

New NC Charter Schools: A Causal and Demographic Inquiry

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I) Introduction

On a fateful day in May, 1954, the Supreme Court of the United States declared the segregation of students in public schools throughout the nation to be unconstitutional in *Brown v. Board of Education*, forever eliminating the previously prevailing “separate but equal” mentality and taking a monumental step towards racial equality in American education. Since that day, however, and particularly in the past few decades, many more complex and pressing issues have emerged in the American system of education including low teacher pay, inadequate funding and resources, and large achievement gaps between communities, races, and socioeconomic levels, to name a few. Politicians, non-profits, and community leaders alike have identified the dire need for substantive education reform in the United States, and many ideas have been tested throughout the nation, with varying success.

Among the many efforts to improve the quality and equality of public education in the United States since *Brown v. Board* has emerged the charter school movement. From Long Island to Little Rock to Los Angeles and in countless communities in between, charter schools have been established to pursue the goals of greater school flexibility with simultaneous accountability to high standards within the public model.¹ Despite the two decades that have passed since the first charter schools emerged in the United States, however, the jury is still out regarding the overall national effectiveness of these hybrid institutions. Rather, more localized studies have proven more effective in determining the overall success of charter schools in comparison to traditional public schools.²

The goal of this thesis is to provide just such a localized preliminary analysis of new North Carolina charter schools through the lens of demographic representation and balance

¹ National Center for Education Statistics

² Multiple Choice: Charter School Performance in 16 States

rather than pure academic achievement. Its theory, methods, and analysis investigate the effectiveness of new North Carolina charter schools in creating comprehensive education reform by maintaining the equal access to education proclaimed decades ago in *Brown v. Board*, and more recently supported and incentivized in President Obama's 2009 Race to the Top program. This thesis takes a two-pronged approach to its investigation of new North Carolina charter schools. First, it seeks to identify factors that significantly contribute to the establishment of new charter schools in certain locations, attempting to answer the simple question "*what factors contribute to whether or not a charter school emerges in a certain community in North Carolina?*" Second, it investigates the demographic balance of new North Carolina charter schools in comparison with those of corresponding traditional public schools, attempting to answer the question "*do new North Carolina charter schools serve a representative population of their communities?*"

This investigation will approach these questions with the following hypotheses:

- **H1: Counties with larger demographic changes, more diverse populations, higher and more dense populations, and lower-performing traditional public schools are more likely to have a new charter school than counties with smaller demographic changes, less diverse populations, lower and less dense populations, and higher-performing traditional public schools.**
- **H2: Demographics of new North Carolina charter schools are *not* representative of their communities or balanced with their corresponding traditional public school.**

In investigating these hypotheses, this thesis will use the following structure. After providing necessary historical background information and a review of existing literature

regarding racial diversity in education, the charter school movement, and the current status of racial diversity and charter schools within North Carolina, I will describe the ways in which this research contributes to the existing body of knowledge about the topic. Subsequently, I will explain my hypothesis, the theoretical structure in which it is grounded, and the methods through which it was researched. I will then present the data collected for both hypotheses with any necessary logistical explanations. Finally, I will present an analysis of the data, a subsequent conclusion about the validity of my hypotheses, its structural limitations, and the ways in which it can be improved or expanded upon in future research.

II) Historical Background and Literature Review

After outlining the necessary historical background information and existing body of research within the fields of racial diversity in education and charter schools, this section will relay how the research of this thesis contributes new and important information to this existing knowledge. The primary aspects of existing knowledge important to this research are the value of diversity in education, the history of trends in racial diversity in education since *Brown v. Board of Education* nationally and in North Carolina, the history of the national charter school movement, and the history of the charter school movement within North Carolina.

a) Diversity in Education

At the core of this research lies a fundamental belief in the value of diversity in education, a concept which has long been supported within the field of education and sociology. While it is impossible to pinpoint the precise origin of the ongoing discussion about the importance of diversity in education, the most well-known origins of the topic emerged in the 1960s and 1970s, following the Civil Rights Movement. James A. Banks, a renowned professor

and researcher of diversity studies, wrote many of the first well-circulated and widely referenced publications on multicultural education, among which is his early short book “Multiethnic Education: Practice and Promises,” first published in 1977. In this publication, Banks academically establishes the fundamental premise that “ethnic diversity enriches the nation and increases the ways in which its citizens can perceive and solve personal and public problems.”³

This premise is still thoroughly supported by education experts today, and today’s lack of diversity in education is considered by some to be “among the most pressing civil rights issue of our time.”⁴ Outside of these academic assertions, dozens of court cases and policy changes ranging from local to national levels, such as the 1971 Supreme Court case *Swann v. Charlotte-Mecklenburg Board of Education*, have restated the necessity of educational equity that *Brown v. Board* and the 14th Amendment formally established.

Finally, this fundamental premise of the importance of diversity in education is most modernly described in the 2011 joint publication of the Civil Rights Division of the US Department of Justice and the Office for Civil Rights of the US Department of Education titled “Guidance on the Voluntary Use of Race to Achieve Diversity and Avoid Racial Isolation in Elementary and Secondary Schools,” which forthrightly states that “providing students with diverse, inclusive educational opportunities from an early age is crucial to achieving the nation’s educational and civic goals.”⁵ This fundamental value of diversity in education is assumed in and critically important to this thesis, which investigates the effectiveness of new North Carolina charter schools based on this value.

³ Banks, James A. “Multiethnic Education: Practices and Promises.” Phi Delta Kappa Education Foundation, 1977

⁴ Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update, Executive Summary”

⁵ US Department of Education, <http://www2.ed.gov/about/offices/list/ocr/docs/guidance-ese-201111.html>

b) Southern Resegregation

Despite the wide academic and legal acceptance of this value of racial diversity in education, existing research has concluded time and time again that recent trends reveal declining racial diversity in public schools across the American South. As explained in Clotfelter, Ladd, and Vigdor's 2013 historical analysis, "an abrupt decline in measured racial segregation throughout the South" in the late 1960s and 1970s due to federal incentives and more "comprehensive assignment plan[s]" was subsequently slowed, halted, and reversed in the 1990s as state and local policies shifted to "put greater emphasis on neighborhood schools and ...greater [parent] choice."⁶ This trend, often referred to as "resegregation," proved to be more severe in suburban and urban communities with greater racial diversity than more rural, homogeneous communities.

This pattern of racial resegregation in public schools across the South was and is particularly prevalent in North Carolina, where school districts such as Charlotte-Mecklenburg and Forsyth County have become national exemplars of implicit resegregating policies. Clotfelter, Ladd, and Vigdor analyzed patterns of school resegregation in North Carolina specifically through the use of an "imbalance index," which measured the "degree to which the racial compositions of public schools in a county fail to mirror that of the county as a whole," within schools between 1994/1995, 2000/2001, 2005/2006, and 2011/2012. After reporting the imbalance index of various school districts across North Carolina, the report discusses possible reasons for the shifts in the imbalance indexes over time, using student assignment policies (such as redistricting or parent choice) and charter schools as probable factors. The authors also discuss additional minor findings regarding imbalances at the classroom level, imbalances by income, and teacher credentials by school characteristics, all within North Carolina public schools. The

⁶ Clotfelter, Ladd, and Vigdor, "Racial and Economic Diversity in North Carolina's Public Schools: An Update."

study concludes that throughout North Carolina, “school segregation had been increasing prior to 2005/2006, but has since leveled off.”⁷ Overall, this source provides an incredibly insightful overview of specific demographic changes within the public school districts of North Carolina. Understanding this well-researched trend of Southern school resegregation, specifically within North Carolina, is vitally important in the current investigation, as such patterns directly impacted the emergence and expansion of the charter school movement in America and the South in the late 1990s through the 2000s, and continuing today.

c) The Charter Movement

In addition to previous research regarding modern diversity patterns in Southern public schools, the historical background and existing body of literature specifically regarding the charter school movement in the United States and North Carolina is also integral to exploring this thesis. In this domain, much valuable work has already been done by the National Center for Education Statistics, the US Department of Education, and countless other education research and policy organizations.

The charter school movement in the United States formally began in 1991 with the establishment of the first state-wide charter school policy in Minnesota. Since then, as of 2012, 41 other states have written into law policies that allow for the establishment of charter schools within public school districts, each with varying stipulations and expectations, as well as means through which charter schools are created and supervised.⁸ As of 2012, approximately 2.1 million students in the United States attend one of approximately 5,700 charter schools, accounting for about 5.8% of all public school students nationally. California yields the largest

⁷ Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update, Executive Summary”

⁸ National Center for Education Statistics

absolute number of charter school students of any state with around 413,000, while charter schools in the District of Columbia serve the largest percentage of total public school students at a staggering 39%.⁹ In continuing the pattern of growth since the beginning of the charter school movement, many sources predict that the number of charter schools, and subsequently the number and percentage of American students within them, will steadily increase in the next decade.¹⁰

Specifically in regards to student achievement within American charter schools, much current research exists that presents mixed finding about the effectiveness of charter schools in comparison with traditional public schools. Stanford University's Center for Research on Education Outcomes provides a particularly insightful review in their study "Multiple Choice: Charter School Performance in 16 States." After collecting student achievement data from charter schools and corresponding traditional public schools in 16 states. This report concluded that the academic performance of charter schools varies greatly by state, with 17% of charter schools showing better academic performance, 46% with indistinguishable performance, and 37% with lower performance than traditional public schools. In North Carolina specifically, the study found mixed or insignificant differences between charter schools and traditional public schools. Overall, the results were too varied among achievement in charter schools and traditional public schools to make a distinctive conclusion. While this research did not provide significant data about the demographics of American charter schools, it provides a valuable foundation for further inquiries.

d) North Carolina Charter Schools

⁹ National Center for Education Statistics

¹⁰ National Alliance for Public Charter Schools, <http://www.publiccharters.org/about-us/board/>

Although these national figures and trends about charter school academic performance are integral to understanding this research, more specifically important to this thesis is the historical background and existing literature that investigates charter schools within North Carolina and the diversity of the students they serve.

North Carolina's public charter school sector was formally created on June 21, 1996, five years after the national charter school movement began, with the passage of the Charter School Act (HB955) by the General Assembly under the bipartisan leadership of Senator Wilbur Gully (D) and Representative Steve Wood (R).¹¹ After opening the state to charter schools with this bill, the creation of charter schools within the state carried on naturally until 2001, when "the North Carolina General Assembly set the state charter school cap to a maximum of 100."¹² Soon, however, it became apparent that such a cap severely limited the amount of federal funding offered to states for charter schools. This limitation became especially relevant in 2009, when President Barack Obama and Secretary of Education Arne Duncan publicly announced the Obama Administration's most significant push for education reform during his presidency, a project they named the "Race to the Top." This complex reform encouragement project "offers bold incentives to states willing to spur systemic reform to improve teaching and learning in America's schools,"¹³ and allocates over \$4 billion to distribute among states to address key issues in education reform. One of the key goals established in the Race to the Top is a nationwide increase in charter schools, in hopes that these schools will provide innovative solutions to key issues in education today through their model of flexibility with accountability.

