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Charter Schools: An Introduction and Discussion for the Case of Kansas and Surrounding States

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EXECUTIVE SUMMARY

With the increasingly difficult situation facing public school students and the poor international academic achievement in the United States relative to other countries, new solutions for improving the system of education in the U.S. are being sought. Charter schools represent one such solution which is of increasing interest to lawmakers, educators and parents.[1]

Charter schools vary in their structure and status, and there is currently no national mandate for how charter schools must be run.[2] Each state with a charter school mandate has a unique system in place for how charter schools in the state are to be created, supported and held accountable over time. Differences in charter school mandates and policies are at least a part of the reason for the single-state nature of most charter school academic research to date. To explain variation by states in flexibility and accountability is both a blessing and a curse for charter school research: while it is possible to determine the effects and determinants of having charter schools in a particular state, making a definitive statement regarding charter school education in the nation as a whole has proven to be an extremely difficult task. Examining the effects of charter schools across states in a rigorous fashion, when the mandates make the charter schools entirely different types of entities, has proved to be a task lacking in intuitive meaning.[3]

Because there are differences between charter schools by implementation of policy mandate in each state, the current analysis will examine the factors typically thought to affect both the number and performance of charter schools in five different states. These factors are, of course, not an exhaustive list of the characteristics of schools which affect performance either in charter or in traditional public schools. However, the characteristics employed represent a combination of those validated as important in affecting the performance of charter schools in the literature, those available based on data restrictions and, in many cases, those focusing on issues of poverty or income disparities, which tend to relate to charter school implementation or success. In other words, characteristics which were generally available for use and had demonstrated consistent relationships with charter school performance or the difference between charter and traditional public school performance are the main focus of the present analysis.[4]

It should be noted that the characteristics of interest are, in many cases, able to be affected by policy interventions—for example, the size of schools—and, at other times, represent a reflection on how charter schools tend to grow and develop during different political and economic climates within a state.

The states of Oklahoma, Colorado, Nebraska and Missouri (in addition to examining the state of Kansas) are chosen to help understand the situation in Kansas, because one of the clear determinants of charter school policy has been the structure and situation of education and charter schools in adjacent states to the state in question.[5] These states, while physically adjacent, are

1 The level of satisfaction that parents have with the current system of charter schools is, however, not as high as had been expected. Results such as these make the current analysis of different charter schools and a more thorough analysis of the charter school situation all the more timely. See Schneider (2006).

2 For a discussion of the various types of charter schools see Witte (2004). The possibility of religious charter schools has also been brought up and is discussed in Hillman (2008), among others.

3 In fact, there is evidence that the difference in mandates in terms of flexibility and accountability—part of what goes into the grading structure discussed in the following section—is the strongest determinant of how well charter schools perform. See Shober, Manna & Witte (2006).

4 This does not mean that other variables are not interesting, important, or in some cases, demonstrate relationships with charter school existence or performance. Some examples of useful variables to help complement the analysis are the pupil teacher ratio and the number of full-time equivalent teachers. These were not the focus of the present analysis due to the body of research generally showing that these traditional characteristics of schools were less important in explaining the success of charter schools than the characteristics of teachers and teacher salaries as discussed in footnote 19.

5 For more on this, see Zhang & Kaifeng (2008).

quite different in terms of their charter school mandates. This analysis will, therefore, help provide a better picture for the projected future of charter school education in the state of Kansas

A more formal analysis beyond that of general trend analysis was not possible due to the aggregated nature of the data, as well as the previously mentioned issues regarding comparing charter schools formally when the mandates are entirely different by state.[6] *Unfortunately, the lack of a large scale individual-level dataset for the present analysis and a causal structure made it impossible to extend results further than those stated here.* The present work should, therefore, be interpreted as an initial step in understanding how charter schools will continue to grow and evolve in Kansas as well as in this general region of the country.

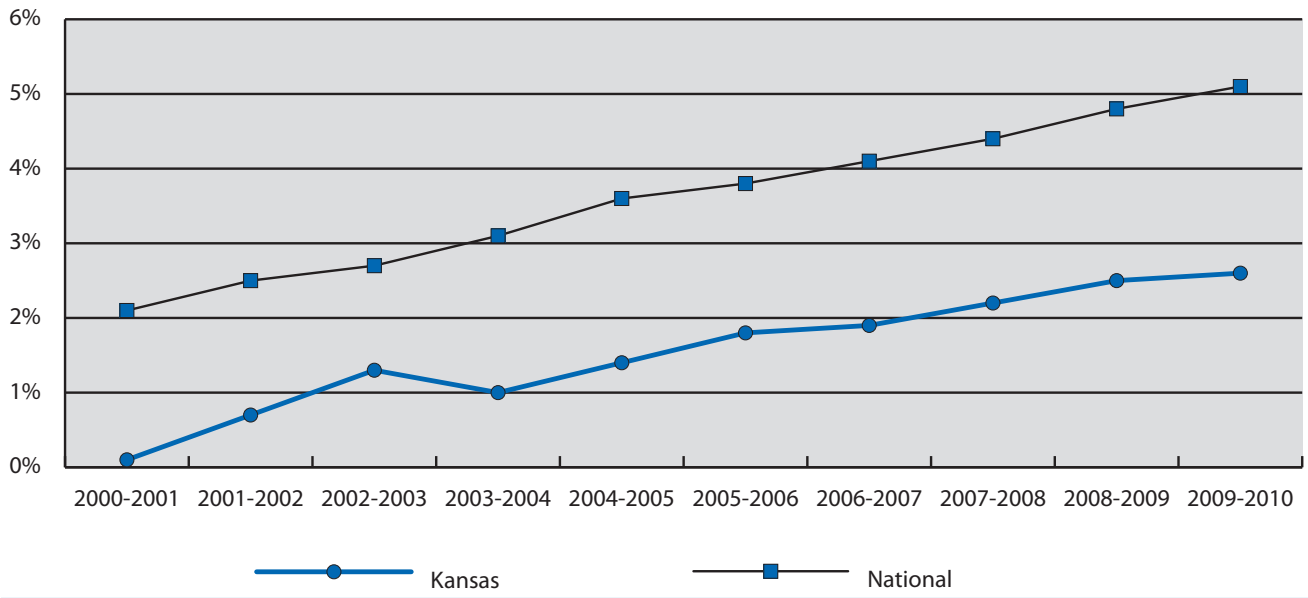
Section 1 provides an overview of the structure and status of charter schools in the states of Kansas and some additional background on the situation in Oklahoma, Colorado, Missouri and Nebraska. Section 2 summarizes questions asked and important relationships coming from the charter school literature as they relate to the present analysis. Section 3 documents trends in several characteristics of interest. Section 4 provides a concluding summary and provides directions for future research in the area of charter schools pursuant to the current work.

CHARTER SCHOOLS IN THE STATE OF KANSAS

Nationwide, there have been charter schools in place in 34-42 states since the year 2000. The number of charter schools in operation over this time period has nationally

Figure 1

Charter Schools as a Percentage of all Public Schools



Source: National Association of Public Charter Schools; Author.

6 Note that, in principle, it would be possible to compare the schools in a regression structure with a fair number of cross-terms but (a) the data would need to be finer to get reasonable levels of statistical significance and (b) because of the varied nature of charter schools by state, it would be difficult to interpret the results unless all regressions were run entirely separately. There is an additional issue discussed later on regarding the exogenous nature of parents choosing schools.

7 See http://www.publiccharters.org/dashboard/performance/page/overview/ for download information. This database was used in constructing the figures used in this section regarding national and state-level trends for charter school numbers and enrollments. They are somewhat different from later tables and figures which were constructed using Common Core of Data information on these same characteristics of the school system.

comprised somewhere between 2.1% and 5.1% of all public schools, as shown in Figure 1. (Source: National Association of Public Charter Schools).[7] In contrast, charter schools in the state of Kansas over this time period have comprised between 0.1% and 2.6% of all public schools.

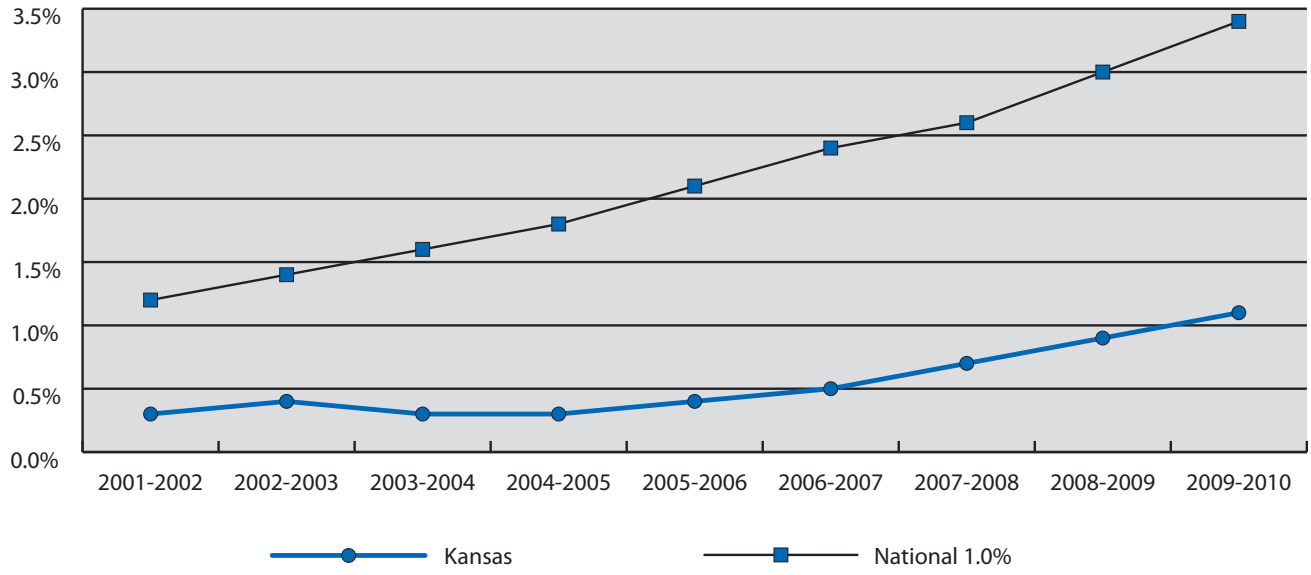
The enrollment picture is quite similar and perhaps starker for Kansas over this time period. As shown in Figure 2, charter school enrollment as a fraction of all public school enrollment was a significantly lower percentage in Kansas relative to the national average (.3%-.4% for Kansas vs. 1.0% -3.4% nationally). It is also apparent that the gap between Kansas and the rest of the nation in charter school education appears to be widening.[8]

Taken together, during the last ten years, Kansas has had both fewer charter schools in existence and fewer students enrolled in its charter schools than the national average. The simplest reason for this difference, and the one which will be highlighted at the end of the analysis, is that Kansas has one of the most restrictive charter school policies in the nation.

