	1.00						
Authorizer flexibility**	-0.24	0.01	-0.02	1.00					
Market Entry	-0.06	0.07	0.09	0.30	1.00				
Charter growth**	-0.10	-0.10	-0.21	0.69	0.39	1.00			
Autonomy**	-0.20	-0.09	-0.18	0.72	0.19	0.58	1.00		
Funding favorability**	-0.09	-0.09	-0.33	0.63	0.07	0.66	0.69	1.00	
Favorability Index	-0.19	-0.04	-0.15	0.88	0.51	0.81	0.86	0.78	1.00

** Variable not used in final data analysis

I use the Center for Education Reform (CER) National Charter School Laws Ranking and Scorecard to measure state laws pertaining to charter schools because it ranks states each year according the extent to which its law favors charter schools. The score reflects "whether a state's charter school law enables citizens to create schools that are independent in oversight and operations, are beyond the reach of traditional school bureaucracies, have wide latitude to operate and innovate, and provide parents with many options when deciding which schools will best meet the needs of their children" (CER, 2017). Although I do not employ these measures in my actual analyses, I use the National Alliance for Public Charter Schools (NAPCS) scores of charter policy subcomponents as a robustness check. NAPCS has developed a model charter

school law that "encourages the creation and growth of high-quality charter schools while holding underperforming schools and authorizers accountable" (NAPCS, 2018). The model law has 21 components, which address components of charter school legislation such as caps on charter schools, variety of types of charter schools, equitable access, among others. A state's score is determined by measuring its law against the model law with weights applied, and generating a score out of 240 possible points. The state with the lowest score is Maryland with 50 points. The state with the highest score is Indiana with 176 points. Excluding DC, the correlation between CER and NAPCS is 0.71.

Figure 1. Correlation between CER and NAPCS law scores across 44 charter-enabling states
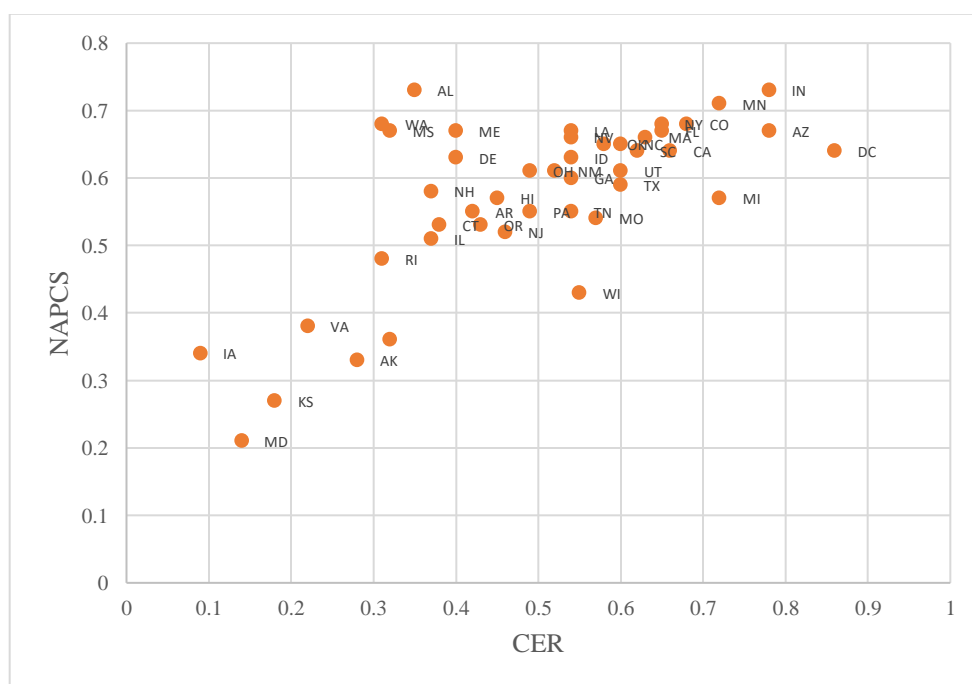
I have excluded the District of Columbia from the dataset because of its idiosyncratic nature compared to the rest of the jurisdictions that comprise my dataset. In Washington, D.C., about half of all public schools are charter schools which is a significantly greater share of the public school marketplace than the rest of the states that all allow charter schools. Moreover, the District of Columbia has two separate public school districts: District of Columbia Public

Schools, and the independently governed District of Columbia Public Charter School Board, which was created by the District of Columbia School Reform Act of 1995. While DC is not significantly unlike other cities within states in this way, its large numbers might overrepresent the area due to its small size, which could skew the results. For these reasons, I have excluded DC from my dataset while acknowledging its richness as an example of charter school policy.

