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HOW (AND HOW WELL) DO CHARTER AUTHORIZERS CHOOSE SCHOOLS? EVIDENCE FROM THE RECOVERY SCHOOL DISTRICT IN NEW ORLEANS

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How (and How Well) Do Charter Authorizers Choose Schools? Evidence from the Recovery School District in New Orleans

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Abstract: The decisions made by charter authorizers about which charter schools are allowed into the market are an under-studied piece of the charter reform process. The post-Katrina school reforms in New Orleans provide an empirical setting to estimate the applicant characteristics most favored by charter authorizers, and whether these characteristics predict future school performance. We find that the initial approval decisions by the state board and the Recovery School District (RSD) were strongly predicted by the subjective ratings of the outside charter application evaluator, and weakly predicted by other individual application characteristics we derived from the applications including naming a specific principal, already operating an open school, and the experience of board members. Later, when the initial contracts ended and renewal decisions were made, authorizers had more information as they could directly observe performance. In this case, the state renewed schools that had high test levels and/or value-added, but did not apparently pay attention to family preferences (as measured by enrollment levels). The outside evaluator ratings of the original application are positively correlated with the future years of renewal granted. Of our 65 estimates (5 long-term outcomes each with 13 predictors), only nine are statistically significant and not one is significant for more than one long-term outcome. These results highlight the challenges of contracting out schools in a new and thin market where prospective contractors have a limited track record, and how performance-based contracting can lead to improved measureable outcomes over time when the government makes decisions based on those same outcomes.

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1 Introduction

Contracting has become a popular way to improve the efficiency and quality of public sector services, offering the potential to avoid public sector bureaucracy that comes when governments directly provide services and allowing for competition among potential providers based on performance metrics outlined and monitored by government agencies (Alchian and Demsetz, 1972; Domberger and Jensen, 1997; Megginson and Netter, 2001). On the other hand, these benefits are undermined when contractor performance is difficult and expensive to monitor or when the supply side of the market is thin (Rose-Ackerman, 1996; Domberger and Jensen, 1997). Hart and Holmstrom (1987) recently shared the Nobel Prize in Economics for his work showing the challenges involved when the government is the contractor.

In education, contracting has become a popular option in the form of charter schools. With policies in place in 43 states, non-profit and for-profit charter operators apply to government agencies or their designees, called authorizers, who then choose from among applicants, oversee performance, and make decisions about contract renewals. Local boards, state boards, mayor's offices, and/or higher education institutions are given the option to authorize the entry and exit of schools (Mintrom & Vergari, 1997; NACSA, 2014).

Though charter school enrollment has steadily grown, from 0.3 million in 1999-2000 to 2.8 million in 2012-2013 (NCES, 2013), little is known about authorizers. Studies have found small differences in student achievement by authorizer type, but have not considered what authorizers are looking for or whether they succeed in reaching the objectives they have for their schools (Carlson, Lavery, and Witte, 2012; Zimmer,

Attridge, and Obenhauf, 2014). Bulkley (1999) concluded from three case studies of authorizers that having a sponsor that acts like a traditional school district (i.e., accountability is focused on control and inputs rather than on flexibility and parental choice) does not necessarily predict future levels of success or innovation. Another group of policy reports summarize authorizer laws in all states and perceived best practices for authorizing (Christie, Millard, Thomsen, and Wixom, 2014; McShane, Hatfield, and English, 2015; NACSA, 2014), though there is little evidence on which to judge which authorizer practices are best. Studies of authorizer renewal decisions have found that 93 percent of schools were renewed, but the evidence is mixed on whether these decisions are related to student outcomes.[3] But there is essentially no evidence on how authorizer decisions are made, what objectives they are trying to achieve, or whether the factors guiding their decisions are associated with strong future performance.

The setting for this study is New Orleans where the vast majority of charters are authorized by the state Board of Elementary and Secondary Education (BESE). The state authorized 82 schools from 2003 until 2013 (NACSA, 2013). We study whether each charter is approved and, among those approved and opened, whether and for how long the contract was renewed. Combined with data on the characteristics of the applications, we can examine the factors that predict approval and renewal and therefore understand authorizer objectives and their ability to meet these objectives.

[3] Older studies on this have suggested that renewal is not based on performance (SRI International, 2000; Finn et al., 2000). One newer survey suggests that "achievement" is the most important determining factor, but this survey is based on self-reports by the authorizers themselves, and only larger authorizers who are responsible for only about half of charter schools overall (National Association of Charter School Authorizers, 2010). Also, even if authorizer decisions include performance as a factor, the survey does not mean that the lowest performers are being closed (e.g., they might only consider closing those schools with extremely low achievement, though still leave most of those schools open).

We find that the only individual application variables that consistently predict approval are the ratings assigned to the application by the third party authorizer, the National Association of Charter School Authorizers (NACSA), that summarize the strength of three main sections of the application: finance, governance, and education plans. Schools are significantly more likely to be approved if they have higher NACSA ratings on those three dimensions. Some combinations of measures, created from a factor analysis, are collectively related to approval though the factors, and mostly represent naming a principal, operating an open school at the time of applying, and having board members with finance and legal experience.

After opening, schools were more likely to be renewed if they had a higher School Performance Score (a state-determined school accountability measure based on test score levels), higher school value-added, or a higher NACSA rating. However, our main measure of parent satisfaction (enrollment level) did not significantly predict renewal (although enrollment sometimes does). The individual application variables (other than NACSA) only weakly predict the future success of applicants, however. Of our 65 estimates (5 long-term outcomes each with 13 predictors), only nine are statistically significant, not one is significant for more than one long-term outcome, and an *F*-test does not reject the null hypothesis that variables predict renewal. The composite application variables from a factor analysis also fail to predict renewal.

The following section outlines the education system in Louisiana and New Orleans. Then we explain the specific processes through which the approval and renewal decisions are made. Lastly, we report our results. The paper concludes with the implications of the state's decision-making behavior.

2 Background

Authorizers are responsible for soliciting applications to operate schools, approving the applicants they deem worthwhile, monitoring those schools once opened, and closing (not renewing) any schools that persistently fail. In Louisiana, the law allows two main types of authorizers: the publicly elected state Board of Elementary and Secondary Education (BESE) and school districts. The majority of charter schools (98 of the 139) operated in Louisiana, are authorized by BESE. Most of the schools authorized by BESE (62) are then governed by a state agency, the Louisiana Recovery School District (RSD). In our analysis, we focus just on schools authorized by BESE and governed by RSD since so few fall under the local school board authorizer.[4]

The RSD was created prior to Hurricane Katrina to help schools that were academically failing in Louisiana. Schools could be transferred into the RSD if they failed to meet minimum academic standards for four consecutive years and were in a district academically in crisis (i.e., more than 50 percent of district schools rated academically unacceptable). Prior to Hurricane Katrina, only one school in Orleans Parish had been transferred into the RSD. Just after Katrina, in November of 2005, Act 35 changed the criteria so that over 100 New Orleans public schools were transferred into the RSD (Smith, 2012). Act 35 stipulated that any school that had a baseline School Performance Score (SPS)[5] lower than the state average and was located in a district

[4] BESE also authorizes and governs some schools, separate from the RSD. The other type of authorizer in New Orleans is the Orleans Parish School Board (OPSB), composed of seven members each elected by voters (by ward) and serve four-year terms. Prior to Katrina, this local district directly ran all but a few charter schools in New Orleans. Today, it directly runs only 6 schools and has authorized 12 charter schools.

[5] As in most states, the SPS is a weighted sum of the percentages of students meeting various performance thresholds on mandated state standardized tests. In some years, the SPS included very small contributions

deemed academically in crisis (only New Orleans met this definition) could be transferred into the RSD.

Once a school was transferred into the RSD, it could be run directly as a state district school or converted into a charter school. In order to convert schools from RSD-run into RSD (Type 5) charters, BESE has to first choose an operator. The current legislation outlines several stages of the application cycle, starting with Eligibility Review and Completeness Review. Next, the applicants undergo Due Diligence Review, which involves background and reference checks on the leaders of the application, analysis of school performance of the applicants' pre-existing schools, the performance of partnering non-profit and for-profit organizations, assessment of performance of previous and existing charter schools, and school site visits (if applicable). The official Application Evaluation is conducted by a team of evaluators consisting of local, state, and national evaluators with expertise in charter school authorizing. Applications have to be reviewed and scored with a rubric by the review team, and applicant leaders are then interviewed.

The evaluator recommendations are submitted to the Louisiana Department of Education (LDOE). The Office of Portfolio housed within the LDOE, assisted by the third party evaluator, makes recommendations for charters to the state superintendent who then sends these on to BESE for the final level of approval. The evaluator during the time period analyzed here was NACSA, the largest organization of its kind in the United States. In the vast majority of cases, the recommendations of NACSA were followed by the state. To summarize, BESE is responsible for making the final approval decisions, but

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for attendance and value-added-like measures. In high schools, in most of the years we consider, the high school graduation rate was part of the SPS calculation for high schools.

relies on the input of NACSA, the LDOE Office of Portfolio, and the state superintendent of education. The RSD then assigns the building and location. Each charter contract is initially approved for five years.

The process of approval, application forms, evaluation rubric, and tools available to applicants have evolved since their inception post-hurricane Katrina. Immediately following the hurricane the process involved one LDOE employee working with NACSA to recommend charter approvals.[6] The application materials and rubrics used to evaluate the application were developed by NACSA with some input from the LDOE Office of Portfolio.[7] In 2006, there was only one application form for all applicants. Submitted applications ranged from 100 to 3,438 pages in length and included 10 main categories: Establishment and School Design, School Mission and Executive Summary, Academic Program, Standards Curriculum and Assessment, Special Student Populations, Parent Staff and Community Support, School Governance, School Policies, Personnel, Financial Accountability, School Facilities and Miscellaneous.

