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A Nation Rated? School Segregation and the Distribution of a School Resource: the Role of Accountability Ratings in Metropolitan Public Schools

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SCHOOL SEGREGATION AND THE DISTRIBUTION OF A SCHOOL RESOURCE: THE ROLE OF ACCOUNTABILITY RATINGS IN METROPOLITAN PUBLIC SCHOOLS

by

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ABSTRACT

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Overview. This dissertation examines how school accountability ratings are associated with school segregation, how they shape public perceptions of school quality and how they influence parents' enrollment decisions. In theory, school ratings were developed to raise achievement for all students by identifying poor performing schools and intervening to improve them. Across the United States, school segregation concentrates Black, Latinx and lower income students in schools with low average test scores. As such, school ratings may both reflect and even reinforce educational inequalities associated with school segregation because a component of the rating relies on performance on standardized exams. To the extent that ratings reflect which groups of students attend which schools rather than how effectively schools serve their student populations, the system may be problematic. Scholars have yet to understand the association of school ratings and school segregation. This is an important consideration, not only because ratings may reflect broader patterns of inequality, but also because they may serve as a resource for stakeholders, including public officials and parents who may rely on ratings as an indication of school quality. Internationally, the publication of school ratings has led to lower enrollment and school closures, but it is unclear how ratings are associated with segregation or how they impact parent's perceptions and attitudes within the United States. This dissertation addresses three key questions: Are school ratings associated with school segregation? If so, by

what metric (i.e. within- or between-district segregation)? Do ratings influence parent's perceptions and attitudes? I answer these by examining school report cards and school segregation across 112 metropolitan regions. By using original data from a survey experiment, I am also able to examine causal effects of school ratings on parents' perceptions and attitudes. Findings show that in more segregated metropolitan regions, schools with higher proportions of Black students have higher probabilities of receiving a lower school rating relative to a higher one. Moreover, I show that parents' perceptions of school quality are significantly less favorable when shown a school profile with a lower school rating and that parents' are less likely to enroll their children in a hypothetical school with a lower rating (C-F).

Intellectual Merit. Segregation researchers argue that the distribution of resources and their effect on students' educational outcomes is poorly understood (Reardon and Owens 2014). This project contributes to the scholarly literature in two ways. First, I conceptualize school ratings as a resource vital to the educational experience of students which impacts students, families and schools differently in patterns that are reflective of existing social inequality. Second, I contribute to sociological understanding of the relationships among race/ethnicity, class, schools, variations in accountability policies in general, and perceptions of school quality and enrollment decisions. *These are significant contributions because they have the potential to transform future school segregation research as well as the design and dissemination of educational accountability metrics.*

Broader Impacts. Findings from this research provide benefits to scholars across multiple disciplines allowing sociologists, educational researchers, methodologists and policy makers to effectively collaborate. The scientific contributions of this research include the expansion of theory and the treatment of accountability policies as a *resource* that plays a key role in parental decision making, which, in turn, may influence school segregation patterns. Methodologists likely gain a richer understanding of how perceptions vary and depend on conditions of school quality indicators. Results from this study offer empirical evidence for the implementation and dissemination of alternative accountability metrics that are reliable and accurate estimates of how well schools and districts serve their students. This should prove informative to educational researchers and policy makers. The scope of this research has the potential to impact anyone conducting research on the association of school segregation and educational policy as well as those studying housing and public perceptions.

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LIST OF ABBREVIATIONS

ESEA	Elementary and Secondary Education Act
NCLB	No Child Left Behind Act
ESSA	Every Student Succeeds Act
AYP	Adequate Yearly Progress
NCES	National Center for Education Statistics
CCD	Common Core of Data
MSA	Metropolitan Statistical Area
D	Dissimilarity Index
FRL	Free or Reduced Lunch
MEOLOGIT	Multi-level Ordered Logistic Regression
GOLOGIT2	Generalized Logistic Regression/ Partial Proportional Odds Models for Ordinal Dependent Variables
PP	Predicted Probability
OLS	Ordinary Least Squares Regression
MTURK	Amazon's Mechanical Turk

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To the aforementioned, and to future first-generation students, I dedicate this dissertation.

"Breaking the silence—talking about class and coming to terms with where we stand—is a necessary step if we are to live in a world where prosperity and plenty can be shared, where justice can be realized in our public and private lives. The time to talk about class, to know where we stand, is now—before it is too late…"

– bell hooks

A NATION RATED? SCHOOL SEGREGATION AND THE DISTRIBUTION OF A SCHOOL RESOURCE: THE ROLE OF ACCOUNTABILITY RATINGS IN METROPOLITAN PUBLIC SCHOOLS

In 2007, the United States Supreme Court limited the use of voluntary racial classifications by school districts in determining student assignments to schools in an effort to lessen the effects of *de facto* segregation (*Parents Involved in Community Schools v. Seattle School District No. 1* 2007) (hereinafter, *Seattle*). *De facto* segregation has long been distinguished by the Court from *de jure* segregation, segregation in Southern and border states along with the District of Columbia that historically adopted explicit state laws requiring or permitting segregation by race (Clotfelter 1999; Clotfelter 2004; Reardon and Owens 2014). While *de facto* segregation at the local level is often a result of overt and covert actions to maintain high levels of segregation (e.g. redlining and housing discrimination, see Rothstein 2015), the plurality of Justices in *Seattle* viewed educational segregation in the case not as a product of governmental policies, but of individual choices. The dissenting voice of Justice Breyer however, offered a third possibility, arguing that,

> *““state action” that is not explicitly racially segregative may nonetheless lead to greater levels of residential segregation. If legal decisions and government policy actually cause residential segregation by changing the structure of incentives that drive private choices, then evidence of segregation resulting from state action might necessitate judicial remedy.”* (Liebowitz and Page 2014: 672; Mickelson et al. 2017: Chapter 7; *Parents Involved in Community Schools v. Seattle School District No. 1* 2007).

At minimum Justice Breyer's dissent from *Seattle* suggests that if educational policy causes segregation by influencing private decisions then there may be evidence of segregation resulting from state action. Below I provide a historical overview of educational policy and school segregation trends in the United States. I argue that contemporary accountability ratings are likely unevenly distributed across schools and districts in a manner that reflects broader inequalities in metropolitan America. At the same time, school ratings may be serving as a signal of school quality to key stakeholders, *whether or not* they are an accurate indication of how well students are able to learn within their school. To test these claims, I assess (1) the association of school accountability ratings and school segregation and (2) the causal effects of school ratings on parents' perceptions of schools and attitudes toward enrollment decisions.

In 1983, the United States Department of Education published *A Nation at Risk,* effectively positioning education in America as an economic and national policy concern. This new perspective garnered the interest of legislative leaders across the entire political spectrum. As a result, there was a culmination of individual state efforts to hold schools accountable for meeting academic standards, which in turn, directly contributed to federal efforts aimed at making accountability a requirement of federal aid (Mehta 2013). In 2015, President Obama signed the Every Student Succeeds Act (ESSA) into law which reauthorized the original 1965 Elementary and Secondary Education Act (ESEA) signed by President Johnson. The immediately prior reauthorization of the law was the 2002 implementation of the No Child Left Behind Act (NCLB) under the Bush administration (U.S. Department of Education 2019). While the current law (ESSA) provides states with more authority over their accountability system in regard to setting their own goals for student achievement, the previous law (NCLB) was the first to mandate that all states publish accountability report cards based, in part, on individual student test scores that reflect the overall school as a whole (No Child Left Behind Act of 2002).

Currently, each state has flexibility in developing a unique report card or rating system (e.g., A-F; 0-100; 1-5; etc.; see Appendix B), as well as determining its own measurement of student variables (Education Commission of the States 2018). By the 2013-2014 school year, all states constructed their accountability categories by employing some variation of an index that measured "essential indicators." During that time, Mikulecky and Christie (2014) note that all states measured student achievement and graduation rates, most accounted for the academic growth (42 states), and many accounted for the reduction of achievement gaps between different student group populations (36 states), while less than half included postsecondary readiness (20 states).

In theory, school ratings were developed to raise achievement for all students by identifying poor performing schools and implementing varying degrees of intervention (No Child Left Behind Act of 2002). In discussions of accountability policy however, controversy has primarily centered around standardized exams, as research consistently shows that performance differs by student demographics (Huntington-Klein and Ackert 2018; von Hippel, Workman and Downey 2018). Across the United States, school segregation concentrates Black, Latinx and lower income students in schools with low average test scores (Logan 2010; Logan, Minca and Adar 2012). To this point, school ratings may both reflect and even reinforce educational inequalities associated with school segregation if a primary component of the rating relies on performance on standardized exams. Segregation researchers have argued that the distribution of resources and their effect on students' educational outcomes is poorly understood (Reardon and Owens 2014). I contribute to this theoretical discussion by conceptualizing school ratings as a *resource* vital to (1) the educational experience of students and (2) parents' perceptions of schools and attitudes toward enrollment decisions.

A contemporary mechanism of school segregation may be the ratings schools receive from their respective states, such that they are unequally distributed across schools and school districts. The evidence shows that families in search of housing tend to develop opinions of neighborhoods and school districts that are driven by schools' performance (Frankenberg 2013), but if ratings primarily reflect which groups of students attend which schools rather than how effectively schools are able to serve their student populations, this system may be problematic.[1] Even more, if school ratings can be predicted ex ante based on easily observable measures of student demographics, the design itself (Ehlert, Koedel, Parsons and Podgursky 2016: 478) may provide *a structure of incentives that drive private choices, potentially reinforcing segregation.* As other evidence has shown, White families tend to avoid schools with high proportions of non-White and especially Black students (Kozol 2005; Billingham and Hunt 2016). If ratings divert attention away from the disparities in other resources associated with school segregation, there is reason to suspect that school ratings may further perpetuate White and middle class families' avoidance of neighborhoods where these schools are located.

In the subsequent sections, this dissertation addresses the following five questions:

1. To what extent do levels of racial/ethnic segregation ***within*** school districts predict school accountability ratings in the United States?
2. To what extent do levels of racial/ethnic segregation ***between*** school districts predict school accountability ratings in the United States?
3. Is there an interaction effect between school demographic characteristics and levels of racial/ethnic segregation that predict school accountability ratings in the United States?
4. Do school ratings impact parents' perceptions of schools?
5. If school ratings impact parents' perceptions of schools, how do they impact parents' attitudes toward enrollment decisions?

[1] While school ratings may overlap with the plethora of online school rating systems (e.g. GreatSchools.org, an embedded feature on prominent home search websites such as Zillow.com and Trulia.com; see also Niche.com), state ratings are distinct in their measurement and weighting criteria. Even if private actors are producing their own quality indicators of schools, they may be weighted or influenced by external variables outside of the control of schools. For instance, some also account for perception surveys and display school ratings next to various neighborhood factors such as, crime and safety and diversity (https://www.niche.com/about/data/).

Together, these questions fill a significant lacuna in the literature. Scholars have yet to understand the distribution of school ratings and the possible association with school segregation. This is an important consideration, not only because student achievement is stratified within the student population, but also because school ratings may reflect broader inequalities in families and communities rather than how effective schools are at educating their student populations. Internationally, the publication of school ratings, in particular, has led to lower student enrollment and school closures (Koning and Van der Wiel 2013; Nunes, Reis and Seabra 2015). It is less clear within the United States, however, if school ratings are unequally distributed and if they are associated with school segregation levels or if they impact parent's decision-making.

The ultimate intention of this project is to inform best practices for designing, disseminating and interpreting measures of school quality by school authorities, elected officials and parents. This research accomplishes the overall objective by pursuing the following specific aims. **Aim #1:** Assess the association of school report cards and levels of within- and between-district school segregation. This aim is completed by analyzing school ratings that are disseminated through state report cards along with student demographic data available through the National Center for Education Statistics: Common Core of Data. **Aim#2:** Offer new evidence and discovery on the potential impacts of school ratings on perceptions of school quality and enrollment decisions. Building on knowledge gained from the empirical analyses described above, I collected new survey data using an experimental design. The between-subjects experimental design investigates how parents respond to school accountability ratings (A-F), net of varying school quality measures such as achievement on standardized exams and student growth. The primary objectives of the second aim are to assess the degree to which accountability policies influence parents' perceptions of school quality and impact the likelihood that parents will choose to enroll their child in a hypothetical school.

Findings reveal a significant interaction effect between school demographic characteristics and levels of between-district segregation that predict school accountability ratings. In more segregated metropolitan regions, these data show that schools with higher proportions of Black students have higher probabilities of receiving a lower school rating relative to a higher one. This association raises serious questions about the equitability of the report card system implemented across the United States, not only because it appears to be penalizing an already disadvantaged group of students and schools, but also because it may be reinforcing patterns of segregation by deterring potential families from moving into certain school districts. The second part of this dissertation examines part of this latter claim, about perceptions of the school quality as well as the extent to which these policies influence parents' decision-making to enroll their children in schools. Experimental findings show that net of adequate yearly progress across school performance metrics, parents' perceptions of school quality is significantly less favorable when shown a school profile with a lower school rating. Similarly, parents indicate that they are less likely to enroll their children in a hypothetical school with a lower rating (C-F).

Considered together, the results presented in this dissertation provide comprehensive benefits to scholars and practitioners across multiple disciplines allowing sociologists, educational researchers, methodologists and policy makers to effectively collaborate. The scientific contributions of this research include the expansion of theory and the treatment of educational accountability policies as a *resource* that plays a key role in parental decision-making, which, in turn, may influence school segregation patterns. Methodologists should gain a richer understanding of what school accountability ratings measure and how perceptions vary and depend on conditions of school quality indicators. Results from this study offer empirical evidence for the implementation and dissemination of alternative accountability metrics that are reliable and accurate estimates of how well schools and school districts serve their students. This should prove informative to social scientists and policy makers. The scope of this project has the potential to impact anyone conducting research on the association of school segregation and educational policy as well as those studying housing and public perceptions.

LITERATURE REVIEW

Educational policy and the implementation of accountability ratings

Historically, the role of the federal government in education was quite limited through the middle of the twentieth century. Following the Second World War however, the role of the federal government in education grew substantially beginning with *Sputnik* and through the passage of the Civil Rights Act of 1964, the passage of ESEA in 1965, the findings of the Coleman Report (1966), and the development of the United States Department of Education in 1979. Together, these efforts broadened the scope of the federal government in education (Mehta 2013; Superfine 2005).

Since the publication of *A Nation at Risk* in 1983*,* there have also been increased efforts to hold schools more accountable. The emphasis on “excellence” and “high standards” in the report represents a rhetorical and practical shift in the educational landscape from the child-centered view of education that characterized the 1960’s to the current standards-based emphasis on material to be mastered by all students. At the core of *A Nation at Risk* was the move toward emphasizing accountability based on quantifiable results (Mehta 2013; Oakes 1985).

There are three important laws that followed the culmination of individual state efforts to hold schools accountable for meeting academic standards. First, in 1994, President Clinton signed Goals 2000 into law. This represented the first federal attempt to promote educational reform on a national scale. Goals 2000 provided financial aid to states and districts in exchange for submitting accountability measures to the federal government (Superfine 2005). Second, in 2002, President Bush further extended Goals 2000 and signed into law the No Child Left Behind Act. This was the first federal law that *mandated* annual testing for all students in mathematics and reading each year for grades third through eighth and once in grades tenth through twelfth. To be sure, similar test-based systems existed in 49 states prior to NCLB (Mehta 2013). NCLB however, *required* states to bring all students up to levels of proficiency through adequate yearly progress (AYP) and produce a detailed timeline for how every student group would reach 100 percent proficiency by the year 2014 (No Child Left Behind Act 2002). Schools and districts that repeatedly failed to meet goals set by AYP faced loss of funding, conversion of the administration or school, and even closure.

In theory, NCLB was intended to improve education for all students. Part of NCLB focused on holding schools accountable for student subgroup populations as a way to guarantee that schools did not ignore certain groups of students. Under the law, failure of any group was defined as failure of the entire school (Gaddis and Lauen 2014; No Child Left Behind Act of 2002; Sims 2013). In practice, however, critics of quantification have shown the law to be especially consequential for disproportionate numbers of students of color, those in poverty and residents of rural and urban communities (Caven 2019; Darling-Hammond 2007; Gay 2007; Ravitch 2010; Ravitch 2013). In sum, NCLB is noted as limiting the educational curriculum and unfairly holding schools accountable for circumstances such as limited resources and events such family and neighborhood poverty that are outside of schools control (Kozol 2005; Gay 2007; Mehta 2013; Ravitch 2010).

By 2012, the United States Department of Education recognized that most schools would not meet the proficiency mandate set under NCLB – to have all students 100 percent proficient by 2014. As such, the Obama administration began granting releases to states and districts that designed comprehensive plans to close achievement gaps and increase academic outcomes. These efforts led to the third and current federal law. In 2015, President Obama signed Every Student Succeeds Act into law. Essentially ESSA reauthorizes NCLB and provides states with more authority over their accountability measures (e.g., the law allows states to include weighting metrics and various school culture measures of their own choosing—see Appendix B).

Nevertheless, ESSA continues the mandate that all states publish accountability report cards that are based, in part, on student achievement. According to the Department of Education, ESSA "[e]nsures that vital information is provided to educators, families, students, and communities through annual statewide assessments that measure students' progress toward those high standards" (U.S. Department of Education 2019). While the new law certainly allows greater flexibility among states in their development of their rating system (e.g., A-F; 0-100; 1-5; etc.; see Appendix B), all states must comply or risk losing federal funding, and construct their accountability categories by employing some variation of an index that measures "essential indicators." In the United States, all states account for student achievement in the construction of their school ratings, but research consistently shows that performance differs by student demographics (Huntington-Klein and Ackert 2018; von Hippel et al. 2018). Because school segregation concentrates Black, Latinx and lower income students in schools with low average test scores (Logan et al. 2012), school ratings may be more of an indication of broader racial/ethnic and socioeconomic inequality rather than the extent to which schools are able to provide quality education to their students. Less is known however, about how school ratings are distributed across schools and districts.

Assessing the unequal distribution of a school resource

Since the Coleman Report (1966), scholars have emphasized that schools and districts have various resources that are beneficial to their students. The existing literature documents that the distribution of resources differs by student groups and schools. These resources include: school funding in the form of property tax revenue, the social and cultural capital of parents and enrolled students, advanced curriculums, skills and credentials of teachers as well as the physical facilities in schools (Carter 2005; Duncan and Murnane 2014; Kozol 1991; Hochschild and Scovronick 2003; Lareau 2003; Lareau 2011; Logan et al. 2012; Reardon and Owens 2014; Oakes 1985). Sociologists have argued that the distribution of resources and their effect on students' educational outcomes is poorly understood (Clotfelter et al. 2003; Reardon and Owens 2014). I contribute to this scholarship by conceptualizing school ratings as an additional contemporary school *resource* that may affect students, families and schools differently if ratings and students are distributed unevenly across schools and districts in patterns that reflect existing social inequality. In addition to the distribution of resources discussed above, existing inequality includes, but is not limited to differences in funding as well as neighborhood and metropolitan housing segregation.