The Center for Education Reform (CER) ranks Kansas as the third weakest charter school system in place in the United States with a grade of "F".[9] The CER notes that Kansas charter schools exist "in name only," with most functioning in a fashion closer to "alternative public schools." Kansas charter schools have virtually no autonomy and must answer to local education agencies (LEA's) at essentially every step of the decision-making process. There is no extra guaranteed funding available for these schools and teachers are subject to the same accountability standards as those enforced in other traditional public schools. As a result, there is very little

Figure 2

Charter Schools Students as a Percentage of all Public School Students



Source: National Association of Public Charter Schools; Author.

8 The anonymous reviewer noted that gaps between Kansas and the nation as a whole may not be indicative of overall success. In response to this point, it is important to note that the remainder of the analysis focuses on inter-state differences with a particular focus on the area around Kansas. The nation vs. Kansas picture is presented to provide an initial backdrop and starting point for the analysis.

9 See for example the Center for Education Reform for a system of ranking state charter school systems. http://www.charterschoolresearch.com/ also contains an overview of state charters and, in particular, the data used here to describe the Kansas charter system. The Center for Education Reform is a national non-profit advocacy corporation based in the District of Columbia and founded in 1993. The three issues around which the center operates are charter schools, school choice and standards and curriculum.

incentive for schools to become charter schools (or for new charter schools to form) in the state of Kansas. This has been reflected in the small number of charters being authorized and formed in the state of Kansas and, as a result, the small number of students who are able to attend these charter schools. Because of the authorization process, these Kansas charters are also going to be run by non-profit organizations, making an analysis of the effects of for-profit vs. not-for-profit charter school governance a moot point.

On a related note, notice that virtual charter schools in Kansas have appeared to experience a rise in importance and attention as of late. It is possible that this is because they are less expensive to maintain and do not need the same kinds of teachers and facilities that a normal charter will require. In this sense, the "alternative-virtual-school" model may come closest to the future of Kansas public schools. This is also reflected in the increasing focus and attention in recent Kansas department of education meeting notes on this type of incorporation of charter schools.

Oklahoma, Nebraska, Colorado and Missouri serve as good comparisons to Kansas—as well as to one another—due to their very different charter school mandates (in addition to their simple adjacency which, as already noted, is generally predictive of the structure and diffusion of charter schools in a state). Nebraska exists at one end of the spectrum with no charter school mandate currently in place in the state. Colorado exists almost at the opposite extreme with its charter school mandate given a grade of "B" and ranked 6th best in the nation by CER rankings. Somewhere in between these two extremes are Missouri and Oklahoma. Missouri comes very close to Colorado with a grade of "B" and a ranking of 9th best in the nation. Oklahoma fares somewhat more poorly with a grade of "C" and a ranking of 26th in the nation. Due to the variation in charter school mandates in the five states in question, they constitute a good sampling of different types of mandates to consider for the current analysis.

IMPORTANT LESSONS AND FACTS TO CONSIDER

The charter school literature is replete with questions and, although there are some attempted answers, these are fewer in number and are rarely in accordance with one another. It is somewhat reminiscent of the style of jokes of the form that *if you want three opinions…you should ask two economists*.

There are two main lines of research examined in charter school literature to date. These can be summarized as relating to (a) some measure of performance of charter schools either relative to one another or relative to public schools or (b) an examination of the competition for resources and students that occurs between charter schools and traditional public schools.

The above two themes will be discussed in detail with particular attention to the causes and consequences of variations in the structure of charters or ways in which the measurements are conducted.

Performance and Other Effects of Charter Schools:

Individuals have asked whether charter schools are indeed effective at improving student outcomes, with primary interest focused on test scores, and secondary interest focused on graduation rates. The baseline against which charter school performance is gauged is generally the local public schools in the area. However, performance is also sometimes measured in terms of one versus another type of charter school. The problem with these types of analyses is that they often fail to account for the inherent selection which occurs both by observable and unobservable characteristics of the student—and parent—populations in traditional public versus charter schools.

If it is the case that students who are predisposed to succeed (fail) enroll in a charter school (or else stay in a traditional public school), then finding a relationship between the type of school and student achievement should come as no surprise. It should also not neces-

10 It is very difficult to account for student selection into charter schools. Angrist et. al. (2010) consider this issue. A similar sort of idea of parental movements when the charter schools are good or bad or simply moving due to having more choice is considered in Hanushek et. al. (2007), King (2005).

sarily be seen as an indication that the charter school has actually caused the students to succeed or fail. In economic terms, selection by underlying characteristics may have biased the measured relationship between student success and enrollment in traditional public/charter schools. It may, therefore, seem as if student achievement is affected by the school that the student attends when in fact the students predisposed to succeed are also the ones more likely to choose the traditional public (or, alternatively, charter) school in the first place.[10]

If school selection was simply based on observable characteristics, then choice of school type could be controlled for in the analysis. Any resulting differences in outcome could be attributed to attending a charter school. Unfortunately, there are often unobservable mechanisms that will make some individuals more likely to want to attend a charter school in the first place and other students less likely to make that attempt. As a result, at that point it would not be possible to say that the analysis is unbiased conditional on observables, since there are unobservable elements that bias the research results. More importantly perhaps, it is often difficult to tell in which direction the bias will lie.

One solution that has been proposed for this problem is to see whether winning a lottery to attend a charter school affects an individual's test scores or other student outcomes through its effect on an individual's ability to attend a charter school (as compared to individuals who apply for but lose the lottery).[11] The lack of a simple mechanism for decoupling the selection effect or available data on lottery winners will make a more rigorous analysis in the current case of Kansas and surrounding states infeasible with the given data.

In addition to test scores, there are other outcomes which have been examined and are increasingly catching the attention of researchers on this topic. Consequently, an analysis restricting attention to the test scores of charter school vs. public school students (or even including drop out rates) misses several important possible ways in which charter schools have an effect on students and communities. For this reason, a broader view regarding the effects of charter schools should be employed in analyses examining the effects of charter schools on student outcomes.

It should be recognized that, in many cases, charter schools represent an entirely new element in the education system and, as such, may have a variegated set of effects on students and the communities in which the students reside. Although there are a large number of possible questions that can be asked along these lines. A few examples from the literature are:

- Does attendance at a charter school make an individual HAPPIER in the long/short run than attendance at a traditional public school?
- Do charter schools promote entrepreneurship?[12]
- Do charter schools improve the civic outcomes of students and increase social capital generally in the community?[13]
- Do charter schools perpetuate inequality or segregation?[14]
- Does the presence of a charter school in a region spur population growth into or out of that area?[15]

The previous questions are becoming increasingly important and interesting for research and policy in determining the true consequences of charter school existence and function in a state, although the main research in the area of charter schools has traditionally

11 Obviously, there will be some exceptions, because not all lottery winners will attend schools that they receive the right to attend. Additionally, some individuals who do not get into the school by lottery may still end up attending the school via other mechanisms. Sometimes they are able to get in because a sibling attends the school, etc. so that this type of lottery analysis is still not a perfect indication of attendance or nonattendance, but it is used as a reasonably strong indicator. See Angrist et. al. (2010) for an example of a lottery analysis.

12 See Sobel & King (2008).

13 See Schneider (2006).

14 See Andre-Bechely (2007), Weiher & Tedin (2002). Renzulli (2006), Dee & Fu (2004).

15 See King (2005).

been on measures of test scores and graduation rates in measuring student success.

Once it has been determined whether charter schools in general increase student performance, it is useful to examine whether the type of charter school is a factor responsible for school effectiveness. Will it matter whether the state's charter schools are run by for-profit or non-profit organizations. Will the size of the organization matter? It turns out that it is also important to examine the rural and urban context of the school area and the size of the school. The way decisions are made will also tend to vary by the type of organization running the charter school, which may ultimately make a difference for how well the school achieves its goals of student performance. In fact, the profit/non-profit status of the charter school tends to have less of an effect than might be expected, with few studies finding a significant relationship between profit-status and student achievement.[16]

Similarly, one might wonder whether classroom-based vs. non-classroom based charters are more effective, or whether conversion charter schools which were initially public schools perform similarly to startup charters that were started from scratch. On a related note, it is interesting to see generally how the age of charter schools affects their performance and whether older charters begin to start tracking the pace of the public schools (as one possibility).[17]

Another suggestion posed in this literature is to examine the variegated set of factors predicting success in charter versus traditional public schools. The theory behind this idea is that since the entering characteristics of students and the structure of the schools are different enough between traditional public schools and charter schools, it is possible that entirely different characteristics will correlate with success in these two environments. Along these lines, it appears that in traditional public schools specific student characteristics clearly relate to student success rates, including the percentage of economically disadvantaged students and the percentage of minority students having a negative relationship with success rates. In charter schools, teacher characteristics, such as teacher pay and experience, appear to matter for student success.[18]

The Nature of Competition

While the previous section has discussed the nature of the relationship between charter schools and traditional public schools with a focus on student performance outcomes, it is also important to consider issues related to the funding and growth of both charter and traditional public schools. In particular, a central question asked in this area is whether charter schools "cream-skim" students from traditional public schools or, alternatively, draw worse-performing and at-risk students from traditional public schools. In terms of competition for financial resources, researchers ask whether charter schools cause a reallocation of funding away from traditional public schools in the LEA. Researchers also sometimes ask whether charter schools use the money they are given in a "more efficient" manner in the production of educational resources. [19]

Taken together, answering the previous two questions helps give a more complete picture of whether charter schools help or harm traditional public schools finan-

16 One area of contention concerns the relative efficacy of various forms of charter school governance. Results in this literature are mixed, with many finding little effect of profit-status on the efficacy of the charter school, its ability to compete with local public schools or its performance in terms of test scores. For examples in this literature see Hill & Welsch (2009), Sass (2006), Bulkley (2004), King (2007).