The length and complexity of the application and the process of approval demonstrate the significant barrier to entry for charter schools. But such a screening process might make sense if the factors used to select applicants happened to be associated with subsequent school performance. Given the lack of evidence, one of the contributions of this article is to begin to understand the predictive validity of charter applications.

[6] LDOE's relationship with NACSA lasted from 2008 through 2013. Since 2013, however, the LDOE's Office of Portfolio manages the application process with help from SchoolWorks, another third party charter application reviewer.

[7] See the 2006 Charter Application Components section of the Appendix for an example of the early application.

After the initial five-year charter contract, each school must apply for renewal and demonstrate their success in an attempt to have their contracts renewed. Unlike the initial application, there is no third party evaluator for renewal. Instead, the Office of Portfolio in LDOE reviews the renewal applications and recommends to BESE by January of the following year whether to renew (Cowen Institute, 2012).

According to the legislation, the RSD's objective at the time of this analysis was improve the academic performance in its schools; specifically, to have all of its schools reach an SPS of 120 by 2014 (Handbook, 2008). This goal is clearly reflected in the rules for renewal. Whether a charter contract is automatically renewed depends solely on the SPS. If, at the time of renewal, the school has a current SPS-based letter grade of D or F, then they can only be renewed for three years. If the school is a C school, then it will be automatically renewed for 5 years. Lastly, a B or A school will be automatically renewed for ten years. The law does offer some latitude to authorizers even for schools with SPS scores in the D and F range, for example, it allows exceptions for schools that serve a unique population, has achieved high achievement growth, does not test a significant portion of its students, or non-renewal students would be forced to attend a lower performing school.[8]

While charter renewal clearly prioritizes academic performance, other elements of state law explicitly prioritize parental choice and family preferences. All BESE-RSD charter schools have to be open admissions so that families can choose based on their

[8] There is also the question of when a school can return to control of the local Orleans Parish School Board. Schools are deemed eligible to return to their LEA from the RSD if they earn an SPS of 54 or higher for two consecutive years, or if the threshold for being deemed an Academically Unsuccessful School (AUS) moves above 50, then the school has to have an SPS at least 4 points higher than the threshold for two years. However, until 2016, schools eligible for return had discretion over whether to do so or to remain under the state authorizer (Bulletin 129 §505(B)). A recent law dictated that all schools return to OPSB control by 2018-19.

preferences. The state's policy also allows BESE-RSD to take two percent of revenues to cover their expenses, funding that is generally proportional to enrollment levels and therefore rewards high demand schools. We therefore consider in our analysis to what degree the state considered these twin potential goals of satisfying parents and increasing measured academic performance in their renewal decisions.[9]

3 Theory

Principal-agent theory holds that those responsible for an organization (e.g., the principal or owner of a firm) hire agents to meet the organization's objectives. A key premise is that the objective of the principal differs from that of the agent and that incentive contracts can help bring objectives into alignment and thus improve efficiency.[10] When the principal is a government agency, studies frequently assume that the objectives are minimizing costs and/or increasing quality (Sappington and Stiglitz, 1987; Ferris and Graddy, 1986; Bel, Fageda, Warner, 2010; Hart, Shliefer, and Vishny, 1998; O'Toole and Meier, 2004). In contrast to most studies of contracting, one purpose of this analysis is to avoid such assumptions and instead empirically identify the objectives of the government as charter authorizer.

One of the main reasons prior studies have relied on assumptions about government objectives is that they could only measure one possible objective. An unusual feature of charter authorization is that we can track multiple objectives, including

[9] The funding formula for charter schools is on a per-pupil basis therefore this could be reframed as revenue maximization. However, since the funding formula is also set by the state and this funding comes from an otherwise fixed level of revenue from taxation, it seems more reasonable to call this maximization of parental utility.

[10] In the literature, some other potential benefits discussed include increased quality, more options for consumers, and more flexibility (Averch 1990; Boyne 1998a; Ferris and Graddy, 1991; Ostrom and Ostrom 1977; Savas 1987; Pack 1987; Rho, 2013; Van Slyke 2002).

a government's own performance metrics and revealed preferences of families who may choose to send their children to charter schools (Ruble and Harris, 2014).

3.1 Model

In the following simplified theoretical model, we attempt to capture the main elements of a generic authorization. We use the implications of this model to develop hypotheses that we test later in the analysis.

We assume households maximize utility, u_{is}, of parent *i* in time *t,* and that utility is a function of the school-level characteristics that are time invariant, X_s and their expectations about the current year's achievement, A_{ist}.[11] Parents make decisions in the summer before the school year *t* starts. The vector of time invariant characteristics of the schools could include everything from extra curricular programs to the cost of attendance. Schools are assumed to accept all students that desire to go to that school, and therefore the choice set of schools is not limited. Equation (1) represents the maximization problem for parental utility:

$$Max_s \quad u_{is}\,(X_s\,, A_{ist}) \tag{1}$$

Household utility is increasing in X_s and A_{ist}. Families choose which school to send their children to based on whether their utility from sending their children to school *j* is greater than the utility of sending their children to any other school *k*, such that $u_{ijt} > u_{ikt}$ $\forall j \neq k$. If the utility from choosing a school outside the authorizer's domain is normalized to zero, a parent will choose one of the authorizer's schools over the others if they derive positive utility. Let the decision to enroll in one of the authorizer's schools be

[11] This time-invariant formulation of X_s assumes that school characteristics only change if there is a change in management, as a result of the authorizer's renewal and approval decisions. It is possible that schools do not follow their applications or make changes over time that we cannot observe.

represented by the indicator function: $I[u_{ijt}^{Auth} > 0]$. The choice set of RSD schools includes all of the schools that were approved to open as charters that year, all of the schools that had their charters renewed that year, and all of the schools that are open but not up for renewal yet. Therefore total enrollment in the authorizer's schools would be represented by:

$$D_{RSD} = \sum_i I[u_{ijt}^{Auth} > 0] \quad (2)$$

Given the above assumptions, district enrollment increases if and only if household utility increases.[12] We therefore use district enrollment as a proxy for household utility.

Each school chooses inputs to maximize its probability of renewal. Given state law, the renewal probability is clearly an increasing function of the SPS, but, with the autonomy given to authorizers, may also be a function of other factors such as household utility. Formally, schools solve the following optimization problem subject to prices and the education production function.

$$Max_{inputs} \; Prob[renewal] = \begin{cases} 1 & if\ SPS > 74.9 \\ R[SPS, D_s] & if\ SPS \leq 74.9 \end{cases} \quad (3)$$

In the maximization problem, $R[SPS, D_s]$ is the renewal function if the SPS is below the automatic renewal threshold and the authorizer has discretion over whether to renew. The renewal function still depends on SPS, but also depends on enrollment, D_s, which proxies for household utility. The authorizer observes the final SPS for each school, SPS^*. Total achievement for all of the authorizer's schools would be measured as:

$$A_{Auth} = \sum_s [SPS_s^*] \quad (4)$$

[12] For purposes of the model, we ignore the possibility of ceiling effects due to schools reaching the maximum capacity of their schools. One reason for doing so is that schools can, at least in theory, always expand their sizes by increasing class sizes, purchasing portable classrooms, and so on.

This yields the following objective function and maximization problem for the authorizer:

$$Max_{\mathbb{N},\mathbb{M}} \quad U_{Auth}\,[\,D_{Auth}, A_{Auth}] \tag{5}$$

In (5), let $\mathbb{N}$ denote the subset of authorizer schools that are approved from all of the schools that applied to open. Let $\mathbb{M}$ denote a subset of authorizer schools that are renewed from the set $\mathbb{N}$, once they have been open for five years. The authorizer chooses the optimal set of approved schools and the optimal set of renewed schools to maximize a function of the sums of SPS and enrollment at all of their schools

Both of the terms in (5) are measureable so that the weights attached to achievement and enrollment can be directly estimated. It is important to emphasize, however, that the authorizer has far more information about enrollment and achievement at the renewal stage than the approval stage. At the application stage, the authorizer is relying on expected values based on (possibly weak) signals from the application process. Put differently, they are relying on the expected values at both the approval and renewal stages, but at the renewal stage, their expectations are well informed by recent experience. Recent academic performance is a very strong predictor of future performance at the school level (Cremata, Davis, Dickey, Lawyer, Negassi, Raymond, Woodworth, 2013).[13]

The objective function developed here to describe the decision-making behavior of a state authorizer could be adapted to any type of authorizer. Local school boards are often assumed to maximize utility of local residents or property values, though they may weigh achievement differently (Kerr, 1964; Mountford, 2001). The objective function

[13] To simplify notation, we have not included an explicit time dimension since we conceive of decisions all being made in a single period based on expectations of future performance.

could also differ when the authorizer is a higher education institution, or some other nonprofit board. Bulkley (1999) suggests that one higher education institution benefited financially from authorizing charter schools by receiving a percentage of per-pupil funding from the state government. Based on the theory that government agencies and non-profits are rent-seeking, the weight that authorizers give to enrollment levels will likely be an increasing function of the additional revenues the authorizer receives with additional student enrollment. Beyond direct funding levels, another consequence of not accepting a charter application or non-renewing an existing ones is that the Louisiana RSD was in some cases responsible for directly running schools that were not placed in the hands of charter operators. The additional cost of that effort may have exceeded the utility value of additional revenues.

This study attempts to estimate the objective function of BESE-RSD implied by its authorizing decisions and the degree to which it meets that objective. The model above describes the key assumptions and the details of the institutional context in Louisiana. Below, we describe our data and estimate these models.