For instance, the evidence shows that both neighborhood and school segregation are intertwined in complex ways and that their association has strengthened over time (Frankenberg 2013; Ong and Rickles 2004; Owens 2020). Indeed, across the nation most students attend their neighborhood school, and this is especially the case at the primary level (Goldsmith 2016; Richards and Stroub 2013). While school and neighborhood segregation are associated, it is useful to conceptualize the two as partially distinct phenomena for at least two reasons. First, the research shows that wealthier children are more likely to withdraw from neighborhood schools (Saporito and Sohoni 2007). Secondly, school attendance boundaries have been gerrymandered over time (Clotfelter 2004; Frankenberg 2013; Richards and Stroub 2015). Both of these trends exacerbate school segregation to an extent over and above what might be expected based on neighborhood segregation measures alone. These trends also lead to a concentration of poverty in neighborhood schools among predominantly minority students and additionally zone students in and out based on demographics. School segregation has the strongest impact on determining educational achievement. In fact, in estimating annual test gains, school factors are most critical (Carlson and Cowen 2015), but the long-term effects of neighborhood segregation have been shown to predict educational attainment later in life. Owens (2010) shows that living in a poor neighborhood decreases the chance of completing high school and that having high achieving neighbors increases the odds of completing a bachelor's degree. Similarly, Goldsmith (2009) demonstrates that students concentrated in predominately Black and Latinx schools are less likely to earn a high school degree or bachelor's, relative to similar students in predominately White schools. The prevailing argument is that school segregation still largely exists because of the inaction to enforce antidiscrimination in housing policy and the failure to attempt to integrate neighborhoods (Frankenberg 2013; Ong and Rickles 2004; Owens 2010). With that said, throughout this dissertation, I argue that if school ratings are unevenly distributed across schools and districts, they likely reflect and potentially reinforce patterns of existing social inequality in the broader metropolitan landscape (e.g. neighborhood/housing segregation; see also Reardon, Fox and Townsend 2015).

School ratings and school segregation

School segregation affects students by both shaping the total quantity of resources available in the system and by the allocation of those resources in schools and districts (Reardon and Owens 2014). Accordingly, if school and school district racial/ethnic and socioeconomic composition affects the allocation of ratings among schools, then it is expected that segregation will lead to disparities in student outcomes that will be reflected in assigned ratings. Despite previous characterizations of "the end of segregation" (Glaeser and Vigdor 2012) or of the time period of 1968-71 through 1990 as one of a "regime of desegregation" (see Logan, Oakey and Stowell 2008), scholars have recently argued these terms might be dated when considering rulings made by the Supreme Court which have largely limited local efforts to reduce school segregation (Logan, Zhang and Oakley 2017; *Miliken v. Bradley* 1974*; Parents Involved in Community Schools v. Seattle School District No. 1* 2007). To shed light on what scholars are now calling the era of "post desegregation," I briefly discuss the historical legal landscape and its effects on changes in levels of school segregation (see Appendix A for a complete list of pertinent opinions and rulings).

Changes in levels of school segregation over the past 65 years have been inconsistent across time and place in pace and direction (Reardon and Owens 2014), and these trends begin with legal declarations throughout modern history. In 1954, the Supreme Court of the United States unanimously agreed in *Brown v. Board of Education of Topeka Kansas* (hereinafter, *Brown*) that separate was inherently unequal overturning precedent set in *Plessy v. Ferguson*

1896 that maintained separate and equal spaces. The Court however, largely left enforcement of the ruling untouched with its infamous timeline of "all deliberate speed," declared the following year in *Brown II.* As a result, the evidence suggests that school segregation remained largely unchanged in the immediate years after *Brown* (Clotfelter 2004; Orfield and Eaton 1996).

It wasn't until the following two decades that serious action was taken by Congress and the Supreme Court. In 1964, the United States Congress passed the Civil Rights Act, which entailed two key aspects pertaining to schools and desegregation efforts. In it, Congress authorized the Attorney General of the United States to initiate class actions against school districts failing to comply with *Brown.* It additionally provided the Secretary of Education (est. 1979; at the time, Secretary of Health, Education and Welfare) to withhold federal funding if schools excluded on the basis of race. Fourteen years after the Supreme Court ruled in *Brown,* they issued a clear directive that schools must desegregate "root and branch." The ruling in *Green v. New Kent County* emphasized that schools must make every effort to not only desegregate their students, but their teachers, transportation and facilities as well. The Court further extended the efforts to desegregate with the ruling in *Swann* requiring school districts to racially balance to the extent possible, even if that required bussing. As evident in time-series analyses, sociologists focused on historic change in school segregation show significant declines in Southern states' within-district segregation rates between 1970 and 1980. This trend was observed throughout the United States, but especially pronounced in the South (Logan et al. 2017).[2]

[2] Using the Dissimilarity Index, sociologists show that Southern states' within-district segregation in 1970 was 83.8, but , by the beginning of the following decade (1980), segregation had fallen to 47.3. Similarly, within-district segregation for non-Southern states decreased from 74.5 in 1970 to 56.1 by 1980 (Logan et al. 2017: 1068, Table 8).

In large part, the first two decades of Supreme Court rulings after *Brown* applied to the 19 Southern and border states along with the District of Columbia that had explicit laws permitting or requiring segregation on the basis of race. This is noted by the Court as *de jure* segregation. While it is certainly the case that segregation in the Southern United States at the time far exceeded the levels observed in any other region, the evidence does show that segregation existed throughout the country. These trends were recognized by the Court in 1973. The final decision that marked school desegregation efforts declared in *Keyes v. Denver* was, if segregation resulted from the actions taken by local authorities or school officials, that the district must desegregate. This ruling was the first to apply to other regions of the United States that did not have *de jure* segregation (Clotfelter 2004; Orfield and Eaton 1996; Wells and Crain 1997).[3] Without contest, the social scientific literature demonstrates that the 1954 to 1968 period after *Brown* maintained high levels of school segregation and the post-*Green* era, from 1968 to 1974 showed declining rates of school segregation. While these trends were especially pronounced in *de jure* states, the decline was evident throughout the nation (Clotfelter 2004; Hochschild and Scovronick 2003; Reardon et al. 2012; Reardon and Owens 2014; Wells and Crain 1994).

Key issues did arise, however. While the within-district segregation rates were declining during the period, the between-district segregation rates were on the rise based on factors that contributed to between-district segregation such as housing loans available to Whites, covert discrimination, strategic location of low-income projects, increased suburbanization, as well as

[3] Some scholars argue that *de facto* segregation at the local level is often a result of overt and covert public actions to maintain high levels of segregation and should be viewed as form of *de jure* segregation (Rothstein 2015). Scholars point to a number of factors such as housing loans available to Whites, covert discrimination, strategic location of low-income projects, increased suburbanization, as well as White flight (Massey and Denton 1993; Rothstein 2015).

White flight (Massey and Denton 1993; Rothstein 2015). This trend was particularly evident in non-Southern states in which school districts are plentiful and often small relative to the much larger school districts in the South. As a result, for non-*de jure* states, those not in Southern and border states, the declines of within-district segregation were offset by the increase of segregation between school districts (Clotfelter 1999; Clotfelter 2004; Reardon and Owens 2014). For instance, in non-Southern states, measures of segregation between-districts steadily increased while measures of segregation within-districts decreased (Logan et al. 2017). This trend is often noted as *de facto* segregation.

Efforts to desegregate across school district boundaries were however largely blocked as part of the *Milliken v. Bradley* ruling in 1974 (Hereinafter *Milliken*). In *Milliken*, the Court declared that school districts were not responsible to participate in interdistrict efforts unless plaintiffs could prove discriminatory acts by the state or district (Clotfelter 1999; Clotfelter 2004; Reardon and Owens 2014). Consequently, the school segregation literature since the 1980s has been less clear.

On the one hand, some scholars have characterized the epoch as one of resegregation (e.g. Orfield and Eaton 1996; Orfield and Lee 2004; Orfield and Lee 2005; Orfield and Lee 2007). To them, *Milliken* and subsequent rulings in the 1990s (e.g. *Board of Education v. Dowell 1991; Freeman v. Pitts 1992 and Missouri v. Jenkins 1995*) that allowed schools to be removed from Court-ordered oversight have resulted in an increase in school segregation. On the other hand, other scholars have made the argument that school segregation throughout the 1990s and up through 2010 has changed very little. In fact, Logan et al. (2017) show that school segregation, both within- and between-districts, has remained relatively flat or declined slightly in and outside of the South (see also Stroub and Richards 2013). At the core of the disagreement is how one measures school segregation. For those that tend to see school segregation as increasing, they rely on measures of exposure and isolation indices to support their argument. Others that show only modest increases in the early 90s and declines in the 1998 to 2009 period rely on measures of evenness (Stroub and Richards 2013). While scholars contend that the measures are correlated, they argue that the two are conceptually distinct (Reardon et al. 2012; Reardon and Owens 2014). Exposure measures necessarily reflect the relative size of the group populations, whereas evenness measures do not. That is, exposure and isolation measures are sensitive to the overall racial composition of the school district and metropolitan area. This is a significant difference, as the demographics in the United States have changed over time with large increases in non-White and non-Black populations (Clotfelter 2004). Evenness measures capture changes in distribution of students in schools. For instance, if a school district is 80 percent Black and if all schools are 80 percent Black, there would be low unevenness, but high isolation or Black-Black exposure.

Most scholars are in agreement that the school segregation levels in the United States today are far lower as a result of *Brown* and the subsequent rulings. For those that use measures of evenness, the current emphasis is on between-district segregation, as recent evidence shows that relative to within-district segregation, this measure remains remarkably high, especially in non-Southern states. The evidence also shows however, that once school districts are released from Court oversight as a result of achieving "unitary" status (a status declared by the Court that recognizes a district as serving all students, rather than as maintaining separate systems by race, *Board of Education v. Dowell 1991*: Appendix A) or recognized as not liable for undoing *de facto* segregation (*Freeman v. Pitts 1992*) that the district does not maintain the same levels of integration it achieved under supervision (Reardon et al. 2012). In sum, the sociological literature maintains that school segregation has declined significantly since 1954, but that the trends varied by region and across time. Today, the largest difference in school segregation is between-districts. According to Clotfelter (2004) "… *Brown* started the engine and *Green* and *Swann* stepped on the accelerator, *Milliken* and *Dowell* applied the brakes (Pp 196)."

Assessing why school segregation is predictive of school ratings

There are a number of reasons to suspect that school ratings may be unevenly distributed across schools and districts in a manner that reflects broader inequalities in American society associated with residential and school segregation. Given their reliance on performance on standardized exams, school ratings likely reflect existing patterns of racial/ethnic and socioeconomic disparities in achievement. While the Black-White (Quinn 2015; Yeung and Pfeiffer 2009), and Latinx-White (Reardon and Galindo 2009) test score gaps have slightly narrowed in recent decades, they have persisted since *Brown* and remain significantly wide, with Black children on the lowest slope of achievement. Reardon and Galindo (2009) indicate that, at the start of Kindergarten, there exist large gaps in reading and mathematics among Black and Latinx students relative to White students. More specifically, as students' progress through education, the Latinx-White gap narrows and the Black-White gap widens (Quinn 2015; Reardon and Galindo 2009). In terms of socioeconomic disparities, findings from the seasonal effects literature demonstrate that net of race/ethnicity, socioeconomic gaps in achievement widen throughout the summer months but remain steady throughout the school year (Condron 2009; Downey 2008; Downey et al. 2004; Downey et al. 2008; Hippel et al. 2018). These early gaps are shown to set off wider gaps in subsequent years (Yeung and Pfiffer 2009).

This literature suggests that racial/ethnic background tends to influence individual academic outcomes (Hogrebe and Tate 2010; Quinn 2015; Reardon and Galindo 2009; Sirin 2005; Stiefel, Schwartz and Chellman 2007; Yeung and Pfeifer 2009) and that the racial/ethnic composition of schools tends to influence overall academic achievement (Caldas and Bankston1997; Crosnoe 2005; Hanushek and Rivkin 2009; Helig and Holme 2013; Logan 2010; Logan et al. 2012). In addition, the concentration of students by race/ethnicity and income has been shown to exacerbate inequality in academic outcomes due to the unequal distribution of resources among schools as well as the stratification of resources deriving from factors outside of schools that students bring with them (e.g., differences in family educational attainment, poverty/wealth and neighborhood characteristics). For instance, schools with large shares of White children provide students with greater access to learning opportunities, while schools with larger proportions of non-White children provide students with more limited opportunities. Predominantly non-White schools are more likely to be overcrowded and are more likely to be staffed by inexperienced and less effective teachers because they are less able to attract and retain teachers with greater experience (Kozol 1991; Kucsera, Siegel-Hawley and Orfield 2015; Mickelson 2001; Musu-Gillette et al. 2016). By creating resource-rich school environments for White students and resource-poor environments for Black students, school segregation intensifies stratification between racial/ethnic groups. When White and Black children attend racially segregated schools, the evidence shows that on average, White students are surrounded by peers that possess more resources (i.e., concentrated advantage), while Black students are concentrated in environments that possess fewer (i.e., concentrated disadvantage) (Coleman 1966; Condron et al. 2013). Together these factors exacerbate racial/ethnic gaps in academic achievement (Logan et al. 2012). As Goldsmith (2011: 509) noted, "…in terms of educational outcomes, the students typically enrolled in minority-concentrated schools are a liability for each other, and the students typically enrolled in White-concentrated schools are an asset for each other." In short, school segregation is an impediment to equal educational opportunities and a key contributor to the racial/ethnic achievement gaps (Card and Rothstein 2009; Condron et al. 2013; Logan et al. 2012). While achievement scores are one component of state accountability rating systems, the association of school segregation and overall school ratings remains unexamined.

Combining the discussion above on educational policy and school ratings with the segregation literature, it is expected that school ratings will be differentially distributed across schools and school districts serving different groups of students in patterns that reflect existing inequalities in academic achievement. First, given the evidence that suggests that segregation affects the total quantity and allocation of resources in schools and districts, and the fact that in the era of accountability schools are rated and held accountable, in part, for individual student achievement on standardized exams, the expectation is that schools will have lower ratings when they are located in (a) more segregated districts (within-district segregation) and (b) more segregated metropolitan areas (between-district segregation). Specifically,

> ***Hypothesis 1:*** Schools' categorical rating will decrease as the racial/ethnic segregation *within* school districts increase.

> ***Hypothesis 2:*** Schools' categorical rating will decrease as the racial/ethnic segregation *between* school districts increase.

Second, because the school segregation literature largely shows that relative to within-district segregation, between-district segregation remains especially pronounced, it is reasonable to assume that the distribution of vital resources between school districts is more unequal than within school districts. If this is the case, it is anticipated that between-district segregation will have a larger negative effect on school ratings relative to within-district segregation. This association reflects broader patterns of inequality in the allocation of resources between-districts being more unequal than within-districts. In other words, it suggests that forces producing educational inequality between racial/ethnic groups primarily operate between school districts, rather than within school districts (Reardon et al. 2019). Accordingly,

> ***Hypothesis 3:*** Racial /ethnic segregation *within* school districts will be less important in accounting for the association with school ratings than the racial/ethnic segregation *between* school districts.

In addition to the unequal distribution of resources, some scholars have focused on the role of racial/ethnic concentration in the perpetuation of inequality. As discussed above, this stream of research finds that across the United States, non-White groups of students are concentrated in schools with lower average test scores (Logan et al. 2012), which is a key measure contributing to the overall rating a school receives from its respective state. The evidence suggests two specific patterns. First, higher shares of Black student enrollment, rather than variations in general minority enrollment (e.g. percent of Latinx student enrollment) primarily impact the achievement of non-Latinx Blacks and Whites (Hanushek, Kain and Rivkin 2009; Goldsmith 2011). Second, the evidence shows that the impact of the concentration of Black students operates at multiple levels. At the school-level, previous research finds that high levels of the concentration of Black students has a negative effect on student achievement

(Caldas and Bankston 1998).[4] At the metropolitan-level, scholars have shown that regions with larger concentrations of Black students produces larger gaps in achievement between White and Black students, net of other characteristics (Reardon et al. 2019). Together, the disparities in achievement gaps appear to be jointly shaped by the distribution of resources and students at both the school- and metropolitan-level. If school ratings primarily reflect existing inequalities and higher levels of segregation indicates a more unequal distribution of essential resources, it is expected that the association of lower school ratings in (a) more segregated districts (within-district segregation) and (b) more segregated metropolitan areas (between-district segregation) will depend on schools' Black student population (see also, Hanushek and Rivkin 2009). Stated differently, the negative association of school ratings and measures of segregation will be strengthened by schools' Black student enrollment in more segregated metropolitan regions. Thus,

> ***Hypothesis 4:*** The negative association between schools' Black population and overall rating will be stronger in metropolitan areas with higher levels of between-district Black-White segregation (i.e., there will be an interaction between the school composition and levels of metropolitan segregation).

To the extent that the accountability ratings are associated with the demographic composition of schools and school districts, the rating system itself may ultimately undermine the ability of schools to raise achievement for their students.

[4] See also, Condron et al. 2013. At the state-and school-level, these scholars find that increases in Black–White dissimilarity and Black isolation contribute to widening Black-White gaps in both math and reading. Notably, Condron et al. (2013) find that increases in the *exposure* of Black to White students are associated with reductions in achievement gaps.

Ratings shaping perceptions of school quality

While school ratings may reflect racial/ethnic segregation and broader patterns of inequality, they also serve as an important resource to key stakeholders, including public officials, school administrators, and especially parents who may perceive ratings as an indication of school quality. To the extent that school ratings actually measure the quality of education students receive by incorporating various measures of student growth over time (e.g. Ehlert et al. 2016), then there may be less concern about the possibility that school ratings affect perceptions of school quality. If this is the case, school ratings should affect perceptions of quality, because they provide stakeholders with an accurate depiction of the degree to which schools are making efficient and effective use of various kinds of resources, including state funding and, most importantly, student enrollment. However, to the extent that school ratings merely reflect inequalities in the broader society and misrepresent the consequences of these inequalities as if they are valid indicators of school quality, their potential effect on perceptions of school quality and stakeholders' decision-making about which schools to invest in becomes much more concerning.

Accountability systems were developed to hold educational institutions responsible for student outcomes using various mechanisms of performance report cards connected with explicit rewards and sanctions (Deming and Figlio 2016). Within higher education, ratings have been shown to be a powerful force in shaping decision-making, enrollment patterns and influencing perceptions of organizational prestige (Bowman and Bastedo 2009; Bastedo and Bowman 2010; DiMaggio and Powell 1983; Epseland and Sauder 2007; Scott 2013). Within this literature, sociologists and educational researchers alike find that ratings influence future assessments of reputation and have a significant effect on college choice. For instance, the evidence shows that ranking as a top-tier institution on the front page of the U.S. News Rankings provides a substantial increase in admissions the following year (Bowman and Bastedo 2009). Similarly, an increase in the performance ratings of hospitals has been shown to attract more patients (Pope 2009).

Within primary and secondary education, international studies have shown that publicizing school quality indicators in newspapers affects enrollment patterns in the Netherlands (Koning and Van der Wiel 2013) and in Portugal (Nunes et al. 2014). In the United States, previous qualitative evidence suggested that parents rely on their personal networks to determine the quality of a school (Holme 2002). However, more recent experimental work during the era of NCLB shows that parents are more likely to choose high scoring schools for their children when provided information from standardized exams (Hastings and Weinstein 2008; Hastings, VanWeelden and Weinstein 2007). Taken together, school ratings may be serving as a signal of school quality, *whether or not* they are an accurate and appropriate indicator of how well schools are able to serve their students net of differences in resources.

This literature largely suggests that ratings not only influence future assessments but also future enrollment patterns because they are seen by the public as legitimate, which may impact perceptions of school quality. Considered in this vein, one can conceptualize elementary school ratings as a vital resource that may shape parents' perceptions of schools and attitudes toward enrollment decisions. To the extent that the accountability ratings influence perceptions and attitudes net of satisfactory progress on academic indicators of school quality, the system itself may ultimately undermine the ability of lower rated schools to attract and retain high performing students. Because previous evidence shows that people perceive a greater difference among school ratings based on the format (e.g., letter grade relative to performance index; Jacobsen, Snyder and Saultz 2014), the expectations are that:

> ***Hypothesis 5:*** Lower school ratings (letter grades) will be associated with lower perceptions of school quality.

> ***Hypothesis 6:*** Lower school ratings (letter grades) will be associated with lower perceptions of likely enrolling.