Chapter 6

Methods

I run ordinary least squares (OLS) multivariate multiple regression analyses on the dependent variables in three different accumulative models. The first model includes only charter school policy measure by the Center for Education Reform rankings. The next model adds the spending measure and within-state spending inequity measure. The third model adds an interaction variable of the spending and inequity measure. I add these variables to see how the additional independent variables might mediate the relationship of the main independent variables. The number of states (n) drops to 41 from 43 in the models that do not look at the overall charter density, because that measure includes states that have charter schools that do not fall within the categories of independent, CMO, or EMO.

Chapter 7

Results

Table 5. Regression Table of First Model: Charter Policies

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                                          Dependent variable:
                         ------------------------------------------------------------------------
                         Charter Density    Ind Density       CMO Density       EMO Density
                              (1)              (2)               (3)               (4)
----------------------------------------------------------------------------------------------
Favorability Index         14.669***         -52.349***         29.575*           20.973*
                            (3.877)           (18.785)         (16.942)          (11.023)

Market Entry                3.138             11.247           -18.596**           8.064
                            (1.928)           (9.224)           (8.319)           (5.413)

Constant                   -1.595            87.210***          17.590*           -5.339
                            (1.891)           (9.880)           (8.911)           (5.798)

----------------------------------------------------------------------------------------------
Observations                 43                41                41                41
R2                          0.338             0.185             0.161             0.146
Adjusted R2                 0.305             0.142             0.117             0.101
Residual Std. Error    4.109 (df = 40)    18.929 (df = 38)   17.071 (df = 38)   11.108 (df = 38)
F Statistic            10.202*** (df = 2; 40) 4.314** (df = 2; 38) 3.649** (df = 2; 38) 3.258** (df = 2; 38)
==============================================================================================
Note:                                                            *p<0.1; **p<0.05; ***p<0.01
> Model 1
```

A higher charter school favorability score has a strong, positive impact on the density of charter schools. The model estimates that a state with one unit increase in the favorability index score would observe a 15 percent increase in the overall density of charters. Under these same conditions, the model estimates that increased charter school favorability would lead to a decrease of greater than 50 percent in the density of independent charter schools, while the density of CMOs and EMOs would increase by 30 and 21 percent, respectively. The only significant regression predicted by the market entry score predicts a slight negative impact on the density of CMOs.

Table 6. Regression Table of Second Model: Charter Policies, Spending, Inequity

```
===============================================================================================
                                              Dependent variable:
                    ---------------------------------------------------------------------------
                    Charter Density      Ind Density        CMO Density        EMO Density
                         (1)                 (2)                (3)                (4)
-----------------------------------------------------------------------------------------------
Favorability Index     13.579***           -42.003**           22.888             17.831
                       (3.960)             (18.999)            (17.586)           (11.618)

Market Entry            2.822               13.179            -19.763**            7.448
                       (1.942)              (9.072)            (8.397)            (5.547)

Inequity               -0.629               -1.622             1.439              0.352
                       (0.750)              (3.381)            (3.130)            (2.067)

Spending                0.274               -1.647*            1.037              0.510
                       (0.201)              (0.921)            (0.852)            (0.563)

Constant               -1.017              81.693***          21.125**           -3.653
                       (1.932)             (10.026)            (9.280)            (6.131)

-----------------------------------------------------------------------------------------------
Observations            43                   41                 41                 41
R2                     0.372                0.270              0.208              0.169
Adjusted R2            0.306                0.189              0.120              0.077
Residual Std. Error  4.105 (df = 38)    18.408 (df = 36)   17.039 (df = 36)   11.256 (df = 36)
F Statistic         5.630*** (df = 4; 38) 3.325** (df = 4; 36) 2.366* (df = 4; 36) 1.837 (df = 4; 36)
===============================================================================================
Note:                                                        *p<0.1; **p<0.05; ***p<0.01
> Model 2
```

In the second model, spending data and a school district inequity measure were added to the model. Higher spending predicted a very slight decrease in the density of independent charter schools. While these variables did not yield significant results in other categories of charter schools, adding these variables slightly reduced the effect sizes of the favorability score on overall charter density and the density independent charter schools, and the market entry score's effect on CMO density. These variables explained away the impact of charter favorability in legislation on the density of CMO and EMO charter schools.

Table 7. Regression Table of Third Model: Charter Policies, Spending, Inequity, Interaction