4 Data

The data for this analysis are made up of charter applications, charter evaluations from the third party evaluators and administrative school-level data on enrollment and outcomes. We obtained all approved applications from 2001 to 2013 from the Cowen Institute and denied applications from 2005 to 2013 from LDOE. We determined which applications had been approved and renewed by reading the BESE meeting minutes. NACSA provided the evaluations, which we manually matched to the applications. If a school was approved and opened, then it is also linked to enrollment and testing data at

the school level. RSD charter applications were to take over pre-existing RSD direct-run schools.

The NACSA evaluations changed over time, and some years included more description than in other years. To standardize the evaluations over time, we simplified the quality ratings to: Satisfactory (3), Approaching Satisfactory (2), and Unsatisfactory (1).[14] And the areas evaluated in each application were limited to those that were found across all years: education plan, governance plan, and financial plan.

Not all applications had NACSA evaluations, and in some cases an evaluation existed without an application. Table 1 explains the total number of known applications, how many had an application available to code, and how many had a rubric available to code. The bulk of the applications were submitted from 2006 to 2012, but evaluations were only available starting in 2007. Those close to the charter application process informed us that a large number of applications from 2005 and 2006 were missing from our data. While we checked numerous potential sources, we were not able to find those applications. Instead, we carried out additional analyses that exclude these early years. It is also apparent from Table 1 that in all of the years except 2006, more applications were submitted than were approved. Thus, in each year, there was competition for a school contract. Lastly, Table 1 provides the number of applications that are eventually renewed after opening. Most schools were renewed, but there were enough charters revoked in order to estimate any differences in characteristics and outcomes between the two groups.

[14] Evaluations in 2010-2012 assigned rankings to all categories of the applications. Notes were then made from 2010-2012 evaluations about the language used to justify each ranking of "meets the standard," "approaching the standard," or "does not meet the standard." These notes were then compiled to create a list of keywords that could be used to assign a ranking in the 2007-2009 evaluations based on the notes written about each category. For example, if the language used in 2007-2009 indicated that the section seems to have at least some elements required but has many more problems listed, then it is given an "approaching the standard" ranking. Further description of the process can be found in the appendix.

The applications contain much more information than it was possible to code. In choosing which variables to code, we focused on information typically found in the first five pages of the application, under the assumption that the most important information would come first. Variables collected beyond the first five pages were chosen because prior research had found correlation with school performance or because they had been topics of prior research.

Some of the variables were collected from various outside sources to provide additional information relating to the management organization's experience. While applicants were required to be non-profit organizations, many also included partners that were for-profits. Therefore, if the applicant named a management partner, we collected information on their non-profit status from the organization's website.[15] We also collected information about which applicants operated schools outside Louisiana, an indication of both the local roots of the organizations and whether they could demonstrate a track record of success. Lastly, we created a variable counting the number of schools the applicant had opened in New Orleans at the time they applied.

Figure 1 displays a graph for each of the average characteristics, by approval and denial status for each year. In some years, authorizers approved schools with higher levels of future capacity planned and with a larger number of grades offered in the first year open, while in other years they approved more small schools than large schools. Some characteristics seem to be valued in earlier years but not in later years. For example, many of the approved schools in the first five years were operated by national

[15] The full set of partners listed by any applicant are as follows: Rocketship Education, The Leona Group, LLC, University of New Orleans, Rite of Passage, Inc., United Neighborhood Organization, Future is Now Schools, Mosaica Education, Inc., Lagniappe Project, Connections Academy, SABIS School Network, New Schools for New Orleans, New Orleans Educational Management, LLC., EdFutures, Inc., Edison Schools, Education Design Management, and Alvarez and Marsal.

Charter Management Organizations (CMOs), nonprofit organizations that operate more than one school, and had requested a specific school location, while in the later years this became less common of approved schools. Many of the characteristics, however, did not have strong or consistent patterns over time. In discussion with those familiar with the process, any correlations in this part of the analysis appear to be due to chance or omitted variables as the evaluators report that they did not consider these factors.

The renewal stage offers more information. Data on enrollment and testing outcomes was provided by the LDOE. The student-level data files were used to calculate aggregate school-level measures of total enrollment, enrollment by race, enrollment by subgroups, average test scores, and value-added measures (VAM) for the school.[16] We also collected annual public data from the LDOE on School Performance Scores (SPS).

Tables 2-3 display the summary statistics for all of the approval variables, first by approval and second by renewal decisions. These show that there is a clear difference in mean characteristics of approved and rejected applications, e.g., in having a partner, having a for-profit partner, naming a principal, minutes of instruction, the number of board members who have legal or finance backgrounds, and the average NACSA rating. There was a significant difference between renewed and non-renewed schools in SPS, value-added measures, average English scores, average math scores, and average science

[16] Following Kane and Staiger (2008) and others, we estimate the following simple model: $A_{ijt} = \lambda A_{ij,t-1} + \beta X_{ijt} + \theta_j + \varepsilon_{ijt}$ where A_{ijt} is achievement of student i in school j at time t, while X_{ijt} represents one or more student- or school-level covariates. The term θ_j represents the school effect or value-added. This is a large and growing literature on the various methods for value-added estimation. The Kane and Staiger (2008) study and most others focus on individual teachers rather than schools. Kane and Staiger (2008) compare different methods within the context of a randomized trial and we follow their preferred approach, though value-added estimates tend not to be sensitive to the inclusion of covariates or estimation strategy once lagged student achievement in accounted for.

scores. The renewed schools had (unweighted) value-added 0.16 standard deviations above those schools that went up for renewal but were denied.

Although the significant differences in averages may point to some variables being used in the approval and renewal decisions, many of these variables are correlated with each other. Our main conclusions are based on the multivariate analyses below.

5 Methods

Our theoretical model, highlighted in equation (5), predicts that the state will approve applications that have high expected achievement and/or enrollment. To estimate the parameters of the objective function, we estimate a linear probability model, regressing the approval decision on application variables.

$$App_s = Gov_s\gamma + Educ_s\,\alpha + Fin_s\beta + \mu NACSA_s + \theta_t + \varepsilon_s \quad (6)$$

The dependent variable App_s is binary and indicates whether application *s* was approved. This is a function of potential predictors of future performance: Gov_s is a vector of application variables that may represent governance decisions found in the application (national CMO status, principal hired or not, number of board members, etc.); $Educ_s$ represents education plan decisions (days of instruction, professional development days, etc.); and Fin_s represents financial or enrollment decisions (building location requested, number of grades, capacity planned), and lastly the $NACSA_s$variable is the average of the governance, finance, and education ratings given to an application by NACSA. We used the same general groupings as NACSA to collect variables, but we assign specific variables to each category whereas NACSA's measures are based on unknown criteria

(e.g., the interviews and analyses of past performance that we cannot observe). We include year fixed effects, θ_t as well to control for the varying degree of approval each year.

The renewal decision is different from the initial application because the authorizer has five years of observed performance data and the original application information is not used in the renewal decision. We therefore model renewal as:

$$R_s = A_s\alpha + D_s\beta + B_s\delta + \vartheta_t + \varepsilon_s \quad (7)$$

where renewal R_s is a function of test-based performance measures, A_s, student enrollment measures, D_s, and subgroup enrollment measures, B_s. The subgroup measures are percentages of students in each group and are included because the law gives BESE the ability to focus on specific populations. The model also includes year of approval fixed effects, ϑ_t. The same model can be estimated using years of renewal granted as the dependent variable. All of the above models with binary dependent variables are estimated both as linear probability models and as probit models, but we present only the linear probability model estimates below since they were essentially the same for all models.

6 Results

6.1 Approval Analysis

Table 4 presents the predictors of application approval. The only variable that is consistently significant is the NACSA rubric rating. This is consistent with the fact that BESE almost always accepted the recommendations of NACSA (and that NACSA recommendations did indeed follow from these individual component evaluations). As further evidence, Figure 2 displays the NACSA rubric ratings by approved and denied

applicants. Approved applicants overwhelmingly had the highest rating in their education plan, finance plan, and governance plan. There are only three approved cases that had the middle rating in finance or governance. Two of the denied applicants had the highest rating in education, but were denied due to insufficient finance or governance plans.[17]

Only one variable collected from the applications, whether or not the applicant was partnering with an outside nonprofit, significantly predicts approval when also including the average NACSA rating as a covariate. An applicant that named a nonprofit partner was 22 percent less likely to be approved than an applicant who did not name any kind of partner. Naming a for-profit partner also decreased the odds of being approved by 20 percent, but was not statistically significant.

When the NACSA variables are dropped in the regressions in column (2), only one variable is significant: the number of board members with finance and legal backgrounds positively influences the probability of approval. The average approved application had about three board members with finance/legal backgrounds while the average denied application had two members. Although not significant in the regressions in Table 4 or the summary statistics in Table 2, the average number of board members who were educators is 1.4 for approved applications and 2 for denied applications. The number of board members with various backgrounds was collected from the application as an indicator of the characteristics of school governance.

The size and significance of coefficient on the NACSA average is not sensitive to the inclusion of any of the other application variables we collected, suggesting that the

[17] In all cases except one, the state followed NACSA's recommendations on which charters to approve. The Amachi Charter School Association applied to open five charter schools in 2010. NACSA recommended that only one of them be approved, but BESE chose to deny all of their applications. Amachi was not applying to take over a pre-existing RSD school, however, so this exception was not included in the analysis.

two sets of variables are not highly correlated. To check this however, Table 5 regresses both the average NACSA rating and each of the individual ratings on the full set of characteristics to test whether the variables we coded from the applications were correlated with the NACSA ratings. In column (1) naming a nonprofit partner is positively correlated with the average NACSA rating. In column (2) both naming a principal and the number of grades in the first year open are positively correlated with the education rating. All of the variables are only slightly significantly correlated, however, and none of the variables collected is significantly correlated with the finance or governance ratings from NACSA. The robust relationship between NACSA and approval is noteworthy given the limited degrees of freedom noted earlier.