METHODS

Secondary data utilizing a unique data set

Specific aim #1: *To assess the association of school report cards and levels of within-district and between-district school segregation.* To evaluate this aim, I draw primarily on two kinds of data: school accountability report cards distributed by individual states and data on the demographic composition of schools. Data for the dependent variable, school rating, come from school report cards for public schools across 14 states that utilize similar rating scales (e.g. 1-5, A-F; see Appendix C for details). I compiled this unique dataset and it includes school ratings from the following states: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah and Wisconsin. Data on student demographic information come from The National Center for Education Statistics (NCES) Common Core (CCD) which annually reports school-level characteristics for individual public schools and districts. The focus on the metropolitan regions located within these 14 states limits the generalizability of the findings. That is, I am unable to make national claims with these data. I discuss more limitations in the discussion and sections below.

Dependent Variable: Measurement of School Ratings

The outcome of principal interest in these analyses is an ordinal indicator of school rating. In the 2017- 2018 school year, these 14 states rated schools within their state on an ordered scale that consisted of five distinct categories. Whereas, Alabama, Arizona, Arkansas, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, Texas and Ohio utilized an A-F system, South Carolina, Utah, and Wisconsin employed an alternative 1-5 scale.[5] For each state, each category has a range in which the accountability score can fall and are based on annual goals set by statewide data. The overall accountability score is the result of the accountability index, which is a combination of several different measurements and components for which there is sufficient data (Education Commission for the States 2018). Appendix B demonstrates the variation across different state indicators in the United States, and Appendix C shows the precise measurements by each of the 14 states in which data was available and is included in this dissertation. The outcome pools the states' school ratings for the 2017-2018 school year. To examine the outcome, school ratings are treated as an ordered variable on a 5-point scale. Hereafter, I refer to all ratings in the ensuing sections as being on the comparable 5-category scale and report all findings as the distribution of A, B, C, D and F ratings.

The analysis includes public schools located in the metropolitan regions of these 14 states and is limited to elementary students attending nonvirtual schools. Schools that received alternative ratings are also excluded from the analysis.[6] Following others (Logan et al. 2004;

[5] South Carolina descriptively rated their schools on a five-point scale from "unsatisfactory" to "excellent." Similarly, Utah descriptively rated their schools on a five-point scale from "critical needs" to "exemplary." Wisconsin used a five-star system and rated their schools as 1-star: "fails to meet expectations" and 5-stars: "significantly exceeds expectations."

[6] At the state-level, NCES indicated 3,905 virtual or supplementary virtual schools. Alternatively rated schools included online academies (e.g. e-learning centers), technical/vocational academies, and corrections. The category often includes schools with few students tested in the grades and schools without tested grades. May also include new schools and schools that serve 100 percent "at-risk" populations.

Logan 2012; Logan et al. 2012; Logan et al. 2017), I limit these data to include elementary grades, Pre-Kindergarten thru sixth to reduce bias from segregation effects of students in higher grades that are drawn from a larger catchment area and those that choose to attend specialized high schools outside of their zoned school.[7] The final sample includes 10,369 schools. For the outcome variable, Figure 1 provides descriptive statistics for the overall sample. Roughly 51 percent of the schools included in this sample received an A (20.2 percent) or B rating (31.1 percent). Nearly one third of the sample received a C rating (31.7 percent) and about 17 percent of the schools received the lowest state ratings (D: 11.9 percent; F: 5.0 percent).

[Insert Figure 1 here]

Focal Independent Variables

Within-District School Segregation. The focal independent variables in the analysis are the levels of 1) *within*-district segregation as well as 2) *between*-district segregation. Data for these measures come from the National Center for Education Statistics (NCES) Common Core (CCD) which reports school-level characteristics for individual public schools and districts. These data include information regarding the total number of students eligible for free/reduced lunch, grade specific characteristics such as the racial/ethnic composition as well as characteristics on personnel (e.g. student/teacher ratio). This dissertation uses the most recent full version of data compiled by NCES for the 2016-2017 school year. To construct the first key independent

[7] Compliance with NCES reporting is voluntary. As such, there may be gaps in statewide reports of student composition.

variable, *within*-district school segregation, I aggregate the grade specific characteristics from NCES up to the school-level. Following others (Logan et al. 2017), only schools with five or more Black, Latinx and White students are included in the analysis. I operationalize the evenness dimension using the dissimilarity index, focusing on the dissimilarity from non-Latinx whites, ${}_xD_w$

$$= 100\left(\frac{1}{2}\sum_{i=0}^{n}\left|\frac{x_1}{X} - \frac{w_i}{W}\right|\right)$$

where ${}_xD_w$ is the dissimilarity between the distribution of group x (Black, Latinx) across n **schools** in the **school district** and corresponding distribution of non-Latinx Whites, w_i is the non-Latinx White student population of the school and W is the non-Latinx White student population of the school district. The final analysis includes 885 school districts.

Between-District School Segregation. To construct the second focal independent variable, *between*-district school segregation, I aggregate the school specific characteristics discussed above to the district-level. Only school districts with two or more elementary schools are included in the analysis (Logan et al. 2017; see also Appendix S for sensitivity analyses). Here too, I utilize the dissimilarity index to operationalize evenness between school districts at the metropolitan-level. Based on the above equation, ${}_xD_w$ is the dissimilarity between the distribution of group x across n **school districts** in the **metropolis** and corresponding distribution of non-Latinx Whites, w_i is the non-Latinx White student population of the school district and W is the non-Latinx White student population of the metropolis. Because educational policy differs by state, the final analysis excludes metropolitan regions that cross state boundaries. The final analysis includes 112 metropolitan regions with at least 100 Black and 100 Latinx students. [8, 9]

Measuring segregation with the dissimilarity approach that I have described here provides a measure of school segregation that is standardized across different levels of analysis where the relative group sizes are different. For *within*-district measures, the index is based on relative shares of students belonging to each racial group in each school for each district. For *between*-district measures, the dissimilarity index is based on information about the relative shares of each group in each school district in the metropolis. In total, I calculate four dissimilarity index measures for Black-White and Latinx-White students at both the district- and metropolis-level. Because I multiplied each of these four measures by 100, the overall index can be interpreted as the percentage of the population of group *x* who would have to either move to another school district (e.g. between-district segregation) or switch schools (e.g. within-district segregation) in order to achieve complete school integration. Values range from 0 to 100, with 100 indicating total separation.

[Insert Table 1 here]

[8] I include Charlotte/Gastonia/Rock Hill, NC/SC and Texarkana, TX/Texarkana in the analysis however because they encompass states contained in the analysis. Eau Claire, WI; Brownsville/Harlingen/San Benito, TX; McAllen/Edinburg/Mission, TX; Santa Fe, NM; and Prescott, AZ were removed from the final analysis based on metropolitan demographic considerations. 13 MSAs were removed because they crossed state boundaries. This includes: Augusta/Aiken, GA/SC, Duluth/Superior, MN/WI, Evansville/Henderson, IN/KY, Fort Smith, AR/OK, Huntington/Ashland, WV/KY/OH, La Crosse, WI/MN, Louisville, KY/IN, Memphis TN/AR/MS, Minneapolis/St. Paul, MN/WI, Norfolk/Virginia Beach/Newport News, VA/NC, Parkersburg/Marietta, WV/OH, Steubenville/Weirton, OH/WV, Texarkana, TX/Texarkana, AR, Flagstaff, AZ/UT.

[9] I conduct several additional sensitivity analyses to assess the extent to which results presented below are robust to different criteria to including specific schools in the analysis sample. Appendix U includes a series of models with more restrictive inclusion criteria. The table includes a restriction to these data for metropolitan regions with at least 1) 500 Black students, 2) 1,000 Black students, 3) 5,000 Black students, and 4) 10,000 Black students. The primary associations remain substantively the same, including the key interaction association, suggesting that the findings presented below are not dependent on the inclusion criteria described above.

As shown in Table 1, the average total metropolitan-level segregation between Black and White children is highest in the Midwest at 62.8 percent. Conventional standards for classifying segregation using dissimilarity values indicate that values above 60 are high, values between 30 and 60 are moderate and values below 30 are low (Denton and Massey 1989; Kantrowitz 1973; Massey and Denton 1988; Massey and Denton 1993; Reardon and Owens 2014). Table 1 also shows that school segregation is nominally higher within school districts, relative to between school districts, but that this varies by region. Specifically, the average segregation indices across groups in Southern states shows that within-district segregation is higher than between-district segregation, while the opposite trend is evident in the West and Midwest regions of the United States. This pattern has been documented elsewhere (Clotfelter 2004: 63) and is described above as an outcome of district size and Supreme Court mandates. These variables are used to test Hypotheses 1 through 4. Figure 2 and Figure 3 provide a visual of the spatial density for both Black-White and Latinx-White metropolitan segregation within the metropolitan regions of the 14 states included in this analysis. For an account of segregation indices by each metropolis included in the sample, please reference Appendix D.

[Insert Figure 2 here]

[Insert Figure 3 here]

Additional independent measures. I include several school- and district-level controls in the models that may be associated with school segregation and school ratings, including charter status, specific type of rating system used in each state (e.g., A-F or 1-5), poverty, demographics, geographic region, local funding, racial/ethnic composition and the percent White population

School-level controls. At the elementary-level, most children in the United States still attend traditional public schools (Goldsmith 2016; Richards and Stroub 2013). However, in recent decades, there has been a growth in charter schools, and findings on their effects on achievement have been mixed across context, space and among different groups of students (Logan and Burdick-Will 2015; Zimmer et al. 2019) with some scholars indicating that enrollment in charter schools is a function of school and district segregation (Bifulco and Ladd 2006; Renzulli 2006). As such, all analyses control for schools with charter designation to assess the association of traditional public schools' demographics and accountability ratings. Charter status is a binary variable reported by NCES, with charter equal to one and non-charter equal to zero. I control for charter status across all models. While the 14 states included in these data follow a similar 5-point scale, they do vary in specific type. I address this difference across all models by including a binary control variable for states that employ an A-F system set equal to one and states that use an alternative 5-point scale equal to zero. Additionally, I control for different proportions of student race and ethnicity at the school-level. Exploratory analyses for race and ethnicity revealed that categorical specifications rather than continuous accounts provide a better fit to these data. For both Black and Latinx student populations, categories were constructed using their respective standard deviations resulting in four distinct categories for Latinx and five categories for Black students. The result suggests that different proportions and specifically, schools' with larger portions of Black and Latinx students are more predictive of school ratings relative to schools with relatively fewer Black and Latinx students. According to Table 2, ratings and racial composition categories appear to follow a distinct pattern, such that lower rated schools have higher proportions of Black students relative to higher rated schools. According to these data, 10 percent (7.78 percent + 2.22 percent) of schools receiving F ratings have Black student populations that make up 62 percent or more of the schools' total enrollment. In contrast, only about 5 percent (3.43 percent + 1.19 percent) of schools receiving A ratings have a Black student population that comprises more than 62 percent of total enrollment. Thus, predominantly Black schools were about twice as likely to receive an F as opposed to an A rating. More generally, schools that received higher ratings had proportionally fewer Black students on average than those with lower ratings.

Combining the two highest categories of percent Latinx, Table 2 shows that roughly 15 percent (9.54 percent + 5.34 percent) of schools receiving an A rating have Latinx student populations that are 55 percent or more of total enrollment, while nearly 23 percent (13.78 percent + 8.67 percent) of the schools receiving an F rating have a Latinx student population above 55 percent. Accordingly, predominantly Latinx schools appear more likely to receive an F as opposed to an A rating. The pattern is similar to Black student composition and school ratings, but Latinx student composition and school ratings is a weaker, non-monotonic relationship across the five categories. Other contextual factors in schools such as poverty have been shown to impact student performance (Hogrebe and Tate 2010). Thus, it is reasonable to expect that such factors may also impact the extent to which school segregation is associated with school ratings. I control for poverty in two ways. First, using data from NCES, I control for school poverty by combining the total count of children eligible for free lunch and the total count of children eligible for free or reduced lunch (FRL) and dividing by the total school population. Because I multiplied this measure by 100, the overall school poverty rate can be interpreted as a percentage. To address the potential of overcontrol bias, I estimate models with and without controls for school and district poverty. These models are presented in the appendix.[10]

[Insert Table 2 here]

District- and metropolitan-level controls. Second, I account for district-level poverty using the EDGE School Neighborhood Poverty Estimates.[11] This survey relies on household economic data based on income data from families with children ages five to 18 who were surveyed over a five-year period as part of the U.S. Census Bureau's American Community Survey and public school point locations. It is an estimate of the income-to-poverty ratio for the neighborhood around public school locations and provides an indicator of local economic conditions in neighborhoods where students live (Geverdt and Nixon 2018). The original estimates reflect the percentage of family income that is above or below poverty, ranging from zero to a top coded-value of 999. I reverse code this variable so that higher values correspond to a higher degree of neighborhood poverty. I then aggregate these measures to the district-level.

[10] Including these variables slightly increase the negative association of the focal relationship (.01). Nonetheless, the substantive associations observed and discussed in the final models remain and are discussed below.
[11] This measure is moderately ($r = 0.53$; $p<.01$) and positively associated with school poverty estimates based on FRL estimates.

[Insert Table 3 here]

Because racial and ethnic demographics are unevenly distributed across the country and because court ordered mandates to desegregate schools and districts have been primarily in the Southern United States, I control for the region in which the metropolis is located. Following others (Clotfelter 1999; Clotfelter 2004; Logan et al. 2004; Orfield and Monfort 1992), region for these data is a categorical variable for South (74 percent), Midwest (18 percent) and West (8 percent). Restricting the analysis to metropolitan regions in states with 5-category rating scales limits the generalizability of these findings. In particular, Southern states are overrepresented in these data (74 percent), while Midwestern and Western states are underrepresented, and states located in Northeast region are not represented at all.

[Insert Table 4 here]

Previous literature has demonstrated that school funding is differentially distributed among school districts. Because a significant and growing portion of school funding comes from local taxes, districts with more expensive housing have higher rates of taxes and subsequently higher revenues from school taxes. This contributes to the trend that some districts have more money to spend per year on each student relative to other schools. Moreover, differential access to school funding provides some districts with greater ability to attract and retain a high quality teaching staff (Hochschild and Scovronick 2003; Ostrander 2015), which has the potential to impact individual school ratings. Using data from the Public Elementary-Secondary Education Finance

Data Survey of School System Finances from the Census of Governments, I estimate models with and without a control for the revenue from property taxes in total dollars. According to the descriptive statistics, district funding from property taxes ranges between zero and 1.2 million dollars. I normalize the distribution of funding by employing the natural log transformation of property taxes. There is a notable trend in the descriptive statistics. Specifically, there is a fairly strong relationship and a distinct trend with school funding and school ratings. In these data, schools with lower school ratings receive less funding on average relative to schools with higher ratings.

Sociologists and educational researchers alike have argued that exposure to students from different racial and ethnic backgrounds has long-term effects in challenging the tendency for segregation to be perpetuated across institutions and throughout students' lives (Braddock and McPartland 1989; Orfield and Eaton 1996; Wells and Crain 19976). If racial/ethnic group members are a minority of a metropolitan region, they tend to experience high levels of exposure to the majority regardless of the pattern of evenness (Massey and Denton 1988: 287). To account for the extent to which children of different racial/ethnic backgrounds within school districts are surrounded by other children from other racial/ethnic backgrounds, I control for the percent of White children at one of two levels in all models, at the district- and at the metropolitan-level. [12] For models of within-district segregation I control for the percent of White children at the district-level by aggregating school demographic variables in NCES up to the district, dividing by the total student population within the district and multiplying by 100. For models of

[12] After calculating exposure indices with these data, I find that Black-White and Latinx-White segregation within school districts is negatively associated with Black-White exposure (-0.55*) and Latinx-White exposure (-.52*). Black-White and Latinx-White segregation between school districts is positively associated with Black-White exposure (.30*) and Latinx-White exposure (.15*). Accordingly, exposure indices are not included in the subsequent models.

between-district segregation, I control for the percent of White children at the metropolitan-level using the method just described, aggregated to the metropolis.[13]

Lastly, I generate two dichotomous variables based on court case data compiled by the American Communities Project at Brown University(https://s4.ad.brown.edu/Projects/USSchools/). These data include 358 court cases that resulted in desegregation plans in 850 school districts. It also includes 207 school districts that implemented desegregation plans under pressure from the Department of Health, Education and Welfare (HEW) since 1978. Like others (Logan et al. 2017), I treat HEW actions as equivalent to mandates to desegregate. The two variables I generate include "prior mandate" which is equal to one if a school district was under a mandate to desegregate between the years of 1980 and 1989 or zero if not, and "recent mandate" which is equal to one if a school district was under a mandate to desegregate since 1990 and zero if not. After restricting these districts to the states in this analysis, the descriptive statistics show that 767 schools are located in districts with mandates to desegregate since 1990 and that 297 schools are in districts that were under mandate prior to 1990.

ANALYTIC STRATEGY

Within-District School Segregation

The focus of ***aim#1*** is to assess the relationship between school ratings and school segregation. Given the ordered character of the dependent variable for school ratings, I first examine the

[13] In addition, I effectively control for the percent non-Black, non-Latinx students, by controlling for the focal group (e.g. Percent Black categories in the models estimating the effects of B-W (D) segregation) and the other group (e.g. Percent Latinx in the models that estimate the "effect" of B-W (D) school segregation)).

relationship among school ratings and *within*-district school segregation using a **two-level** mixed-effects ordered logistic regression model and Stata 15's `meologit` commands with several postestimations.

This model contains both fixed and random effects and allows for levels of nested clusters of random effects. In terms of a latent linear response, observed ordinal ratings y_{ij} can be expressed as:

$$y^*_{ij} = x_{ij}\beta + z_{ij}u_{ij} + \varepsilon_{ij}$$

and

$$y^*_{ij} = \begin{cases} 1 \; if & y^*_{ij} \leq k_1 \\ 2 \; if & k_1 < y^*_{ij} \leq k_2 \\ . & \\ . & \\ K \; if & k_{K-1} < y^*_{ij} \end{cases}$$

where latent variable y^*_{ij} represents the underlying continuous measure on which the school rating is based in school *i* in district *j*, x_{ij} are the covariates, β is the regression coefficients for the fixed effects and z_{ij} are the covariates corresponding to the random effects, u_{ij} (StataCorp 2013). Regressing school ratings on the independent variables produces the fixed effects, the estimated cutpoints and the estimated variance components. The fixed effects are interpreted in the same manner as output produced from an ordered logistic regression. That is, this model predicts the natural log of the odds of being in a category less than or equal to k, as a function of a vector of independent variables, k – 1 cutpoints. Since the ratings implemented by these states assigns each school to one of five distinct categories, k is equal to 5 and thus, there are k-1 = 4 thresholds, k_1 through k_4. This is the most parsimonious approach, given the hypotheses and these data (Heeringa, West and Berglund 2010; Long and Freese, 2014).[14]

Between-District School Segregation

Second, I examine the relationship among school ratings and *between*-district school segregation with a **three-level** mixed-effects ordered logistic regression model. Similar to the assessment of *within*-district school segregation, this model contains both fixed and random effects and allows for levels of nested clusters of random effects. Following the above equation, the observed ordinal ratings are similarly expressed, but they are clustered within an additional level. Here one can note y^*_{ijm} as the school rating of school *i* in district *j* in metropolitan region *m.* The covariates for the fixed effects with regression coefficients are given by β, while z_{ijm} are the covariates corresponding to the random effects, u_{ijm} (StataCorp 2013; Raman and Hedeker 2005).