17 Authors in this genre examine how charter schools perform over time and how their performance relates to that of traditional public schools. See Hanushek et. al (2007), Sass (2006), Bifulco & Ladd (2006), Buddin & Zimmer (2005).

18 See Lovett et. al. (2010), Carpenter et. al. (2010).

19 The literature on how students in public schools are affected by the presence or absence of charter schools in terms of test scores, graduation rates, efficiency or simply the concept of "cream-skimming" is quite well-developed. For a few examples, see: Zimmer & Buddin (2009), Ni (2009), Cardon (2003), Bettinger (2005), Booker (2008), Garcia, Lee &Barber (2008). One particularly important argument is that areas with charter schools tend to already have private schools in place, making it unlikely that charters are the only form of competition that could affect the traditional public schools in the area. See Glomm, Harris & Lo (2005).

cially. If it is the case that charter schools are taking money from traditional public schools, however, and they use it more effectively, then it becomes somewhat more difficult to oppose. If they do not appear to take money away from traditional public schools but they are in fact less effective, then while they may be worse for the system, they are not directly harming traditional schools the same way. In a more dynamic sense, these questions all lead to the final question: Does the advent of charter schools in an area force public schools to improve?

Overview

This section has outlined several lines of research previously undertaken in order to better understand the relationship between charter schools and both their performance and growth in number in a state (or likelihood of being instituted in the first place). The literature is far from complete and answers to the questions point to neither a definitive type of charter school nor style of charter school governance which is uniformly best for every student in every situation.

The remaining portion of this analysis focuses on several specific characteristics of students, schools and communities previously shown to be important. These variables tend in the literature to relate to charter school success and growth. The empirical discussion that follows looks at these relationships generally for the states of Kansas, Colorado, Missouri, Oklahoma and Nebraska

The empirical section is rather qualitative in its attention and direction. It restricts attention to the question of how charter schools have been instituted and grown rather than some of the more elaborate questions considered in Section II of the present analysis. While these other questions are important, they are the next step in the analysis and not yet a relevant concern for the current structure. It should also be noted that because it is not possible to deal with these questions given the current data constraints, the question of an "optimal" policy in the state of Kansas is still a question for debate.

EMPIRICAL PATTERNS

The empirical analysis primarily uses data from the Common Core of Data (CCD) with other data sources mentioned as relevant. The Common Core of Data is a database of information constructed by the Department of Education to reflect annual national statistics on public elementary and secondary schools in the United States. Data in the CCD are collected in the three categories of information of general descriptive information regarding schools and school districts, data on students and staff and fiscal data.[20] The years of interest vary for the source data due to availability constraints with the longest time frame being used whenever possible. The earliest date considered was 1990, since the charter school laws did not go into effect until the mid to late 1990's; data earlier than 1990 seemed unnecessary. The variables of interest are (1) the number of charter schools present in each state, (2) unionization by state, (3) enrollment patterns—both total enrollment of public school students, enrollment of public school students per capita (of state population) and enrollment of charter schools relative to non-charter public schools, (4) teacher salaries—both total amounts and relative to state GDP, (5) measures of disadvantage—the fraction of individuals and of students under the poverty line as well as the fraction of students on free lunch, (6) retention in terms of graduation rates, (7) partisanship in the state—in terms of governor party and the fraction of each party in the state, (8) minority representation in schools—both for public schools generally and broken out for charters versus traditional public schools.

Reasoning for Variable Inclusion

It is believed that the number, size and strength of the charter school movement in a particular state affect the existence and strength of charter schools in each of the surrounding states. For this reason, to understand what is happening in Kansas, it is necessary to determine what is occurring in the charter school patterns for each of the states surrounding Kansas.

20 For more information see: http://nces.ed.gov/ccd/aboutCCD.asp#components

21 For more on this topic, see Shober, Manna & Witte (2006). Ideally, it would have been interesting to examine special interest groups in the state in addition to those mentioned in the analysis since there is some evidence that they do have an effect on charter school structure. See Holyoke et. al. (2009).

Previous literature has indicated a positive relationship between having a Republican governor and charter school growth in the state.[21] This implies that as Kansas has recently elected a Republican governor in the state, it is more likely to see charter school growth in the near future. This idea will be discussed in detail along with a consideration of the governor parties of each of the states surrounding Kansas. An additional measure of partisanship used is voter registration. Voter registration alone would be problematic as an estimate of overall representation of the total population's voting patterns—especially since many individuals register close to elections and registration rules vary by state. It is, however, useful in combination with information on governor party status for the present analysis to create a richer picture of the party representation in the state and to illuminate future possible trends.

I examine the characteristics of students, communities and schools both in terms of the total representation in the state as well as broken out by charter and non-charter public-school status.[22] At the community level, I examine both the surrounding community characteristic of the percentage unionization in the state as well as the fraction at or below the poverty line in the state—for the total population and for the population aged 5-17 years old. The existing literature has generally shown that higher rates of unionization are positively related to growth of charter schools in the state but negatively to the state's initial institution of a charter school mandate.[23] Poverty, as discussed earlier, is thought to affect the performance and existence of charter schools.

I examine patterns in the size of schools, the percentage representation of minority students, and the fraction of students on reduced or free price lunch—both of these variables have similar reasoning as using the fraction below the poverty line—at the school level stratified by charter school status.[24] At the state level, I examine patterns in expenditures in schools for teacher salaries, size of schools—both total amounts and based on a population per capita measure—the fraction of different minority groups and graduation rates. It is believed that teacher salaries and training should affect the performance of students in traditional schools, and that graduation rates may both be indicative of charter school institution as well as show their ultimate success.

This empirical structure, it should be noted, provides only summary statistics for the relevant characteristics. This will help in determining what trends have been seen in charter schools and traditional public schools in the state of Kansas and the four surrounding states over the last two decades.

The present analysis and the summary statistics help lay the foreground necessary for an analysis of where Kansas is going but do not, in and of themselves, constitute a final answer as to the independent effect of each of these characteristics in the state on charter school performance and growth. Although initial trends are important in an analysis of charter schools, each variable taken alone does not constitute the larger picture of its effect given the relationship with other relevant characteristics of interest.

Charters by State

It is assumed that a higher prevalence of charter schools in surrounding states should be associated with a greater likelihood of charter schools in the state in question as well. The last year of data in Figure 3 used information from school departments of education in order to obtain more recent estimates of the number of charter schools in the state.

It is apparent from this figure that charter schools began as a presence of interest no earlier than 1998 or 1999 in all of the states in question—except Nebraska, which has not instituted a mandate to date—and it is for this reason that the focus does not use earlier data than 1998.

Kansas and Missouri have been fairly similar in their number and growth of charter schools over time (data

22 As mentioned previously, many of the variables mimic effects shown in the literature. For a particular example of some of the more important effects see Zhang & Yang (2008).

23 See Stoddard & Corcoran (2007), Shober, Manna & Witte (2006).

24 There is some indication that charters tend to locate in areas with high levels of disadvantage and lower income settings—although not all authors agree that this is sufficient information to determine location decisions. See for example Henig & MacDonald (2002), Groskopf, Hayes & Taylor (2009).

constraints made 2004 Missouri charter school data unavailable) with Missouri having a slightly higher initial level and speed of growth. Oklahoma is somewhat behind in number of schools with little change during the last four or five years. In contrast, Colorado has seen the largest number and growth of charter schools in the state. They have almost four times the number of charter schools than in Missouri by 2009. They are clearly the anomaly in terms of charter school growth in this area during the time period.

Perhaps Colorado's generous charter school laws are responsible for the growth of charter schools in the state. As shown in the figure, the states with the highest grades in terms of the most autonomous charter school regulations do indeed have the largest number of charter schools in the state.

In terms of affecting Kansas, it seems that Nebraska, unless it institutes a mandate, will have no positive impact on causing charters to form in Kansas. Missouri and Colorado may have some positive impact on charter growth in Kansas given their positive and growing pattern of charter schools in the states. Oklahoma would not seem to have much of a positive impact given its relatively steady and low level of charter schools in the state. Once again, these are initial trends and one should note the possibility of changes in charter school patterns in the states surrounding Kansas in years to come, making the analysis quite different.

TABLE 1

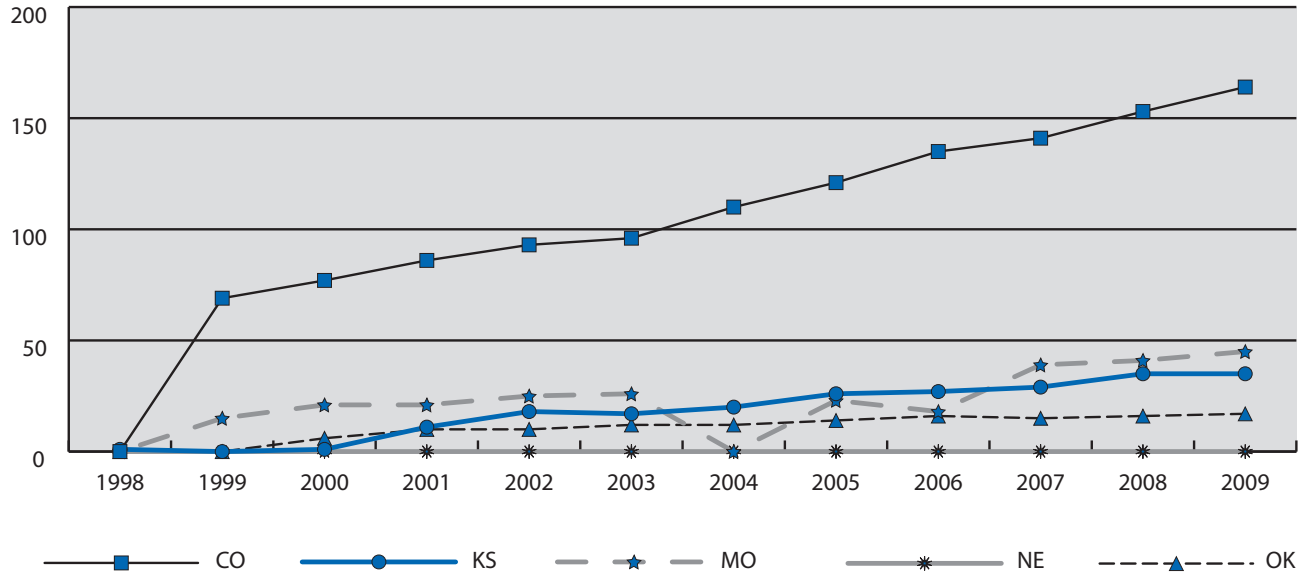
GOVERNOR PARTY

	DEMOCRAT	REPUBLICAN
1996	CO, NE, MO	KS, OK
1997	CO, NE, MO	KS, OK
1998	CO, NE, MO	KS, OK
1999	CO, NE, MO	KS, OK
2000	MO	CO, NE, KS, OK
2001	MO	CO, NE, KS, OK
2002	MO	CO, NE, KS, OK
2003	MO	CO, NE, KS, OK
2004	MO, KS, OK	CO, NE
2005	MO, KS, OK	CO, NE
2006	KS, OK	CO, NE, MO
2007	KS, OK	CO, NE, MO
2008	CO, KS, OK	NE, MO
2009	CO, KS, OK	NE, MO
2010	CO, MO, KS, OK	NE
2011	CO, MO	NE, KS, OK

Source: National Governor's Association; Author.