¹¹ NC General Assembly, <http://www.ncleg.net/gascripts/BillLookUp/BillLookUp.pl?BillID=H955&Session=1995>

¹² Cho, Chudnofsky, Jiang, Landes, and Mortimer, "The Impact of Charter Schools on Traditional Public School Finances and Demographics."

¹³ The Race to the Top, <http://www.whitehouse.gov/issues/education/k-12/race-to-the-top>

Under the Race to the Top, “states that could increase the number of charter schools [have] a greater chance of receiving federal funding.”¹⁴

Upon the implementation of President Obama’s Race to the Top, the North Carolina legislature critically reconsidered its previous restrictions on charter schools. “Fearing the charter school cap would prove to be a competitive disadvantage”¹⁵ in competing for Race to the Top funding, North Carolina abolished the charter school limit with a 108 to 5 vote on Senate Bill 8 in 2011.¹⁶ This extremely impactful bill both allowed public school districts to convert low-performing schools into charter schools and gave the open opportunity for communities to organize, apply for, and start new charter schools.

Since the passing of NC Senate Bill 8, the growth of the number of charter schools across the state has been absolutely unprecedented. Thirty new North Carolina charter schools opened their doors for the 2012-2013 or 2013-2014 school years,¹⁷ increasing the number of charter schools within the state by nearly a third within two years. As of January 1, 2014, 127 currently operating charter schools serve approximately 62,040 students in 57 of North Carolina’s 115 school districts, figures that are all projected to increase in 2015.¹⁸

Since the purpose of lifting the cap on the number of charter schools in the state was to better compete for the Race to the Top funding, it can be assumed that the goal of the state for these new charter schools is to fulfill the goals of the Race to the Top, and subsequently create positive education reform in North Carolina. In order to improve the education system of the state, therefore, these schools are responsible for holistically serving their communities and

¹⁴ Cho, Chudnofsky, Jiang, Landes, and Mortimer, “The Impact of Charter Schools on Traditional Public School Finances and Demographics.”

¹⁵ Cho, Chudnofsky, Jiang, Landes, and Mortimer, “The Impact of Charter Schools on Traditional Public School Finances and Demographics.”

¹⁶ Senate Bill 8/ S.L. 2011-164, No Cap on Number of Charter Schools

¹⁷ North Carolina Public Schools Office of Charter Schools, <http://www.ncpublicschools.org/charterschools/schools/>

¹⁸ Public Schools of North Carolina, “Annual Charter School Report”

districts in a manner that is equitable to and representative of all groups within them. In other words, as public schools which were allowed to be created in order to advance education reform, these thirty new charter schools are theoretically responsible for serving all types of students within their communities, not just benefit a portion of their district's or city's population. This assumption is based not only in the historically supported ideal of diversity in education and the clear expression of intent of the previously mentioned joint publication of the Department of Justice and Department of Education, but also by the stated Purpose 2 of article 14A of the North Carolina Charter School Act of "increasing learning opportunities for *all* students."¹⁹

Currently, however, existing literature reveals that when observed on a state-wide level, charter schools in North Carolina are *not* racially representative of the public school districts in which they are located. A prominent example of such literature can be found in the research conducted in 2012 presented by Masters in Public Policy candidates at Duke University to The Public School Forum of North Carolina, which concluded "despite the rise in student enrollment, [North Carolina] charter schools' student bodies lack diversity relative to traditional public schools."²⁰ The North Carolina Center for Public Policy Research reinforces this finding, claiming that charter schools "more racially segregated than traditional public schools as a whole."²¹ More so than any of the previously mentioned existing literature, these sources provide the crucial background of research on North Carolina charter school diversity on which this thesis is based.

e) New Contributions

Having laid out the necessary historical background information and existing body of knowledge regarding the charter school movement and its student diversity nationally and in

¹⁹ NC General Assembly House Bill 955, article 14A, a2.

²⁰ Cho, Chudnofsky, Jiang, Landes, and Mortimer, "The Impact of Charter Schools on Traditional Public School Finances and Demographics."

²¹ Rustin, John L. and Catie Blair. "Charter School Growth." Family North Carolina Magazine, Sept./Oct. 2007

North Carolina, it is important to explain precisely how and where this thesis will contribute to this knowledge of North Carolina charter schools. Whereas previous studies have investigated the demographic balance of *all* North Carolina charter schools and compared them to their community or district as a whole, this study will focus a similar inquiry specifically on *new* North Carolina charter schools, or those that have opened in the 2012-2013 or 2013-2014 school years, notably after the passage of NC Senate Bill 8. To my current knowledge, no such investigation on this new subset of North Carolina charter schools currently exists. In addition to investigating the racial diversity of these new charter schools in comparison to their communities, this research will also seek to discover possible factors that caused them to emerge in some communities and not others. While other literature has investigated the personal motives and incentives of individuals starting charter schools, to my current knowledge, no research investigates more systemic causes of new charter schools emerging in North Carolina since the passing of NC Senate Bill 8.

In the big picture, this research and studies like it are important to most successfully and holistically improving the relatively racially inequitable system of education in North Carolina. In order to maintain the educational equality established in *Brown v. Board of Education* and honestly work towards the goals of modern education reform such as the Race to the Top and the charter school movement, equal educational opportunities must be provided to students of *all* demographics within the public school system. If newly established charter schools are not serving their communities in a representative and balanced manner, therefore, they are missing the mark of truly comprehensive progress in education. To the contrary, public charter schools with unbalanced demographics unintentionally but significantly continue a pattern of school

resegregation that has been identified in public schools across North Carolina and the American South in the past two decades.²²

III) Definitions, Theoretical Framework, and Research Methodology

a. Definitions

Before explaining the theoretical framework of this research, it is necessary to define a few key terms that will be used throughout the process. Most importantly, explicitly defining the term “*charter school*” is crucial to moving forward. Generally speaking, a charter school is “a tuition-free public school with more freedom than a traditional public school in determining curriculum, hiring and firing standards, teaching methods, and financial responsibilities.”²³ Charter schools are technically part of a public school district, but are not confined by many district-wide rules to which traditional public schools must comply. Ideally, charter schools beneficially combine autonomy from district-level bureaucracy with accountability to high academic standards. In contrast, the term “*traditional public school*” refers to a normal, non-charter school within a public school district.

In regards to my study of specific North Carolina charter schools, I will frequently use the term “*new charter school*” to refer to a North Carolina charter school that opened its doors in 2012 or 2013, for the 2012-2013 and/or 2013-2014 school years, respectively. These charter schools in particular are important to the study because they opened their doors markedly after the 2011 lifting of the North Carolina charter school limit through NC Senate Bill 8. Building off of previous studies that have analyzed the student diversity of *all* North Carolina charter schools, this research is unique in its specific focus on these newly opened charter schools. In contrasting

²² Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update.”

²³ Cho, Chudnofsky, Jiang, Landes, and Mortimer, “The Impact of Charter Schools on Traditional Public School Finances and Demographics.”

these “*new charter schools*,” then, this thesis will use the term “*old charter school*” to refer to any North Carolina charter schools that had previously existed before this critical 2011 bill.

In comparing the demographics of new North Carolina charter schools with traditional public schools, the term “*corresponding traditional public school*” will be used to signify the traditional, non-charter public school serving the same grade levels as the new charter school in question that is the closest in geographic location to the new charter school. Further explanation of this term will be provided in the explanation of research methodology.

In evaluating the salience of public schools academic performance in predicting the likelihood of new charter school emergence, the term “*control public school*” will be used to signify a traditional public school in a county *without* a new charter school. The average academic performance of these schools will be paired with and compared to that of a corresponding traditional public school, through a method which will be further explained in the “Traditional Public School Performance Methodology” section.

Within this research, the terms “*demographic balance*” or “*demographic imbalance*” within a charter school will be used to describe the “degree to which the racial compositions of [the charter school succeed] or fail to mirror that of the county as a whole.”²⁴ It is worth emphasizing that “demographic imbalance” does not simply mean that a school has unequal percentages of races within its student body, but rather that it does not reflect the specific racial composition of the community in which it is located. This classification will be crucial in this research, as it will be used to assess the effectiveness of new charter schools in serving their communities in a substantive and effective manner.

²⁴ Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update.”

Finally, “*education reform*” is used to generally describe any policy or practice with the goal of improving education systems in the state or nation, such as increasing teacher support, adapting better data systems to record and track student and teacher progress, or closing the achievement gap between demographics of students. In particular, this study will focus on achieving or maintaining balanced school demographics as a step towards education reform.

b. Theoretical Framework

Now that these terms are more comprehensively understood, it is also important to understand the causal theoretical framework on which the research will be based. I will first explain the theoretical framework of the “factors in new charter school emergence” hypothesis, followed by the “demographic balance of new charter schools” hypothesis.

i. “Factors of Emergence” Hypothesis Framework

As previously stated, the first question that this research investigates is “*what factors contribute to whether or not a charter school emerges in a certain community in North Carolina?*” More simply stated, the goal of answering this question is to determine why, since the passing of NC Senate Bill 8 in 2011, new charter schools have emerged in some counties and communities within the state, but not in others. Of the myriad of possible reasons for a community to support the opening of a new charter school within their public school district, which are the most predictive? Previously reported national trends suggest that charter schools “tend to locate in areas that have the largest student concentrations or more access to potential buildings for the academic programs,” but how well does this trend apply to new charter schools in North Carolina?²⁵ In response to this question, this research hypothesizes that the demographic

²⁵ Public Schools of North Carolina, Annual Charter School Report 2014

change, population, racial diversity, and traditional public school performance of a community will be the most salient factors in determining whether or not a new charter school emerges.

1. “Demographic Change” Framework

The foundation of this theory lies in the relationship between the independent variables of demographic diversity change, existing racial diversity, population size and density, and traditional public school performance within a specified community and the dependent variable of the emergence, or non-emergence, of a new charter school within that community. Specifically in regards to the first predicted factor, demographic change, this thesis hypothesizes that increased demographic diversity change within a county between 2000 and 2010 is directly correlated to a greater chance of the emergence of a new charter school in that county. After the independent variable of increased demographic diversity changes comes the next step in the theoretical framework, a subsequent social unrest within the community. Such social unrest is based on a general principle of resistance to change within communities, real or perceived. More simply stated, this framework predicts some form of community-wide discomfort in reaction to shifting racial demographics.