Below I present the results in several ways. First, I present smoothed values from a kernel-weighted local polynomial regression of schools' racial/ethnic composition on levels of within- and between-district segregation. Second, I employ a series of mixed-effects ordered logistic regression models which includes interactions between school racial/ethnic composition and levels of within- and between-district segregation. Third, I present the average marginal effects associated with changes in schools' student population demographics and the broader

[14] Ordered logistic regression relies on the proportional odds assumption, such that the parameters do not change for different categories (Long and Freese, 2014). To test the parallel line assumption in a single-level ordered logit model one can use Stata 15's brant and oparrallel command options. However, no such test exists in Stata for multi-level ordered regressions. While the LR test for the multi-level models suggest that the proportional odds assumption is not violated, additional informal indications using alternative models (e.g. gologit2 with robust clusters) that relax the assumption produces similar results (Fullerton and Xu 2016). I include figures produced from gologit2 in the appendix.

metropolitan region. Fourth, I present the regression results as predicted probabilities using tests of significance based on delta-method standard errors followed by the marginal differences in these predicted probabilities (Long and Mustillo forthcoming; Mood 2010; Mustillo, Lizardo and McVeigh 2018; Williams 2009).

RESULTS

Are school ratings associated with school segregation? If so, by what metric (i.e. within- or between-district segregation)?

[Insert Figure 4 here]

[Insert Figure 5 here]

Figure 4 shows smoothed values from a kernel-weighted local polynomial regression of Black-White within-district segregation on the percent Black student population by school rating. Figure 5 shows similar values of Black-White between-district segregation on the percent Black student population by school rating. While all five school ratings, from A through F, follow broadly similar trends in Figure 4, Figure 5 shows a divergence among schools based on their levels of Black-White between-district segregation and Black student population. Specifically, Figure 5 shows that as levels of between-district segregation increase, schools with Black populations that exceed 50 percent are shown to align more strongly with the failing category

(F). Contrastingly, schools that receive an A correspond more strongly with lower levels of between-district segregation.

[Insert Figure 6 here]

[Insert Figure 7 here]

Figure 6 and Figure 7 present similar values for Latinx children and Latinx-White within- and between-district segregation. The trendlines shown in Figure 6 are indistinguishable. At few thresholds of between-district segregation and Latinx student population, depicted in Figure 7, there is a divergence among the school ratings, such as around 50 and near 90 percent Latinx student population. For instance, these thresholds suggest that schools that receive an A appear to correspond more strongly with lower levels of between-district segregation. Relative to the trends shown with Black-White between-district segregation and Black student composition however, the pattern of these trendlines are less clear. Figure 8 and Figure 9 present values for White children and Black-White between-district segregation. Here too, the trendlines for both measures are relatively indistinguishable. There appears to be a notable exception, however. For schools that receive an A rating with relatively low levels of White student composition (i.e., below 35 percent) in metropolitan regions with low levels of Black-White segregation (i.e. $D < 30$). Collectively, these findings suggest that the association between school ratings and segregation may be most pronounced for measures of between-district segregation and that it depends on schools' racial makeup.

[Insert Figure 8 here]

[Insert Figure 9 here]

Figures 5 through 9 suggest that school ratings may be unevenly distributed across schools, but that this association differs by student demographics and measures of school segregation. Nevertheless, are these differences significant? If so, by what metric (i.e. within- or between-district segregation)?

[Insert Table 5 here]

Within-District School Segregation

Table 5 and Table 6 present results from the multi-level ordered logistic regressions of within-district segregation with covariates, including school- and district-level controls. Across both models in Table 5, there is evidence that relative to schools with low proportions of Black student populations (i.e. 0-19 percent), schools with high proportions of Black student populations (i.e. 42-62 percent) have lower odds of being in a higher rated category relative to a lower one, net of additional covariates. Specifically, Model 2 predicts that the odds of a higher rating relative to a lower one decreased by about 75 percent for predominantly Black schools (i.e. 83-100 percent Black) when compared to schools in which less than one-fifth of the students (i.e. 0-19 percent) were Black ($100*(e^{(-.1.37)}-1) = -74.59$). Table 5 shows that relative to schools without a recent mandate to desegregate, schools located in districts with a recent mandate (i.e. 1990-2003) have higher odds of being in a higher rated category relative to a lower one. Model 2 in Table 5 accounts for school funding in the form of district-level property taxes. The coefficient for property taxes is positive and significant, suggesting that schools located in districts with higher levels of property taxes have higher odds of being in a higher rated category relative to a lower one. This finding is significantly noteworthy from a policy perspective and warrants future research. For just a five percent increase in property taxes, the odds of a higher school rating versus a lower one are increased by approximately 73 percent ($100*(e^{(.11*5)}-1) = 73.33$), controlling for other variables. According to the coefficients in Table 5, the interaction between varying proportions of Black students and within-district Black-White segregation is not significant.

[Insert Table 6 here]

Table 6 assesses similar associations for schools' percentage of Latinx students and within-district Latinx-White segregation. Across both models in Table 6, there is evidence that, compared to schools with low proportions of Latinx student populations (i.e., 0-4 percent), schools with higher proportions of Latinx student populations (i.e., 56-80 percent) have lower odds of being in a higher rated category relative to a lower one, net of additional covariates.[15] More precisely, Model 2 predicts that the odds of a higher rating relative to a lower one

[15] The coefficient for schools with high proportions of Latinx student populations (i.e. 81-100 percent) is marginally significant under a one-tailed test (i.e. 0.1) in Model 2, but not Model 1.

decreased by about 56 percent for schools with 56-80 percent Latinx student composition when compared to schools with 0-4 percent Latinx student composition ($100*(e^{(-.83)}-1) = -56.40$). Like in Table 5, the coefficients for segregation and the interaction effect between the two do not produce statistically significant associations. In sum, these data appear to fail to support Hypothesis 1, that schools' categorical rating will decrease as the racial/ethnic segregation *within* school districts increase.

Between-District School Segregation

Table 7 and Table 8 present results from the multi-level ordered logistic regressions of between-district segregation with covariates, including school-, district- and metropolitan-level controls. Across models in Table 7, there are statistically significant negative interaction effects between higher proportions of Black students and between-district Black-White segregation. Specifically, as segregation levels increase, schools with higher proportions of Black student populations (i.e., 20-41 percent through 83-100 percent) relative to schools with lower proportions of Black student populations (i.e. 0-19 percent) show lower odds of being in a higher rated category compared to a lower one, net of additional covariates. The interaction variables show notable patterns. The coefficient for B-W Between (D) * 83-100 percent Black, show that given a moderate level of metropolitan segregation, schools with higher concentrations of Black students receive lower ratings relative to higher ratings, and this is increasingly the case as metropolitan segregation increases. For instance, in metropolitan regions with average levels of segregation in these data (D = 36), the predicted odds of a higher rating relative to a lower rating decrease for schools with higher proportions of Black students (i.e. 83-100 percent Black) by about 55 percent ($100*(e^{(.27-.03*36)}-1) = -55.5$). For moderately segregated regions (D = 45), the predicted odds of a higher rating relative to a lower rating decrease for schools with higher proportions of Black students (i.e. 83-100 percent Black) by 66 percent ($100*(e^{(.27-.03*45)}-1) = -66.04$). Similarly, for highly segregated metropolitan regions (D = 65), the predicted odds of a higher rating relative to a lower rating decrease for schools with higher portions of Black students (i.e. 83-100 percent Black) by nearly 81 percent ($100*(e^{(.27-.03*65)}-1) = -81.36$).

[Insert Table 7 here]

Model 2 in Table 7 accounts for property tax revenue at the district-level and slightly reduces the total number of schools and districts observed in Model 1 (e.g. from 10,369 schools and 112 districts to 9,138 schools and 102 districts). Again, the coefficient is positive and significant, suggesting that schools located in districts with higher levels of property taxes have higher odds of being in a higher rated category relative to a lower one. As the percent of students who qualify to receive free and reduced lunches (FRL) increase, the odds of a higher rating compared to a lower rating decrease. Consequently, for a 10 percent increase in FRL, the odds of a higher school rating versus a lower one is decreased by approximately 9.5 percent ($100*(e^{(-.01*10)}-1) = -9.52$), net of other variables. Relative to schools located on the West coast of the United States, schools in the Southern region show lower odds of a higher rating relative to a lower one.

Notably, there is a positive association with the percent of White students at the metropolitan-level. In fact, as the percent of White students in the metropolis increase, the odds of a higher rating compared to a lower rating increase, net of additional covariates. This finding is likely important for policy makers and merits additional research. For just a one percent increase of White students in the metropolis, the odds of a higher school rating versus a lower one increases by approximately 43 percent (100*($e^{(.36*1)}$ -1) = 43.34), controlling for other covariates. Compared to traditional public schools, charter schools in these data show higher odds of receiving a higher rating compared to a lower rating.[16] More precisely, the odds of a higher ratings relative to lower one are increased by about 36 percent for charter schools when compared to traditional public schools (100*($e^{(0.31)}$ -1) = 36.34).

[Insert Table 8 here]

Table 8 assesses similar associations for Latinx students and between-district Latinx-White segregation. Like Table 6, Table 8 shows significant negative coefficients for schools with higher proportions of Latinx students. Compared to schools with low proportions of Latinx student populations (i.e. 0-4 percent), schools with higher proportions of Latinx student populations (i.e. 56-80 percent and 81-100 percent), have lower odds of being in a higher rated category relative to a lower one, net of additional covariates. In Model 2, the odds of a higher rating relative to lower one are decreased by about 44 percent for schools with 56-80 percent Latinx student composition when compared to schools with 0-4 percent Latinx student composition (100*($e^{-.59}$ -1) = -44.57) and decreased by 71 percent for schools with 83-100 percent Latinx population (100*($e^{-1.24}$ -1) = -71.06). Like in Table 5, the coefficients for

[16] Across Model 1 and Model 2 in Table 7, there is no evidence that the type of rating a school receives (e.g. A-F relative to 1-5) is driving the observed associations.

segregation and the interaction effect between the two do not produce statistically significant associations.

Model 2 in Table 8 accounts for property tax revenue at the district-level and slightly reduces the total number of schools and districts observed in Model 1 (e.g. from 10,369 schools and 112 districts to 9,138 schools and 102 districts). The property tax revenue coefficient is again positive and significant. Like in Table 7, this suggests that schools located in districts that receive greater amounts of property taxes have higher odds of being in a higher rated category relative to a lower one. For a five percent increase in property taxes, the odds of a higher school rating versus a lower one is increases by approximately 92 percent ($100*(e^{(.13*5)}-1) = 91.55$). The effect of school poverty is negative and significant. In fact, as the percent of students who qualify to receive free and reduced lunches (FRL) increase, the odds of a higher rating compared to a lower rating decrease. Relative to schools located in the Western part of the United States, schools in the Midwest show higher odds of a lower rating relative to a higher one. For schools in the Midwest, the odds of a higher rating relative to lower one are decreased by about 45 percent compared to schools in the West ($100*(e^{-.59}-1) = -44.57$). Again, there is a positive association with the percent of White students at the metropolitan-level. Similar to findings in Table 7, Model 2 in Table 8 shows that as the percent of White students in the metropolis increase, the odds of a higher rating compared to a lower rating increase, controlling for additional variables. Compared to traditional public schools, charter schools show higher odds of receiving a higher rating compared to a lower one.[17]

[17] Across Model 1 and Model 2 in Table 8, there is no evidence that the type of rating a school receives (e.g. A-F relative to 1-5) is driving the observed associations.

Considered together, findings from Table 5, Table 6, Table 7 and Table 8 provide evidence that school ratings are unevenly distributed across schools and districts. While there appears to be a lack of support for Hypothesis 1 and Hypothesis 2, there is support for Hypothesis 3 and Hypothesis 4. Specifically, racial /ethnic segregation *within* school districts appear to be less important in accounting for the association with school ratings than the racial/ethnic segregation *between* school districts. Indeed, the negative association between schools' Black student population and overall rating is stronger in metropolitan areas with higher levels of between-district segregation. The significant interactions in Table 7 between race/ethnicity and segregation suggests that the distribution of school ratings depend on the various concentrations of Black students. Relative to the racial/ethnic composition and segregation interaction at the district-level (within-district segregation), the coefficients at the metropolitan-level (between-district segregation) suggest that the distribution of vital resources between school districts is more unequal than within school districts. That is, Table 7 suggests that the effect of school racial composition on the overall school rating depends on the broader segregation levels.

In recent years, scholars have cautioned against using the coefficient from an interaction term in nonlinear models to draw conclusions (Long and Mustillo forthcoming; Mood 2010; Mustillo, Lizardo and McVeigh 2018; Williams 2009). Below I show the average marginal effects associated with differences in schools' student composition categories.[18] Then I present the regression results from Table 7 and Table 8 as predicted probabilities using tests of

[18] In the Appendix, I show Table 9 and Table 10 with a continuous measure of Black student and Latinx composition, respectively. Appendix Q and Appendix R show the average marginal effects associated with a one standard deviation increase in percent Black by Black-White between-district segregation and a one standard deviation increase in percent Latinx by Latinx-White between-district segregation. It is generated using the same covariates shown in Table 7 and Table 8, but in order to show a standard deviation change, I replace the categorical variable for student composition with the linear formations. This replacement shows substantively similar associations to models using the categorical version of this variable.

significance based on the delta-method for calculating standard errors (Long 2009; Xu and Long 2005).

[Insert Table 9]

Table 9 shows the average marginal effects associated with categorical comparisons of schools' Black student composition by various levels of metropolitan-level Black-White segregation. Across all metropolitan regions included in the analyses, schools with larger shares of Black students decreases the probability of receiving an A or B rating and increases the probability of receiving a D or F rating. For instance, compared to schools with 0-19 percent Black students, schools with 20-41 percent Black students decrease the probability of receiving an A rating by .034 (-.034; $p < 0.01$) and increase the probability of receiving an F rating by .012 ($p < 0.01$). Similarly, compared to schools with 0-19 percent Black students, schools with 83-100 percent Black students decrease the probability of receiving an A rating by .089 (-.089; $p < 0.01$) and increase the probability of receiving a D rating by .066 ($p < 0.01$) and an F rating by .057 ($p < 0.01$). This trend remains throughout the table when comparing schools with high proportions of Black students relative to low proportions. For schools with majority Black students, there are no significant differences between the highest thresholds (i.e. schools with 83-100 percent Black relative to schools with 63-82 percent Black).

For metropolitan regions with medium to high levels of segregation (i.e. $D > 30$), the associations described above are strengthened. For example, relative to schools with 0-19 percent Black students, schools with 20-41 percent Black students decrease the probability of receiving an A rating by .054 (-.054; $p < 0.01$) and increase the probability of receiving an F rating by .021

($p < 0.01$). This suggests that in more highly segregated metropolitan regions, schools with relatively moderate levels of Black students (e.g. 20-41 percent) have an increased probability of receiving an F which is nearly double the probability of receiving an F rating when all metropolitan regions are considered. This trend remains throughout the table. Consider schools with 0-19 percent Black students compared to schools with 83-100 percent Black students. Here, there is a decrease in the probability of receiving an A rating by .145 (-.145; $p < 0.01$) and an increase in the probability of receiving an F rating by .108 ($p < 0.01$). In more segregated regions, Table 9 suggests that as schools' Black student composition increases, the probability of receiving a higher school rating decreases and the probability of receiving a lower school rating increases (see also Appendix Q for linear form). In metropolitan regions with low levels of Black-White segregation, there is no evidence that changes in schools' Black student population impacts the probability of a higher or lower school rating. This indicates that variations in schools' Black student populations in and of themselves do not produce significant differences. Instead, Table 9 suggests that the association between school demographic characteristics and overall school rating depends on the broader levels of metropolitan segregation.

[Insert Table 10]

Table 10 shows the average marginal effects associated with categorical comparisons of schools' Latinx student composition by various levels of metropolitan-level Latinx-White segregation. The first section of the table shows all metropolitan regions included in the analyses. Like Table 9, Table 10 shows that schools with larger shares of Latinx students decreases the probability of receiving an A or B rating and increases the probability of receiving a C, D or F rating. Relative to schools with 0-4 percent Latinx students, schools with 56-80 percent Latinx students decrease the probability of receiving an A rating by .114 (-.114; $p < 0.01$) and increase the probability of receiving an F rating by .039 ($p < 0.01$). Likewise, compared to schools with 0-4 percent Latinx students, schools with 81-100 percent Latinx students decrease the probability of receiving an A rating by .126 (-.126; $p < 0.01$) and increase the probability of receiving a D rating by .068 ($p < 0.01$) and an F rating by .045 ($p < 0.01$). This trend remains throughout the table when comparing schools with high proportions of Latinx students relative to low proportions (see also Appendix R for linear form). Similar to Table 9, Table 10 shows no significant differences between the highest thresholds (i.e. schools with 81-100 percent Latinx relative to schools with 56-80 percent Latinx).

Considering regions with medium to high levels of segregation (i.e. $D > 30$), the associations described above are similar though less pronounced for some categories. For instance, compared to schools with 0-4 percent Latinx students, schools with 56-80 percent Latinx students decrease the probability of receiving an A rating by .116 (-.116; $p < 0.01$) and increase the probability of receiving an F rating by .051 ($p < 0.01$). The difference between these categories is slightly strengthened in relation to considering all metropolitan regions. However, the difference between schools with the highest proportions of Latinx students and schools with the lowest proportions is slightly decreased. Specifically, relative to schools with 0-4 percent Latinx students, schools with 81-100 percent Latinx students decrease the probability of receiving an A rating by .104 (-.104; $p < 0.01$) and increase the probability of receiving a D rating by .055 ($p < 0.01$) and an F rating by .042 ($p < 0.01$). This may suggest that in more segregated metropolitan regions, schools with relatively high levels of Latinx students (e.g. 81-100 percent) have a less negative impact on the probability of a higher rating relative to a lower rating. This is distinct from the trends shown above for schools with higher proportions of Black students. In fact, the final portion of Table 10 may provide some insight. In metropolitan regions with low levels of segregation, the vast difference appears to be between schools with the highest levels of Latinx student populations (e.g. 81-100 percent) relative to schools with lower proportions of Latinx students. For instance, relative to schools with 0-4 percent Latinx students, schools with 81-100 percent Latinx students decrease the probability of receiving an A rating by .108 (-.108; $p < 0.01$) and increase the probability of receiving a D rating by .056 ($p < 0.01$) and an F rating by .032 ($p < 0.01$). This indicates that variations in schools' Latinx student populations in and of themselves may produce significant differences that does not depend on the broader levels of metropolitan segregation. In less segregated metropolitan regions, schools with larger portions of Latinx students appear to have a lower probability of receiving a higher rating. I expand on these findings below, but caution the reader on their generalizability given that no metropolitan regions in these data include areas that meet conventionally high values of segregation for Latinx-White (e.g. D >60; Denton and Massey 1989; Kantrowitz 1973; Massey and Denton 1988; Massey and Denton 1993; Reardon and Owens 2014).

[Insert Figure 10]

Figure 10 graphs the unequal distribution of school ratings. It shows how the predicted probability of school ratings (A-F) varies by Black student concentration and between-district Black-White segregation (i.e., the interaction effects from Table 7). These predictions are computed from the regression results in Table 7 when control variables are held at their mean values (Long and Freese 2014). The X-axis represents the predicted probabilities of the different school ratings on the Y-axis (A-F).

Figure 10 shows a six-panel graph of schools with categorical thresholds for Black student concentration and two continuous measures of between-district Black-White segregation (i.e., the interaction effects from Table 7). The top left graph in Figure 10, panel 1, shows the predicted probabilities of school ratings for schools with 0-19 percent Black students located in a metropolis with a segregation index equal to 0.[19] Here, the predicted probability (pp = .246, ub = .293, lb = .206) of a school receiving an A rating is substantially higher than the predicted probability of a school receiving a D (pp =.101, ub = .121, lb = .081) or F (pp =.045, ub = .057, lb = .033) rating, where "ub" is the upper bound of the confidence interval and "lb" is the lower bound. In other words, the probability of schools with 0-19 percent Black students in metropolitan regions with no segregation in receiving an A rating is more than twice as high as the probability of receiving a D rating. This trend remains similar for the following two panels on the top half of the six-panel display. Regardless of the level of metropolitan segregation, schools with low shares of Black students do well (i.e., most receive a B or C letter rating, and many also receive A ratings). This is evident in the top left and top middle panel, panel 1 and panel 2. This suggests that, in and of themselves, high levels of segregation do not produce substantial differences. Similarly, comparing the top left panel (panel 1) l to the top right panel (panel 3) shows that having a larger share of Black students also doesn’t make much difference either, given low levels of metropolitan segregation.