```
==========
                                           Dependent variable:
                   ------------------------------------------------------------------------
                   Charter Density    Ind Density      CMO Density      EMO Density
                        (1)              (2)              (3)              (4)
------------------------------------------------------------------------------------------
Favorability Index    13.452***        -40.559**         21.757           17.649
                      (3.907)          (18.996)         (17.668)         (11.803)

Market Entry           3.447*           16.115*         -22.062**          7.078
                      (1.964)           (9.440)          (8.780)          (5.866)

Inequity              -0.692            -1.949            1.695            0.394
                      (0.741)           (3.385)          (3.149)          (2.104)

Spending               0.056            -2.483**          1.692            0.615
                      (0.250)           (1.197)          (1.113)          (0.743)

Interaction           -0.228            -0.812            0.636            0.102
                      (0.159)           (0.744)          (0.692)          (0.463)

Constant              -1.162            79.757***         22.641**        -3.409
                      (1.909)          (10.156)          (9.446)          (6.310)

------------------------------------------------------------------------------------------
Observations            43               41               41               41
R2                     0.405            0.294            0.227            0.171
Adjusted R2            0.325            0.193            0.116            0.052
Residual Std. Error  4.049 (df = 37)  18.360 (df = 35) 17.077 (df = 35)  11.408 (df = 35)
F Statistic          5.041*** (df = 5; 37) 2.912** (df = 5; 35) 2.053* (df = 5; 35) 1.440 (df = 5; 35)
==========================================================================================
Note:                                                  *p<0.1; **p<0.05; ***p<0.01
> Model 3|
```

In the third model, I added an interaction variable of spending and inequity. Adding this variable very slightly reduced the effect sizes of the favorability score on overall charter density and the density independent charter schools. Interestingly, adding this variable increased the effect of the market entry score on the CMO density. It also yielded significant results which were not present before in the market entry variable: an increase in this variable is associated with a slightly higher density of independent charter schools, and charter schools as a whole.

The R-squared value in my final model increased substantially from that of my first model, which indicates that the proportion of variance explained by my independent variables

increased through the progression of models. Across dependent variables, the greatest amount of variance was explained in the overall charter school density, then, in order, that of independent charters, CMOs, and EMOs. Because the n-size of my dataset is only 43, it is possible that I pushed the limits on the number of independent variables in my analysis.

Chapter 8

Discussion

The charter school favorability index, which is comprised of the highly correlated variables of funding favorability, authorizer flexibility, operational autonomy, and charter growth, is a consistent predictor of higher overall charter school density. This result follows logically; one would expect to see a higher density of charter schools in a state whose legislation facilitates their existence, financing, and operation. What is interesting is the consistent negative impact that this favorability score has on the density of independent charter schools. Independent charter schools, which plausibly best represent the localized, innovative intentions of the charter school movement, seem to be adversely impacted by the presence of favorable charter school laws. If states with laws that ostensibly favor charter schools see a reduced density of independent charter schools, one must wonder: which type of charter school do these laws favor? According to the way the Center for Education Reform measures charter favorability in legislation, it appears that independent charter schools may not see the same benefits.

The other notable significant result was the negative impact of a higher market entry score on the density of CMOs. This could potentially be explained by the fact that CMOs often operate in networks of schools, which would allow them to quickly exploit easy access to the charter school market in a given state. Bennett (2008) demonstrates how the Knowledge is Power Program, just one popular example in this heterogenous subcategory, has accumulated a great deal of recognition and esteem through its growth-oriented franchise model. Bennett