In the next step of the “Demographic Change” theoretical framework of this hypothesis, this community shift in response to the independent variable of increased demographic changes leads to tangible reactions within the community, in this case in the form of a movement supporting the creation of a new charter school within the county. This initiative is generally started by a select group of dissatisfied teachers or community leaders who seek to provide better educational opportunities, and gather a group of like-minded parents and

educational leaders.²⁶ Subsequently increasing support of this movement leads to the eventual creation of a new charter school in the community. This facet of the hypothesis is largely based on a model of “white flight” within communities where recent demographic shifts have yielded greater racial diversity (more people of color), although other examples of self-segregation can also bring about the same final outcome of a new charter school. This “white flight” into charter schools has been documented both nationally and within existing charter schools North Carolina, such as by Cho, Chudnofsky, Jiang, Landes, and Mortimer, who found that “62 percent of... charter school students are in schools with less than or equal to 30 percent nonwhite students,” while exactly half of that percentage of traditional public school students “are in schools with less than or equal to 30 percent nonwhite students.”²⁷ Stated differently, existing North Carolina charter schools were found to be twice as likely to have a student body that is 70 percent or more white than traditional public schools.

2. “Existing Diversity” Framework

This research will also analyze the role of the dependent variable of existing racial diversity in impacting the independent variable of the emergence of a new charter school. Very similarly to the theoretical framework of the “demographic change” variable of this hypothesis, this framework predicts an increasing likelihood of the emergence of a new charter school in communities with greater existing racial diversity. Following the same trends of white-flight and self-segregation, this factor in the hypothesis is based on the idea that the passing of NC Senate Bill 8 in 2011 lifted the previously existing strict restriction on the emergence of new charter school within the state, allowing communities to more freely pursue new charter schools as an

²⁶ Ervin, Archie. “A Study of Why People Organize, Operate, and Support Charter Schools.”

²⁷ Cho, Chudnofsky, Jiang, Landes, and Mortimer, “The Impact of Charter Schools on Traditional Public School Finances and Demographics.”

option in continuing the recent trend of decreased racial diversity in public schools within the state and region.

3. “Rural vs. Urban” Framework

This research also uses larger absolute population as an independent variable that correlates to the dependent variable of the emergence of a new charter school. This independent variable is supported by the fundamental framework of supply and demand within a school district. First, the independent variable of larger overall populations leads directly and obviously to larger student populations within communities. That is to say, where there are more people, there are also more young people. From this step comes a subsequent strain on existing public school districts within these larger communities, based on the idea that school districts have limited financial, spatial, material, and personnel resources with which they must serve their student population. Communities with larger student populations, therefore, are more likely to experience the constraints of these limited school resources, with the result of generally less supportive educational settings. While structures of public education funding through local taxes naturally provide larger communities with more funding, this increase in funding is not always exactly relative to increases in population. This is particularly true in urban communities with higher population densities, which are prone to lower average per-capita incomes, therefore providing less public funding through local taxes than less densely populated communities with higher average per-capita incomes. Since 37.1% of all education funding is provided on a local level, strains on school capacity based on available resources are more likely to occur in areas with higher population and population density.²⁸ That is all to say, then, that communities

²⁸ US Department of Education, “10 Facts About K-12 Education Funding.”

experiencing this constraint of limited resources in their existing public district structure are more likely to be attracted to the flexible but accountable model of a new charter school to alleviate such constraints, resulting in the establishment of a new charter school.

4. “Traditional Public School Performance” Framework

Finally, this research uses traditional public school academic performance as an independent variable that correlates to the dependent variable of the emergence of a new charter school. A directly negative correlation is predicted between a traditional public school’s academic performance and the likelihood that a new charter school emerges within that school’s county. In other words, the hypothesis predicts that traditional public schools with lower academic performance are more likely to see a new charter school emerge in their county, and conversely, that traditional public schools with higher academic performance are less likely to see a new charter school emerge in their county. This hypothesis is first based on a logical dissatisfaction of parents and educational and community leaders in the presence of poor academic performance of their community’s traditional public schools, as described by Ervin in his 1999 UNC Chapel Hill School of Education dissertation.²⁹ From this dissatisfaction comes an increased chance that community members will seek to improve the educational opportunities in their communities through the establishment of a new charter school. The other side of this prediction is that if a community’s traditional public school’s academic performance is high, members are less likely to be dissatisfied, and consequently less likely to seek to establish a new charter school.

i. “Demographic Imbalance” Hypothesis Framework

²⁹ Ervin, Archie. “A Study of Why People Organize, Operate, and Support Charter Schools.”

The second hypothesis of this thesis, that demographics of new North Carolina charter schools are *not* representative of their communities or balanced with their corresponding traditional public school, follows a related but simpler theoretical framework than the first.

The first part of this framework is NC Senate Bill 8, the legislation passed by the North Carolina General Assembly in 2011 which lifted the previous 100 school cap on the number of charter schools allowed within the state. Although NC Senate Bill 8 should not be considered the “independent variable” in this study because it did not inherently or automatically led to racially imbalanced charter schools, passing of this bill clearly initiated the dramatic influx of charter schools within the state on which this study will focus.

With the passing of NC Senate Bill 8 came the next step in this framework, the 30 new North Carolina charter schools established after its passing. These thirty charter schools all opened their doors for the first time for the 2012-2013 or 2013-2014 school years, and cover all areas of the state, from Mooresville to the Outer Banks. While earlier research has studied previously existing North Carolina charter schools, this study will narrow in specifically on these new charter schools in order to assess the current direction of the North Carolina charter school movement and its success in advancing North Carolina’s goal of substantive education reform under the standards of the Race to the Top. It is worth noting here that only 28 out of these 30 new charter schools were used in the study, as one charter closed very shortly after its opening in 2012 and another was deemed unfit to include in the study because it only has 21 total students.

In considering these 28 new charter schools, specifically important in the theoretical framework are the factors that can lead to racial segregation or demographic imbalances within charter schools. Previous research has found these factors significantly include a lack of subsidized transportation to charter schools and automatic sibling enrollment. The former of

theses causes refers to situations when parents cannot drive their child to school because of a job or other factors (which occurs far more frequently among Black and Latino families than white families),³⁰ while the later refers to a policy that some charter schools subscribe to in which siblings of current charter school students are given preference in an otherwise very competitive application or lottery selection process. Both of these factors can lead directly to a deepening of any racial imbalances that already exist within the new charter schools. While the causes of any potential racial imbalance in new charter schools are not explicitly within the scope of this research, they are certainly important in its theoretical framework.

Finally, these factors lead to the final dependent variable of racially unbalanced new charter schools in North Carolina. This portion of the research will investigate the demographic balance or imbalance of new charter schools established in North Carolina after the charter school cap was lifted from the state in 2011, and work under the hypothesis that demographics of new North Carolina charter schools are *not* representative of their communities.

Once this framework has been completed, hypothetical inferences can be extended beyond the dependent variables based on the data regarding the overall degree of success of new North Carolina charter schools in creating holistic education reform across the state. If this second hypothesis is correct, it could be further hypothesized that because of racial imbalances with current enrollment demographics, new North Carolina charter schools are not succeeding in creating the holistic education reform that the state desires, and that the US needs to catch up or keep up with other nations in preparing students for an increasingly globalized world. This broader implication, however, is beyond the direct scope of this research.

³⁰ Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update.”

c. Research Methodology

Before presenting and analyzing the data collected, it is important to note the methods through which it was collected and processed.

i. “Factors of Emergence” Hypothesis Methodology

In researching the salient factors that lead to the creation of a new North Carolina charter school in a community, the first, or “factors of charter school emergence” hypothesis, required extensive data collection about each of the state’s 100 counties. First, I used a few valuable sources including the North Carolina Public Charter School Accelerator and the Department of Public Instruction within the North Carolina Board of Education to determine which counties in the state currently have charter schools, and which do not. This probing yielded the result that, as previously mentioned, 57 counties in North Carolina host at least one charter school, while 43 do not. Once this was established, I needed to establish which of the counties are home to at least one of the 28 new, post-NC Senate Bill 8 charter schools, and which only contain charter schools that were opened before this bill.

All told, 18 of the 57 counties that contain charter schools are home to at least one new charter school, and the remaining 39 counties only contain old charter schools. In order to process this data and within the tables containing it, counties without any charter schools are coded with “0,” counties with only old charter schools are coded with “1,” and counties with new charter schools are coded as “2.” Once these basic county-classifications were made, I needed to research the demographic changes, existing racial diversity, total population, and pre-2011 traditional public school performance of each county, in accordance with each of the four

predictive factors stated within the “factors of charter emergence” hypothesis. The vast majority of this information was acquired from the independent organization Census Viewer, which cohesively classifies all census information on a county-by-county level.

a. “Demographic Changes” Methodology

In researching the “demographic changes” data, I collected the percentages of the white, black, Latino, and Asian-American population of each county from both the 2000 and 2010 census, as well as the percent change within each demographic over the 10-year period. In order to analyze this data, I used Stata to test what degree of increased changes within each demographic, and the white and non-white demographics as a whole, resulted in a significant increase in the likelihood that that county contained a new charter school. Table 1 includes the county charter coding and 2000 and 2010 census information used in this analysis.

b. “Existing Diversity” Methodology

In investigating the “existing racial diversity” factor within the “factors of emergence” hypothesis, I collected and used the percentages of the white, black, Latino, and Asian-American population of each county from only the 2010 census. I then used Stata to test the degree to which higher minority percentages can significantly predict whether or not a new charter school emerged within the county. Table 1 also includes the 2010 existing racial diversity statics used in this analysis.

c. “Rural vs. Urban” Methodology

In investigating the “Rural vs. Urban” factor within the ‘factors of charter emergence’ hypothesis, I collected and used the total population and population density data from each county from the 2010 census. Using this population and the recorded population density, each

county was classified as either rural or urban, based on the classifications used by the US Census Bureau. I then used Stata to test the degree to which a higher population can significantly predict whether or not a new charter school emerged within a county. Table 2 includes the 2010 population, rural vs. urban coding, and new charter school coding from each county used in this analysis.

d. “Traditional Public School Performance” Methodology

The final factor considered within the “Factors of Emergence” hypothesis is the “Traditional Public School Performance” factor. This factor considers the saliency of the academic performance of local traditional public schools within a community in predicting whether or not a new charter school is likely to emerge in the community. In order to determine whether or not this factor is predictive in the emergence of a new charter school, I had to first carefully select one corresponding traditional public school for each of the 28 new North Carolina charter schools being observed. I selected these corresponding public schools based on two criteria: each corresponding traditional public school needed to serve the same or similar range of school level as the new charter school in question *and* be the closest of such schools geographically in order to be selected. For instance, in selecting a corresponding traditional public school for a K-5 charter school in Durham County, I would select the closest K-5 traditional public school within Durham County. I used the independent US school database School Digger in order to find the corresponding traditional public schools that best fit this criterion. A list of each of the new charter schools, their corresponding traditional public schools, and the miles between them can be found in Table 3. Once these corresponding traditional public schools were selected, I used the public NC School Report Card database, which tracks school demographic, financial, and academic data, in order to record the average academic performance

of each of these schools. More specifically, I recorded the percentage of students who scored at or above grade-level on their state-mandated math and reading End of Grade exams in order to quantitatively evaluate the average academic performance of each school. In addition to recording each corresponding traditional public school's academic performance, I also collected the grade levels and student population of each corresponding traditional public school, the purpose of which will be made clear in the next step of the research process.