[19] In the appendix, I present the cross-tabulations of the data by selected points to demonstrate the total amount of schools in these data that meet the fixed covariates. I use STATA 15.1’s margin commands and specify values for covariates to be fixed with the at(atspec) option. Appendix also includes additional at(atspec) options representing similar patterns shown in Figures 10-13.

Notably, the bottom left graph in Figure 10, panel 4, shows the predicted probabilities of school ratings for schools with 40-62 percent Black students located in a metropolis with a segregation index equal to 70. Here, the predicted probability of a school receiving an A (pp =.120) rating has decreased and the predicted probability of a school receiving an F (pp =.106) rating has increased, relative to the previous three-panels. While the predicted probability of a school receiving an A rating appears to be substantially different than the predicted probability of a school receiving a B or C rating, the probability is indistinguishable from a school receiving a D or F rating. The final panel, panel 6, in the bottom right corner presents the predicted probabilities of school ratings for schools with 83-100 percent Black student concentration located in a metropolis with a segregation index equal to 70. This graph shows that the predicted probability of receiving an A (pp =.061, ub =.093, lb = .029) rating has decreased and differs substantially from the chance of receiving a C (pp =.335, ub = .369, lb = .299) or D (pp =.249, ub = .293, lb = .206) rating. Most notably, the predicted probability of a school with these characteristics receiving an F rating is .195, which is more than two times greater than the predicted probability of receiving an A (pp =.061) rating. Relative to the top middle panel (panel 2), the bottom right (panel 6) and bottom left panel (panel 4) show clearly that schools with more Black students have higher predicted probabilities of receiving a lower rating, given higher levels of metropolitan segregation. Conversely, consider the top left (panel 1), top right (panel 3) and bottom middle panels (panel 5), collectively these demonstrate that changes in schools' Black student composition does not have a significant impact on overall school rating, given low levels of segregation.

[Insert Figure 11 here]

Figure 11 shows a six-panel graph of schools with categorical thresholds for Latinx student concentration and two continuous measures of between-district Latinx-White segregation (e.g. the interaction effects from Table 8). The top left panel in Figure 11, panel 1, shows the predicted probabilities of school ratings for schools with 0-4 percent Latinx students located in a metropolis with a segregation index equal to 0.[20] Figure 11 shows that the predicted probability of a school with these characteristics receiving an A (pp =.278, ub = .305, lb = .203) rating is higher than the predicted probability of a school receiving a D (pp =.089 ub = .116, lb = .061) or F (pp =.039, ub = .054, lb = .023) rating. Put differently, the probability of schools with 0-4 percent Latinx students in metropolitan regions with no segregation in receiving an A rating is more than three times as high as the probability of receiving a D rating. This trend remains similar for the following two panels on the top half of the six-panel display.

The bottom middle panel of Figure 11, panel 5, shows the predicted probabilities of school ratings for schools with 81-100 percent Latinx students located in a metropolis with a segregation index equal to 0. Here, the predicted probability of a school receiving an A (pp =.113) rating has decreased, and the predicted probability of a school receiving an F (pp =.114) rating has increased, relative to the previous four-panels. The final panel in the bottom right corner, panel 6, presents the predicted probabilities of school ratings for schools with 81-100 percent Latinx student concentration located in a metropolis with a segregation index equal to 50. This graph shows that the predicted probability of receiving an A (pp =.177, ub = .225, lb =

[20] See Appendices for the cross-tabulations of the data by selected points to demonstrate the total amount of schools in these data that satisfy the fixed covariates. I use STATA 15.1's margin commands and specify values for covariates to be fixed with the at(atspec) option.

.130) differs substantially from the likelihood of receiving a C (pp =.327, ub = .354, lb = .300), D (pp =.138, ub = . 170, lb = .108) or F (pp =.070, ub = .093, lb = .048) rating.

Below I provide four additional figures that contain the marginal differences in the predicted probability of school ratings for schools that receive an A and schools that receive an F rating for both Black student concentration and Latinx student concentration and their respective between-district segregation indices.

[Insert Figure 12 here]

Figure 12 presents the predicted probabilities of schools for each categorical threshold for Black student concentration and two levels of between-district Black-White segregation. Figure 12 shows two trendlines. The solid line represents metropolitan regions with a segregation index of .5, while the dashed line represents metropolitan regions with a segregation index of 71.5. Figure 14 shows a significant and widening gap in the predicted probability of receiving an A rating as both measures increase. Specifically, the likelihood of receiving an A rating decreases rapidly as the Black student composition increases in metropolitan regions with high rates of segregation (i.e. D = 71.5). For schools with 83-100 percent Black students located in highly segregated metropolitan regions, the predicted probability of receiving an A is .059, which is substantially lower than the likelihood of schools in similarly segregated metropolitan regions with 0-19 percent Black students (pp =.237) and schools with 20-41 percent Black students (pp =.170). This is a distinct trend relative to schools with varying levels of Black student populations located in metropolitans with low segregation levels (i.e. D =. 5). In fact, for the latter trendline, the predicted probabilities of receiving an A rating are indistinguishable.

[Insert Figure 13 here]

Figure 13 presents similar trendlines for schools' predicted probability of receiving an F rating. Like Figure 12, Figure 13 shows two trendlines. The dashed line represents metropolitan regions with a segregation index of .5, and the solid line represents metropolitan regions with a segregation index of 71.5. Figure 13 shows a substantial and widening gap in the predicted probability of receiving an F rating as both measures increase. In fact, the probability of receiving an F rating increases as the Black student concentration increases in metropolitans with high rates of segregation (i.e. D = 71.5). For schools with 83-100 percent Black students located in highly segregated metropolitan regions, the predicted probability of receiving an F is .201, which is statistically substantially higher than the likelihood of schools with 0-19 percent Black students (pp =.048) and schools with 20-41 percent Black students (pp =.072). In other words, the difference in receiving an F is more than four times greater for schools with higher Black student compositions relative to schools with lower proportions (pp=.048*4) = .019). Similar to Figure 12, Figure 13 represents a notable trend relative to schools with varying levels of Black student populations located in metropolitans with low segregation levels (i.e. D = .5). Here too, the trendline representing low levels of segregation shows that the predicted probabilities of receiving an F rating are indistinguishable. I expand on these findings below.

[Insert Figure 14 here]

Figure 14 presents the predicted probabilities of schools with each categorical threshold of Latinx student concentration and two-levels of between-district Latinx-White segregation. There are two trendlines. The solid line represents metropolitan regions with a segregation index of 0, and the dashed line represents metropolitan regions with a segregation index of 55. Because of the confidence interval overlap on each level, Figure 14 shows indistinguishable trendlines representing the predicted probability of receiving an A rating across various Latinx student compositions for both high and low metropolitan segregation. In other words, the evidence shows that, unlike Figure 12, the interaction of schools' proportion of Latinx students with broader metropolitan segregation does not produce substantially different predictions.

[Insert Figure 15 here]

Figure 15 shows the predicted probabilities of schools with each category of Latinx student composition along with measures of between-district Latinx-White segregation. The two trendlines represent metropolitan regions with a segregation index of 0 and with a segregation index of 55. Like Figure 14, Figure 15 shows indistinguishable trendlines among the segregation indices, representing the predicted probability of receiving an F rating across each category of Latinx student composition. Here too, the evidence shows that unlike Figure 13, the interaction of schools' proportion of Latinx students with broader metropolitan segregation does not demonstrate substantial differences.

To summarize, the findings from ***aim#1*** provide answers to several questions posed at the beginning of this dissertation. First, the results show that neither measures of within- or between-district segregation predict school ratings when considered solely as a focal independent variable. In other words, the findings show no support for Hypothesis 1 or Hypothesis 2. However, there is evidence of an interaction effect between school demographic characteristics and levels of racial/ethnic segregation that predict school accountability ratings. To be clear, the findings show that school ratings are associated with schools' Black student composition and that this association strengthened depending on levels of between-district Black-White and the broader metropolitan landscape. In more segregated metropolitan regions, the data show that schools with higher proportions of Black students have higher probabilities of receiving a lower school rating relative to a higher one. Figure 12 and Figure 13 capture the most extreme outcomes of the accountability system – receiving an A and receiving an F overall letter grade. Here, there is a distinct pattern which documents the importance of the interaction of school demographics and metropolitan segregation. The findings do not show the same association for schools' Latinx student populations or between-district Latinx-White segregation. It is important to note however, that between-district Latinx-White segregation does not exceed a dissimilarity index of 55 (e.g. Table 1) in these data, whereas between-district Black-White segregation reaches a maximum of 72.3 in some regions. This suggests that between-district Latinx-White segregation in these data do not meet the criteria indicative of high segregation (e.g. values above 60) (Denton and Massey 1989; Kantrowitz 1973; Massey and Denton 1988; Massey and Denton 1993; Reardon and Owens 2014). With that said, within-district Latinx-White segregation does exceed a dissimilarity value of 60, but the evidence does not suggest similar associations when considered at the district-level (e.g. Table 6; Figure 6). Notably, this finding must be considered within the limits of these data. These data are a subsample of the United States and while research primarily finds stable trends in Latinx-White segregation, there is evidence from other metropolitan regions not included in this analysis (e.g. including but not limited to, Los Angeles-Long Beach-Glendale, CA; Salinas, CA; Minneapolis-St. Paul-Bloomington, MN; Portland-Vancouver-Hillsboro, OR-WA) that show increasing rates of Latinx-White segregation (Logan and Stults 2011: Table 4: 12-13).

Due to the lack of evidence shown by using measures of within-district segregation, these results suggest that patterns of inequality in the allocation of resources are more unequal between school districts, rather than within (Reardon et al. 2019). School demographics in isolation do not appear to be driving association. Instead, the divergence among the trendlines reflects a jointly shaped unequal distribution of resources and students at both the school- and metropolitan-level. This association raises serious questions about the equitability of the report card system implemented across the United States, not only because it appears to be penalizing an already disadvantaged group of students and schools, but also because it may be reinforcing patterns of segregation by deterring potential families from moving into certain schools and districts. The second part of this dissertation examines part of this latter claim, about perceptions of the school quality as well as the extent to which these policies influence parents' decision-making to enroll their children in schools.

METHODS

Primary data utilizing an experimental design

Specific aim #2*: To offer new evidence and discovery on the potential impacts of school ratings on perceptions of school quality and enrollment decisions.* The second major component of the dissertation is designed to assess how different overall school ratings influence (a) parents' perceptions of school quality and (b) their attitudes toward enrolling their child or children in a hypothetical school. Data for this study rely on primary data collection utilizing the online survey platform, Qualtrics, and the solicitation of respondents via Amazon's Mechanical Turk (MTurk), a mechanism similar to the solicitation of a traditional panel.[21] Qualtrics was ideal for survey development because it has a built-in feature that allows for the randomization of exposure groups and can simultaneously fix the question order and hold constant the school performance metrics. Qualtrics also has a random number generator that was used to maintain confidentiality and to ensure that respondents from MTurk received payment. Following the completion of the survey, respondents received a random code that they could copy and paste into MTurk for payment. Based on previous compensation rates and online discussion boards, the recommended rate of paying a survey respondent was between $6.00 and $7.25 an hour which translates to between $0.10 and $0.12 a minute (https://www.mturk.com/pricing). Because the Federal minimum wage in the United States is $7.25 an hour and the expectation was that the survey would take between 3 and 5 minutes to complete, I paid a compensation rate of $0.60 per respondent.[22, 23]

Because this study focuses on the extent to which ratings impact parents' perceptions of school quality and enrollment decisions, respondents were limited to adult parents in the United States with children under the age of 21. I assessed if respondents fit this criterion in three ways. First, the consent form included two eligibility requirements that respondents agreed to – *I am at*

[21] A blind proposal was submitted to the Time-Sharing Experiments for the Social Sciences Short Studies Program (SSP) (Druckman and Freese 2012; Quadlin 2019). Unfortunately, the study was not accepted due, in part, to the population parameters of identifying parents in the United States.
[22] Additional Amazon fees ($0.24 for each respondent).
[23] Prior to launching the survey, I conducted 9 cognitive pre-tests to investigate the reliability and validity of the experiment. This process confirmed that overall school rating may impact decisions of enrollment, a finding that is consistent with international research (Koning and Van der Wiel 2013; Friesen et al. 2012). Put differently, net of neutral indicators of "School and District Performances" such as "Adequate Yearly Progress" in closing the achievement gap, overall rating appeared to drive decision-making on this sample.

least 18 years old and *I am a parent of a child/children between the ages of 0 and 21 years old*. Second, through a parameter identification built into Amazon's qualification criterions, I was able to restrict the panel of respondents to parents located in the United States.[24] Third, the first question on the survey asked respondents *Are you a parent [Please select one].* Respondents that selected "No" in response to this question were sent to the end of the survey and excluded from the data. A power analysis revealed that 385 parents provides a 95 percent confidence interval and 5 percent margin of error.[25] In early 2020, 461 respondents self-selected to participate in the experiment, and of those who opted-in, 414 fully completed the study. The completion rate is 89.8 percent. Descriptive statistics for the sample are reported below.

While this sample is indeed limited in its generalizability (i.e. does not maintain a nationally representative panel of respondents), employing an experimental design provides internally valid causal inferences of how ratings influence parents' perceptions of school quality and attitudes toward enrollment decisions (Pedulla 2016; Quadlin 2018). Moreover, MTurk is becoming a widely used tool by social scientists to recruit panel participants and to provide empirical evidence to stimulate future research in their respected areas of expertise (Buhrmester, Kwang and Gosling 2011; Cusatis and Garbarski 2018).

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[24] Qualification criterions include many variables including but not limited to, parental status, location, finances, employment, political ideology, marriage status, device-types. In combination with criterion types, requesters are able to select sub-categories such as gender or online purchase types https://www.mturk.com/help#how_use_premium_qualifications).

[25] I use the following equation to calculate the sample size needed for a 95 percent confidence interval with a 5 percent margin of error (e): $\frac{\frac{z^2 p(1-p)}{e^2}}{\frac{z^2 p(1-p)}{e^2 N}}$ I substitute z with the z-score 1.96, and N with the United States parent population estimate: 33,552,189 (U.S. Census Bureau. 2013-2017). After calculation, I find that I must recruit 384.15 parents. I round to the nearest whole number and find that the minimum sample size needed is 385 parents.

[Insert Table 11 here]

EXPERIMENTAL DESIGN

I collected new survey data using a between-subject experimental design to investigate how parents respond to school ratings (A-F), net of school performance measures. Respondents were randomly assigned to be exposed to one of five school ratings (i.e. A-F) that described a hypothetical school profile. To optimize the analysis using this design, participants were presented the same questions in the same order (Charness, Gneezy and Kuhn 2012). While the overall school rating was experimentally manipulated, each participant viewed the same four "School and District Measures of Performance" (Student Achievement on Standardized Tests, Growth in Student Achievement Over Time, Closing Achievement Gaps With Other Students and On-Track to Graduation) and corresponding "Adequate Yearly Progress" notation (see Appendix X for Survey Instrument). To be clear, the between-subject experimental design exposed respondents to only one treatment (i.e.,. one school rating). This is distinct from a within-subject experimental design in which respondents are exposed to more than one of the treatments. In general, scholars have noted between-subject designs as more conservative in their estimations and have cautioned against carry-over and spurious effects from within-subject designs (Charness et al. 2012). Prior to viewing a random school profile of *Cedar Elementary* each respondent was provided with the following statement:

> *"School. The following page shows report card data for Cedar Elementary School. Cedar Elementary is a public school. The performance of Cedar Elementary has been measured by the school's performance index scores and is listed for each area. Each category is rated as below, adequate or exceeds yearly progress. The overall rating is a*

> *weighted combination of these measures. The overall rating scale is A-F. With the provided data, please answer the following questions."*

For each participant, the hypothetical school was given the name *Cedar Elementary School.* Figure 16 indicates that the distribution of respondents by exposure group is similar. That is, roughly a fifth of the total sample were exposed to each possible school rating (i.e. A-F).

[Insert Figure 16 here]

OUTCOME MEASURES

After they had read the profile for *Cedar Elementary*, respondents were asked two key questions of interest. First, participants were asked: *Imagine the ideal overall school rating for you and your household. How well do you think Cedar Elementary compared with your ideal?* Second, participants were asked: *Imagine Cedar Elementary was your local neighborhood school. If cost were not an issue, how likely do you think you and your household would be to decide to enroll your child in Cedar Elementary School versus an Alternative School (such as a private school, voucher or charter)?* To examine these outcomes as continuous variables on a 6-point scale, responses were coded so that higher scores mean closer to ones' ideal and more likely to enroll in *Cedar Elementary.*

.[Insert Figure 17 here]

Perceptions of school quality

For the first outcome variable, perceptions of school quality, Figure 17 provides the unweighted means and corresponding confidence intervals of the distribution of respondents by exposure group. Relative to those that viewed a lower rated school profile (e.g. C, D or F), those that randomly viewed a higher rated profile (e.g. A or B) show, on average, higher rates of indicating that *Cedar Elementary* more closely aligned with their ideal school type. As shown in Figure 17, the average differences between those who viewed A or B rated schools relative to C, D or F schools appear to be distinct from one another (i.e. the confidence intervals for higher ratings do not overlap with lower ratings). Based on tests for independence, the distribution of participant responses and school rating appear to be completely independent ($\chi2$ (20) = 65.01 ; $p < 0.01$).

[Insert Figure 18 here]

Likelihood of enrollment

For the second outcome variable, likelihood to enroll, Figure 18 shows the unweighted means and corresponding confidence intervals of the distribution of participants by school rating. The pattern of distribution is similar to perceptions of school quality. Here too, tests for independence show that the distribution of participant responses and school rating appear to be completely independent ($\chi2$ (20) = 133.41; $p < 0.01$). Relative to those that viewed a lower rated school profile (e.g. C, D or F), those that randomly viewed a higher rated profile (e.g. A or B) reported, on average, a higher average likelihood of enrolling their children in Cedar Elementary. As shown in Figure 18, these differences are significantly different from one another.

Independent Variables

While the effects of school report card ratings should be relatively similar across various sociodemographic characteristics because of the random assignment of participants into exposure groups (Mutz 2011), I include additional independent variables to assess if there are relationships between controls and participant's responses (i.e. whether responses vary by race/ethnicity, gender or number of children). In addition to the experiment, the survey included several questions to obtain pertinent demographic information.

Political views are measured on a six-point scale, from extremely liberal (1) to extremely conservative (6), and were coded so that the responses with higher values correspond to stronger conservative identification.[26] Education is measured on a six-point scale and was coded so that the responses with higher values correspond to higher levels of education. Age is measured in years and gender is a binary variable, with female equal to one and male equal to zero. Race/ethnicity is measured with categories for Black, White, Latinx, Asian and Other. Total number of children is measured with categories from 1 (1) to more than 5 (6). To examine these responses as a binary variable, responses were collapsed to create a dichotomous variable, with one equal to 1 or 2 children and 3 or more children equal to zero. The type of school that the respondent sent or send their child/ren to is measured with categories for Public, Private, Charter, Voucher and Other.[27] Lastly, I capture geographic location based on the state location provided

[26] I utilized similar language to how this question is asked on the General Social Surveys (Smith et al. 1972-2018).
[27] For those that selected other, there was an option for a write in response. 6 respondents indicated that they homeschooled their child.

by the participants. Similar to the first study above, I collapse states into regions of the United States and treat region as a four-item categorical variable.