6.2 Renewal Analysis

After the initial five-year contract, authorizers decide whether to renew the contract for 3 to 10 years or to terminate the contract. When making the renewal decision, authorizers have access to much more information than at the application stage, including the school's academic and financial performance as well as enrollment. As Table 6 shows, the only variables that significantly predict renewal are the SPS and a school VAM. The renewal rules are based on the SPS therefore this result indicates that authorizers are following the policy and renewing schools more often if they have a higher SPS. School VAM is positively correlated with SPS. With multicollinearity and few observations, the result is that only one of these two variables is a significant predictor across specifications. There were no statistically significant relationships for enrollment levels either on average or for specific subgroups, though there is one case

where enrollment growth is positively related to renewal. Overall, these results suggest that parental utility is a minor objective relative to measured academic achievement.

One of the goals of this analysis was to evaluate whether authorizers have the ability to make approval/renewal decisions using information in a way that facilitates improved outcomes. We tested this by regressing years of renewal and the intermediate outcomes (SPS, VAM, etc.) on the vector of application variables. Since the average NACSA evaluation rating almost perfectly correlates with the approval decision, Table 7 (Panel A) presents results with renewal and performance outcomes regressed on just the NACSA measure. The rating significantly correlates with years of renewal. In this case, increasing the average rating by one unit (range = 1-3) is associated with a 10-year increase in renewal length. It is important to note, however, that because there were only three applications that did not have the highest NACSA rating in all three categories, this effect is being identified using the variation only from those observations.

In Panel B, we focus on the specific application variables, none of which significantly predicts the number of years of renewal once a school is opened. The *F*-statistic also no longer rejects the null hypothesis that the application collectively predicts renewal. Since schools with A and B letter grades were automatically renewed, and part of the goal is to understand how the state uses its discretion, we also re-estimated the model excluding the automatic renewals; the findings were qualitatively similar. Finally, because renewal is only observed for those applicants that are approved, we regressed years of renewal on the application variables using a Tobit model to account for the

censoring of the sample. The variables remain statistically uncorrelated with years of renewal.[18]

The application information also generally cannot predict future SPS, value-added, or enrollment, with a few exceptions. If a school names a non-profit partner, their future SPS was 38 points lower. Four variables, the number of board members who are educators, whether the applicant had hired a principal, the number of grades in year 1, and requesting a location are significantly correlated with the enrollment level once the school opens.

Applicants with one more educator as a board member had enrollments with 54 fewer students. If the applicant had hired a principal at the time of application, enrollment was 252 students lower than those that did not. However, these results must be interpreted with the important caveat that some schools have more grade levels than others and therefore have more enrollment simply because they have more grades. In the last column of Table 7, enrollment growth, which takes the number of grades into consideration, is still only weakly related to the application variables, except for the negative correlation with having a nonprofit partner.

The above analysis is limited by two main factors. The first is that we cannot be sure whether or how specific school characteristics affected authorizer decisions. It may be, for example, that authorizers have more information than what we could capture here and that information may have been correlated with the included measures. Our data do not allow us to address this.

[18] The Tobit model can only be used in regressions that include application variables that are observed for the whole sample of regressors and use renewal as the independent variable.

The second issue, which we can partially address, is statistical power. We have few degrees of freedom and many of the prediction variables are highly correlated. For this reason, and to determine whether the individual variables might represent broader constructs, we carried out an exploratory factor analysis with principal components with all of the application variables (excluding the NACSA rating). The analysis produced five factors to represent the approval variables. Table 8, Panel A provides weights,.though these do not seem to correspond with broader theoretical constructs. Panel B provides regression results equivalent to Tables 4-7 for the various dependent variables (approval, renewal, and future performance).

Two of the five factors predict approval in at least some of the models. The results suggest that the combination of naming a principal, having a larger number of schools already open when you apply for a charter, and having more board members with finance and legal backgrounds positively influence approval while planning a larger school and naming a partner in your application negatively influence approval. The second factor does predict the average NACSA rating and specifically the finance rating. This implies that having a high rating could be correlated to having more schools already open at the time of the application and having more board members with finance and legal experience. Factor 1 is significantly correlated with the governance rating, implying that this part of the rating may have depended on having named a principal, planning a smaller school, and not naming a partner in your application. None of the factors, however, predict the main dependent variables of interest: SPS, value-added, enrollment, and enrollment growth, as direct measures of future school performance.

7 Conclusion

This is among the first studies to examine the predictive validity of a charter authorization process. The data collection required for such an analysis is extremely time-intensive, especially at the application stage and, partly as a result, we examine only a single authorizer and a relatively small number of schools. Many of our measures, such as value-added, also have limited variance (i.e., NACSA ratings) and/or limited reliability (i.e., value-added). Nevertheless, the results are consistent with theoretical predictions and provide a useful starting point for what will hopefully be more extensive research in the future.

Based on these results, we conclude that the State of Louisiana, as represented by BESE, maximizes academic achievement rather than parental utility. None of the enrollment measures predicted renewal while all those based on student test scores were strong predictors. The third party evaluator, NACSA, had some success in identifying successful schools as their ratings predicted renewal, though did not clearly predict the other outcomes.

One reason that the NACSA ratings were not stronger predictors is that these schools were being created largely from scratch and the applicants had little track record from which to judge their potential. Just as recent research on teachers has shown that credentials are not strong predictors of future performance (Goldhaber, 2000; Harris & Sass, 2011), the evidence highlights the inherent challenges in predicting future performance with non-performance information. This situation is likely to change over time, in New Orleans and other contracting situations, as markets begin to mature and more contractors have a verifiable track record.

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Figure 1: Characteristics by Approval by Year

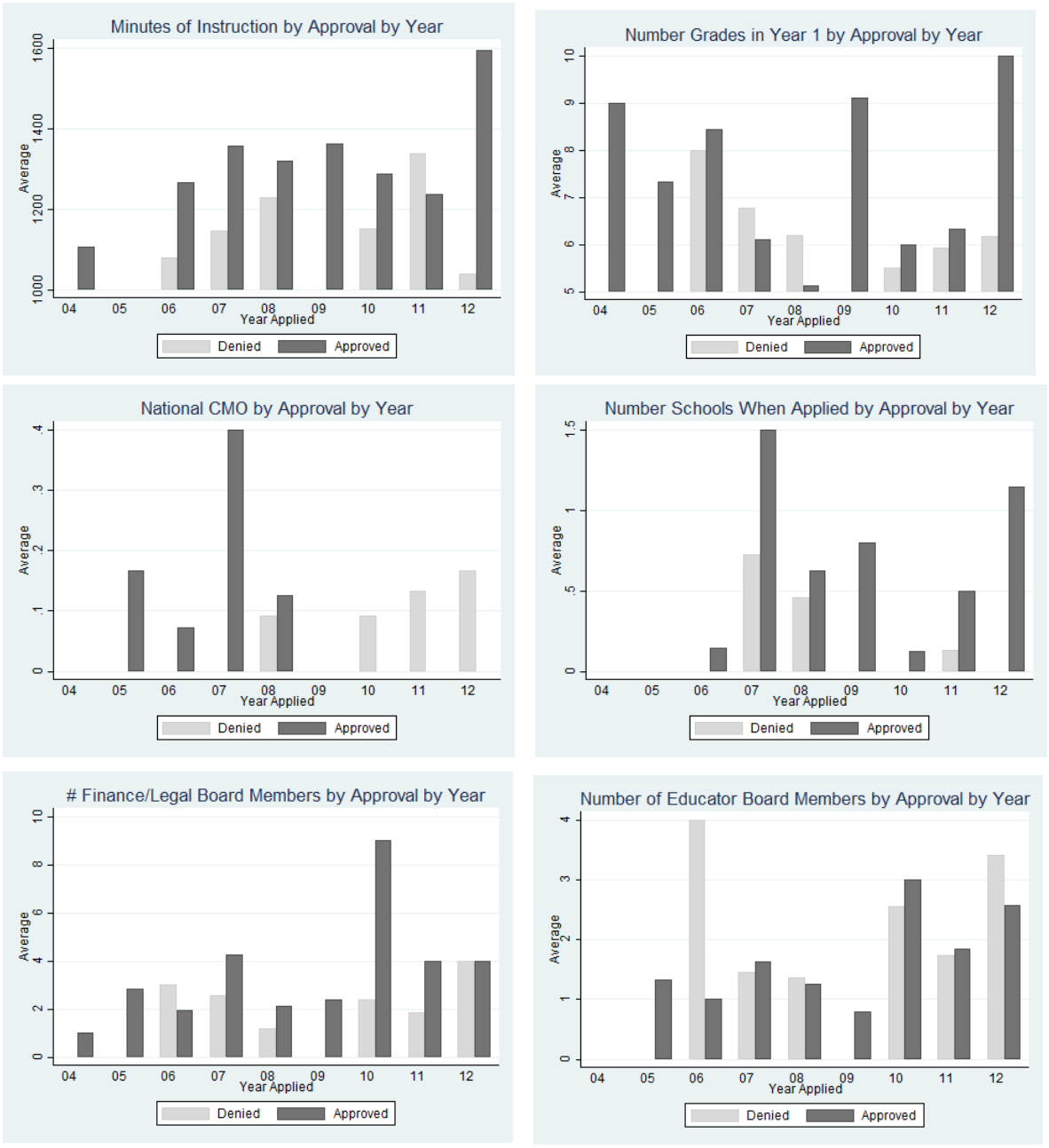
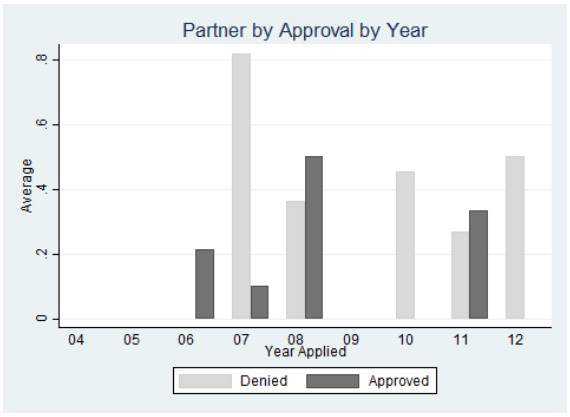
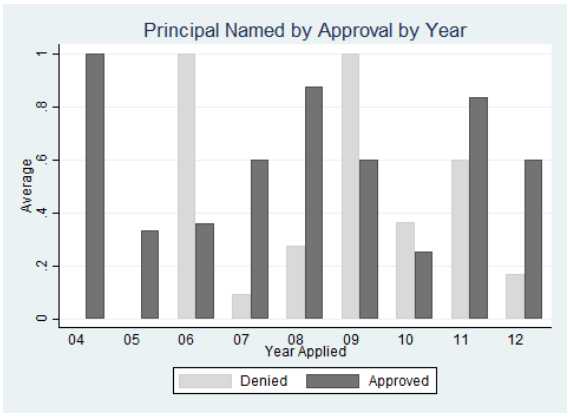
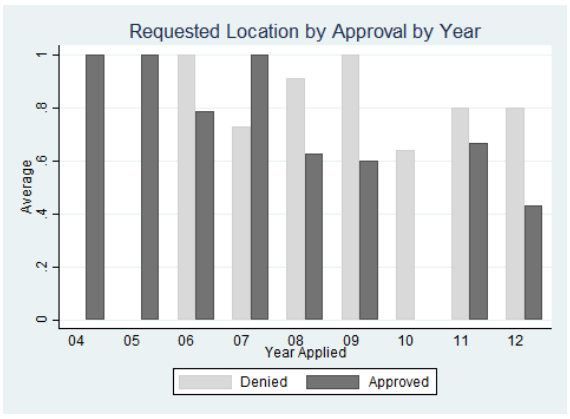
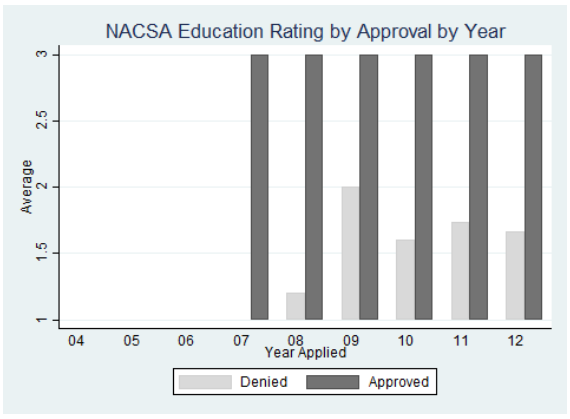