Once I selected each new charter school's corresponding traditional public school and recorded their average academic performance, however, I still needed to select a control group of schools located in counties *without* a new charter school and record *their* average academic performance in order to accurately compare the performance of the corresponding traditional public schools with that of the control schools, in order to ultimately calculate whether or not this factor is salient in predicting the likelihood of a new charter school emerging within the county. Though it may seem like only a minor aspect of this project as a whole, selecting the 28 control schools to compare with the 28 corresponding traditional public schools proved to be the most arduous part of the data-collection process.

The first step of selecting these control schools was to compile a data base of *every* traditional public school in each of the 43 counties in North Carolina in which no charter school currently exists. In addition to the school name and county, I also recorded the student population of each of these 513 traditional public schools, and sorted them by the grade levels they serve (elementary, elementary/middle, middle, middle/high, high). Like I said: arduous.

Once all of these 513 possible control schools were recorded, I went through the process of deciphering which 28 of them could most fairly be compared to each corresponding traditional public school in regards to average academic performance. I first based pairing-process on the

grade levels served by the corresponding traditional public school. For the 11 corresponding traditional public schools that are elementary schools, for example, I considered “only” the 298 possible control schools that are elementary school for pairing. After limiting the possible control school based on school level, I paired each corresponding traditional public school with a single control school based on the size of their student populations. In other words, if a certain corresponding traditional public school was an elementary school with 345 students, I paired it with a control public school that was also an elementary school with 345 students. For the cases in which no possible control matched the exact number of students in a corresponding traditional public school, I selected the possible control school with the student population closest in size to the corresponding traditional public school, while still keeping the grade level as the first pairing factor.

Once I had paired 28 control public schools (from counties without charter schools) with each of the 28 corresponding traditional public schools (from counties with new charter schools) based on these two factors, the meticulous pairing process was complete. From here, I simply looked up and recorded the percentage of students in each control public school that scored at or above grade-level on their reading and math End of Grade Exams. Thus, I had the necessary data with which to fairly and accurately compare the academic performance of each corresponding traditional public school with each control public school in order to assess the impact of public school academic performance in the likelihood of the emergence of a new charter school in that county. As done in calculating the saliency of previous factors within this hypothesis, I used Stata to statistically compute this comparison. Once this computation was complete, I had assessed each of the four factors within the “Factors of Emergence” hypothesis.

ii. “Demographic Imbalance” Hypothesis Methodology

In investigating whether or not the student bodies of new North Carolina charter schools are racially balanced or not, or the “new charter school demographics” hypothesis, required significant but more straightforward data than the first hypothesis.

As previously noted, the first step in this endeavor was identifying the thirty “new” charters as previously defined. In addition to the name and opening year of each new charter school, I recorded its zip-code and school district. This information is readily provided for public use by the Office of Charter Schools within the North Carolina Board of Education. Also as noted, 28 out of these 30 total new charter schools proved suitable for my research, as one shut down after only a few months and another only served 21 students.

Upon identifying all of the new charter schools and corresponding traditional public schools, I needed to research the demographics of the student bodies at each school. Beginning with the new charter schools, I collected the percentages of the white, black, Latino, and Asian-American students at each school from the 2013 school year. Because of how recent this information needed to be, it was not yet available on School Digger, but located through an annual report of the Office of Charter Schools within the North Carolina Board of Education. The demographic information from each of the new charter schools is listed in Table 4.

Next, I collected the percentages of the white, black, Latino, and Asian-American students at each of the 28 corresponding traditional public schools from the 2006, 2008, 2010, and 2012 school years. I chose to record the demographic information from 2006, 2008, and 2010 in order to observe the demographic trends present at each school in the years leading up to

the creation and opening of the new charter schools within its community, in addition to the information from 2012, which was necessary in comparing the present demographics of the corresponding traditional public school with the new charter school. The demographic information from each of the corresponding traditional public schools is presented in Table 5.

After collecting all of the stated demographic information from the new charter schools and corresponding traditional public schools, I carefully compared the demographic information of each pair of schools. Specifically, I compared the percentages of each racial/ethnic group measured in each school. This comparison included calculating the average difference between the percentages of each demographic group within each pair of school, which pairs had different majority groups in each school, and which pairs exhibited little or no demographic differences.

Upon observing the racial balance of each of the new charter school individually, I examined the group of 28 schools as a whole. Through this broader examination, I was able to evaluate the general extent to which all new North Carolina charter schools are serving students in a racially balanced way, and therefore successfully working towards closing the achievement gap and, more broadly, substantive education reform in North Carolina.

Finally, I recorded and analyzed the published mission statement of each new charter school in hopes of qualitatively evaluating the degree to which racial diversity is a priority within the school. I coded any new charter school mission statement that in some form mentioned diversity as “1,” and new charters without any mention of diversity in their mission statement as “0,” and used the information to qualitatively assess each new charter school’s public commitment to diversity within its student population.

Generally speaking, all data for this research was collected using public online resources, most significantly from the US Census Bureau and the North Carolina Department of Education. All data for this research was collected between November, 2014 and February, 2015.

IV) Data and Analysis

Having explained the deliberate and thorough methodology through which I collected the data necessary for this research, I will now reveal the proverbial “moment of truth”: the results of the data collection and subsequent analysis of the results. Overall, the data yielded significant results for two out of the four hypothesized factors of the “Factors of Emergence” hypothesis, and correctly predicted results for the “Demographic Imbalance” hypothesis.

a. “Factors of Emergence” Data and Analysis

In order to determine the relationship between my main dependent variable—whether or not a charter school emerges in particular location—and the four independent variables I described above (demographic change, existing diversity, rural vs. urban, public school performance), I used logistic regression. Logistic regression allows me to assess the potential strength and magnitude of these relationships. In each table, column one is the regression estimate and the standard error, which can be hard to interpret. As such, in column two, I present the predicted probability that a charter school emerges. I will discuss the results using those figures.

i. “Demographic Change” Data and Analysis

In regards to the “Demographic Change” factor of the “Factors of Emergence” hypothesis, the data revealed that no general correlation exists between changes in a North Carolina county’s demographics over a ten-year period and the likelihood of a new charter

school emerging in the county. When considering the aggregate changes of the white, black, Latino, and Asian populations within a county between 2000 and 2010, larger demographic shifts do *not* increase the chances that a new charter school emerged in the county after the passing of NC Senate Bill 8. This information disproved my hypothesis that greater demographic changes would lead to general social unrest and subsequently increased chances that new charter schools would be founded through the process of “white-flight.”

Upon individual analysis of each demographic group within this factor, three out of the four groups yielded similarly insignificant results as the aggregate factor. When observed individually, changes in the white, black, and Latino populations of a county between 2000 and 2010 did not affect the likelihood of a new charter school emerging within the county. Interestingly, the data revealed that when observed individually, changes in the Asian population of a North Carolina county between 2000 and 2010 yield a significant positive correlation with the likelihood of a new charter school emerging within the county. An increase in the Asian population of a county between 2000 and 2010 proportionately increased the chances that a new charter school opened within the county in 2012 or 2013, and the opposite phenomena (decreasing chances of a new charter school emerging) was also observed in counties with decreasing Asian populations over the same time period. This specific demographic change impact may be the result of charter schools that draw disproportionately large Asian student population as will be revealed in the “Demographic Imbalance” data analysis, but ultimately the cause of this phenomena is beyond the scope of this research.

Beyond this individual relationship, no greater relationship exists between changing county demographics and the likelihood of a new charter school emerging, rendering incorrect my hypothesis regarding this factor. Although the precise reasons for which this hypothesis

proved incorrect are beyond the scope of this research, it is possible that the wide time range in which the demographic changes were observed (2000 to 2010) played a role in the lack of significant results. In further research regarding this factor, observing more local demographic changes over a smaller period of time more immediately before the opening of a new charter school may possibly hone in on any role that demographic changes play in new charter school emergence. It is also possible, of course, that demographic factors play absolutely no role in the emergence of new charter schools in a community, although this seems unlikely based on the important role that student racial demographics play within the modern charter school and education reform movement. The lack of general relationships between demographic changes and charter school emergence, as well as each individual demographic group's relationship or lack thereof, can be seen in Table 6.

ii. "Existing Diversity" Data and Analysis

After disproving my hypothesis regarding changing county demographics, the data presented identical results for the similar hypothesis that new North Carolina charter schools are more likely to emerge in counties with greater existing racial diversity. As shown in Table 7, higher levels of existing racial diversity in a county in North Carolina are not significantly predictive of a higher likelihood that a new charter school emerges within the county, except when looking specifically at the Asian American population. That is to say, for example, that a county with 65 percent general non-white citizens was not necessarily more likely to see the emergence of a new charter school than a county with 25 percent non-white citizens. However, when looking specifically at the existing percentage of Asian Americans within a county, the higher the percentage, the greater likelihood exists that a new charter school emerged in that county. This hypothesis was based on the idea that lifting the cap on charter schools through the

passing of NC Senate Bill 8 in 2011 would lead to a continuation of the recent trends of decreased racial diversity in public schools within the state and region, and therefore that communities with the most existing racial diversity would be the most likely to see new charter schools emerge. This result is more surprising to me than the insignificance of the “changing demographics” factor, but can perhaps again be explained by the wide scope of the county-level demographics collected; further research investigating the impact of existing local diversity on new charter school emergence could focus on more local city- or town-level demographics, since charter schools typically seek to serve a specific community, not an entire county.

iii. “Rural vs. Urban Data and Analysis

In regards to the rural vs. urban hypothesis in which I predicted that new North Carolina charter schools are more likely to emerge in urban counties than rural counties, the data proved my prediction correct. As shown in Table 8, the data revealed that new North Carolina charter schools are 24 percent more likely to emerge in urban counties than in rural counties. This finding is in accordance with previous studies on existing charter schools nationally, in which charter schools are found to be historically more prevalent in urban communities, and significantly more prevalent in large cities.³¹ The significant positive correlation of this data applies that national trend to new North Carolina charter schools. This correlation could be linked to the trend of many charter schools, particularly those that are a part of larger charter school networks such as KIPP (Knowledge Is Power Program), in seeking to serve predominantly low-income communities, but ultimately the cause of this trend lies beyond the scope of this research.

iv. “Public School Performance” Data and Analysis

³¹ Great Schools, “Charter School Essentials”

The final factor in the “Factors of Emergence” hypothesis, public school performance, on the aggregate level, also yielded results on the aggregate level in direct accordance with my stated predictions, though not when separated into math and reading scores. As shown in Table 9, the average math and reading scores of traditional public schools within a county, when taken individually, each proved insignificant in predicting the likelihood of whether or not a new charter school would emerge in that county. In other words, traditional public schools with lower percentages of students who score at or above grade-level on End of Year examinations are not necessarily more likely to see a new charter school emerge in their community, and traditional public schools with higher percentages of students who score at or above grade level are not necessarily less likely to see a new charter school emerge in their community. Likewise, the same statement can apply to the performance of traditional public school on math End of Grade examinations.