Table 11 shows descriptive statistics for the 414 participants in the survey experiment. The average age of the sample is 35, the majority are White (66 percent) or Black (23 percent) and most have 1 or 2 children (79 percent). A majority of respondents identify as male (62 percent), and most indicate that they send/sent their child/ren to a public school (63 percent). [28]

ANALYTIC STRATEGY

Perceptions of school quality

To understand how parents' think about the quality of *Cedar Elementary*, results are shown using continuous forms of the outcome. Perceptions of school quality are recorded on a 6-point scale and responses were coded so that higher scores mean *Cedar Elementary* is closer to ones' ideal school. First, I show the average percentage of perceptions and use chi-square tests of independence to determine if cross-tabulations are independent. Second, I employ a series of ordinary linear regression models which includes sociodemographic covariates. Third, I present the regression results as predicted values.

Likelihood of enrollment

[28] Males appear to be overrepresented in these data. This is not necessarily typical of data collected using MTurk (see Antoun et al. 2016; Cusatis and Garbarski 2018 for data with female overrepresentation) but it is also not uncommon and is consistent with several other research (see Boas, Christenson and Glick 2018; Krupnikov and Levine 2014; Levay, Freese, and Druckman 2016; for data with male overrepresentation).

To assess how the profile of *Cedar Elementary* impacts parents' decisions to enroll in the hypothetical school, results are shown using continuous forms of the outcome. Enrollment decisions are recorded on a 6-point scale and responses were coded so that higher scores indicate a greater likelihood likely to enroll in *Cedar Elementary.* I present the results in the same manner described above for perceptions of school quality.

RESULTS

Perceptions of school quality

[Insert Table 12 here]

Do school ratings impact parents' perceptions of schools? Model 1 in Table 12 presents the coefficients from a linear regression. The model establishes that overall school rating statistically significantly predicts parents' perceptions of schools ($F(4, 416) = 22.80$, $p < 0.01$), and that overall rating accounted for 18 percent of the explained variability in parents' perceptions. Model 1 in Table 12 presents the regression coefficients for school ratings that predict parents' chances of indicating *Cedar Elementary* is closer to their ideal school. This base model shows that compared to parents' that viewed an overall school rating of an A, those that viewed lower ratings were less likely to indicate that the school profile aligns with their ideal school. Specifically, the coefficients for those that viewed a C rating indicate a difference of 1.03 points in school quality compared to those that viewed an A rating. That is, parents' who viewed a C school rating report 1.03 points less than those who viewed an A school. For those that viewed a

D school rating, the difference between those that viewed an A school rating is 1.67 less in perceptions of school quality. Lastly, parents' who viewed an F school rating, report 1.59 points less than parents' who viewed an A school rating. These findings suggest that parents' reactions to schools that received a D rating and schools that received an F rating are essentially similar.

Model 2 accounts for additional covariates reported by parents' who participated in the survey experiment. Here, the coefficients for school ratings remain negative and statistically significant in predicting perceptions of school quality. While those that viewed a C rating relative to those that viewed an A rating slightly decreased from Model 1 (e.g. -1.03; -1.01) after accounting for sociodemographic characteristics, those that viewed a D and an F compared to those that viewed an A rating is strengthened (e.g. D rating: -1.69; -1.71; F rating: -1.59; -1.63). Model 2 shows one additional covariate that is statistically significant. Specifically, the coefficients for those that enroll/ed their child/ren in other forms of schooling (e.g. homeschool) indicate a difference of 1.33 points in school quality compared to those that selected public school enrollment.

[Insert Figure 19 here]

Figure 19 graphs the impact of school ratings on parents' perceptions of schools. It contains the linear predictions of school quality (1-6) by exposure group (A-F). These predictions are computed from the regression results in Table 12 when control variables are held at their mean values (Long and Freese 2014). The X-axis represents the linear predictions of parents' perceptions of *Cedar Elementary* by exposure group, represented on the Y-axis (A-F).

Accordingly, those who were exposed to an A rating have a predicted response of 4.16 which is statistically significantly different than the those exposed to the lowest school ratings

($p<.001$). While there is no difference between those exposed to an A rating relative to a B rating (see Appendix V for differences in linear predictions), there are statistically significant differences between those exposed to an A or B rating relative to a C rating, D rating and F rating. Parents' who viewed a D rating have a predicted response of 2.45 compared to a predictive response of 3.82 for those that viewed a B rating for *Cedar Elementary*. Notably, the predicted response of parents' who viewed an F rating is 2.53 which is less than two thirds of the predicted response of parents' who viewed an A rating.

[Insert Table 13 here]

Likelihood of enrollment

The results from Table 12, Figure 19 suggests that school ratings impact parents' perceptions of schools. But, how do they impact parents' attitudes toward enrollment decisions? Model 1 in Table 13 presents the coefficients from a linear regression. The model establishes that overall school rating statistically significantly predicts parents' attitudes toward enrollment ($F(4, 414) = 12.44$, $p < 0.01$), and that overall rating accounted for 11 percent of the explained variability in parents' attitudes. Model 1 in Table 13 presents the regression coefficients for school ratings that predict parents' attitudes toward enrolling their child in *Cedar Elementary*. This base model shows that compared to parents' that viewed an overall school rating of an A, those that viewed lower ratings were less likely to indicate that they would enroll their child in the hypothetical school. In particular, the coefficients for those that viewed a C rating indicate a difference of .93 points in likelihood to enroll compared to those that viewed an A rating. Parents' who viewed a

D school rating report 1.07 points less than those who viewed an A school and parents' who viewed an F school rating, report 1.08 points less than parents' who viewed an A rating.

Model 2 accounts for additional covariates. The coefficients for school ratings remain negative and statistically significant in predicting perceptions the likelihood to enroll in *Cedar Elementary*. Whereas those that viewed a C and F rating relative to those that viewed an A rating slightly decreased from Model 1 (e.g. C rating: -.933; -.90; F rating: -1.08; -1.06) after accounting for sociodemographic characteristics, those that viewed a D rating relative to parents' who viewed an A rating is again marginally strengthened (e.g. D rating: -1.07; -1.15). Model 2 includes additional covariates that are statistically significant. There is a difference in gender, and school type. Compared to male parents that participated in the survey, female parents are less likely to indicate a greater likelihood to enroll in *Cedar Elementary*. Moreover, those that enroll/ed their child/ren in charter schools (.75) or vouchers (1.07), compared to traditional public schools show a higher likelihood to enroll in *Cedar Elementary.* Below I present these results as linear predictions using tests of significance based on delta-method standard errors (Long 2009; Xu and Long 2005).

[Insert Figure 20 here]

Figure 20 graphs the impact of school ratings on parents' attitudes toward enrollment decisions. It contains the linear predictions of likelihood to enroll (1-6) by exposure group (A-F). These predictions are computed from the regression results in Table 12 when covariates are held at their mean values (Long and Freese 2014). The X-axis represents the linear predictions of parents' likelihood to enroll in *Cedar Elementary* by exposure group, represented on the Y-axis (A-F).

Those who were exposed to an A rating have a predicted response of 4.05, which is statistically significantly different than the those exposed to the lowest school ratings ($p < .001$; see Appendix V for differences in linear predictions). Again, there is no evidence of a difference between those exposed to an A rating relative to a B rating. However, there are statistically significant differences between those exposed to an A or B rating relative to a C rating, D rating and F rating. Parents' who viewed a C rating have a predicted response of 3.15 compared to a predictive response of 4.19 for those that viewed a B rating for *Cedar Elementary*. The predicted response of parents' who viewed a D rating is 2.91 compared to a predictive response of 4.05 for those that viewed an A rating.

To summarize, the findings from ***aim#2*** provide answers to the final questions posed in the introduction of this dissertation. In particular, the experimental findings show that net of adequate yearly progress across school performance metrics, parents' perceptions of school quality is significantly less favorable when shown a school profile with a lower school rating. Similarly, parents indicate that they are less likely to enroll their children in a hypothetical lower rated school. In other words, these findings suggest that regardless of how well schools may be educating their students (i.e., showing adequate yearly progress by performance metric), the overall school rating seems to be driving parents' perceptions of quality and influencing their enrollment decisions. To be clear, these results do not show significant differences among higher overall school ratings (A and B) and among lower school ratings (C, D, and F), but they do show significant differences when comparing the differences between higher school ratings (A/B) relative to lower school ratings (C/D/F). Figure 19 and Figure 20 provide compelling visuals of these differences.

The findings presented from ***aim#2*** compliment the findings reported from ***aim#1*** and raise serious questions about the equitability of the report card system implemented across the United States. I discuss the implications below.

DISCUSSION

The ultimate intention of this project is to inform best practices for designing, disseminating and interpreting measures of school quality by school authorities, elected officials and parents. I began this dissertation with the 2007 United States Supreme Court ruling that limited the use of voluntary racial classifications by school districts (*Parents Involved in Community Schools v. Seattle School District* 2007). In so doing, I drew attention to the dissenting voice of Justice Breyer who argued that if educational policy causes segregation by influencing private decisions then there may be evidence of segregation resulting from state action. Above, I provide empirical evidence that contemporary accountability ratings are unevenly distributed across schools and districts. The distribution of this *resource* is patterned such that ratings appear to be reflecting mechanisms that produce achievement disparities outside schools, such as racial/ethnic inequality in financial, cultural, and social capital, more than the extent to which ratings are providing an accurate depiction of how schools are making efficient use of their resources to provide the best learning opportunities possible. In a similar vein, I show that school ratings are serving as a signal of school quality to key stakeholders and that school ratings impact and influence parents' attitudes toward enrollment decisions. Considered together, I assert that the current accountability rating system is diverting attention away from the disparities in resources associated with school segregation. Moreover, this system appears to be providing *a structure of incentives that influence stakeholders' decision-making* and ultimately undermines the ability of schools to raise achievement for their students.

To be clear, findings from ***aim#1*** show that school ratings are associated schools' demographic composition and that this association depends on the broader metropolitan landscape. In more highly segregated metropolitan regions, schools with higher proportions of Black students show greater odds of receiving a lower rating relative to a higher one, net of additional covariates at the school-, district- and metropolitan-levels. Critics of these findings may suggest that the associations documented in ***aim#1*** do not produce a causal direction. That is, one could reasonably ask if segregation causes lower school ratings or if lower ratings lead to an increase in metropolitan segregation. As I note above, the fact that any association exists between school demographics and school ratings is problematic and it raises serious questions about the equitability of the report card system implemented across the United States. Indeed, the theoretical goals of such systems were to raise achievement for *all* students, while eliminating gaps in achievement, attainment and career readiness between different student subgroups (No Child Left Behind Act 2002; Hess 2003), not to identify which group of students attend which schools. The findings presented for ***aim#1*** are worrisome. Schools assigned to lower categories are often targeted for supports, reforms and occasionally even closure by state education officials (Brummet 2014; Logan et al. 2012; Darling-Hammond 2010; Gaddis and Lauen 2014; Ravitch 2010). The report card system appears to be penalizing an already disadvantaged group of students and schools. That is, the system is likely unfairly blaming schools for relatively poor achievement and obscuring the extent to which some schools serving disadvantaged students outperform others. Moreover, the overall school rating may be reinforcing patterns of segregation by deterring potential families from moving into certain schools and school districts.

The second part of this research examined part of this latter assertion, about perceptions of school quality as well as the extent to which these policies influence parents' decision-making to enroll their children in schools. The experimental findings from ***aim#2*** show that parents' perceptions of school quality is significantly less favorable when shown a school profile with a lower school rating, net of adequate yearly progress across school performance metrics. Moreover, parents in the experiment indicated that they were less likely to enroll their children in a hypothetical school with a lower rating. These findings are noteworthy. The significant differences documented in the experiment provide empirical evidence of the importance of school ratings. Indeed, school ratings are a *resource* that influence private decisions.

Considering both aims, this research expands the sociological scholarships' understanding of the distribution of resources and their effect on students' education (Reardon and Owens 2014). I argue that educational accountability ratings are an additional *resource* that impacts students, families and schools differently in patterns that are reflective of existing inequality and that they play a pivotal role in parental decision-making which may contribute to school segregation. While the findings from ***aim#1*** show that this *resource* is unevenly distributed among schools and districts and findings from ***aim#2*** show that this *resource* influences decision-making, I am unable to assert that parents' decisions directly contribute to an increase in segregation. Undeniably, both studies include limitations.

Data analyzed to assess ***aim#1*** is limited by the 14 states and the subsequent metropolitan regions included in the analysis. As I show in the appendix and discuss at length above, school accountability ratings differ across state lines, making a nationwide study not only difficult, but potentially, biased and inaccurate. States that employ alternative metrics for the report card, such as "tiers of support" or "accreditation" make it difficult to collapse the overall rating on a meaningful and interpretable continuous or categorical scale. This should be a concern for methodologists and policy makers when discussing national trends of school performance metrics based on annual school report cards. Furthermore, in the 14 states included in this research, there is variation in the amount of weight given to the components that contribute to the overall school rating. I show this difference by state in the appendix, but it is worth noting the concerns that this difference raises here. For instance, states vary in the extent to which they emphasize performance on standardized exams. This difference is related to the current law (ESSA) which provides states with more authority over their accountability system. The issue remains however, that it continues the NCLB mandate that accountability report cards are based, in part, on student achievement in spite of the consistent research showing that performance differs by student demographics and school composition. In this sense, school ratings appear to be merely repackaging and reflecting inequalities in academic achievement into overall school ratings. Depending on the states' weight on academic achievement in calculating school ratings, this may be more or less pronounced in certain states.

Data analyzed to assess ***aim#2*** is also limited in its' generalizability. While the experimental nature of these data provide evidence of their internal validity, the concern of how this sentiment extends beyond these data is reasonable. These data were from parents across the United States and collected online. It remains less clear how parents who do not use Amazon's MTurk or those who chose not to participate may differ. Even more, while these data represent a breadth of individuals across the United States, it is also likely that parents in this sample lived in a state with a different display of the school report card and may not have been exposed to the same 5-point letter system previously. At minimum, these data suggest that when parents are provided a hypothetical option in this scenario however, school letter ratings have a substantial impact on their decision-making and attitudes toward school quality. While they remain distinct in many regards, this sentiment may also be formed by exposure to a growing online school rating environment (e.g. GreatSchools.org, an embedded feature on prominent home search websites such as Zillow.com and Trulia.com, see also Niche.com – see footnote 1). Additional research on how ratings impact parents' decision-making is needed. Future research should employ nationally representative data and account for segregation levels within the respondent's local school, district and metropolitan context.

Throughout this dissertation, I have conceptualized school ratings as a *resource* vital to the educational experience of students which impacts students, families and schools differently in patterns that are reflective of existing social inequality. I've used empirical data to contribute to the sociological understanding of the relationships among race/ethnicity, schools, variations in accountability policies in general, and perceptions of school quality and enrollment decisions. In doing so, this research should prove valuable to scholars across multiple disciplines allowing sociologists, educational researchers, methodologists and policy makers to effectively collaborate. The empirical evidence presented here makes the case for the implementation and dissemination of alternative accountability metrics that are reliable and accurate estimates of how well schools and districts serve their students. To promote the spirit of raising achievement for *all* students, states may consider adjusting their educational policies more broadly and changing the construction of their report cards more specifically. Opponents of standardized testing and performance driven accountability may favor the elimination of the overall rating system deployed by state departments. Such systems however, have considerable appeal across ideological lines – for conservatives determined to increase accountability for public spending on education (Moe 2003) and for progressives as an effective means to enhance educational opportunities for economically disadvantaged students and those belonging to racial/ethnic groups (Mehta 2013). Ratings offer seemingly transparent indicators of school quality that are supposed to be readily interpretable by legislators, state education officials, school administrators, educators and, perhaps most importantly, parents (Education Commission of the States 2016; Nunes, et al. 2015). Proponents of such systems could argue that ratings provide stakeholders with more choice. But unlike charter and various choice schools, public schools are less able to recruit and choose their respective student attendees to influence their overall rating (e.g. Jennings 2010). Advocates of choice policy tend to argue that market forces will produce more efficient and high achieving schools because students can "vote with their feet," (Chubb and Moe 1988), but the result of such policies are trending toward increasing racial/ethnic and socioeconomic segregation in schools and districts. This trend holds in research on perceptions of schools as well as in enrollment patterns in charter schools. Using an experimental design, Billingham and Hunt (2016) show that White parents become less likely to enroll their children in schools as the Black population increases, net of school quality and school characteristics. Nationwide, school districts that are more segregated show increased rates of Black enrollment in predominantly Black charter schools (Renzulli 2006). Because school ratings primarily reflect who attends what school, the design itself likely reinforces school segregation. By categorizing schools on the annual report card, schools' ability to attract high quality teachers is limited and has been shown to influence parents' decisions about where to move or where to purchase a home (see also Ehlert et al. 2016; Figlio and Lucas 2004).

The evidence presented here suggests that school ratings may not be transparent or *accurate* indicators of school quality. Like others, these data support the argument that focusing on indicators of school quality for accountability purposes essentially holds schools responsible for achievement gaps that are largely the result of inequalities in families and neighborhoods (García and Weiss 2017). This suggests that reforms focused on schools are at best insufficient and perhaps even harmful if the goal is to close achievement and attainment gaps between and among students because ratings largely reflect inequalities outside the schools themselves rather than providing a clear indication of the extent to which schools effectively serve their students. An elimination of the rating system however, may leave social scientists and policy makers without data to ensure that achievement is in fact raised for *all* students. An alternative solution may be to not only reconsider the weights on standardized testing but to increase the emphasis on growth over time after accounting for differences outside of the schools' control (e.g. summer and the seasonal effects; Condron 2009; Downey 2008; Downey et al. 2004; Hippel et al. 2018). It would be additionally useful for states to implement, or scholars to develop, metrics of the report card that make cross-state comparisons much more possible.

The evidence suggests that school accountability systems may be effectively penalizing relatively integrated schools while giving predominantly White, relatively affluent schools too much credit for closing racial/ethnic and socioeconomic gaps in achievement. Given high levels of school segregation, large schools in urban districts are more likely to be evaluated on their contribution to closing such gaps than smaller schools in suburban or rural districts (Stiefel, et al. 2007). Conversely, predominantly White schools with students from relatively affluent families may be more likely to get credit for closing gaps because they enroll small and highly selective groups of students who belong to racial/ethnic minorities (e.g. upper middle class Asian students), while schools that primarily serve economically disadvantaged Black and Latinx students may be less likely to get credit for whatever success they do achieve with students despite contending with challenges that arise outside the schools themselves.

Schools and school districts should make every effort to provide students with a diverse environment to the extent possible, given their broader metropolitan landscape. Schools should be held accountable for ensuring integrated spaces. For instance, in metropolitan areas where the student age population presents a large share of lower socioeconomic and non-White students, schools could receive points on their report card, similar to the absenteeism deduction. This credit could be noted as a diversity metric. If a metropolitan region is relatively diverse, schools and districts should have representative student bodies that are within the margins of the broader landscape. This would be a significant change to the current system.

School segregation has significant implications for experiences in primary and secondary education, along with race relations and efforts to eliminate disparities in achievement. It remains important that students of all racial/ethnic and socioeconomic backgrounds are exposed to one another. As Orfield has maintained, in large part because of the peer effect findings issued in the Coleman Report (1966), that while there is nothing magic about sitting next to a White child in a classroom, there are significant advantages to doing so (Hill 2017; Orfield and Lee 2004; Orfield and Eaton 1996). That is, an integrated classroom, school and school district has the potential to provide Black and Latinx students with access to social capital that may otherwise be outside of their network, primarily because of the history of discrimination and the tight linkage of minority status with poverty. For instance, high income students perform better in highly segregated metropolitan regions relative to low income students (Owens 2018). Access to these networks are significant because they effect the creation of capital in the next generation

(Coleman 1988) and well-connected parental networks have been shown to buffer the disadvantages of school and neighborhood disadvantages (Li and Fischer 2017). Additionally, interracial contact is crucial, though insufficient on its own, to reducing prejudice and enhancing racial tolerance throughout the lifespan (Clotfelter 2004). This contact proves especially valuable at the primary-level (Buck 2010). At minimum, integration challenges the theory of perpetuation which maintains that those who experience segregation will experience it across various life stages and throughout institutions (Wells and Crain 1994).