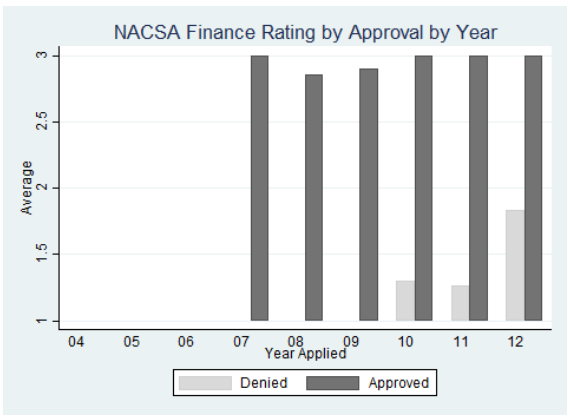
Figure 1: Characteristics by Approval by Year (cont.)











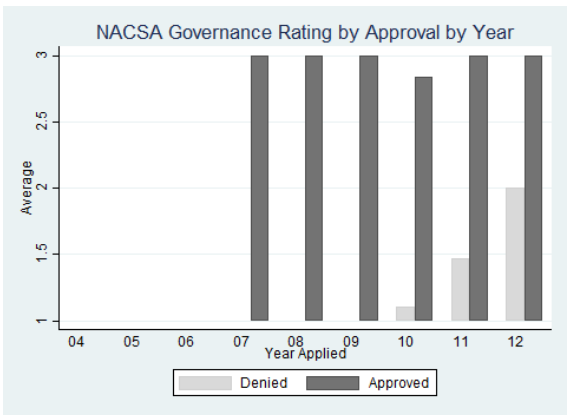


Figure 2: NACSA Rubric Ratings by Approval

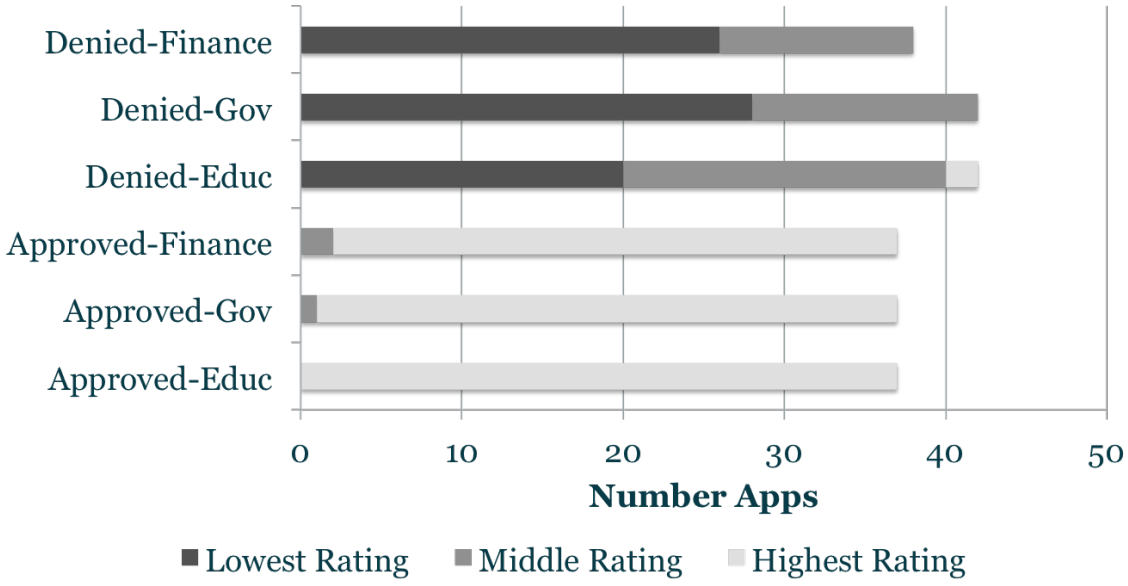


Table 1: Applications and Renewals for Orleans Parish

Year Applied	Total Applications	Applications Available	Rubrics Available	Approved	Denied	Renewed
2000	1	1	0	1	0	1
2003	1	1	0	1	0	1
2004	1	1	0	1	0	1
2005	2	2	0	2	0	2/2
2006	15	15	0	14	1	10/14
2007	22	21	5	10	12	6/9
2008	24	20	21	8	16	4/8
2009	20	12	19	11	7	8/8
2010	31	29	27	10	21	7/7
2011	27	22	23	8	19	.
2012	12	12	12	5	7	.

Includes all approved and denied applications submitted to BESE from 2000 to 2012. Renewals determined by BESE meeting minutes.

Table 2: Summary Statistics for Application Variables for Approval Analysis

	Average Not Approved	Average Approved	Number Not Approved	Number Approved	Min	Max
Partner	0.455	0.143***	55	70	0	1
	(0.503)	*(0.352)*				
For-Profit Partner	0.750	0.364*	24	11	0	1
	(0.442)	*(0.505)*				
National CMO	0.089	0.100	56	70	0	1
	(0.288)	*(0.302)*				
Principal Named	0.357	0.563*	56	64	0	1
	(0.483)	*(0.5)*				
Minutes of Instruction	1207.126	1356.305**	50	43	696	2812.5
	(233.978)	*(296.135)*				
Development Days	24.235	25.917	49	42	5	202
	(27.823)	*(11.968)*				
Number of Schools Approved	0.268	0.600	56	70	0	7
	(0.486)	*(1.232)*				
Number of Grades in Y1	6.120	7.188	50	64	0	13
	(2.819)	*(2.845)*				
Number Students at Capacity	556.633	528.429	49	63	150	1200
	(210.215)	*(144.432)*				
Requested Location	0.782	0.667	55	69	0	1
	(0.417)	*(0.475)*				
NACSA Finance Rating	1.316	2.946***	38	37	1	3
	(0.471)	*(0.229)*				
NACSA Education Rating	1.571	3.000***	42	37	1	3
	(0.590)	*(0.00)*				
NACSA Governance Rating	1.333	2.973***	42	37	1	3
	(0.477)	*(0.164)*				
Number Educator BM	1.963	1.400	54	60	0	8
	(1.613)	*(1.405)*				
Number Legal/Finance BM	2.185	2.983*	54	60	0	9
	(1.493)	*(2.087)*				