Figure 3

Number of Charter Schools in the State



Source: Common Core of Data; State Departments of Education; Author.

Governor and Party Representation

Previous literature has shown that having a Republican governor should be associated with a higher likelihood of charter school institution and growth in the state. That said, it is also notable that the presence and force of special interest groups in the state as well as representation in the legislature will additionally have a large contribution to the effect over time in charter school policy and propagation.

Table 1 shows governor status, while Appendix Table 1 shows voter registration status in these same states. Governor party status data were gathered from the National Governor's Association. Information on registration status was gathered from state election board and Secretary of State data in each state. Due to the differing availability of poll data by state, it will not look comparable by year. Efforts were made, however, to secure the most similar type of data over each of the five states in question.

Kansas and Oklahoma have followed roughly similar patterns in their governor party representation over time. They both had Republican representation going into and through the beginning of the 2000's and then Democrat representation starting from 2004-2010. Both have now elected Republican governors starting in 2011. Missouri has generally had the opposite pattern of representation from Kansas and Oklahoma over time and, to a lesser extent, so has Nebraska. Interestingly enough, despite Nebraska's Republican governor from 2000 onwards, they have not enacted a charter school law. Similarly, despite Missouri's different party status of the governor from Kansas, they have looked roughly similar in terms of the sheer "number" of charter schools over time (although that doesn't account for the actual type of charter schools in place). This provides one hint that looking only at the party representation in the state may, in fact, lead to an incorrect assessment of what has happened over time due to any individual factor. Examining the results in Appendix Table 1, very different voter registration patterns by state, depending on the rules for how individuals can vote in the primaries, are apparent. The smaller parties (representing less than 1% of the total individuals registered) were deleted from the statistics to account for the three-part structure of Democrat, Republican and no party/unaffiliated/independent status (the wording depended on the state in question).

Oklahoma has a low percentage of individuals not registered as either Republican or Democrat. Of the two major parties, the majority has generally gone with the Democrats. Clearly, there has been an equilibrating trend over time, with a larger number of individuals registering as Republicans, but it does not yet change the majority statement made previously. It is possible that the greater interest in the Republican party may be responsible for some of the growth in charter schools in the state over time. In Nebraska, the situation is reversed, with a large percentage Republican and a smaller percentage Democrat and relative stability in numbers over this last decade. In this state, there is a somewhat larger number of individuals who have not fit into the two party system. In Kansas and Colorado, there are between 25% and 34% of voters registering as neither Republican nor Democrat. The large difference between these two states, however, is that in Kansas the two main parties do show a clear lead of the Republican party, while in Colorado there has been a relatively even split. (I note here that Missouri has been left out of this table due to the open voting policy in the state, making voting in the primaries possible for any individuals in the state. Thus, no one keeps track of the registration status of individuals in the state of Missouri.)

Overall, it appears difficult to make strong statements regarding the pattern of either voter registration or governor status and the strength of charter schools in a state. Taken alone, this characteristic does not appear to be particularly indicative of the story in question.

Community, School and Student Characteristics

Unionization

I begin by discussing the relationship between unionization and charter schools. Unionization numbers come from the Bureau of Labor Statistics (BLS). Data for 1994 are not shown due to availability constraints. The literature has shown that there should be a lower likelihood of starting charter schools given higher unionization rates,

but their growth, once instituted, will be higher if there is, in fact, unionization in the state.

Figure 4 shows roughly similar unionization patterns between all the states at the beginning of the 1990's with the range generally between 11% and 13%. Missouri maintains the highest unionization numbers and this is true over the entire time period when unionization is shrinking over all of the states in question.

In terms of instituting the charters, I note also that the mandates went into effect at roughly the same time in the data with some amount of variation. They were, in order, Colorado (1993), Kansas (1994), Missouri (1998), Oklahoma (1999). It does appear that Missouri, the state with the highest unionization rates, was almost the last in the group to pass a charter mandate. Kansas, with one of the lowest unionization rates, was also one of the earlier states to have charter schools. The pattern is not perfect, however, since (a) Nebraska does not have an unusually high unionization rate and did not pass the mandate yet (b) Colorado was the first to pass the mandate in this group and, although it did have a low unionization rate, was just slightly above Oklahoma.

In terms of the growth of charter schools, the state of Missouri did have steady growth of charter schools and a high unionization rate (in keeping with the theory), however, Colorado also had growth of charters as well and did not have a high unionization rate.

Poverty Rates[25]

In a similar vein, Census 2000 data are employed to examine whether there is a difference in poverty rates between the various states of interest.

Table 2 shows that although the poverty level for the entire population is fairly similar (with a generally higher

Table 2

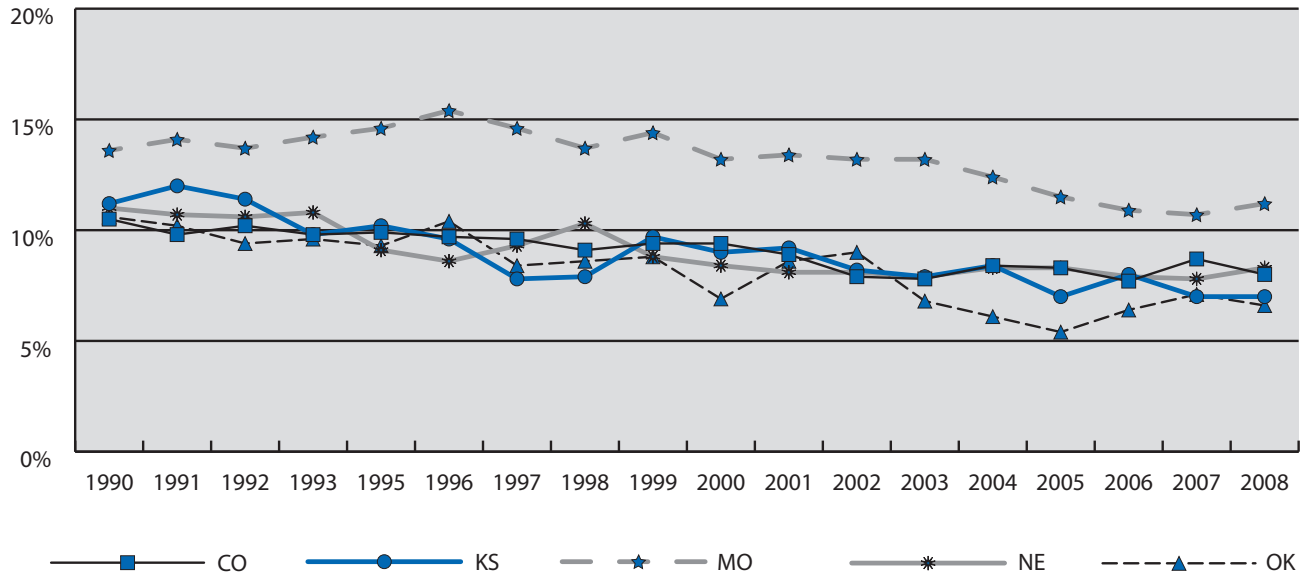
Percentage in Poverty (2000)

	CO	KS	MO	NE	OK
Total population in poverty	9%	10%	11%	9%	14%
Aged 5-17 in poverty	11%	11%	15%	12%	18%

Source: Common Core of Data Census 2000 Information; Author.

Figure 4

Percentage Unionized in the State



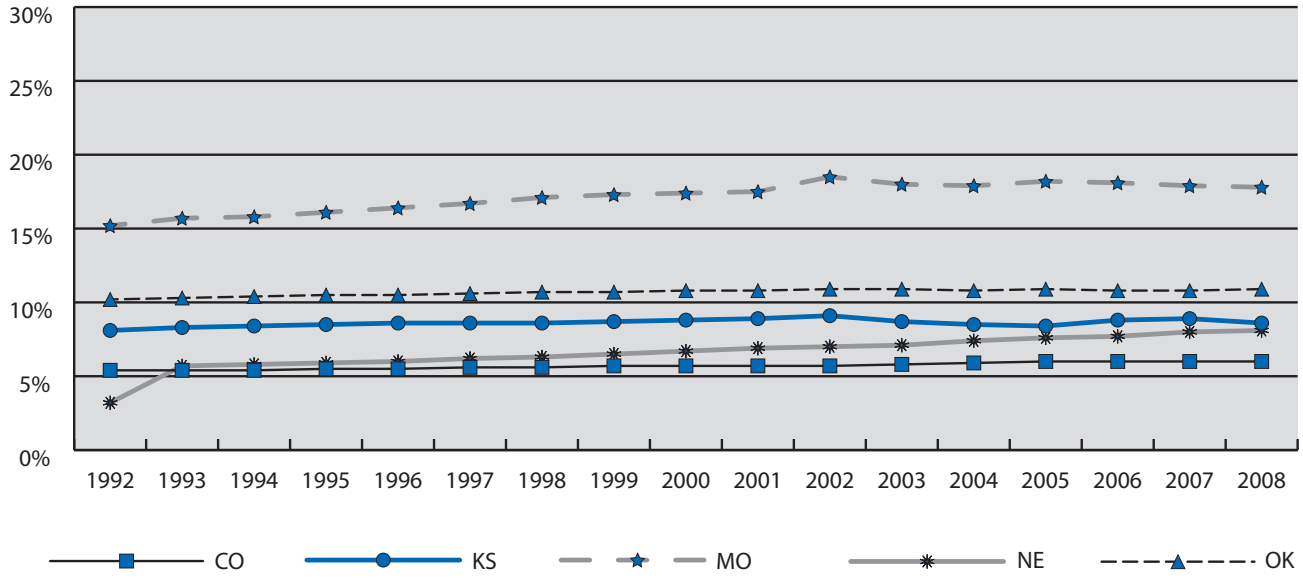
Source: Bureau of Labor Statistics; Author.