argues: "KIPP has adapted the franchise model to its goal of preparing disadvantaged urban children to succeed in college and beyond. The process Singer and KIPP's other founding principals use to locate sites, raise funds, and find their young customers is very similar to the efforts of America's 900,000 franchisees, operators of the nation's restaurants, print shops, and senior-care services." While this neither corroborates nor disconfirms the findings in my study, it may be helpful to think about whether an organization such as KIPP would necessarily need to flock to states whose laws allow for fluid market entry if it already possesses considerable resources to do so anyway.

Though my research did not initially seek to critique the Center for Education Reform's measurement of charter school laws, it is impossible to ignore that their measurements seem to misrepresent the movement they claim to support. As I mentioned previously, I chose this measure of charter school legislation because it is the most comprehensive measurement and comparison of the components of charter school laws across states. Moreover, the metric given by CER could be operationally useful when looking at states over time, as an updated report card is generally released every year. If this dataset is one of the most comprehensive tools for cross-state analysis, the finding that the measurement of these laws appear to favor the operation of certain types of charter schools over other others is problematic. Scholars who wish to analyze charter legislation across states should be cognizant of the possible predilections of the Center for Education Reform's dataset. This by no means renders the dataset unusable, but requires mindful interpretation of one's results. This finding could open pathways to further consider how to more holistically and accurately measure charter legislation in a way that allows researchers to easily compare across states.

Chapter 9

Conclusion

This thesis points to several different paths for future research. Because of the limits of my dataset and small n-size, this type of analysis could be applied to school districts, which would exponentially expand the number of independent variables that could be added to the models. This kind of analysis would allow for comparison both across and within states. Moreover, more robust and time-controlled finance data could be used to better capture the nuances of state education policy rather than the broad strokes with which my variables paint it.

This study also begs for more research that can disentangle the different types of charter schools. Because we know that the charter movement is not a monolithic one, it will be valuable to disaggregate charter schools by type, both as dependent and independent variables. That being said, we also know that the simple categorization of charter schools by their ostensible for-profit or nonprofit status can also lead to naïve generalizations and oversights; a school's nonprofit status does not say much about the way it actually uses its funds, and there is reason to believe there are similarities in the structural organization and behaviors between nonprofit and for-profit charters. Future research should continue the impressive work of Lacireno-Paquet and her colleagues (2002) in finding ways to measure the market orientation of charter schools within the nonprofit subcategory.

Moreover, this study has identified a demand for research that scrutinizes the datasets produced by pro-charter and school choice organizations. Because these are some of the most comprehensive and longitudinal compilations of comparative charter policies at this current point in time, they will likely continue to be used by researchers who wish to compare policies across

states. However, if my study's results accurately demonstrate potential bias in these datasets,

their widespread use for empirical research is problematic. In addition to the scrutiny of already

existing datasets, it would be a worthwhile pursuit for nonpartisan academic researchers to

producing new datasets detailing state charter school laws would be a worthwhile one.

BIBLIOGRAPHY

Au, W., & Ferrare, J. J. (2014). Sponsors of policy: a network analysis of wealthy elites, their affiliated philanthropies, and charter school reform in Washington state. Teachers College Record, 116(11), 1–24.

Bennett, J. (2008). Brand-name charters. Education Next, 8(3) Retrieved from http://ezaccess.libraries.psu.edu/login?url=https://search-proquest-com.ezaccess.libraries.psu.edu/docview/1237823681?accountid=13158

Charter schools in perspective: A guide to research. (2015). San Francisco, CA. Retrieved from http://www.ahc.umn.edu/img/assets/26104/Research_Ethics.pdf

Cooman, R. D., S. D. Gieter, R. Pepermans, and M. Jegers. 2011. "A Cross-Sector Comparison of Motivation- Related Concepts in For-Profit and Not-for-Profit Service Organizations." *Nonprofit and Voluntary Sector Quarterly* 40(2):296–317.