Standard deviation in Parenthesis. Partner (NonProfit or For-Profit) indicates that the applicant named a partner and that partner is either nonprofit or for-profit. National CMO indicates the applicant operates schools in other states. Principal Named indicates the applicant had already hired a principal. Rubric (Education, Finance, or Governance) rating is the number assigned to the application by the National Association of Charter School Authorizers, ranging from 1 to 3. Number of BM- (Educators, Finance, Legal) indicates the number of charter board members who specialize in each of the three categories. Number of grades in Year 1 indicates the actual grades offered in the first year. Number of students at capacity is the number of students the applicant said it would serve at capacity. Request a location indicates the applicant wanted to operate a specific school or in a specific building. Significant difference between approved and denied average * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 3A: Summary Statistics for Application Variables by Renewal

	Avearge Not Renewed	Average Renewed	Number Not Renewed	Number Renewed	Min	Max
Partner	0.46	0.07***	11	42	0	1
	(0.52)	*(0.26)*				
For-Profit Partner	0.60	0.25	5	4	0	1
	(0.55)	*(0.50)*				
National CMO	0.00	0.17	11	42	0	1
	(0.00)	*(0.38)*				
Principal Named	0.64	0.51	11	39	0	1
	(0.51)	*(0.51)*				
Minutes of Instruction	1271.79	1341.70	7	22	1062	1933.3
	(212.25)	*(216.83)*				
Development Days	16.50	26.05	6	22	10	54
	(4.76)	*(11.07)*				
Number of Schools Approved	0.09	0.67	11	42	0	7
	(0.30)	*(1.34)*				
Number of Grades in Y1	8.18	7.26	11	42	0	13
	(3.09)	*(2.58)*				
Number Students at Capacity	513.10	520.53	10	38	261	900
	(213.05)	*(131.34)*				
Requested Location	0.82	0.71	11	42	0	1
	(0.41)	*(0.46)*				
NACSA Finance Rating	2.60	3.00**	5	19	2	3
	(0.55)	*(0.00)*				
NACSA Education Rating	3.00	3.00	5	19	3	3
	(0.00)	*(0.00)*				
NASCA Governance Rating	3.00	2.95	5	19	2	3
	(0.00)	*(0.23)*				
# Board Members-Educators	0.90	1.25	10	36	0	5
	(0.99)	*(1.30)*				
# Board Members-Legal	2.10	2.86	10	36	0	9
	(1.45)	*(2.13)*				

Standard deviation in parenthesis. Partner (NonProfit or For-Profit) indicates that the applicant named a partner and that partner is either nonprofit or for-profit. National CMO indicates the applicant operates schools in other states. Principal Named indicates the applicant had already hired a principal. Rubric (Education, Finance, or Governance) rating is the number assigned to the application by the National Association of Charter School Authorizers, ranging from 1 to 3. Number of BM- (Educators, Finance, Legal) indicates the number of charter board members who specialize in each of the three categories. Number of grades in Year 1 indicates the actual grades offered in the first year. Number of students at capacity is the number of students the applicant said it would serve at capacity. Request a location indicates the applicant wanted to operate a specific school or in a specific building. Significant difference between approved and denied * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 3B: Summary Statistics for Renewal Analysis

	Average Not Renewed	Average Renewed	Number Not Renewed	Number Renewed	Min	Max
SPS Average	60.00	74.20**	11	41	9	101
	(9.48)	*(14.70)*				
VAM	-0.13	0.03**	11	37	-1	0
	(0.14)	*(0.16)*				
ELA Avg	-0.28	-0.08**	11	41	-1	0
	(0.13)	*(0.23)*				
Math Avg	-0.30	-0.08**	11	41	-1	0
	(0.14)	*(0.22)*				
Science Avg	-0.34	-0.12*	11	40	-1	0
	(0.21)	*(0.27)*				
Social Studies Avg	-0.30	-0.12	11	40	-1	1
	(0.20)	*(0.34)*				
Met Growth Target SPS	0.64	0.52	11	42	0	1
	(0.51)	*(0.51)*				
Enrollment	400.00	511.98	11	42	103	936
	(140.62)	*(173.12)*				
Enrollment Growth	1.08	1.24	11	42	0	9
	(1.27)	*(1.90)*				
Scaling Up Grades	0.82	0.69	11	42	0	1
	(0.41)	*(0.47)*				
Growth in last year	0.02	0.04	6	28	0	0
	(0.07)	*(0.14)*				
Grades Offered	7.82	7.10	11	42	0	14
	(2.44)	*(2.62)*				
LEP	0.05	0.01	11	42	0	0
	(0.09)	*(0.05)*				
FRPL	0.92	0.92	11	42	1	1
	(0.03)	*(0.06)*				
SPED	0.07	0.06	11	42	0	0
	(0.03)	*(0.03)*				
Black	0.89	0.95	11	42	0	1
	(0.17)	*(0.11)*				
Hispanic	0.06	0.02	11	42	0	1
	(0.15)	*(0.08)*				

Standard deviation in parenthesis. SPS (School Performance Score) averages SPS for all years. VAM (Value Added Measure) is the estimated value added of the school. ELA, Math, Science, Social Studies averages the scale scores for each subject. Met Growth Target SPS indicates the school met their target in any year. Enrollment growth is overall growth from year one to the final year. Scaling Up Grades indicates the school opened with fewer grades than they planned for capacity. Growth in last year is the growth from the second to last year to the last year calculated only for schools that have fully scaled up. Grades offered is the number of grades offered. Percent LEP (Limited English Proficiency), FRPL (Free Reduced Price Lunch), SPED (Special Education), Black, and Hispanic. Significant difference between renewed and not renewed * $p<0.05$, ** $p<0.01$, *** $p<0.001$

Table 4: Predictors of Charter Approval
(Linear Probability Model)

	(1)	(2)	(3)
NACSA Average Ratings			
NACSA Average	0.544***		0.545***
	(0.025)		(0.046)
Governance			
National CMO		-0.018	-0.045
		(0.205)	(0.088)
# Board Members-Legal/Finance		0.085*	0.027
		(0.036)	(0.020)
# Board Members-Educators		0.039	0.007
		(0.048)	(0.026)
Partner-Nonprofit		0.181	-0.216*
		(0.167)	(0.097)
Partner-For-Profit		-0.286	-0.203
		(0.170)	(0.109)
Principal Named		0.173	-0.073
		(0.115)	(0.056)
Education Plan			
Minutes of Instruction per Year		0.000	-0.000
		(0.000)	(0.000)
Professional Development Days		0.008	-0.001
		(0.006)	(0.003)
Financial/Enrollment			
Request a Location		-0.151	0.075
		(0.135)	(0.063)
Number of Grades in Year 1		0.002	-0.019
		(0.023)	(0.011)
Number of students at Capacity		-0.000	0.000
		(0.000)	(0.000)
Number of School when Applied		-0.031	-0.036
		(0.096)	(0.043)
R squared	0.923	0.547	0.942
F Statistic	0.00	0.00	0.00
Number of Applications	64	67	46

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001. OLS Regressions are robust to including year of application fixed effects, using a constant sample of applications, or running as Probits. Regression (3) does not include fixed effects and uses a constant sample. Regression (2) includes fixed effects but does not restrict the sample. Regression (1) includes fixed effects and does not restrict the

Table 5: Predictors of NACSA Rubric Ratings

	NACSA Average (1)	Education Rating (2)	Finance Rating (3)	Governance Rating (4)
Governance				
National CMO	-0.386	-0.257	-0.456	-0.177
	(0.410)	(0.409)	(0.463)	(0.471)
# Board Members-Legal/Finance	0.070	0.063	0.094	0.102
	(0.080)	(0.076)	(0.091)	(0.087)
# Board Members-Educators	0.014	0.133	0.008	0.049
	(0.119)	(0.112)	(0.134)	(0.129)
Partner-Nonprofit	0.870*	0.539	0.932	0.479
	(0.409)	(0.387)	(0.462)	(0.445)
Partner-For-Profit	0.483	0.176	0.522	-0.132
	(0.499)	(0.406)	(0.563)	(0.467)
Principal Named	0.457	0.565*	0.348	0.445
	(0.246)	(0.234)	(0.278)	(0.269)
Education Plan				
Minutes of Instruction per Year	0.001	0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Professional Development Days	0.017	0.019	0.021	0.016
	(0.013)	(0.013)	(0.015)	(0.015)
Financial/Enrollment				
Request a Location	-0.235	-0.434	-0.161	-0.388
	(0.291)	(0.285)	(0.329)	(0.328)
Number of Grades in Year 1	0.087	0.119*	0.067	0.094
	(0.046)	(0.044)	(0.052)	(0.051)
Number of students at Capacity	-0.001	0.000	-0.002	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Number of School when Applied	0.215	0.130	0.294	0.088
	(0.187)	(0.182)	(0.211)	(0.209)
R squared	0.437	0.413	0.413	0.360
F Statistic	0.042	0.04	0.07	0.1
Number of Applications	46	50	46	50

Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001. Regressions were robust to including the year of application and to using a constant sample.