25 Once again, locational selection of the charters themselves tends to be where there is low achievement and/or lower socioeconomic status and higher percentages of minority students. Schneider (2006), Glomm, Harris & Lo (2005), Stoddard & Corcoran (2007).

rate in Oklahoma), the pattern for school aged children is even more exaggerated (aged 5-17). In particular, Missouri and Oklahoma have particularly high poverty rates. Once again, the existence of charters in states with particularly high poverty rates does not appear to be a particular anomaly.

Figure 5

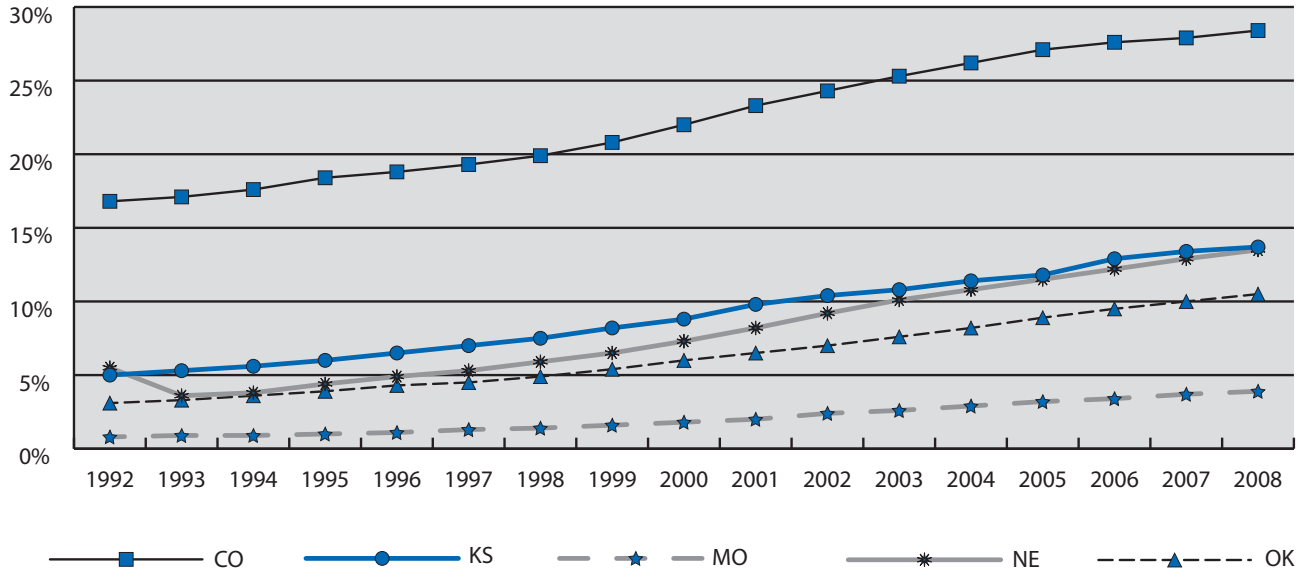
Percentage Black Students in Public School by State



Source: Common Core of Data; Author.

Figure 6

Percentage Hispanic Students in Public School by State



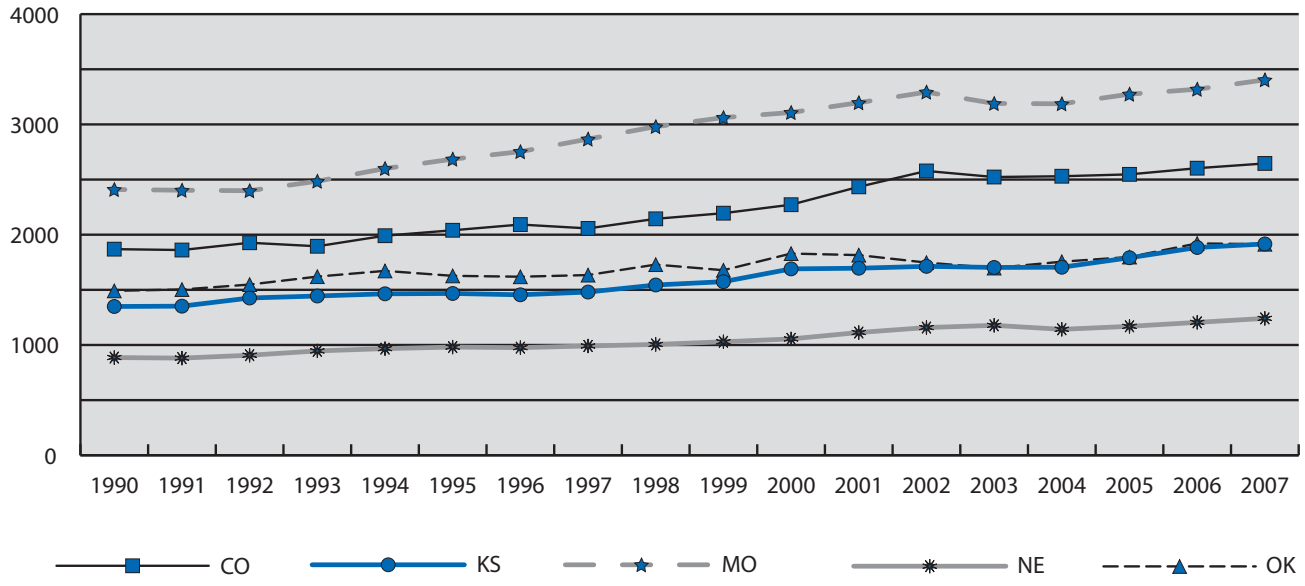
Source: Common Core of Data; Author.

Fraction Minorities (All Publics)

The analysis proceeds with an examination of the characteristics of schools at the state-aggregated level which are predictive of charter school existence and growth. To begin, the existence of a larger percentage of minority students (black and Hispanic) is generally related to a higher growth of charter schools in the state. This may be explainable by research documenting the higher

Figure 7

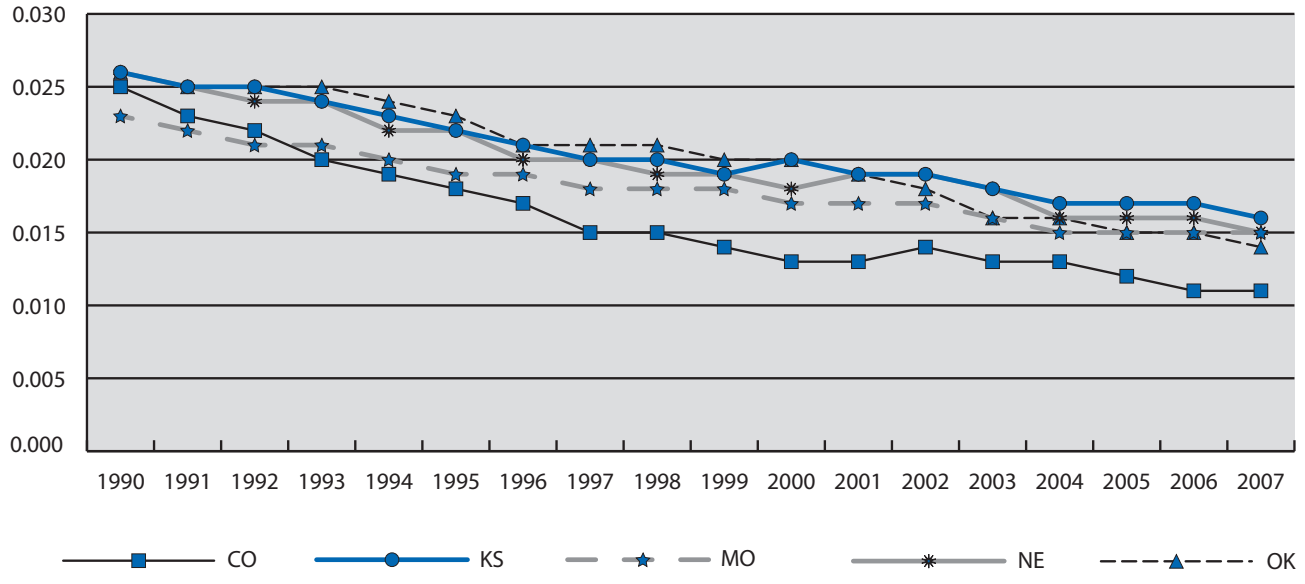
Teacher Salary *(in Millions of Real 2005 Dollars)*



Source: Common Core of Data; Bureau of Economic Analysis; Author.

Figure 8

Teacher Salary/State GDP *(Teacher Salary and GDP in Millions of Real 2005 Dollars)*



Source: Common Core of Data; Bureau of Economic Analysis; Author.

success of charter schools with minority populations (although this effect is not unidirectional). It would be logical to see the institution and growth of charter schools in states with larger minority populations.

Figures 5 and 6 show that Kansas has stayed roughly in the middle of the pack of five states in terms of the fraction black and Hispanic in the public school system over time (including regular public and charter schools). While Missouri has one of the lowest Hispanic representations of these five states, its representation of black students is the highest of the five states, roughly tripling the representation in Colorado for most of the time frame. In Nebraska, the representation of black students began at the lowest levels and has been steadily increasing so that it is currently just about equal to Kansas's representation in the middle of the group. In terms of their Hispanic representation, Nebraska is in the middle of the group throughout this time period. Oklahoma's representation of black students is second in the group and its representation of Hispanic students is fourth although it began early on with the second lowest representation of Hispanic students in the state. Colorado, while having a particularly low representation of black students, has the highest (consistently) representation of Hispanic students in the state.