When math and reading scores of a traditional public school are observed as a whole, however, the average performance proved to be a significant factor in predicting the likelihood of whether or not a new charter school emerged in the county. As predicted and as logic would suggest, a negative relationship exists between average public school performance and the chances of new charter school emergence. That is to say, public schools that displayed lower average performances on End of Grade math *and* reading examinations were *more* likely to see a new charter school emerge in their county. These results follow the theory that parents and community members are more likely to be dissatisfied with existing educational opportunities in their communities if traditional public school performance is lower, and therefore more likely to

establish a new charter school as a means through which to improve educational opportunities in their community.³² This analysis is illustrated by the data in Table 10.

Overall, two out of the four predictive factors used in the “Factors of Emergence” hypothesis of this research proved to significantly impact the likelihood of a new charter school emerging in a North Carolina county. While demographic changes and existing diversity proved to be insignificant (perhaps due to their wide time frame and scope), the urban or rural status of a community and the public school performance of a community proved to be significant in predicting the likelihood of new charter school emergence. Although these findings certainly contribute to existing theories of why new charter schools emerge where they do, much more research must be completed in order to more holistically understand the systemic factors that play a role in charter school emergence.

b. “Demographic Imbalance” Data and Analysis

In addition to the “urban vs. rural” and “public school performance” factors of the “factors of emergence” hypothesis, the data from the “demographic imbalance” hypothesis also yielded results with significant implications about new charter schools emerging in North Carolina. The data from this hypothesis can be analyzed through the perspective of general imbalances, “white flight” imbalances, non-white imbalances, and insignificant imbalances. A side-by-side comparison of all of the new charter schools and corresponding traditional public school demographics can be found in Table 11.

i. General Imbalance

³² Ervin, Archie. “A Study of Why People Organize, Operate, and Support Charter Schools.”

Generally speaking, the data collected from this hypothesis revealed that new North Carolina charter schools continue the already well researched trend of racial imbalance in charter schools within the state and across the American South.³³ When the differences between demographic groups in each new charter school and corresponding public school pair were averaged and aggregated, the data revealed that there is an average 15 percent difference between demographic groups in new North Carolina charter schools and their corresponding traditional public school. In total, 15 out of the total 28 new charter school/corresponding traditional public school pairs exhibited average differences of 15% or more between demographic groups. When eliminating the difference in Asian demographics from the total aggregate differences, the data revealed an average of 18 percent difference between demographic groups in new charter schools and their traditional public schools, as the Asian demographic remained very minute across almost all of the pairs. A more granulated analysis of these imbalances reveals very dramatic differences between demographic groups within new charter school/corresponding public school pairs. 13 out of the 28 total new charter school/corresponding traditional public school pairs yielded *different majority demographic groups* between their schools, with the most extreme cases showing demographic differences of greater than 50 percent between schools located just a few miles apart.

ii. “White-Flight” Imbalance

In cases in which the new charter school/corresponding traditional public school pairs yielded different majority demographic groups, the most common case situation was that the new charter school yielded a white majority while the corresponding traditional public schools yielded a non-white majority. This confirms the pattern of “white flight” from traditional public

³³ Clotfelter, Ladd, and Vigdor, “Racial and Economic Diversity in North Carolina’s Public Schools: An Update.”

schools into charter schools documented in previous studies in North Carolina and nationally.³⁴ In total, 8 out of the 13 new charter school/corresponding traditional public school pairs with different demographic majorities displayed this “white flight” imbalance. Although not quite as dramatic as a difference in demographic majority, 12 out of the 28 total pairs exhibited at least a 15 percent larger white population at the new charter school than corresponding traditional public school. In total, 18 out of the 28 pairs, 64 percent, displayed larger white populations in the new charter school than in the corresponding traditional public school.

iii. Non-White Imbalance

Contrasting the large group of new charter school/corresponding traditional public school pairs exhibiting patterns of “white flight,” some pairs revealed demographics in which a non-white population (Black, Latino, or Asian) made up a majority within the new charter school, while a white majority existed in the traditional public school only a few miles away. In total, 5 out of the 13 pairs with different demographic majorities displayed this “non-white” imbalance. It is worth noting that in 4 out of 5 of these pairs, the new charter school displayed a majority Black population while their corresponding traditional public school displayed a majority white. In the fifth of these 5 pairs, the new charter school displayed an Asian majority while its corresponding traditional public school displayed a white majority. In the most extreme case of this pattern, one new charter school displayed a black demographic that was over 70 percent higher than that of its corresponding traditional public school, while another dramatic case revealed a new charter school with a black demographic that was over 40 percent higher than that of its corresponding traditional public school. Although not as dramatic as a difference in racial majority, 6 of the 28 total pairs revealed new charter schools that had at least a 15 percent

³⁴ Cho, Chudnofsky, Jiang, Landes, and Mortimer, “The Impact of Charter Schools on Traditional Public School Finances and Demographics.”

greater black, Latino, or Asian population than its corresponding traditional public school. In total, 10 out of the 28 pairs, 36 percent, displayed larger non-white populations in the new charter school than in the corresponding traditional public school. As a group, these pairs align with a larger pattern of charter schools focusing on serving historically underserved minority communities.

iv. Insignificant Imbalance

While the majority of the 28 the new charter school/corresponding traditional public school pairs revealed some form of demographic imbalance within their student bodies, some pairs revealed no significant differences and relatively uniform demographics between the two schools. Broadly speaking, 15 out of the 28 pairs of new charter schools (54 percent) and corresponding traditional public schools reflected the same majority demographic between the schools. While these majorities were dramatically different in size across these 15 pairs, they at least showed that the two schools had somewhat similar demographic balances. More specifically, 12 out of the 28 pairs displayed average demographic differences of less than 15 percent between the new charter school and corresponding traditional public school, though that number drops to 10 out of 28 when removing the generally miniscule Asian demographics from the pairs. Finally, 7 out of the 28 pairs were demographically balanced to the extent that *no* demographic group within the pair revealed a difference of greater than 10%. As predicted and in accordance with previous studies, new charter school/corresponding traditional public school pairs without any significant demographic imbalances between represented a minority of the total pairs studied. Hopefully, though, through growing awareness of these dramatic

demographic differences, this number of new North Carolina charter schools with no significant difference in demographics from traditional public schools in their communities will increase.

Overall, the data collected from the new charter schools and their corresponding traditional public schools confirms my “demographic imbalance” hypothesis that new North Carolina charter schools continue the previously researched trend of demographic imbalances within previously existing charter schools across the state and nationally. While some of the pairs reveal a “white-flight” imbalance and others reveal a “non-white” imbalance, one thing is certain: most new charter schools in North Carolina show some type of significant demographic imbalance with the traditional public schools in their communities. Automatic sibling enrollment policies, bussing policies, and targeted recruitment efforts have all been discussed as possible reasons for these demographic imbalances in previous studies on charter schools, but the specific causes of the imbalances within new North Carolina charter schools are ultimately outside of the scope of this research.

V) Conclusion, Limitations, and Further Research

This thesis represents a thorough investigation of new North Carolina charter schools through the contexts of factors that affect their emergence and the balance of their racial demographics with traditional public schools in their communities. After analyzing four possible factors in new charter school emergence in North Carolina, two factors, the urban or rural classification of a county and the academic performance of traditional public schools within the county, proved to be salient in determining the likelihood of a charter school emerging in that county. The data revealed that new North Carolina charter schools are more likely to emerge in urban counties and in counties with traditional public schools with lower average academic performance based on North Carolina End of Grade exams. Broad demographic changes within the county and the

existing racial diversity of the county, on the other hand, proved to be insignificant in predicting charter school emergence. These findings contribute to the relatively small existing body of research regarding systemic factors effecting charter school emergence in North Carolina and nationally.

This research also discovered that as a whole, significant demographic imbalances exist between new North Carolina charter schools and traditional public schools in their communities. This finding, and the more specific characteristics of the imbalances within it, extends the findings of previous research regarding demographic imbalances in charter schools to North Carolina charter schools that have opened since the impactful passing of NC Senate Bill 8 in 2011.

While the findings of this research contribute to the existing body of research on North Carolina charter schools, there are certainly many avenues through which this research can be improved and expanded upon. In regards to the “Factors of Emergence” hypothesis, much more research must be done in order to more holistically understand the systemic factors that lead to the emergence of new charter schools in North Carolina and nationally. Identifying these factors will allow for a more comprehensive understanding of the charter school movement and its place within the public school system. Specifically, future studies similar to this research could take a more localized approach by recording demographic changes and existing racial diversity in specific towns and cities in which new charter schools do and emerge in order to better understand if these factors are significant on these levels. Many other factors, including local socioeconomic levels, political atmospheres, and levels of parental participation in traditional public schools could be analyzed in future research regarding factors of new charter school emergence.

In regards to the “Demographic Imbalance” hypothesis, much more research can be conducted not just on the current demographics of new North Carolina charter schools in comparison with the traditional public schools in their communities, but also on the impact that new charter schools have over time on the demographics of the traditional public schools in their communities. Additionally, research can be conducted on the academic performance of specific demographic groups within new North Carolina charter schools in comparison to that of the same demographic groups at a traditional public school in the community, in order to determine whether or not the new charter school is creating better educational opportunities for that demographic of students within that community. Finally, the geographic scale of this research can be significantly reduced in future research in order to analyze new charter schools in a specific city, county, or region in North Carolina, or significantly expanded to analyze new charter schools across the South, other regions, or the nation.