Since 1995, the Supreme Court has remained largely silent on school segregation (aside from *Parents Involved in Community Schools v. Seattle School District No. 1* 2007) and have treated the issue as resolved of past wrongdoings. But, school segregation was built on the structure of racial inequality and liberals and conservatives alike continue to reinforce the “color line” in their decisions on where to live and where to send their children to school (Wells and Crain 1997). Today, additional mechanisms to maintain separate schools and districts seem to be evident with the deployment of school accountability ratings. The distribution of this new school *resource* is unequal. Its implementation appears to be driving private decisions. The nation’s schools are rated.

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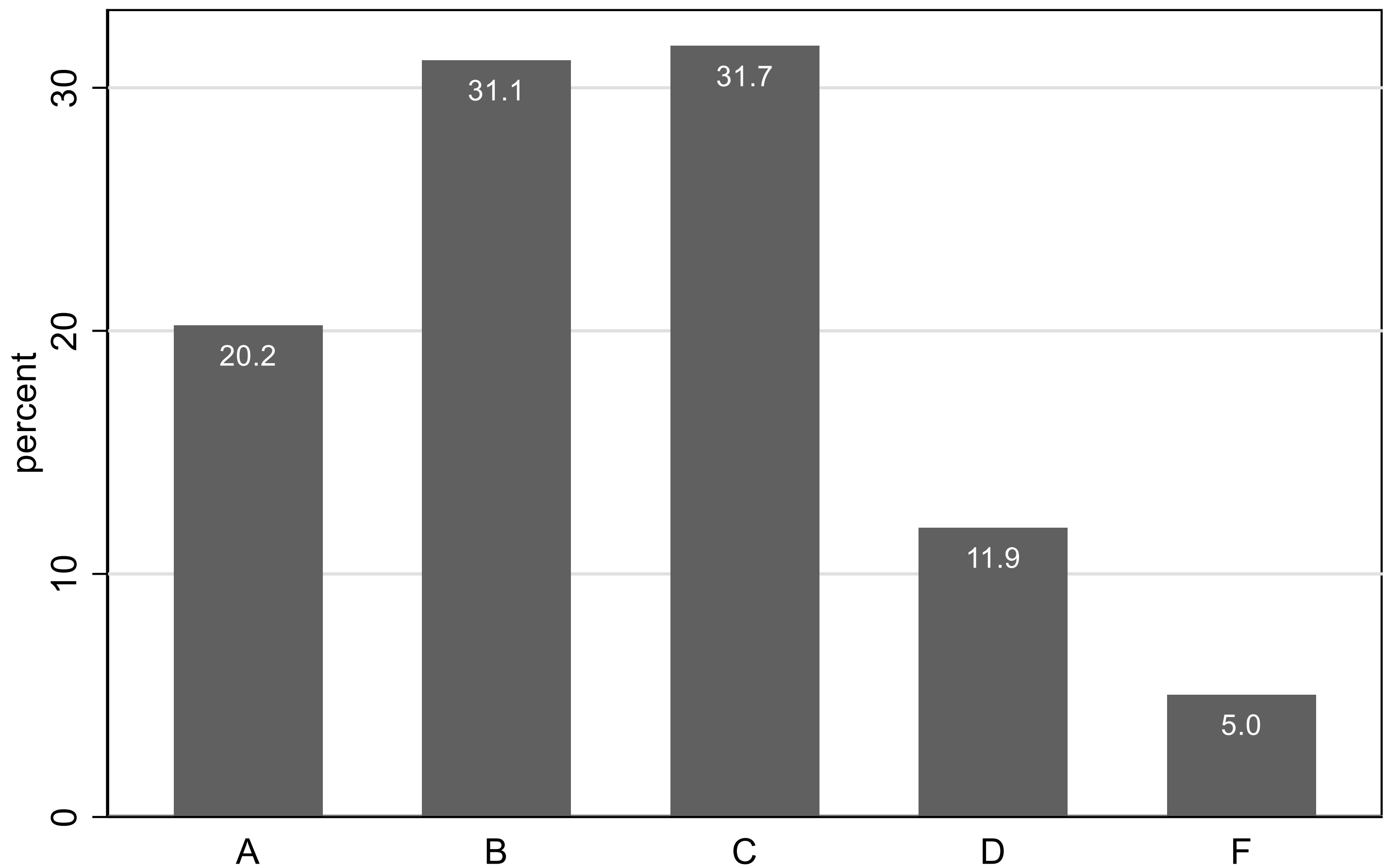
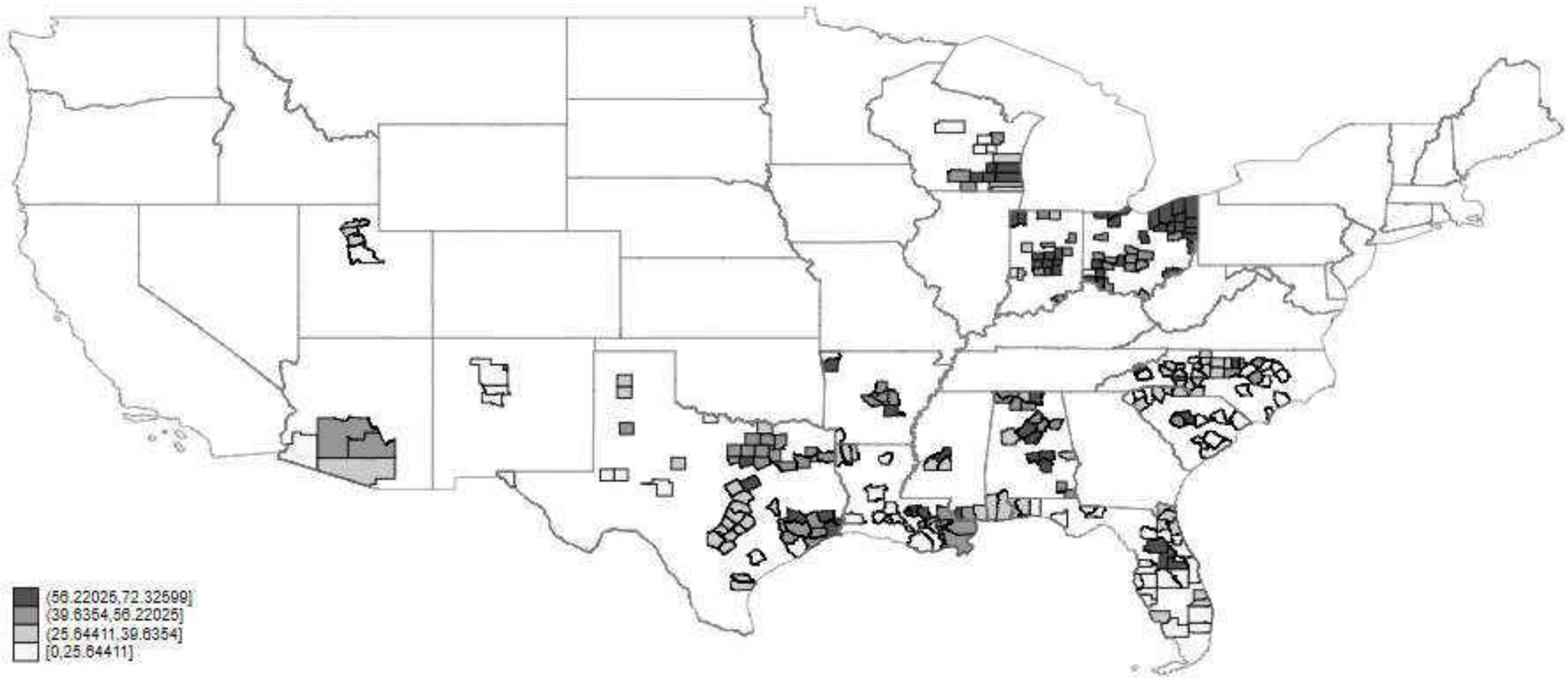
FIGURES

FIGURE 1. School ratings for 14 U.S. states that use similar scales.



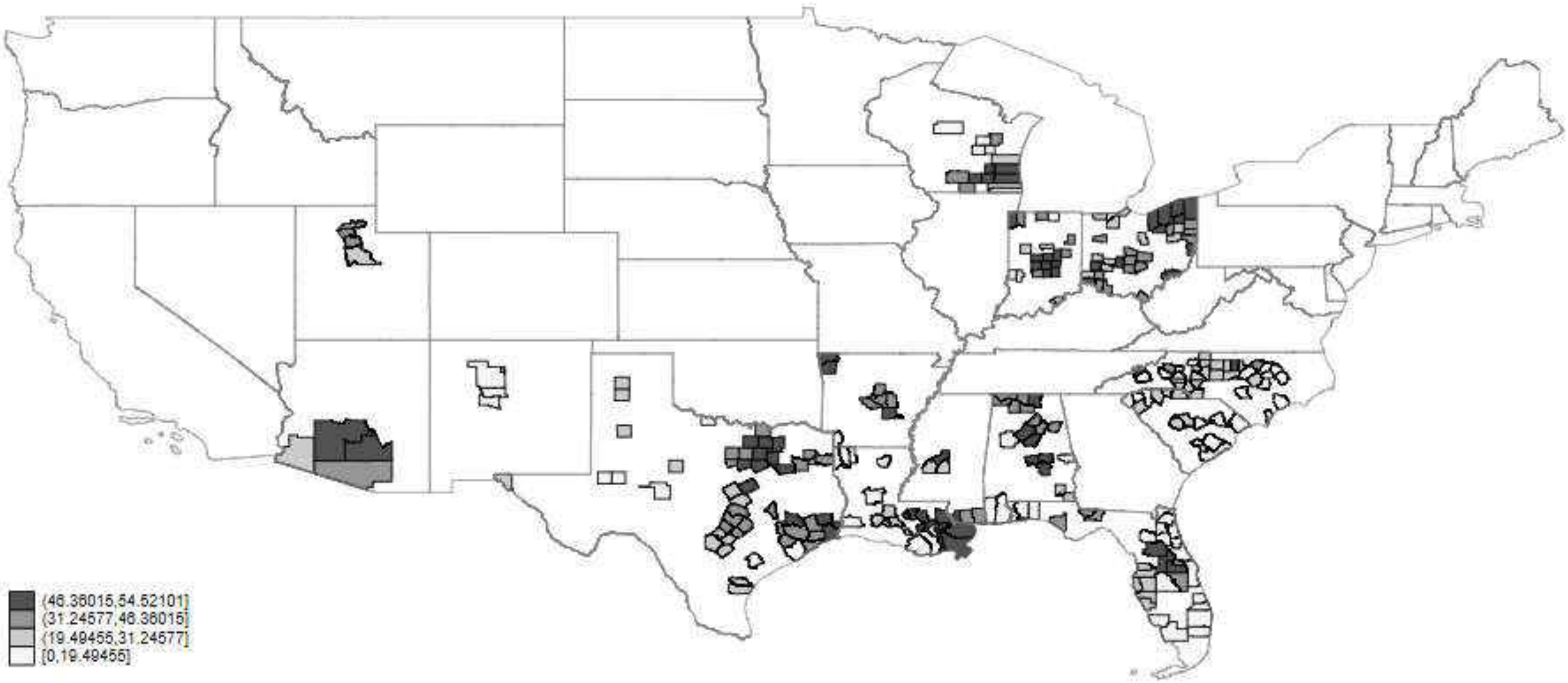
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* N=10,369

FIGURE 2. Metropolitan-level Black-White segregation (D) by region.



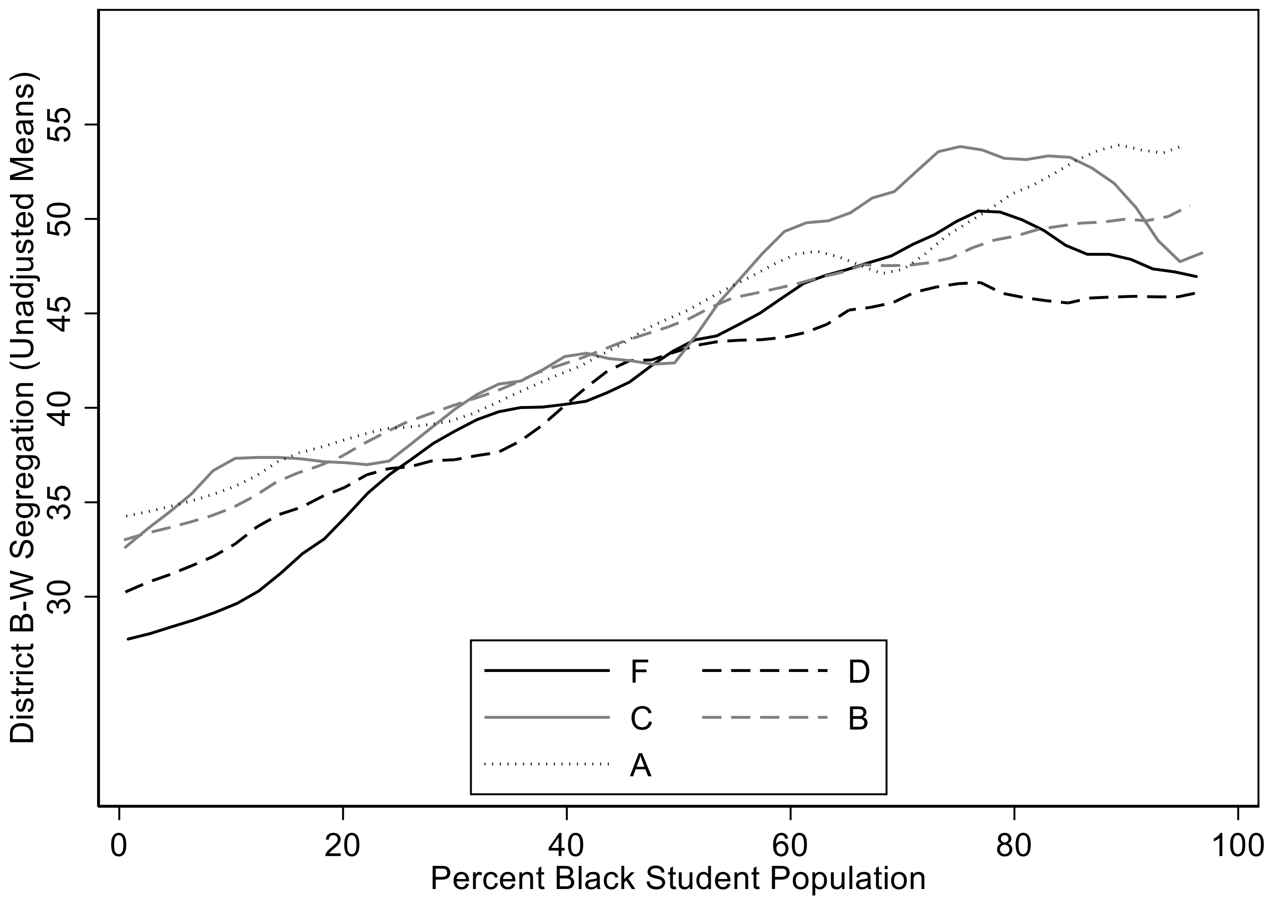
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. Census TIGER/Line Shape Files at the State Level. Figure created using spmap package in STATA 15.1. *Notes: N*=10,369. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

FIGURE 3. Metropolitan-level Latinx-White segregation (D) by region.



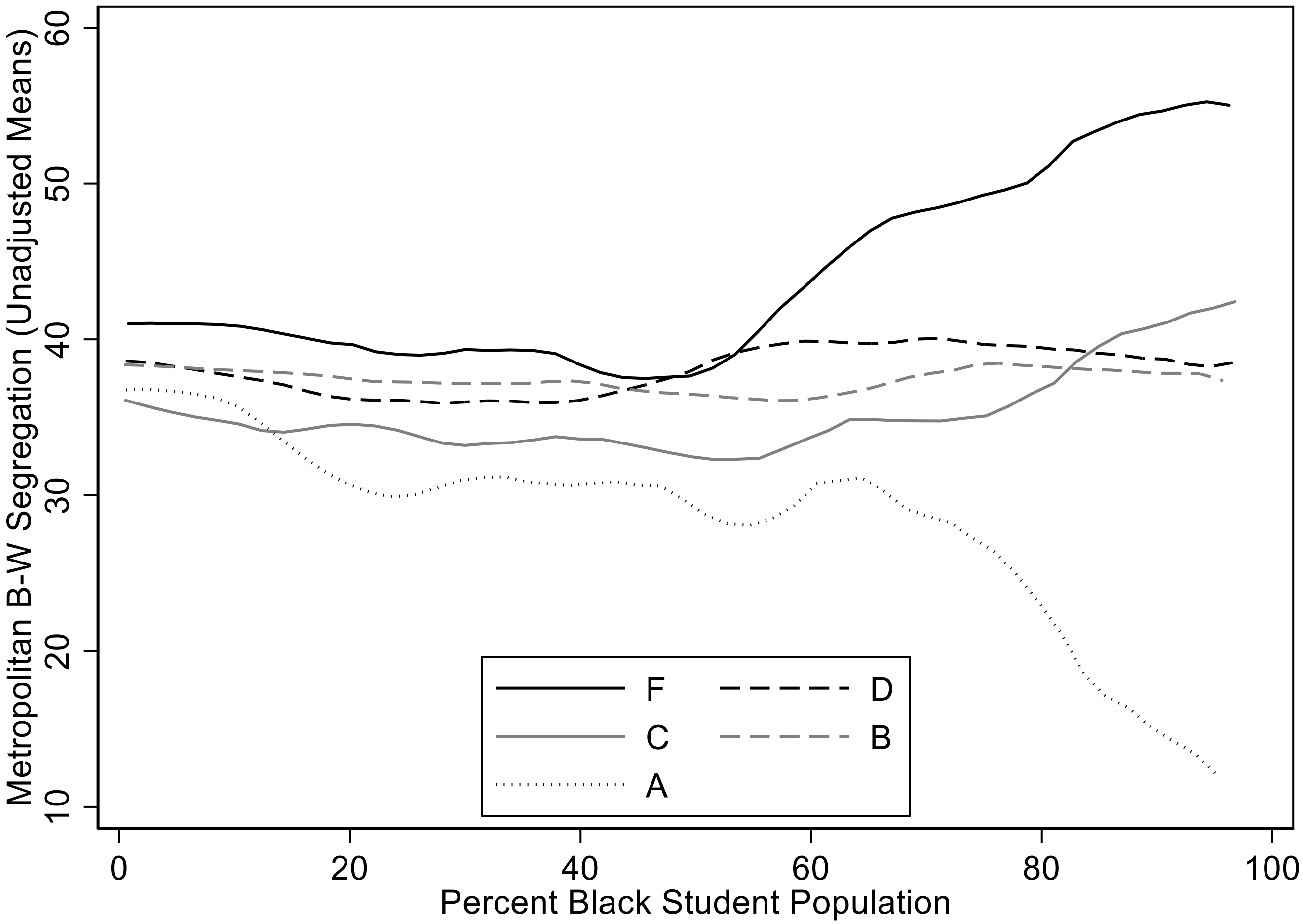
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. Census TIGER/Line Shape Files at the State Level. Figure created using spmap package in STATA 15.1. *Notes:* N=10,369. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

FIGURE 4. District-level Black-White segregation (D): By school rating and percent Black student population.