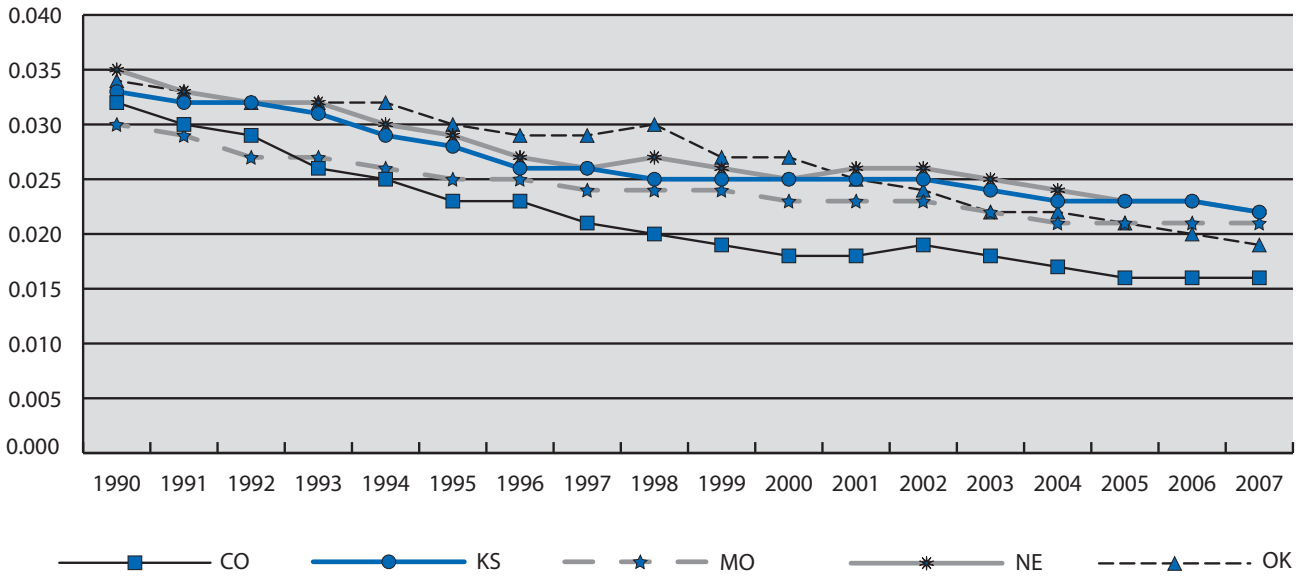
It is clear that the states with the highest representation of either minority group in question (black or Hispanic) tend to have higher numbers of charter schools and growth over time (Missouri and Colorado). There is not as clear of a pattern for schools which have been less extreme in their minority representation in schools in the state.

Teacher Compensation[26]

Moving to measures of teacher compensation in schools, overall size and fraction of salaries relative to state GDP measures are next employed—measures using total expenditures for instruction devoted to salaries are used to proxy teacher salaries. Data from the Bureau of Economic Analysis (BEA) were used for state GDP. All data in these figures use units in millions of real 2005 dollars. Additionally, I examine total expenditures in schools divided by state GDP levels to give an alternative measure of spending in schools. This measure of teacher salaries is expected to be somewhat higher than

Figure 9

Expenditures Total/State GDP *(Expenditures and GDP in Millions of Real 2005 Dollars)*



Source: Common Core of Data; Bureau of Economic Analysis; Author.

26 Teacher salaries (and later graduation rates) were not disaggregated by charter status due to the paucity of data on these variables by charter school status.

the reality (since not all instructional expenditures for salaries are going to teachers in particular), however, it is a reasonable first-pass estimate.

The hypothesis as to the relationship between charter school performance as related to previous literature is that teacher salaries (and teacher experience, not included here due to data availability issues) is more strongly related to the success of students in charter schools than in traditional public schools. This hypothesis has not been unilaterally true, however, and it may occur that rather than seeing states with high teacher salaries having the better (more flexible and autonomous) charter school mandates, the opposite could occur. It is also true that due to data limitations, it was not possible to see disaggregated information on teacher salaries by school type but only by state totals.

Figure 7 shows that (gross) teacher salaries increased for all of the states in question over the 1990's and the 2000's. This increase was approximately $0.5-$1 billion for all of the states.[27] It is possible that this change simply reflects increases in GDP over time. Figure 8 considers this possibility.

Teacher salaries as a fraction of state GDP (Figure 8) have been steadily declining over time. The same is true for all expenditures on education as a fraction of state GDP (Figure 9). In Colorado, this decline has been clearest, while in the other states the drop has been somewhat less significant.

The next point to consider is the clear accordance between the prevalence of charter schools in a state and the fraction of GDP being spent on teacher salaries. While it is true that the raw amounts devoted to salaries in the strong charter school states of Colorado and Missouri are higher, after adjusting for state GDP, it is no longer true that there is a very clear difference between these two states and the other three in spending devoted to education.

In sum total, the patterns displayed show higher teacher salaries for states with stronger charter school mandates. This may be in keeping with the fact that in charter schools, teacher salaries and experience are crucial for student performance. This may, however, reflect the economic situation in the state to some extent since controlling for state GDP makes the high teacher salary in strong charter school states disappear.

TABLE 3

School Enrollments

(Per Capita Enrollment)

	CO	KS	MO	NE	OK
1991	0.14	0.17	0.15	0.16	0.17
1992	0.14	0.17	0.15	0.17	0.17
1993	0.15	0.17	0.15	0.17	0.18
1994	0.15	0.17	0.16	0.17	0.18
1995	0.15	0.17	0.16	0.17	0.18
1996	0.16	0.17	0.16	0.17	0.18
1997	0.16	0.17	0.16	0.17	0.18
1998	0.16	0.18	0.16	0.17	0.18
1999	0.16	0.18	0.16	0.17	0.18
2000	0.17	0.18	0.16	0.17	0.18
2001	0.17	0.17	0.16	0.17	0.18
2002	0.17	0.18	0.16	0.17	0.18
2003	0.18	0.18	0.16	0.17	0.18
2004	0.18	0.17	0.16	0.17	0.18
2005	0.18	0.17	0.16	0.17	0.18
2006	0.18	0.17	0.16	0.17	0.19
2007	0.19	0.17	0.16	0.17	0.19
2008	0.19	0.18	0.16	0.17	0.19

(Total Enrollment)

1991	593030	445390	842965	279552	588263
1992	612635	451536	859357	282414	597096
1993	625062	457614	866378	285097	604076
1994	640521	460838	878541	287100	609718
1995	656279	463008	889881	289744	616393
1996	673438	466293	900517	291967	620695
1997	687167	468687	910613	292681	623681
1998	699135	472353	913494	291140	628492
1999	708109	472188	914110	288261	627032
2000	724508	470610	912744	286199	623110
2001	742145	470205	909792	285095	622139
2002	751862	470957	906499	285402	624548
2003	757693	470490	905941	285542	626160
2004	765976	469136	905449	285761	629476
2005	779826	467525	917705	286646	634739
2006	794026	469506	920353	287580	639391
2007	801867	468295	917188	291244	642065
2008	818443	471060	917871	292590	645108

Source: Common Core of Data and Census 2000; Author.

27 For additional work looking at increases in school finances and how they relate to student performance, see Neymotin (2010).

Enrollments Rates

Examining enrollment both as a sum total as well as broken out by charter versus traditional public school is necessary to understand exactly what is going on in the state in terms of growth of the public school system over time. One possibility is that schools where there are charter schools in place attract parents to come to the state since they will have a higher level of educational choice. Whether this is actually borne out in the data is unclear, but a positive relationship between enrollments (and enrollment per capita) and the number of charter schools in the state may indeed be expected.

Turning first to Table 3, both per capita and total enrollment have been increasing over time in all of the states in question. I note that it is necessary to examine per capita enrollment due to the possibility that the demographic and particularly age-makeup of states changed over this time period.

The clearest exception to the pattern of per capita increase was Nebraska, which generally saw a flat pattern of growth over time other than the increase between 1991 and 1992 (although slight gross increases in enrollment existed throughout, due to general population growth). Missouri followed the flat pattern fairly closely as well, seeing a flat per capita pattern of growth after about 1994.

Although there was in fact a general increase over time in the three remaining states, this does not, however, mean that it was either unidirectional or monotonic. In particular, the story for Kansas is a bit more complex.

Kansas began with a period of increasing enrollments around 1998 (the same time the charter school movement began) but followed this with various declines and resurgences in populations over the next ten years. Overall, the change in population would appear to be flat in Kansas, like Missouri, but the volatility in Kansas is much clearer.

This pattern of changing enrollments has some, but not perfect, concordance with charter school patterns in the five states. Nebraska, the state with flat growth, has had no charter schools to speak of. Colorado has the strongest charter school system and the clearest pattern of per capita enrollment growth. Missouri appears to be an exception, with a fair amount of charter school growth and little per capita enrollment growth over time. Similarly, while Oklahoma is somewhere in the middle in charter school size, it has, in fact, witnessed steady growth in its per capita enrollments. The Kansas story is more difficult to interpret, with some small amounts of growth but very large volatility in enrollments.

Turning next to the size of the charter school movement relative to traditional public schools, Appendix Table 2 begins this analysis. In Colorado, enrollments have increasingly been composed of charter school students, going from just over 2% of total public school enrollments (as defined by charter plus non-charter public schools) at the beginning of the period to almost 7.5% by the end of the period. None of the other states is even close to matching this pattern of activity in charter school enrollments. Examining this pattern of enrollments over time is also a good step towards determining whether charter schools appear to be drawing students away from the traditional public school system. Admittedly, the issue will be extremely complex with competition from private schools to consider and questions regarding the selective location of charter schools in particular districts affecting the answer.

Fraction Minority (by School Type)[28]

The hypothesis to be considered is that the fraction of minorities should be higher in charter schools than in traditional public schools. There is also some evidence for grouping of minorities into the charter school system only when their percentage representation in the charter school already represents an increase of over 11-14%, the rate seen in the public school system. This follows the line of a sort of 'tipping point' hypothesis of minority selection into charter schooling.

Turning in Appendix Table 2 to measures of the percentage black in the two types of schools over states and

28 The fraction Hispanic and black are the main minority groups of interest, however, Asian and American Indian students are also added to the analysis to provide the analysis with more depth. It is also interesting to consider American Indian students due to the particular states in the sample (Oklahoma and Nebraska, in particular, with their high percentage of American Indians).

time, Missouri shows an extremely high percentage of black students relative to the other states in the sample. Oklahoma follows second to Missouri in its pattern of representation of black students over time. These two states also both have a very large representation of black students in the charter school system. Although Missouri and Oklahoma only have 11% (OK) or 17-18% (MO) of black students in schools that are non-charter publics, the representation of black students in charters is fully 30-57% (OK) and 79-86% (MO). This overrepresentation of black students is a clear pattern in both states following the hypothesis of grouping of minorities into charters when they are overrepresented by greater than about 10% relative to the public schools. The time trend in black representation has been steady in Missouri with some slight increases and decreases. In Oklahoma, however, there appears to be a gradual decrease of representation of black students in the charter school system over time. Both states have remained fairly steady in their total representation of black students in the state public non-charter schools. This movement away from charter schools is of some interest.