Since the birth of the American charter school movement in 1991, education professionals, politicians, and concerned parents alike have discussed, debated, and researched the effectiveness of charter schools in providing a unique combination of autonomy and accountability towards an overall successful educational opportunity. Although the jury is still out on the overall patterns of charter school academic achievement and racial demographics nationally, more state-wide and local studies can provide effective and necessary reflections that will create space for slowly but surely improving charter schools, the education reform movement, and, eventually, educational opportunities for all students in America.

Table 1: County Charter Coding and 2000 & 2010 Census Demographics

County	No Charter, Old Charter, New Charter (0,1,2)	2000W		2010W		2000B		2010B		2000L		2010L		2000AA		2010AA	
Alamance	1	75.61	71.08	18.76	18.77	6.75	11.01	0.9	1.22								
Alexander	0	92	89.59	4.63	5.49	2.5	4.3	1.04	0.97								
Alleghany	0	95.69	92.23	1.23	1.26	4.97	9	0.2	0.48								
Anson	0	49.53	47.15	48.64	48.58	0.83	3.01	0.57	1.07								
Ashe	0	97.17	95.49	0.66	0.59	2.42	4.81	0.23	0.38								
Avery	1	93.95	91.95	3.48	3.98	2.41	4.48	0.19	0.31								
Beaufort	1	68.44	68.16	29.03	25.59	3.24	6.63	0.22	0.35								
Bertie	1	36.3	35.18	62.34	62.48	0.99	1.25	0.11	0.48								
Bladen	2	57.22	56.28	37.91	34.86	3.71	7.11	0.1	0.2								
Brunswick	1	82.3	83.2	14.38	11.4	2.68	5.17	0.27	0.54								
Buncombe	1	89.06	87.36	7.48	6.38	2.78	5.98	0.66	1.01								
Burke	1	86.01	84.38	6.71	6.61	3.57	5.1	3.48	3.5								
Cabarrus	2	83.26	75.36	12.18	15.29	5.05	9.42	0.91	1.97								
Caldwell	0	91.74	90.24	5.46	4.92	2.49	4.57	0.39	0.52								
Camden	0	80.62	82.09	17.27	13.19	0.71	2.15	0.57	1.46								
Carteret	1	90.28	89.28	6.99	6.08	1.74	3.37	0.54	0.87								
Caswell	0	61.07	62.48	36.52	33.81	1.77	3.14	0.15	0.25								
Catawba	0	84.99	81.73	8.37	8.45	5.57	8.44	2.93	3.47								
Chatham	2	74.94	75.96	17.07	13.21	9.62	12.96	0.59	1.11								
Cherokee	1	94.82	93.65	1.59	1.28	1.25	2.51	0.28	0.48								
Chowan	0	60.54	62.02	37.52	34.27	1.51	3.16	0.34	0.35								
Clay	0	98.01	96.64	0.8	0.6	0.83	2.44	0.09	0.23								
Cleveland	2	76.79	75.58	20.94	20.73	1.49	2.81	0.7	0.77								
Columbus	2	63.45	61.51	30.93	30.49	2.23	4.58	0.22	0.27								
Craven	0	69.94	69.99	25.12	22.41	4.02	6.06	0.99	2.03								
Cumberland	1	55.15	51.36	34.9	36.66	6.9	9.45	1.88	2.22								

VI) Data Tables

Table 1: County Charter Coding and 2000 & 2010 Census Demographics

Currituck	2	90.41	90.32	7.25	5.78	1.43	2.99	0.39	0.63
Dare	0	94.75	92.31	2.66	2.46	2.22	6.52	0.37	0.63
Davidson	0	87.05	84.33	9.14	8.85	3.24	6.39	0.82	1.22
Davie	0	90.44	87.54	6.8	6.29	3.47	6.05	0.31	0.58
Duplin	0	58.66	57.17	28.96	25.25	15.13	20.61	0.15	0.26
Durham	2	50.91	46.44	39.46	37.96	7.63	13.48	3.29	4.59
Edgecombe	2	40.06	38.77	57.46	57.35	2.79	3.72	0.13	0.2
Forsyth	2	68.47	62.31	25.61	26.02	6.4	11.91	1.04	1.85
Franklin	1	66	65.99	30.03	26.74	4.44	7.88	0.3	0.48
Gaston	1	82.98	78.2	13.87	15.25	3	5.92	0.95	1.2
Gates	0	59.08	63.69	39.18	33.16	0.77	1.42	0.25	0.14
Graham	0	91.91	90.33	0.19	0.19	0.75	2.19	0.16	0.33
Granville	2	60.74	60.43	34.94	32.8	4.02	7.48	0.36	0.54
Greene	0	51.83	50.79	41.21	37.28	7.96	14.3	0.09	0.34
Guilford	2	64.52	57.03	29.28	32.53	3.8	7.13	2.45	3.93
Halifax	1	42.57	40.02	52.56	53.22	1.01	2.11	0.54	0.66
Harnett	1	71.13	68.28	22.05	20.9	5.86	10.78	0.65	0.9
Haywood	0	96.85	95.54	1.27	1.06	1.41	3.39	0.21	0.36
Henderson	1	92.52	88.92	3.06	3.02	5.47	9.77	0.61	0.96
Hertford	0	37.45	35.62	59.55	60.53	1.57	2.61	0.31	0.53
Hoke	0	44.53	45.31	37.64	33.47	7.18	12.4	0.83	1.03
Hyde	0	62.65	63.99	35.07	31.6	2.25	7.07	0.36	0.28
Iredell	2	82.17	80.69	13.66	11.95	3.41	6.8	1.27	1.83
Jackson	1	85.68	83.16	1.67	1.85	1.74	5.06	0.51	0.86
Johnson	1	78.09	74.22	15.65	15.13	7.74	12.92	0.3	0.6
Jones	0	60.97	62.99	35.87	32.39	2.72	3.92	0.15	0.32
Lee	0	70.03	66.86	20.46	19.99	11.65	18.28	0.67	0.85
Lenoir	1	56.47	53.38	40.43	40.54	3.17	6.58	0.34	0.44
Lincoln	1	90.24	89.36	6.44	5.55	5.73	6.69	0.31	0.54

□

Table 1: County Charter Coding and 2000 & 2010 Census Demographics

Macon	0	97.18	93.78	1.2	1.32	1.52	6.57	0.39	0.61
Madison	0	97.63	96.49	0.82	1.16	1.35	2.04	0.23	0.34
Martin	2	52.54	53.13	45.37	43.46	2.06	3.14	0.24	0.29
McDowell	0	92.18	90.57	4.16	3.8	2.88	5.32	0.92	0.78
Mecklenburg	2	64.02	55.34	27.87	30.75	6.45	12.17	3.15	4.61
Mitchell	0	97.87	95.28	0.22	0.37	1.98	4.05	0.2	0.32
Montgomery	0	69.07	68.93	21.84	18.82	10.43	14.12	1.61	1.59
Moore	1	80.25	80.36	15.5	13.42	3.99	5.96	0.44	0.85
Nash	1	61.94	55.85	33.93	37.2	3.36	6.28	0.57	0.78
New Hanover	2	79.91	79.09	16.97	14.76	2.04	5.29	0.83	1.19
Northampton	1	39.09	39.22	59.43	58.35	0.73	1.38	0.09	0.18
Onslow	2	72.06	74.02	18.48	15.57	7.25	10.07	1.68	1.89
Orange	1	78.05	74.36	13.78	11.9	4.46	8.23	4.1	6.74
Pamlico	1	73.17	76.32	24.57	20.02	1.32	3.13	0.38	0.38
Pasquotank	0	56.93	56.71	40.05	37.76	1.23	4.04	0.86	1.12
Pender	0	72.74	76.14	23.58	17.75	3.64	6.12	0.18	0.4
Perquimans	0	70.82	72.06	27.99	24.88	0.6	2.13	0.21	0.28
Person	1	68.79	68.34	28.21	26.98	2.09	4.04	0.15	0.29
Pitt	0	62.08	68.92	33.65	34.05	3.15	5.47	1.08	1.55
Polk	0	92.26	90.85	5.89	4.48	3.01	5.47	0.24	0.33
Randolph	2	89.21	85.48	5.63	5.77	6.63	10.37	0.64	1.01
Richmond	0	64.85	60.19	30.52	30.59	2.83	5.88	0.68	0.92
Robeson	2	32.8	28.98	25.11	24.33	4.86	8.15	0.33	0.47
Rockingham	1	77.33	75.69	19.57	18.85	3.07	5.51	0.28	0.46
Rowan	0	80.02	76.52	15.78	16.18	4.12	7.69	0.85	1
Rutherford	1	86.79	85.86	11.23	10.11	1.81	3.53	0.33	0.44
Sampson	0	59.79	56.73	29.93	27	10.79	16.46	0.31	0.38
Scotland	0	51.48	46.52	37.32	38.56	1.17	2.09	0.51	0.76
Stanly	1	84.67	83.56	11.46	10.94	2.13	3.58	1.81	1.85

□

Table 1: County Charter Coding and 2000 & 2010 Census Demographics

Stokes	0	93.43	92.87	4.66	4.04	1.87	2.65	0.19	0.26
Surry	1	90.4	88.13	4.16	3.73	6.49	9.71	0.57	0.47
Swain	1	66.33	66.63	1.7	0.54	1.47	3.86	0.15	0.48
Transylvania	1	93.67	92.41	4.21	3.9	1.02	2.91	0.38	0.44
Tyrrell	0	56.47	54.53	39.43	38.19	3.62	5.45	0.75	1.82
Union	1	82.83	78.97	12.52	11.7	6.17	10.42	0.58	1.63
Vance	1	48.21	44.16	48.31	49.84	4.56	6.72	0.39	0.44
Wake	2	72.4	66.32	19.72	20.7	5.41	9.76	3.38	5.39
Warren	1	38.9	38.76	54.49	52.31	1.59	3.3	0.13	0.24
Washington	0	48.28	45.99	48.94	49.8	2.27	3.52	0.32	0.29
Watauga	1	96.46	94.5	1.59	1.72	1.46	3.35	0.59	0.93
Wayne	1	61.29	58.83	33.01	31.4	4.95	9.92	0.96	1.17
Wilkes	1	92.95	90.6	4.16	4.08	3.45	5.44	0.32	0.43
Wilson	1	55.83	51.98	39.33	39.01	6.04	9.51	0.42	0.82
Yadkin	0	92.54	88.55	3.43	3.1	6.48	9.76	0.17	0.2
Yancey	0	97.99	95.22	0.57	0.61	2.69	4.57	0.13	0.19