Table 6: Predictors of Charter Renewal (Linear Probability Models)

	Years Renewal						Renewed		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Predicted Prob(Approval)									0.250 (1.200)
Test Score:									
SPS	0.214	0.147**	0.142***	0.043		0.133***	0.112***		
	(0.116)	(0.043)	(0.036)	(0.052)		(0.022)	(0.028)		
VAM	8.740			14.081*	17.311***			11.263***	
	(7.985)			(5.331)	(3.695)			(2.597)	
Enrollment:									
Enrollment	-0.005	-0.000	-0.002	-0.002	-0.002		-0.003	-0.003	
	(0.004)	(0.004)	(0.002)	(0.003)	(0.003)		(0.002)	(0.002)	
Scaling Up	-0.520	-0.739			-0.179				
	(1.203)	(1.147)			(0.835)				
Enrollment Growth	7.981	-0.032	2.100	2.369	4.007		4.417	6.508*	
	(5.892)	(5.581)	(3.349)	(4.670)	(4.308)		(2.972)	(2.887)	
Grades offered	0.345								
	(0.308)								
Demographics:									
LEP	34.538	-33.819		-7.683	3.033	-17.210			
	(79.234)	(72.841)		(58.769)	(58.271)	(13.006)			
FRPL	-18.814	-11.823		-11.293	-12.745	-7.024			
	(10.376)	(9.086)		(7.505)	(7.588)	(5.059)			
SPED	-24.504	15.602		8.068	8.043	9.379			
	(28.503)	(22.148)		(18.230)	(18.950)	(11.634)			
Black	36.865	-13.108		-0.205	4.371	0.022			
	(52.918)	(47.762)		(38.322)	(38.718)	(5.085)			
Hispanic	16.029	8.153		7.466	5.668	13.733			
	(13.903)	(12.939)		(10.397)	(11.085)	(7.736)			
R squared	0.805	0.606	0.489	0.703	0.693	0.520	0.439	0.473	0.002
F Statistic	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.84
# Schools	28	28	28	28	28	45	33	32	23

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001. Column one also includes other test score variables including math, english, social studies, and science averages, and an indicator for meeting the SPS growth target. SPS (School Performance Score) is aggregate measure of quality based on test scores. VAM (Value-Added Measure) for the school. Enrollment is the number of students in the last year the school appears in the data. Scaling Up Grades is a dummy for schools that increase the grades offered each year. Enrollment Growth measure the growth from the second to last year to the last year the school is in the data, and is calculated only for schools that have finished scaling up. Grades offered refers to the number of grades offered in the last year the school is in the data. LEP (Limited English Proficiency) is the average percent LEP. FRPL (Free Reduced Price Lunch) average percent students FRPL. SPED (Special Education) percentage of students who are designated as special education. Black and Hispanic is the percent students with that race/ethnicity.

Table 7: Application Variables as Predictors of Renewal and Student Outcomes

	Renewal Years	SPS	VAM	Enrollment Level	Enrollment Growth
Panel A:					
NACSA Average Rating	10.600*	-7.799	0.473	-67.966	0.306
	(4.431)	(35.431)	(0.414)	(295.632)	(0.295)
R Squared	0.276	0.002	0.061	0.002	0.082
Number Schools	17	30	22	32	14
Panel B:					
Governance					
# of Board Members-Educators	0.883	3.737	-0.154	-54.078*	-0.002
	(1.020)	(4.173)	(0.088)	(22.491)	(0.016)
# of Board Members-Finance/Legal	-0.797	-3.973	0.025	7.856	0.002
	(0.577)	(1.865)	(0.040)	(12.230)	(0.007)
Partner-Nonprofit	-4.310	-38.507**	0.065	-110.024	-0.351*
	(3.265)	(10.285)	(0.209)	(63.161)	(0.045)
Partner-For-Profit	-1.591	21.969	-1.060	-231.723	0.124
	(6.175)	(27.221)	(0.441)	(162.341)	(0.152)
National CMO	0.589	16.080	0.575	100.169	0.000
	(4.136)	(19.092)	(0.447)	(116.180)	(.)
Principal Named	-0.289	10.215	-0.400	-252.164***	-0.079
	(2.708)	(9.890)	(0.185)	(56.820)	(0.059)
Education Plan					
Minutes of Instruction	0.003	0.002	-0.001	-0.168	-0.001*
	(0.005)	(0.025)	(0.001)	(0.144)	(0.000)
Professional Development Per Year	0.043	0.442	-0.004	4.767	0.000
	(0.102)	(0.424)	(0.006)	(2.444)	(0.001)
Financial/Enrollment					
Number of Schools when Applied	1.160	1.371	0.100	17.690	0.020
	(1.457)	(5.572)	(0.099)	(33.205)	(0.017)
Number of Grades in Year 1	-0.003	0.269	-0.024	22.887*	0.010
	(0.330)	(1.525)	(0.018)	(9.712)	(0.006)
Number of Students at Capacity	-0.005	-0.036	0.001	0.196	-0.001*
	(0.007)	(0.029)	(0.000)	(0.178)	(0.000)
Request a Location	-3.086	-8.352	0.291	155.765**	0.140
	(2.388)	(9.131)	(0.157)	(48.628)	(0.062)
R Squared	0.502	0.620	0.683	0.738	0.995
F Statistics	0.50	0.10	0.50	0.01	0.03
Num Schools	22	28	19	30	14

Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001. If all schools that are approved and make it to renewal all had the same rating for any category, then the variable is ommited from the regression. Less schools have available VAM scores than SPS scores because VAM is not calculated for high schools or primary schools with too few students in tested grades. Also, two schools had only been open for one year at the time that VAMs were calculated. In order for a school to have an enrollment growth measure, the school would have to have two years worth of enrollment data, and the number of grades offered in the last two years of data have to be the same, which excludes schools that are scaling up grades.

Table 8: Factor Analysis

Panel A: Scoring Coefficients

Original Variable	Factor1	Factor2	Factor3	Factor4	Factor5
Named Partner	-0.47	0.08	0.04	0.09	0.03
National CMO	-0.06	0.04	-0.03	-0.02	0.84
Principal Named	0.34	-0.16	0.15	-0.15	0.11
Minutes of Instruction	0.13	0.08	0.35	-0.12	0.07
Professional Development Per Year	0.12	0.07	0.46	-0.03	-0.30
Number of Schools when Applied	-0.03	0.46	-0.06	-0.07	0.01
Number of Grades in Year 1	0.21	0.06	-0.53	-0.20	-0.15
Number of Students at Capacity	-0.38	-0.23	0.14	-0.33	0.11
Location Request	0.13	-0.14	0.02	0.33	0.26
# of Board Members-Educators	-0.03	0.11	0.07	0.69	-0.08
# of Board Members-Finance/Legal	-0.02	0.56	0.03	0.23	0.09

Panel B: Regression Results

	Factor1	Factor2	Factor3	Factor4	Factor5	N	Adj R2	F Test
Approval 1	0.14*	0.13*	0.09	-0.01	-0.02	67	0.32	yes
	(0.06)	(0.06)	(0.05)	(0.06)	(0.06)			
Approval 2	0.21***	0.15*	0.06	-0.08	-0.08	67	0.26	yes
	(0.05)	(0.06)	(0.05)	(0.05)	(0.06)			
Approval 3	0.06	0.14*	0.10	0.00	0.01	46	0.44	yes
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)			
NACSA Average	0.21	0.36**	0.07	-0.12	-0.09	46	0.19	yes
	(0.12)	(0.13)	(0.11)	(0.12)	(0.12)			
Education Rating	0.2	0.24	0.10	-0.19	-0.12	50	0.1	no
	(0.12)	(0.13)	(0.11)	(0.11)	(0.13)			
Finance Rating	0.18	0.46**	0.12	-0.08	-0.12	46	0.21	yes
	(0.13)	(0.14)	(0.13)	(0.13)	(0.13)			
Governance Rating	0.34**	0.32	0.03	-0.13	-0.07	50	0.2	no
	(0.12)	(0.14)	(0.12)	(0.13)	(0.13)			
Renewal	0.5	0.92	0.21	-0.24	-0.22	22	-0.12	no
	(0.94)	(0.72)	(0.85)	(0.76)	(0.85)			
SPS Average	5.5	-0.87	-0.07	-4.13	2.69	28	-0.06	no
	(5.16)	(3.47)	(4.34)	(3.81)	(4.10)			
VAM Average	0.00	0.01	0.05	0.02	0.02	19	-0.19	no
	(0.06)	(0.05)	(0.05)	(0.05)	(0.05)			
Enrollment	20.65	40.1	-29.10	-0.14	-17.65	30	-0.03	no
	(40.33)	(26.93)	(31.30)	(30.40)	(31.10)			
Enrollment Growth	0.03	-0.02	-0.04	0.03	-0.15	14	0.02	no
	(0.04)	(0.04)	(0.05)	(0.05)	(0.10)			

Standard errors in parentheses * p<0.05, ** p<0.01, *** p<0.001. Factor analysis method was regression based on varimax rotated factors. The approval regressions were done three ways to mach the robustness checks done on the original regressions. Approval 1 includes year of application fixed effects and does not limit the sample. Approval 2 does not include fixed effects or limit the sample. Approval 3 includes fixed effects and limits the sample to be consistent across variables.