The other three states in the sample all have representation in their public non-charter and (in the case of KS and CO) in their charter schools of under 10%. There is also a fairly close accordance in Kansas and Colorado between the charter and non-charter public school representation of black students in schools. Once again, this is in keeping with the hypothesis that minority students will not favor the charter over the non-charter public school if there isn't already a large representation relative to the public non-charter school. In Colorado, this accordance is much closer; in Kansas, there actually tends to be an under-representation of black students in charter schools. There is a slight increase over time in the representation of black students in charter schools in both Colorado and Kansas over time although the pattern in non-charter public schools is fairly steady.

The patterns by state for Hispanic representation look somewhat different. The highest representation of Hispanic students in charter schools are in both Colorado and in Oklahoma. In Colorado, however, this is in close accordance with (and perhaps even slightly below) a generally high representation of Hispanic students in non-charter public schools in the state. In Oklahoma, Hispanic students are actually overrepresented in charter schools relative to their non-charter public school counterparts. The overrepresentation in Oklahoma is in accordance with the 11-14% overrepresentation grouping of minorities into the charter school system.

The patterns of representation in Nebraska and Kansas are fairly similar, with similar increases over time in the representation of Hispanic students in the public schools of both states (charter and non-charter in the case of Kansas). Missouri, the last state of interest, has a fairly similar representation of Hispanic students in charter and non-charter public schools. Only in the case of Missouri is there an overrepresentation of minority students in charter schools with this overrepresentation below an 11-14% difference.

There is a very low representation of Asian students in each of the five states in question. There is a similarly low level for the charter and non-charter schools with no instance reaching above the 4% level of representation. The pattern for American Indian students is quite similar, with the only noteworthy point being an essentially zero representation of American Indians in Missouri and a representation of almost 20% in Oklahoma (non-charter schools).[29]

Overall, the pattern of representation of minority students is consistent with the evolution of charter schools in each of these five states. The states with the strongest minority representations (either black or Hispanic) tend to have fairly strong charter school laws. The only exception is that Oklahoma has a fairly high representation of minority students but it does not rank high on charter school representation. It is also generally true that for states with high representations of minority students in charter schools, the gap between charter and non-charter public school representation is at least 10%, with the exception of Hispanic students in Missouri.

29 Presumably the lack of representation in charter schools has to do with how traditional American Indian schools are coded in the data as public schools but generally not as charter schools.

Fraction on Free Lunch

It is expected that rates of economic disadvantage will be a better predictor of success or failure of students in the public non-charter rather than in the charter schools. Nevertheless, I examine these patterns of disadvantage for both charter and non-charter public schools in the sample to determine a clearer picture of results. As seen from Appendix Table 2, the fraction on free lunch is generally high throughout the sample over time in all states and charter statuses. For the charter schools, Missouri has a particularly high representation on free lunch, as evidenced by rates in the 90% range for much of the period in question. Oklahoma follows this pattern closely with numbers in the 70% range. Colorado and Kansas have a somewhat lower representation of students in charters on free lunch reaching only the 30% representation on average or even the teens or 20% range. These numbers are very similar to the percentage representation of students on free lunch in the non-charter public schools in all states in the sample other than Oklahoma. This would imply that students would do well to enter the charter schools given high disadvantage rates in the state, since disadvantage appears to be less detrimental to student success in charters.

The pattern here seems to be one of poorer charter school students in the state relative to the non-charter average in Missouri and in Oklahoma–confirming the idea that student disadvantage will not harm students as much in charter as traditional public schools. In Colorado, however, charter school students may actually be somewhat higher income than regular public school students, while in Kansas they are fairly similar.

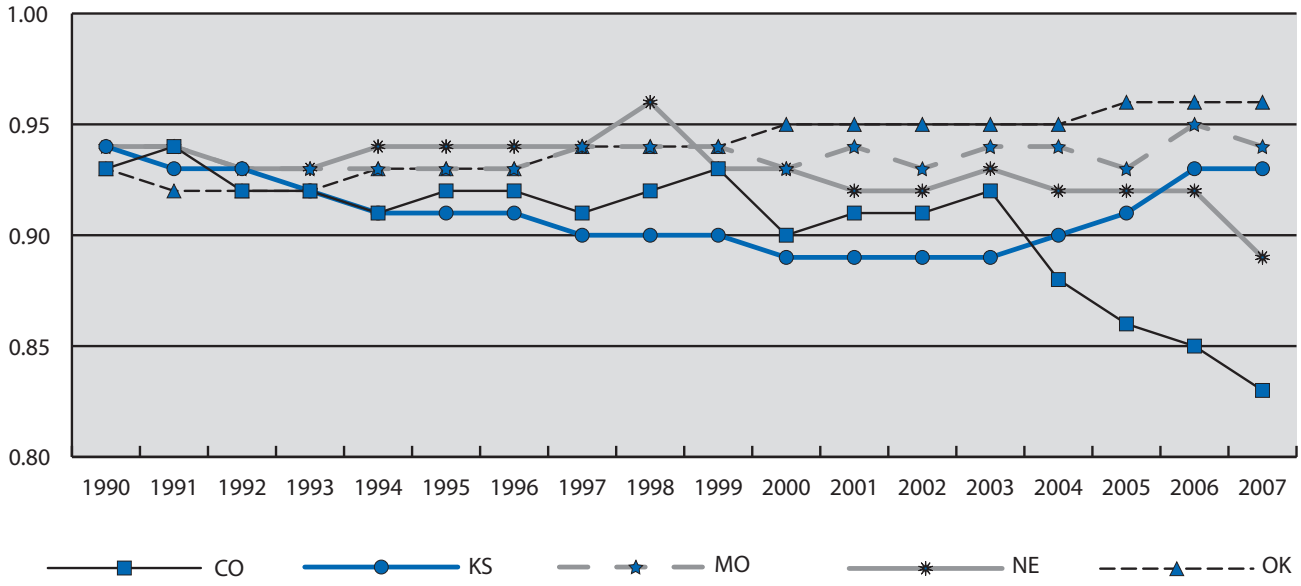
Graduation Rates

Figure 10 shows differing patterns of graduation rates over time in each of the various states in question. One would expect to see that states struggling in terms of their performance will also have a higher institution of charter schools in the state. During the period 1997-2000 when charter schools were just starting, this pattern does not appear entirely obvious. Although Nebraska does in fact have very high graduation rates and no charter schools, Kansas has the lowest graduation rates and does not have the strongest charter school laws to allow for inception. Taken alone, this does not appear to be a sufficient predictor of success.

Over time, Oklahoma generally exhibited steady graduation rates over the period and some small increases in 1994, 2000 and 2005 (and a slight decrease in 1991). This

Figure 10

Fraction Graduating in Each State



Source: Common Core of Data; Author.

means there was an increase in graduation rates over this 18 year period of time. In Colorado, the pattern of movement was towards a general decline in graduation rates. During 1990-1994 and during 2004-2007, as well as in 1997 and 2000, there were decreases in graduation rates. Only in 1998, 1999 and 2001-2003 were there increases in graduation rates. Taken together, this led to a general worsening in graduation rates over time. Nebraska also exhibited a general decline in graduation rates over time in this period. Unlike Colorado, where the declines and increases occurred during some blocks of time, in Nebraska they tended to occur in an alternating yearly fashion with many years of steady lack of change interspersed in the mix. Turning next to Missouri, this state also had many periods of no change in graduation rates, and the few increases were generally balanced out by decreases and mostly in the following years. This pointed to a stable rate of graduation rates over the time period. Finally, looking at Kansas, over the later part of the time period there was a slight increase in graduation rates (going from .89 in 2000 to .93 in 2007). However, there had been a period of decline earlier on in the period of interest. Therefore, the overall pattern of graduation rates in Kansas is highly dependent upon which part of the period is examined, since the sum total is essentially no change in graduation rates. Overall, it appears that there is no consistent pattern between the strength of charter schools in the state and changes or levels of graduation rates either initially or over time, so it is difficult to draw any inferences from this information in particular.

CONCLUDING REMARKS

The present analysis has painted a fairly stark picture of charter schools in the state of Kansas, with a very stringent charter school statute in the state, making it fairly difficult and not ultimately beneficial to establish a new charter school or change an existing traditional school to charter school status. Kansas ranks somewhere in the middle of the five schools examined (KS, OK, CO, NE, MO) based on number of charter schools in the state and percentage of enrollment of students in the charter schools in question.

In terms of the characteristics of schools and areas that predict charter school performance and growth, the current study has examined several different lines of research and development. This is an initial exploration of summary statistics and relationships and does not, in and of itself, constitute a causal statement regarding the effect of any of these particular factors on charter school existence or growth. It is, however, a very necessary first step to then teasing out a later relationship that is more substantial between charter schools and each of the factors in question.

Despite indications in the literature that the party of the governor tends to influence the development of charter schools in the state, there does not appear from summary statistics to be an obvious relationship in this data for this point. Once again, it is possible that the relationship is in fact there, but it would require more complex statistical techniques to determine the nature of this relationship. .

The representation of teacher salaries does appear to relate in some sense to the strength and growth of charter schools in the state, however, this appears to be diminished after accounting for state GDP levels. An exact determination of the veracity and strength of this relationship would require more complex statistical methods.

The representation of minority students in schools (both charter schools and non-charter public schools) is thought to relate to charter school existence and performance. Kansas, as having a fairly low representation of minority students relative to the states surrounding it, is unsurprisingly lower in its charter school growth patterns. Similarly, the relative wealth of the populace compared to the nearby states (as measured by the fraction on free lunch and the fraction under the poverty line based on Census 2000 figures) does not make it seem like charter schools "in the disadvantaged sense" are a route to be taken in the nearby future unless there are clear changes in this arena.

It appears that growing enrollments is somewhat related to charter school growth and existence in the state, and perhaps increases in population of students in the state (enrollments total and per capita) would raise the need for charter schools. To date, however, the pattern in

Kansas, based at least on summary statistics alone, has not been clearly in one direction or the other making it difficult to see any sort of relationship at this level.