□

Table 2: County Population, Urban/Rural Coding, and New Charter School Coding

County Name	Population	Urban(1) or Rural(0)	New Charter (1) or No NCS (0)
Alamance County		1	0
Alexander County	37,198	0	0
Alleghany County	11,155	0	0
Anson County	26,948	0	0
Ashe County	27,281	0	0
Avery County	17,797	0	0
Beaufort County	47,759	0	0
Bertie County	21,282	0	0
Bladen County	35,190	0	1
Brunswick County	107,431	0	0
Buncombe County	238,318	1	0
Burke County	90,912	0	0
Cabarrus County	178,011	1	1
Caldwell County	83,029	0	0
Camden County	9,980	0	0
Carteret County	66,469	0	0
Caswell County	23,719	0	0
Catawba County	154,358	1	0
Chatham County	63,505	0	1
Cherokee County	27,444	0	0
Chowan County	14,793	0	0
Clay County	10,587	0	0
Cleveland County	98,078	0	1
Columbus County	58,098	0	1
Craven County	103,505	0	0
Cumberland County	319,431	1	0
Currituck County	23,547	0	0
Dare County	33,920	0	0
Davidson County	162,878	1	0
Davie County	41,240	0	0
Duplin County	58,505	0	0
Durham County	267,587	1	1
Edgecombe County	56,552	0	1
Forsyth County	350,670	1	1
Franklin County	60,619	0	0
Gaston County	206,086	1	0
Gates County	12,197	0	0

Table 2: County Population, Urban/Rural Coding, and New Charter School Coding

Graham County	8,861	0	0
Granville County	59,916	0	1
Greene County	21,362	0	0
Guilford County	488,406	1	1
Halifax County	54,691	0	0
Harnett County	114,678	0	0
Haywood County	59,036	0	0
Henderson County	106,740	0	0
Hertford County	24,669	0	0
Hoke County	46,952	0	0
Hyde County	5,810	0	0
Iredell County	159,437	0	1
Jackson County	40,271	0	0
Johnston County	168,878	0	0
Jones County	10,153	0	0
Lee County	57,866	0	0
Lenoir County	59,495	0	0
Lincoln County	78,265	0	0
Macon County	33,922	0	0
Madison County	20,764	0	0
Martin County	24,505	0	1
McDowell County	44,996	0	0
Mecklenburg County	919,628	1	1
Mitchell County	15,579	0	0
Montgomery County	27,798	0	0
Moore County	88,247	0	0
Nash County	95,840	0	0
New Hanover County	202,667	1	1
Northampton County	22,099	0	0
Onslow County	177,772	0	1
Orange County	133,801	1	0
Pamlico County	13,144	0	0
Pasquotank County	40,661	0	0
Pender County	52,217	0	0
Perquimans County	13,453	0	0
Person County	39,464	0	0

Table 2: County Population, Urban/Rural Coding, and New Charter School Coding

Pitt County	168,148	0	0
Polk County	20,510	0	0
Randolph County	141,752	0	1
Richmond County	46,639	0	0
Robeson County	134,168	0	1
Rockingham County	93,643	0	0
Rowan County	138,428	1	0
Rutherford County	67,810	0	0
Sampson County	63,431	0	0
Scotland County	36,157	0	0
Stanly County	60,585	0	0
Stokes County	47,401	0	0
Surry County	73,673	0	0
Swain County	13,981	0	0
Transylvania County	33,090	0	0
Tyrrell County	4,407	0	0
Union County	201,292	0	0
Vance County	45,422	0	0
Wake County	900,993	1	1
Warren County	20,972	0	0
Washington County	13,228	0	0
Watauga County	51,079	0	0
Wayne County	122,623	0	0
Wilkes County	69,340	0	0
Wilson County	81,234	0	0
Yadkin County	38,406	0	0
Yancey County	17,818	0	0

Table 3: New Charter Schools and Corresponding Traditional Public Schools

New Charter School (year opened)	Grade Levels	Town, Zip-code	Corresponding Traditional Public School	Grade Levels	Town, Zip-code	Miles Between Schools (miles)
Aristotle Preparatory Academy (2013)	K-3	Charlotte, 28208	Ashley Park Elementary	K-8	Charlotte, 28208	1.3
Bear Grass Charter School (2013)	6-12	Williamston, 27892	Williamston (Riverside) High School	9-12	Williamston, 27892	6.4
Cabarrus Charter Academy (2013)	K-12	Concord, 28077	Central Cabarrus High School	9-12	Concord, 28025	1.8
Charlotte Choice Charter (2013)	K-8	Charlotte, 28205	Shamrock Gardens Elementary	K-5	Charlotte, 28205	1.3
Cornerstone Charter Academy (2012)	K-8	Greensboro, 27455	James Y Joyner Elementary	K-5	Greensboro, 27408	2.5
Corvian Community School (2012)	K-4	Charlotte, 28262	Mallard Creek	K-5	Charlotte, 28262	1.7
Douglas Academy (2013)	K-2	Wilmington, 28401	Annie H Snipes Elementary	K-5	Wilmington, 28405	1.4
Falls Lake Academy (2013)	K-7	Creedmoor, 27522	Creedmoor Elementary	PK-5	Creedmoor, 27522	4.4
Flemington Academy (2013)	6-12	Lake Waccamaw, 28450	East Columbus High	9-12	Lake Waccamaw, 28450	2.5
Invest Collegiate (2013)	K-6	Charlotte, 28208	Irwin Avenue Open	K-5	Charlotte, 28202	2.0
Island Montessori (2013)	K-6	Carolina Beach, 28428	Carolina Beach Elementary	K-5	Carolina Beach, 28428	1.0
Langtree Charter Academy (2013)	K-6	Mooreville, 28117	Lake Norman Elementary	K-5	Mooreville, 28117	5.0
Longleaf School	9-12	Raleigh, 27601	Phillips High	9-12	Raleigh, 27610	2.2

Table 3: New Charter Schools and Corresponding Traditional Public Schools

of the Arts (2013)							
North East Carolina Prep School (2012)	K-9	Tarboro, 27886	Stocks Elementary, CB Martin Middle School	PK-3, 7-8	Tarboro, 27886	2.5, 2.9	
Oxford Preparatory High School (2013)	9-12	Oxford, 27565	JF Webb High School of Health	9-12	Oxford, 27565	2.9	
Paul R. Brown Leadership Academy (2013)	6-11	Elizabethown, 28337	Elizabethown Middle	6-12	Elizabethown, 28337	0.7	
Pinnacle Classical Academy (2013)	K-6	Shelby, 28152	Marion Intermediate	PK-4	Shelby, 28150	3.8	
Research Triangle Charter High School (2012)	9-12	Research Triangle Park, 27709	Hillside High School	9-12	Durham, 27707	5.7	
STEM Education for a Global Society Academy (2013)	K-7	Delco, 28436	Acme Delco Middle	6-8	Delco, 28436	0.7	
Southwestern Academy (2013)	K-8	Lumberton, 28358	Littlefield Middle	4-8	Lumberton, 28358	5.9	
Summerfield Charter Academy (2013)	K-8	Summerfield, 27358	Summerfield Elementary	K-5	Summerfield, 27358	1.5	
The College Preparatory and Leadership Academy of High Point (2012)	K-5	Greensboro, 27409	Southwest Elementary	K-5	High Point, 27265	3.1	
Institute for the Development of Young Leaders	K-5	Durham, 27707	E.K. Pove Elementary	K-5	Durham, 27705	0.7	

Table 3: New Charter Schools and Corresponding Traditional Public Schools

(2013)							
NC Leadership Academy(2013)	K-9	Kernersville, 27284	Union Cross Elementary	K-5	Kernersville, 27284	0.4	
Triangle Math and Science Academy (2012)	K-12	Cary, 27511	Penny Road Elementary	K-5	Cary, 27511	3.1	
Lyharric Charter Academy (2013)	9-12	Asheboro, 27204	Asheboro High School	9-12	Asheboro, 27203	3.7	
Willow Oak Montessori (2013)	1-3	Chapel Hill, 27517	North Chatham Elementary	PK-5	Chapel Hill, 27517	3.9	
Z.E.C.A School of Arts and Technology (2013)	K-6	Jacksonville, 28540	Parkwood Elementary	K-5	Jacksonville, 28540	1.5	

Table 4: New Charter School Demographics



New Charter School	%White	%Black	%Latino	%Asian American
Aristotle Preparatory Academy	7.476636	86.916	2.80374	0
Bear Grass Charter School	94.25676	3.0405	1.68919	0.337837838
Cabarrus Charter Academy (2013)	62.8483	19.35	5.10836	6.656346749
Charlotte Choice Charter	1.522843	90.863	6.59898	1.015228426
Cornerstone Charter Academy (2012)	78.13953	11.628	3.25581	2.635658915
Corvian Community School (2012)	74.71526	8.2005	5.01139	3.644646925
Douglas Academy	5.714286	82.857	8.57143	2.857142857
Falls Lake Academy	80.05865	9.9707	2.6393	0.879765396
Flemington Academy	43.10345	32.759	10.3448	0
Invest Collegiate	18.18182	60.606	0	21.21212121
Island Montessori(2013)	87.32394	0	6.33803	1.408450704
Langston Charter Academy(2013)	75.30303	5.1515	6.36364	10.15151515
Longleaf School of the Arts (2013)	74.68354	13.924	4.43038	3.164556962
North East Carolina Prep School	59.0455	33.518	4.10655	0.776914539
Oxford Preparatory High School	67.21311	29.508	0	0
Paul R. Brown Leadership Academy	25	68.478	3.26087	0
Pinnacle Classical Academy (2013)	74.74747	13.468	6.39731	0.673400673
Research Triangle Charter High School	4.552352	71.472	18.2094	2.427921093
STEM Education for a Global Society Academy	71.63462	7.6923	2.40385	2.403846154
Southeastern Academy	29.16667	61.111	2.77778	0
Summerfield Charter Academy (2013)	77.15827	7.9137	3.77698	10.61151079
The College Preparatory and Leadership Academy of High Point	3.225806	90.323	2.58065	0
Institute for the Development of Young Leaders	1.408451	97.183	0	1.408450704
NC Leadership Academy	87.14286	3.5714	3.09524	1.19047619
Triangle Math and Science Academy	21.78771	18.436	1.95531	53.63128492
Uwharrie Charter Academy (2013)	76.88172	4.3011	11.828	0
Willow Oak Montessori	80.89888	2.2472	8.98876	3.370786517
Z.E.C.A School of Arts and Technology	6.593407	60.44	1.0989	0