DiMartino, C., & Scott, J. (2013). Private Sector Contracting and Democratic Accountability. Educational Policy, 27(2), 307–333. https://doi.org/10.1177/0895904812465117

Finn, C. E., B. C. Hassel, and S. Speakman. (2005). Charter School Funding: Inequity's Next Frontier. Washington, DC: Thomas B. Fordham Foundation.

Ford, M. R., & Ihrke, D. M. (2015). A comparison of public and charter school board governance in three states. Nonprofit Management and Leadership, 24(4). https://doi.org/10.1002/nml

Henig, J. R., & Macdonald, J. A. (2002). Locational decisions of charter schools: probing the market metaphor. Social Science Quarterly, 83(4)

Hoxby, C. M. (Ed.). (2003). "School Choice and School Productivity: Could School Choice Be a Tide that Lifts All Boats?" in *The Economics of School Choice*. Chicago, IL: Univ. of Chicago Press.

Karl, K., Peluchette, J., Hall, L., & Harland, L. (2005). Attitudes toward workplace fun: A three sector comparison. *Journal of Leadership & Organizational Studies*, 12(2), 1-17.

Kornhaber, M.L., Barkauskas, N.J., and Griffith, K.M. (2016). Smart money? Philanthropic and federal funding for the Common Core.Education Policy Analysis Archives, 24(93).http://dx.doi.org/10.14507/epaa.24.2221

Lacireno-Paquet, N., Holyoke, T., Moser, M., & Henig, J. (2002). Creaming versus Cropping: Charter School Enrollment Practices in Response to Market Incentives. *Educational Evaluation and Policy Analysis*, 24(2), 145-158. Retrieved from http://www.jstor.org.ezaccess.libraries.psu.edu/stable/3594141

Miron, G., & Gulosino, C. (2013). Profiles of For-Profit and Nonprofit Education Management Organizations: Fourteenth Edition - 2011-2012. Boulder, CO: National Education Policy Center. Retrieved from http://nepc.colorado.edu/publication/EMO-profiles-11-12

Miron, G. & Shank, C. (2017). NEPC Review: "Charter Management Organizations 2017." Boulder, CO: National Education Policy Center. Retrieved from http://nepc.colorado.edu/thinktank/review-CMOs.

National Conference of State Legislatures. 2017. "Charter Schools" http://www.ncsl.org/research/education/charter-schools-overview.aspx (October 25, 2017).

Renzulli, L. A., & Roscigno, V. J. (2005). Charter school policy, implementation, and diffusion across the United States. American Sociological Association, 78(4), 344–365.

Saultz, A., Mensa-Bansu, Q., Yaluma, C., & Hodges, J. (2018). Charter School Deserts: High
Poverty Neighborhoods with Limited Educational Options. Columbus, Ohio.

Schafft, K. A., Frankenberg, E., Fuller, E., Hartman, W., Kotok, S., & Mann, B. (2014).
Assessing the enrollment trends and financial impacts of charter schools on rural and
non-rural school districts in Pennsylvania. The Center for Rural Pennsylvania.

U.S. Department of Education. (2007). No Child Left Behind and Charter Schools: Giving
Parents Information and Options. Washington, DC.

U.S. Department of Education. (2009). States Open to Charters Start Fast in 'Race to Top'.
Washington, DC: White, John.

Wells, A. S., ed. (2002). *Where Charter School Policy Fails: The Problems of Accountability
and Equity.* Sociology of Education Series. New York: Teachers College Press.

ACADEMIC VITA

Education:

Bachelor of Arts in Political Science; Bachelor of Science in Education and Public Policy; Master of Arts in Educational Theory and Policy; Minor in French

Dean's List: Fall 2014 - Fall 2019

Work Experience:

World in Conversation (University Park, PA)

◊ *Dialogue Facilitator; Dialogue Assistant; Foundational Facilitation Trainer:* Facilitated dialogues in small groups of 4-15 undergraduate students about contentious social issues in domestic, international, and global initiatives; contributed to creative dialogue development through collaborative meetings in person and using video conferencing technology; co-instructed two 3-hour courses per week in dialogue facilitation to train 40 students to facilitate weekly dialogues.

Penn State Outdoor Adventures (University Park, PA)

◊ *Outdoor Guide, Co-Instructor of Outdoor Adventures Leadership Training Course:* Guided groups of 5-15 students in outdoor trips to encourage community building and skill development; completed over 60 hours of leadership and technical skills training to prepare for leading groups and facilitating team-building activities.

Jefferson Center (St. Paul, MN)

◊ *Fellow:* Assisted in outreach and facilitation of Citizens Jury events held in two Minnesota communities; developed a media literacy curriculum for K-12 students.

Grants Received:

Paterno Fellows Scholarship; Schumacher Honors Scholarship; Sue Paterno Renaissance Scholarship; Wise Memorial Scholarship in Education; Nevins Fellows Scholarship (McCourtney Institute for Democracy); UNESCO Fellows Scholarship.

Language Proficiency:

Native speaker in English; fluent in French; some experience with Arabic