It also appears that for al least one of the states (MO) higher unionization rates are also related to more charter schools. It is not uniformly true, however, since the school with the most charter schools appears to be decreasing unionization rates over time. Changes in Kansas's unionization rate alone would appear to not give a clear prediction regarding what should happen in the future of the state.

Finally, a worsening of graduation rates in many of the states may indeed have been related to a growth in charter schools, however, in Missouri there were more charter schools and overall graduation rates stayed relatively constant. Thus, a change in graduation rates does not appear consistent with a prediction of changes in the state's predicted charter school statutes over time based on this simple summary statistics measure.

The current analysis has introduced the issue of charter schools and how they should be analyzed in the state of Kansas. The results portrayed here are a first step towards understanding the pattern of effects of each of the variables in question. In order to understand the independent effect of each of the variables of interest, however, it is necessary to engage in a robust form of statistical analysis. To note, if there does not appear to be a basic relationship between the variables of interest and the outcome variable as discussed here, then there is less of a reason to suppose that a more rigorous analysis will in fact tease out this relationship. It is possible, however, that this will in fact be the case.

The present analysis has introduced several different possible lines of research for future study and directions for academics and policy makers to consider in deciding how to structure school policy and funding. These constitute the foundation upon which future research will be built in understanding charter school growth and survival in the state of Kansas and related states.

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APPENDIX TABLE 1
VOTER REGISTRATION PERCENTAGES BY STATE AND YEAR

	DEM.	REP.	NO PARTY
OKLAHOMA			
1996	1112560	624240	86948
	61%	34%	5%
1997	1171620	693076	122139
	59%	35%	6%
1998	1158754	691942	139626
	58%	35%	7%
1999	1183523	718534	157760
	57%	35%	8%
2000	1189332	734382	174649
	57%	35%	8%
2001	1233481	803908	202266
	55%	36%	9%
2002	1079298	729393	199164
	54%	36%	10%
2003	1099458	758275	214887
	53%	37%	10%
2004	1022442	720121	195334
	53%	37%	10%
2005	1100263	822131	227163
	51%	38%	11%
2006	1021053	778405	209515
	51%	39%	10%
2007	1045904	805607	224464
	50%	39%	11%
2008	1012594	790713	219230
	50%	39%	11%
2009	1077616	860378	246002
	49%	39%	11%
2010	999855	813158	225607
	49%	40%	11%
COLORADO			
2004	1118597	942025	1024973
	36%	31%	33%
2005	1043718	870173	955038
	36%	30%	33%
2006	1070190	904767	1013177
	36%	30%	34%
2007	1004419	870389	984924
	35%	30%	34%
2008	1056077	1065150	1069497
	33%	33%	34%
2009	800648	832170	716801
	34%	35%	31%
2010	614578	722673	481200
	34%	40%	26%

	DEM.	REP.	NO PARTY
NEBRASKA			
2000	392344	537605	153088
	36%	50%	14%
2002	381991	543935	152874
	35%	50%	14%
2004	396767	575781	177961
	34%	50%	15%
2006	370600	572869	187004
	33%	51%	17%
2008	392943	558465	195507
	34%	49%	17%
2010	380321	549105	212501
	33%	48%	19%
KANSAS			
1996	423595	650566	351492
	30%	46%	25%
1997	424925	651548	366942
	29%	45%	25%
2000	449445	735435	424183
	28%	46%	26%
2002	441269	742903	420261
	28%	46%	26%
2004	447891	769142	438005
	27%	46%	26%
2006	438327	760745	440372
	27%	46%	27%
2007	437338	752597	446924
	27%	46%	27%
2008	451577	751125	446450
	27%	46%	27%
2009	471119	744633	473847
	28%	44%	28%
2010	460318	744975	490395
	27%	44%	29%

Note: Missouri has been intentionally excluded from this table because its open voting policy in election primaries negates any incentive to track voter registration status.

Source: State election board and Secretary of State data by state; Author.

APPENDIX TABLE 2
CHARACTERISTICS OF CHARTERS VS. REGULAR PUBLIC SCHOOLS

P=Traditional Public Schools, C=Charter Schools, C/P=Charter Schools Relative to Traditional Public School Numbers

Percentage Black

	CO		KS		MO		NE		OK	
	P	C	P	C	P	C	P	C	P	C
1998	6%	.	9%	0%	17%	.	6%	.	11%	.
1999	6%	6%	9%	.	17%	79%	7%	.	11%	.
2000	6%	6%	9%	0%	17%	84%	7%	.	11%	57%
2001	6%	6%	9%	1%	17%	85%	7%	.	11%	47%
2002	6%	6%	9%	5%	18%	85%	7%	.	11%	43%
2003	6%	6%	9%	5%	17%	85%	7%	.	11%	42%
2004	6%	8%	9%	6%	18%	.	7%	.	11%	40%
2005	6%	9%	8%	6%	17%	85%	8%	.	11%	35%
2006	6%	9%	9%	6%	18%	77%	8%	.	11%	38%
2007	6%	9%	9%	5%	17%	86%	8%	.	11%	31%
2008	6%	8%	9%	6%	17%	86%	8%	.	11%	31%

Percentage Hispanic

	CO		KS		MO		NE		OK	
	P	C	P	C	P	C	P	C	P	C
1998	20%	.	7%	55%	1%	.	3%	.	5%	.
1999	21%	14%	8%	.	2%	8%	6%	.	5%	.
2000	22%	16%	9%	0%	2%	5%	7%	.	6%	3%
2001	24%	17%	10%	3%	2%	5%	8%	.	6%	8%
2002	25%	17%	10%	5%	2%	5%	9%	.	7%	13%
2003	26%	18%	11%	5%	3%	5%	10%	.	8%	17%
2004	27%	20%	11%	9%	3%	.	11%	.	8%	19%
2005	27%	21%	12%	8%	3%	6%	11%	.	9%	24%
2006	28%	23%	13%	6%	3%	11%	12%	.	9%	27%
2007	28%	24%	13%	8%	4%	7%	13%	.	10%	30%
2008	29%	25%	14%	9%	4%	8%	14%	.	10%	34%

Percentage Asian

	CO		KS		MO		NE		OK	
	P	C	P	C	P	C	P	C	P	C
1998	3%	.	2%	2%	1%	.	1%	.	1%	.
1999	3%	2%	2%	.	1%	2%	1%	.	1%	.
2000	3%	2%	2%	0%	1%	2%	2%	.	1%	2%
2001	3%	3%	2%	1%	1%	2%	2%	.	1%	2%
2002	3%	3%	2%	1%	1%	1%	2%	.	1%	1%
2003	3%	3%	2%	1%	1%	2%	2%	.	2%	1%
2004	3%	3%	2%	1%	1%	.	2%	.	2%	2%
2005	3%	3%	2%	1%	2%	2%	2%	.	2%	2%
2006	3%	3%	3%	1%	2%	2%	2%	.	2%	3%
2007	3%	4%	3%	1%	2%	1%	2%	.	2%	3%
2008	4%	4%	3%	1%	2%	1%	2%	.	2%	3%

Percentage American Indian

	CO		KS		MO		NE		OK	
	P	C	P	C	P	C	P	C	P	C
1998	1%		1%	0%	0%	.	1%	.	16%	.
1999	1%	1%	1%	.	0%	0%	1%	.	16%	.
2000	1%	1%	1%	21%	0%	0%	2%	.	17%	3%
2001	1%	1%	1%	1%	0%	0%	2%	.	18%	4%
2002	1%	1%	1%	2%	0%	0%	2%	.	18%	5%
2003	1%	1%	1%	3%	0%	0%	2%	.	19%	5%
2004	1%	1%	1%	3%	0%	.	2%	.	19%	5%
2005	1%	1%	1%	2%	0%	0%	2%	.	19%	5%
2006	1%	1%	2%	2%	0%	0%	2%	.	19%	5%
2007	1%	1%	2%	2%	0%	0%	2%	.	19%	4%
2008	1%	1%	2%	2%	0%	0%	2%	.	19%	5%

Fraction Free and Reduced Price Lunch

	CO		KS		MO		NE		OK	
	P	C	P	C	P	C	P	C	P	C
1998	0%		32%	78%	33%	.	30%	.	46%	.
1999	28%	19%	32%	.	34%	83%	30%	.	46%	.
2000	27%	18%	33%	45%	34%	64%	30%	.	48%	69%
2001	28%	18%	34%	14%	35%	91%	31%	.	49%	70%
2002	29%	17%	36%	20%	36%	89%	32%	.	51%	75%
2003	31%	19%	38%	35%	37%	93%	34%	.	53%	76%
2004	32%	22%	39%	40%	39%	.	35%	.	54%	71%
2005	34%	23%	39%	37%	39%	93%	35%	.	54%	70%
2006	35%	26%	40%	32%	39%	92%	36%	.	55%	77%
2007	35%	25%	40%	30%	39%	90%	37%	.	55%	71%
2008	36%	27%	43%	28%	38%	92%	38%	.	56%	76%

Enrollment

	CO			KS			MO			NE		OK		
	P	C	C/P	P	C	C/P	P	C	C/P	P	C	P	C	C/P
1998	699135	.	.	465457	60	0.01%	912134	.	.	291140	.	628522	.	.
1999	691048	17061	2.41%	465223	.	.	910297	3713	0.41%	288261	.	627032	.	.
2000	705018	19333	2.67%	462527	67	0.01%	906463	5786	0.63%	286199	.	622034	1076	0.17%
2001	717025	24658	3.32%	464895	1465	0.31%	905856	6039	0.66%	285095	.	620165	1974	0.32%
2002	722271	28785	3.83%	466398	1944	0.42%	915336	7858	0.85%	285402	.	622036	2512	0.40%
2003	725383	31529	4.17%	467115	1395	0.30%	908476	8366	0.91%	285542	.	622875	3284	0.52%
2004	729195	36781	4.80%	465095	1482	0.32%	904125	.	.	285761	.	625961	3515	0.56%
2005	735792	44034	5.65%	464352	1914	0.41%	906737	9113	1.00%	286646	.	630840	3899	0.61%
2006	741182	52087	6.57%	457592	2287	0.50%	915194	5159	0.56%	287580	.	634576	4433	0.69%
2007	745635	56232	7.01%	465248	3047	0.65%	904125	13063	1.42%	291244	.	636924	5141	0.80%
2008	756758	60847	7.44%	466716	4344	0.92%	902607	15264	1.66%	292590	.	639896	5212	0.81%

Source: Common Core of Data and Census 2000; Author.

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