Table 5: Corresponding Traditional Public School Demographics

School Name	2006W	2006B	2006L	2006AA	2008W	2008B	2008L	2008AA	2010W	2010B	2010L	2010AA	2012W	2012B	2012L	2012AA
Ashley Park Elementary	3.2	94	2.4	0	5	90	1.8	0	1.6	92.2	0	2	2.9	88.5	4.1	2.9
Williamston High School	40.9	56.7	0	0.2	37.2	58	3.4	0.4	37.6	58.8	0	0.6	46.1	49.3	2.7	0.8
Central Cabarrus High School	76.8	16.9	4	0.2	67.5	19.1	8.6	0.4	63.6	24.1	11.5	0.6	61.6	19.5	14.5	0.8
Shamrock Gardens Elementary	7.1	55.1	31.1	4	10.2	51.4	27.1	5.2	6.2	65.1	23.1	5.3	14.2	56.9	21.6	4.7
James Y Joyner Elementary	44	46.6	5.4	2.8	35.3	39.8	8.5	5.7	31.2	54.5	7	6.6	33.4	49	10.6	2.5
Mallard Creek	36.4	46.4	6.4	9.7	31.3	41.9	9	10.9	20.8	54.3	10.5	13.8	17.5	54	8.9	15
Annie H Snipes Elementary	28.3	63.7	6.1	0.9	11.4	80	5.4	0.2	5.3	90.6	3.7	0.4	6.9	85.6	5.4	0
Creedmoor Elementary	60.4	27.9	10.5	0.7	60.4	18.1	14.3	0.8	50.1	30.8	18.4	0.5	45	23.3	26.5	0.4
East Columbus High	33.5	45.6	2.6	0.2	34.9	46.6	3.2	0	37	42.4	3.9	0	32.7	41.7	4.5	0.2
Irwim Avenue Open	3.5	87.8	5.7	1.5	2.4	84.8	6.6	0.9	2.1	89.7	6.3	0.6	1.1	89.2	8	0.4
Carolina Beach Elementary	88.2	8.5	0	0.4	88.9	2.1	1.8	1.5	89.7	7.5	0	1.4	90.5	3.3	0	0.6
Lake Norman Elementary	88.1	4	0	4.4	88	1.6	4.1	3.9	85.2	3.5	4	6.5	84.3	2.7	7.4	7.4
Phillips High	7.1	89	0	0.6	5	86.9	3.8	1.8	3.5	91	5.4	0	4.7	80.7	9.9	0
Stocks Elementary	32.9	57.2	9.7	0	31.1	55.3	10.6	0.6	27.9	60.8	10.6	0.8	27.9	59.3	11.1	0.7
JF Webb	50.4	43.4	3.5	2.6	52.9	36.5	4.3	3.4	58	34.9	4.1	2.7	62.9	28.2	4.5	0.3

Table 6: Logistic Regression New Charter School by Change in Demographics at the County Level (2000-2010)

Variable	Estimate (Std Error)	Likelihood (Std Error)
Constant	-2.516 (0.669)***	--
Change in White Population	0.150 (0.302)	0.021 (0.041)
Change in Black Population	0.097 (0.344)	0.013 (0.050)
Change in Latino Population	0.091 (0.279)	0.012 (0.038)
Change in Asian American Population	1.088 (0.662)+	0.149 (0.087)+
N	100	100
Log Likelihood	-42.597	--

Notes: + p<.10, * p < .05; ** p < .01; *** p < .001 for a two-tailed test.

Table 7: Logistic Regression New Charter School by Existing Demographics at the County Level (2000-2010)

Variable	Estimate (Std Error)	Likelihood (Std Error)
Constant	2.280 (4.092)	--
White Population	0.053 (0.042)	0.007 (0.005)
Black Population	0.031 (0.045)	0.004 (0.006)
Latino Population	0.033 (0.74)	0.004 (0.010)
Asian American Population	0.466 (0.215)*	0.062 (0.026)
N	100	100
Log Likelihood	-64.52	--

Notes: + p<.10, * p < .05; ** p < .01; *** p < .001 for a two-tailed test.

Table 8: Logistic Regression Charter School by Urban vs. Rural County

Variable	Estimate (Std Error)	Likelihood (Std Error)
Constant	-1.906 (0.323)***	--
Urban	1.773 (0.610)**	0.236 (0.071)***
N	100	100
Log Likelihood	-43.111	--

Notes: + p<.10, * p < .05; ** p < .01; *** p < .001 for a two-tailed test.

Table 9: Logistic Regression Charter School by School Performance

Variable	Estimate (Std Error)	Likelihood (Std Error)
Constant	0.076 (0.527)	--
Reading Grade	0.026 (0.044)	0.006 (0.012)
Math Grade	0.021 (0.039)	0.005 (0.010)
N	56	56
Log Likelihood	-38.61	--

Notes: + p<.10, * p < .05; ** p < .01; *** p < .001 for a two-tailed test.

Table 10: Logistic Regression Charter School by Average School Performance

Variable		Estimate (Std Error)	Likelihood (Std Error)
Constant		3.384 (1.854)+	--
Average School Performance		0.046 (0.025)+	-0.012 (0.005)*
N	56	56	
Log Likelihood	-36.907	--	

Notes: + $p < .10$, * $p < .05$; ** $p < .01$; *** $p < .001$ for a two-tailed test.

Table 11: New Charter School and Corresponding Public School Demographic Comparison

School	CTPS or NCS (1 or 2)	%White	%Black	%Latino	%Asian	Average	Average
						%Diff. including Asian	%Diff. without Asian
Aristotle Preparatory Academy	2	7.5	86.9	2.8	0		
Ashley Park Elementary	1	2.9	88.5	4.1	2.9		
	% Difference	4.6	1.6	1.3	2.9	2.6	2.5
Bear Grass Charter School	2	94.3	3.0	1.7	0.3		
Williamston High School	1	46.1	49.3	2.7	0.8		
	% Difference	48.2	46.3	1.0	0.5	24.0	31.8
Cabarrus Charter Academy	2	62.8	19.3	5.1	6.7		
Central Cabarrus High School	1	61.6	19.5	14.5	0.8		
	% Difference	1.2	0.2	9.4	5.9	4.2	3.6
Charlotte Choice Charter	2	1.5	90.9	6.6	1.0		
Shannock Gardens Elementary	1	14.2	56.9	21.6	4.7		
	% Difference	12.7	34.0	15.0	3.7	16.3	20.5
Cornerstone Charter Academy	2	78.1	11.6	3.3	2.6		
James Y Joyner Elementary	1	33.4	49.0	10.6	2.5		
	% Difference	44.7	37.4	7.3	0.1	22.4	29.8
Corvian Community School	2	74.7	8.2	5.0	3.6		

□

Table 11: New Charter School and Corresponding Public School Demographic Comparison

Mallard Creek	1	17.5	54.0	8.9	15.0							
	% Difference	57.2	45.8	3.9	11.4			29.6				35.6
Douglas Academy	2	5.7	82.9	8.6	2.9							
	1	6.9	85.6	5.4	0.0							
Annie H Snipes Elementary	2	1.2	2.7	3.2	2.9							
	% Difference							2.5				2.4
Falls Lake Academy Creedmoor Elementary	2	80.1	10.0	2.6	0.9							
	1	45.0	23.3	26.5	0.4							
% Difference		35.1	13.3	23.9	0.5			18.2				24.1
	Flemington Academy	2	43.1	32.8	10.3	0.0						
1		32.7	41.7	4.5	0.2							
East Columbus High	2	10.4	8.9	5.8	0.2							
	% Difference							6.3				8.4
Invest Collegiate	2	18.2	60.6	0.0	21.2							
	1	1.1	89.2	8.0	0.4							
Irwin Avenue Open	2	17.1	28.6	8.0	20.8							
	% Difference							18.6				17.9
Island Montessori	2	87.3	0.0	6.3	1.4							
	1	90.5	3.3	0.0	0.6							
Carolina Beach Elementary	2	3.2	3.3	6.3	0.8							
	% Difference							3.4				4.3
Langtree Charter Academy	2	75.3	5.2	6.4	10.2							
	1	84.3	2.7	7.4	7.4							
Lake Norman Elementary	2	9.0	2.5	1.0	2.8							
	% Difference							3.8				4.2

Table 11: New Charter School and Corresponding Public School Demographic Comparison

Longleaf School of the Arts Phillips High	2	74.7	13.9	4.4	3.2				
	1	4.7	80.7	9.9	0.0				
	% Difference		65.7	11.5	3.4	0.4			20.2
North East Carolina Prep School Stocks Elementary School	2	59.0	33.5	4.1	0.8				
	1	27.9	59.3	11.1	0.7				
	% Difference		31.1	25.8	7.0	0.1			16.0
Oxford Preparatory High School JF Webb High School of Health	2	67.2	29.5	0.0	0.0				
	1	62.9	28.2	4.5	0.3				
	% Difference		4.3	1.3	4.5	0.3			2.6
Paul R. Brown Leadership Academy Elizabethown Middle	2	25.0	68.5	3.3	0.0				
	1	21.8	59.8	14.1	0.0				
	% Difference		3.2	8.7	10.8	0.0			5.7
Pinnacle Classical Academy Marion Intermediate	2	74.7	13.5	6.4	0.7				
	1	52.5	36.9	6.9	0.7				
	% Difference		22.2	23.4	0.5	0.0			11.5
Research Triangle Charter High School Hillside High School	2	4.6	71.5	18.2	2.4				
	1	2.7	83.3	11.5	0.6				
	% Difference		1.9	11.8	6.7	1.8			5.6
STEM Education for a	2	71.6	7.7	2.4	2.4				

□

Table 11: New Charter School and Corresponding Public School Demographic Comparison

Academy								
Penny Road Elementary		1	62.3	17.4	11.9	3.3		
% Difference			40.5	1.0	9.9	50.3	25.5	
Uwharrie Charter Academy		2	76.9	4.3	11.8	0.0		
Asheboro High School		1	47.3	14.8	32.2	1.7		
% Difference			29.6	10.5	20.4	1.7	15.5	
Willow Oak Montessori		2	80.9	2.2	9.0	3.4		
North Chatham Elementary		1	52.6	7.9	33.9	2.1		
% Difference			28.3	5.7	24.9	1.3	15.0	
Z.E.C.A School of Arts and Technology		2	6.6	60.4	1.1	0.0		
Parkwood Elementary		1	62.8	18.1	11.7	0.8		
% Difference			56.2	42.3	10.6	0.8	27.5	
Different demographic majorities: 13 out of 28			15.0			18.4		

^Average

average, difference, without asian

Majority White NCS with
 Majority Other CTPS: 8 of
 13
 Majority Other NCS with
 Majority White CTPS: 5 of
 13
 Majority Demographic
 Group: Blue shaded

□

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