10 Appendix

B1 Charter Application Outline 2006

I. Establishment and School Design
   a. Attachments 1- Name of School
   b. A2-Non Profit Members
   c. A3-Opening Date
   d. A4-Five Year projected enrollment
   e. A5-Partner organization
   f. A6A-Information for profit or non-profit management company- Exhibit A
   g. A6B- How non-profit was selected
   h. A6C- Registration with Secretary of State, Number of Schools, most recent annual report, length of time entity has been in business, and summary of student achievement data

II. School Mission and Executive Summary
   a. Attachment 7- Accountability Plan and Mission Statement
   b. A8- Executive Summary

III. Academic Program, Standards, Curriculum and Assessment
   a. Attachments 9A- Calendar
   b. A9B- Sample Schedule
   c. A10- Student Achievement Goals
   d. A11- Learning Standard and Curriculum Exhibit C
   e. A12A- Schedule o State Assessments
   f. A12B- List of standardized tests; rationale for selections
   g. A13- Other methods of assessments
   h. A14- Requirements for awarding diplomas

IV. Special Student Populations
   a. Attachments 15- Policies, procedures, programs for serving disabled students
   b. A16- program design, methods, and strategies for serving LEP students
   c. A17- Methods, strategies, and/or programs for serving at-risk students
   d. A18- Methods and strategies for serving other targeted populations

V. Parent, Staff and Community Support
   a. Attachment 19- Parental involvement
   b. A20- Community group involvement in school planning and development

VI. School Governance
   a. Attachment 21- Articles of Incorporation- Exhibit D
   b. A22A- Non profit members- Exhibit E
   c. A22B- Credit Report- Exhibit E
   d. A22C- IRS Services form 990

e. A23- Purpose for which non profit was established, activities in which the no profit has been engaged, disclosure of religious affiliation, discuss any liens, describe initial incorporations, plans for future recruitment
f. A24- Qualification for service of school's board of directors
g. A25- Proposed members of the board of directors, minimum of 7 members recommended, biographical affidavit, restricted to 20% from same family
h. A26- Description of board responsibilities, description of officer responsibilities
i. A26B- signed assurance for each board of directors
j. A27- Organizational chart

VII. School Policies
a. Attachments 28- Code of Ethics for Board Members
b. A29 - Training of Board Members
c. A30- Student Admission Policy (Jurisdiction, lottery, waiting list process, student Withdrawal)
d. A31- Discipline Policy for Regular Students
e. A32- Discipline Policy for Special Education students
f. A33- Dress Code Policy
g. A34- Description of Food Services Policy
h. A35- Description of Transportation
i. A36- Description of Health Services
j. A37- Compliance with Public Records Law, Exhibit F
k. A38- FERPA-Exhibit G
l. A39- Open Meetings-Exhibit H
m. A40- Policy for Reporting to Parents
n. A41- Policy for Handling Complaints
o. A42- Process for Transferring students, records, and assets

VIII. Personnel
a. Attachments 43A- Policy Regarding teachers employed prior to take over school
b. A43B – policy regarding employee not employed prior to takeover (hiring/dismissing personnel, qualifications for hiring school admins and other employees, job descriptions and responsibilities for all employee, procedure for compliance with criminal offense, employment benefits, salary ranges)
c. A44- Roster of Instructional Staff
d. A45A- Professional development opportunities
e. A45B- Methods that will be used to evaluate teachers and other instructional staff

IX. Financial Accountability
a. Attachment 46- Detailed Budget for the Start-Up Planning
b. A47- Detailed First Year Operation Budget
c. A48- Budget plan for Next Four Years
d. A49- Supporting evidence that the start-up budget plan, the first year and the five years are sound
e. A50- Compliance with fiscal audits

X. School Facilities
    a. Attachment 51- Insurance Coverage
    b. A52- Complete street address of the school
    c. A53- Descriptions of the charter school facility
    d. A54- potential renovation needs
    e. A55- safety and security plan
XI. Miscellaneous
    a. Attachment 56

B2 School Performance Score Explained

Any SPS calculated during or before the 2011-2012 school year included the following:

- K-5 Schools--Attendance Index (10%), Assessment Index (90%)
- K-8, 7-8 Schools-- Attendance Index (5%), Dropout Index (5%), and Assessment Index (90%)
- 9-12 Schools--Graduation Index (30%), and Assessment Index (70%)

Any SPS calculated in 2012-2013 and after used the following system:

- K-7 Schools--LEAP Assessment Index (100%)
- School with an 8th Grade--Dropout/Credit Accumulation Index (5%), and Assessment Index (95%)
- 9-12 Schools--ACT index (25%), EOC Index (25%), Graduation Index (25%), Graduation Cohort Rate (25%)

Letter grades were then assigned based on these SPS. The table below explains the letter grade assignment pre and post 2011.

SPS Letter Grades		
Letter Grade	SPS Range (2010-2011)	SPS Range (2012-2013)
A	120-200	100-150
B	105-119.9	85-99.9
C	90-104.9	70-84.9
D	75-89.9	50-69.9
F	0-74.9	Below 50
Source: http://www.louisianabelieves.com/data/sps		

B3 NACSA Evaluation Coding Procedure

General Coding Guidelines:

- Variables to be coded from every evaluation:
  - Year (2007-2012)
  - Type of Charter (1-5)
  - CMO Name
  - School Name
  - Low Grade served at capacity (0=Kindergarten, 13=Pre-K, 1-12)
  - High Grade served at capacity (1-12)
  - Desired Capacity (the largest enrollment number mentioned)
  - Low Grade served Year 1
  - High Grade served Year 1
  - Year 1 capacity (the enrollment projection for the first year open)
  - Principal if named
  - Location name if given
  - Decision (Approve or Deny)
  - Application Number
    - The pdf file name starts with a number, this is the number of the application that the evaluation corresponds to.
    - If it has no number, then it is a non-New Orleans evaluation.
- Code a categorical variable for each section of the evaluation:
  - Meets the Standard (3)
  - Is approaching the Standard (2)
  - Does not Meet the Standard (1)
  - The following chart includes the section names for each year, and how they correspond to the overall sections you will create variables for:

ERA Category	**2007 NACSA Category**	**2008 NACSA Category**	**2009 NACSA Category**	**2010 NACSA Category**	**2011 NACSA Category**	**2012 NACSA Category**
Education Program	Education Program	Education Program	Education Program	Education Program	Education Program	Education Program
						Teaching
						Culture
Governance Manage	Governance Manage	Governance Manage	Governance Manage	Governance Manage	Org Plan	Governance
						School Operations
						Leadership
Financial Plan	Financial Plan	Financial Plan	Financial Plan	Financial Plan	Business Plan	Budget and Finance
		Facilities	Facilities	Facilities	Evidence of Capacity	
			LA Charter	LA Charter		

			Operator Compliance	Operator Compliance		

- Years 2010-2012 Assign the ranking to each category.
    - For the Education Plan category, enter the rank assigned into the variable "Education Plan Rank" then use the "Reasons Given for Rank" column to write notes explaining as briefly as possible why they got that rank.
    - If more than one category corresponds to the ERA category, then pick the ranking that is most common
    - If there is not a most common ranking, pick the lowest ranking amongst them and assign to entire ERA category
    - Keep a list of common buzzwords or language that indicates each of the categories: Meets, Approaching, Does Not Meet to use for 2007-2009. More below.
- Years 2007-2009, you will have to read the analysis and assign a ranking accordingly: See below

How to assign for 07-09:

- Example: We will be assigning Approaching the Standard to the NASCA reviewers' notes that indicate a decision in between Meets the Standard and does not meet the Standard. How to assign:
    - Key buzzwords/indications: seems to be at least some element of meeting the standard, but has many more problems.
    - Also: DOES NOT often has stronger language, as in cannot, unable to, usually refers to the failure of the applicant to understand what they're talking about when proposing a plan.
- Example for Meets the Standard:
    - There are only (2) examples from 2010 to 2012 where a school was approved and not all of its sections met the standard.
    - One coder will assume that if an application was recommended for approval in 2007-2009 then all of the sections met the standard. The second coder will not make this assumption, and will instead:
        - 1. Try to follow buzzwords in explanation and assign a category based off of that.
        - 2. Compare assigned rank with the first coder's rank
        - 3. If you do not agree: Document what you think it should be, and why.
- Example for Does not meet:
    - Again, do not assume that because they were denied that all sections are Does Not Meet. It was much more common to have some sections meet the standard and others not and still be denied.
    - The language is strong when it does not meet. Look for negative buzzwords.

Cleaning up:

- Coders documented each ranking decision with notes as to why it was assigned

- Discrepancies were then dealt with by comparing both and deciding which one would be the less drastic choice.

B4 Predictors of Charter Approval Robustness Check

Appendix: Predictors of Charter Approval (Linear Probability Model) Robustness

	(1)	(2)	(3)	(4)	(5)	(6)
NACSA Average Ratings						
NACSA Average	0.518***		0.545***	0.566***		0.606***
	(0.035)		(0.046)	(0.023)		(0.038)
Governance						
National CMO		-0.044	-0.045		-0.246	-0.079
		(0.212)	(0.088)		(0.215)	(0.090)
# Board Members-Legal/Finance		0.116*	0.027		0.036	-0.002
		(0.044)	(0.020)		(0.035)	(0.018)
# Board Members-Educators		0.018	0.007		0.012	-0.009
		(0.063)	(0.026)		(0.051)	(0.026)
Partner-Nonprofit		0.281	-0.216*		0.119	-0.304**
		(0.212)	(0.097)		(0.177)	(0.095)
Partner-For-Profit		0.070	-0.203		-0.302	-0.220
		(0.257)	(0.109)		(0.173)	(0.110)
Principal Named		0.151	-0.073		0.182	-0.088
		(0.127)	(0.056)		(0.122)	(0.056)
Education Plan						
Minutes of Instruction per Year		-0.000	-0.000		0.000	-0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Professional Development Days		0.010	-0.001		0.010	-0.002
		(0.007)	(0.003)		(0.006)	(0.003)
Financial/Enrollment						
Request a Location		0.033	0.075		-0.175	0.085
		(0.152)	(0.063)		(0.142)	(0.064)
Number of Grades in Year 1		0.001	-0.019		0.030	-0.018
		(0.026)	(0.011)		(0.022)	(0.010)
Number of students at Capacity		-0.000	0.000		-0.000	0.000
		(0.000)	(0.000)		(0.000)	(0.000)
Number of School when Applied		-0.055	-0.036		0.087	0.003
		(0.103)	(0.043)		(0.093)	(0.041)
R squared	0.914	0.652	0.942	0.908	0.371	0.927
Number of Applications	46	46	46	64	67	46

Standard errors in parentheses. * p<0.05, ** p<0.01, *** p<0.001. OLS Regressions 1-3 use a constant sample of applicatons. Regressions 4-6 do not control for the year of the application.