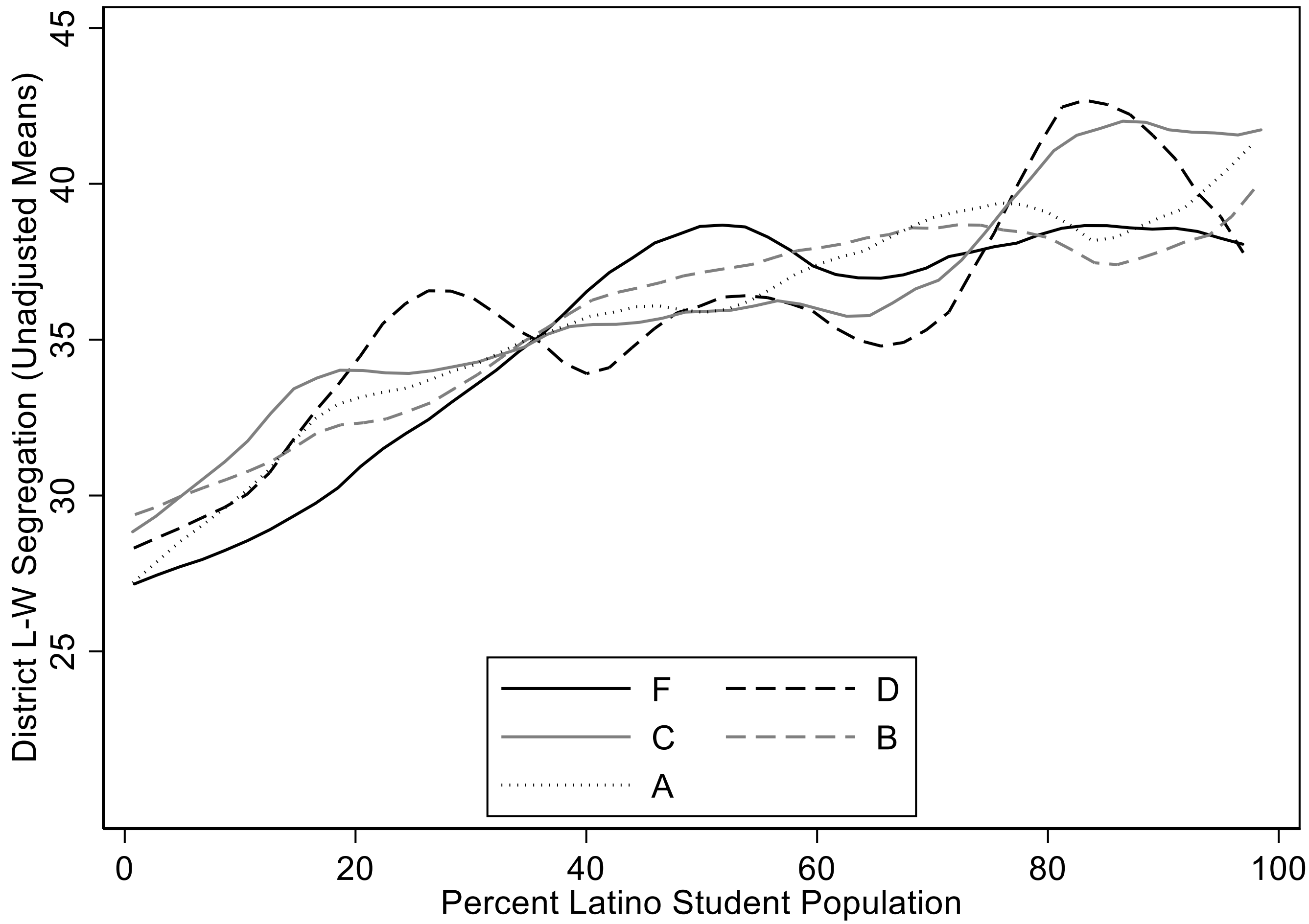
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes: N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Black-White segregation within school districts on percent of Black student population within schools by school rating.

FIGURE 5. Metropolitan-level Black-White segregation (D): By school rating and percent Black student population.



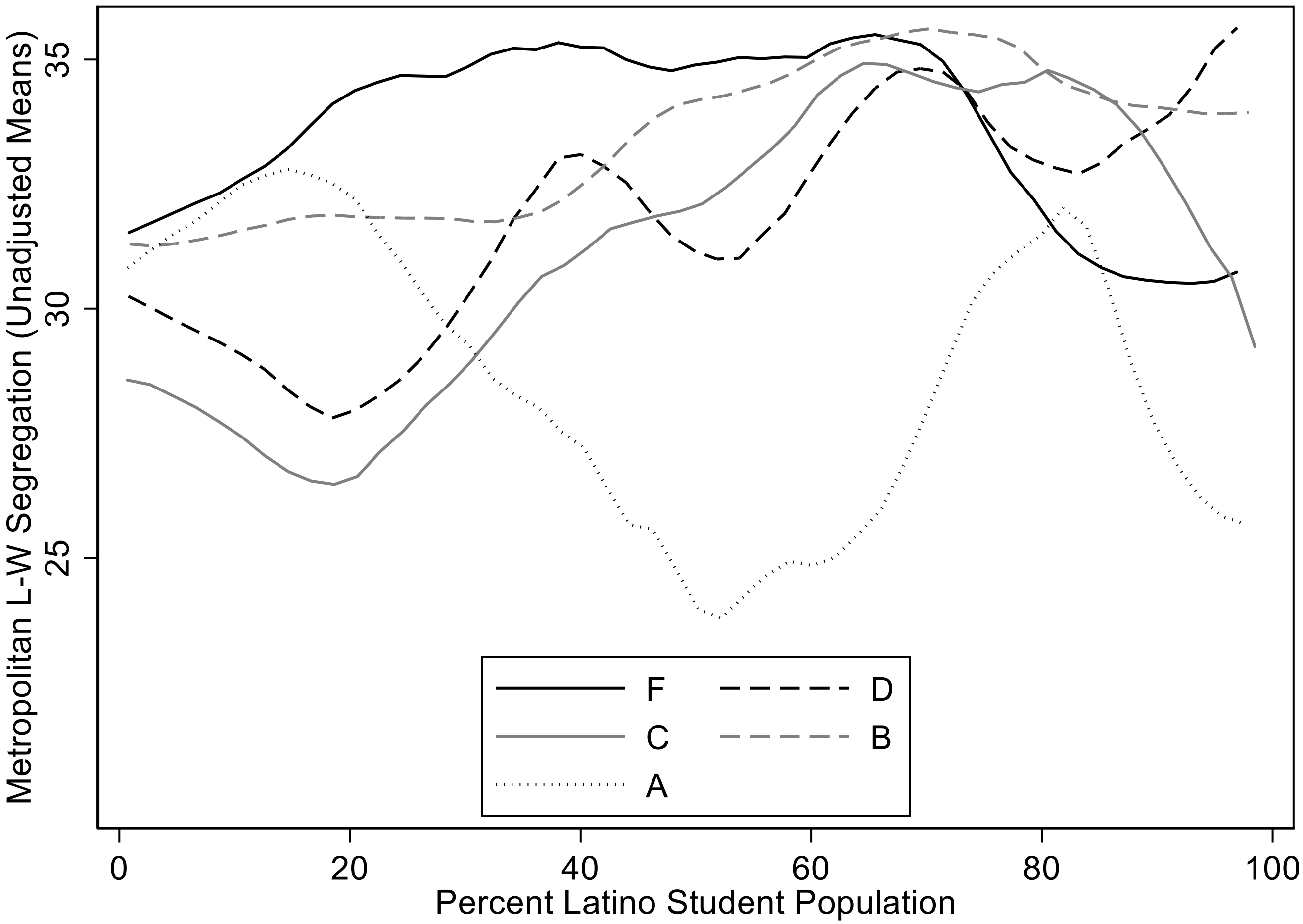
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes: N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Black-White segregation between school districts on percent of Black student population within schools by school rating.

FIGURE 6. District-level Latinx-White segregation (D): By school rating and percent Latinx student population.



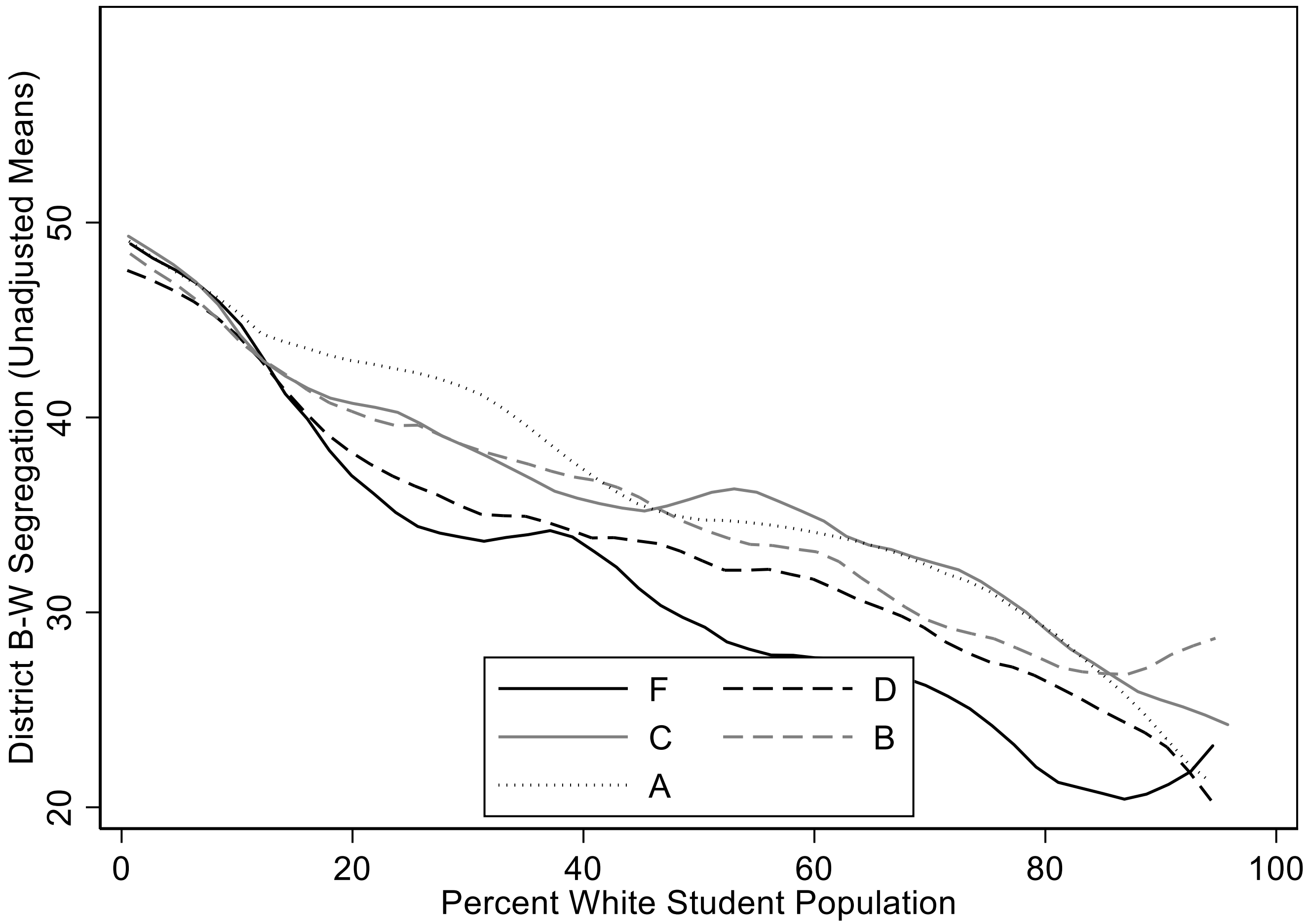
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes: N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Latinx-White segregation within school districts on percent of Latinx student population within schools by school rating.

FIGURE 7. Metropolitan-level Latinx-White segregation (D): By school rating and percent Latinx student population.



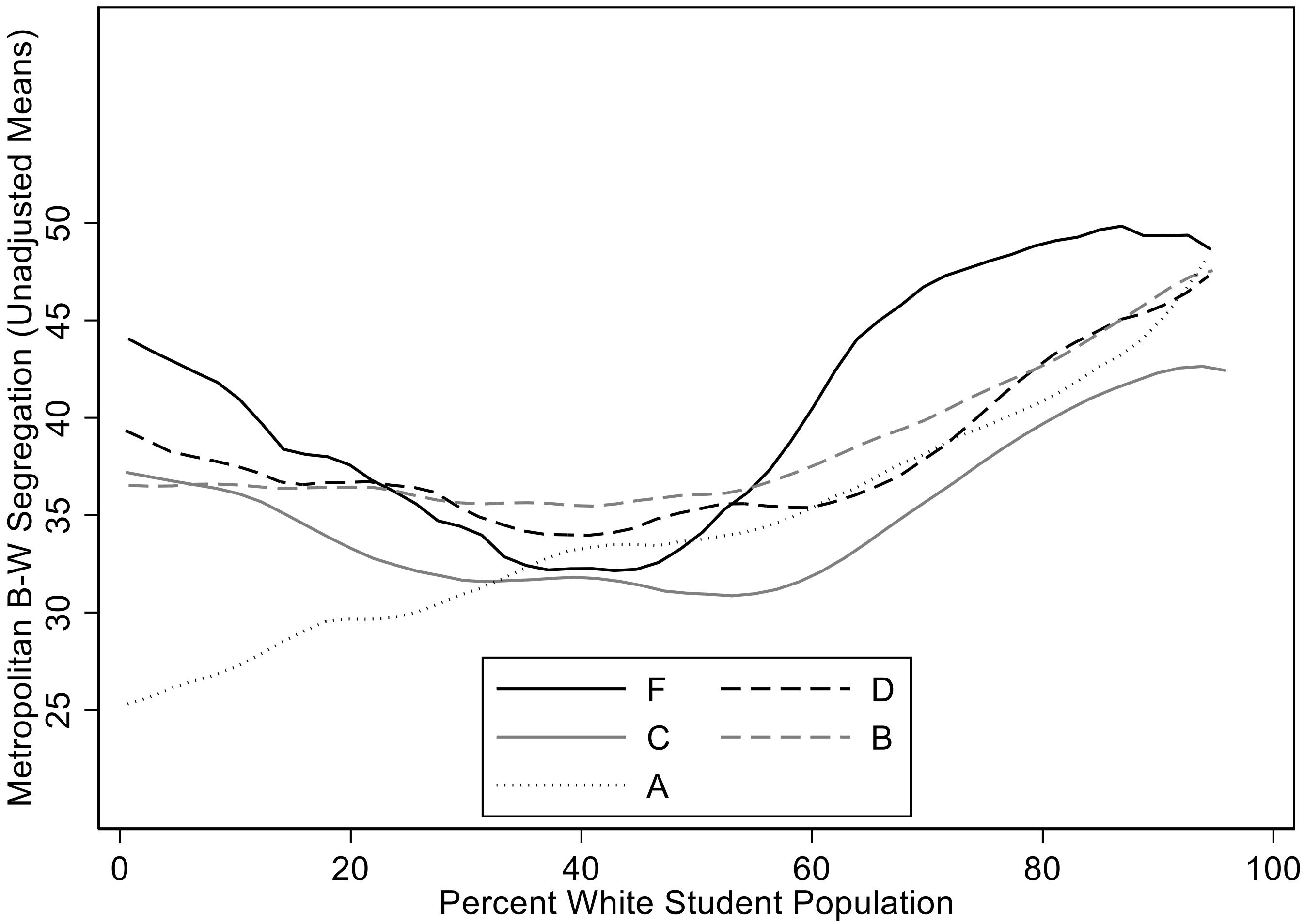
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes: N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Latinx-White segregation between school districts on percent of Latinx student population within schools by school rating.

FIGURE 8. District-level Black-White segregation (D): By school rating and percent White student population.



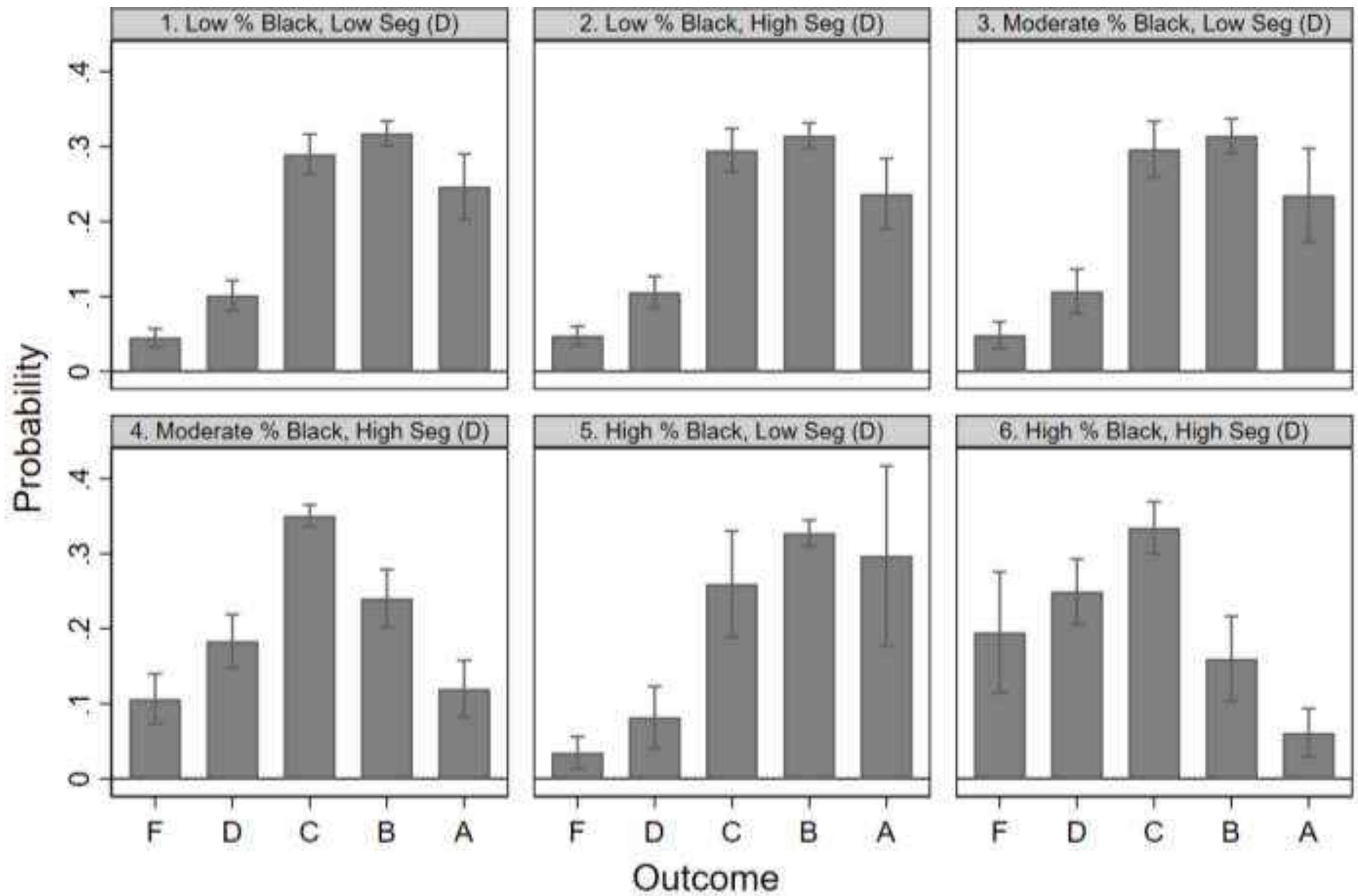
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes: N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Black-White segregation within school districts on percent of White student population within schools by school rating.

FIGURE 9. Metropolitan-level Black-White segregation (D): By school rating and percent White student population.



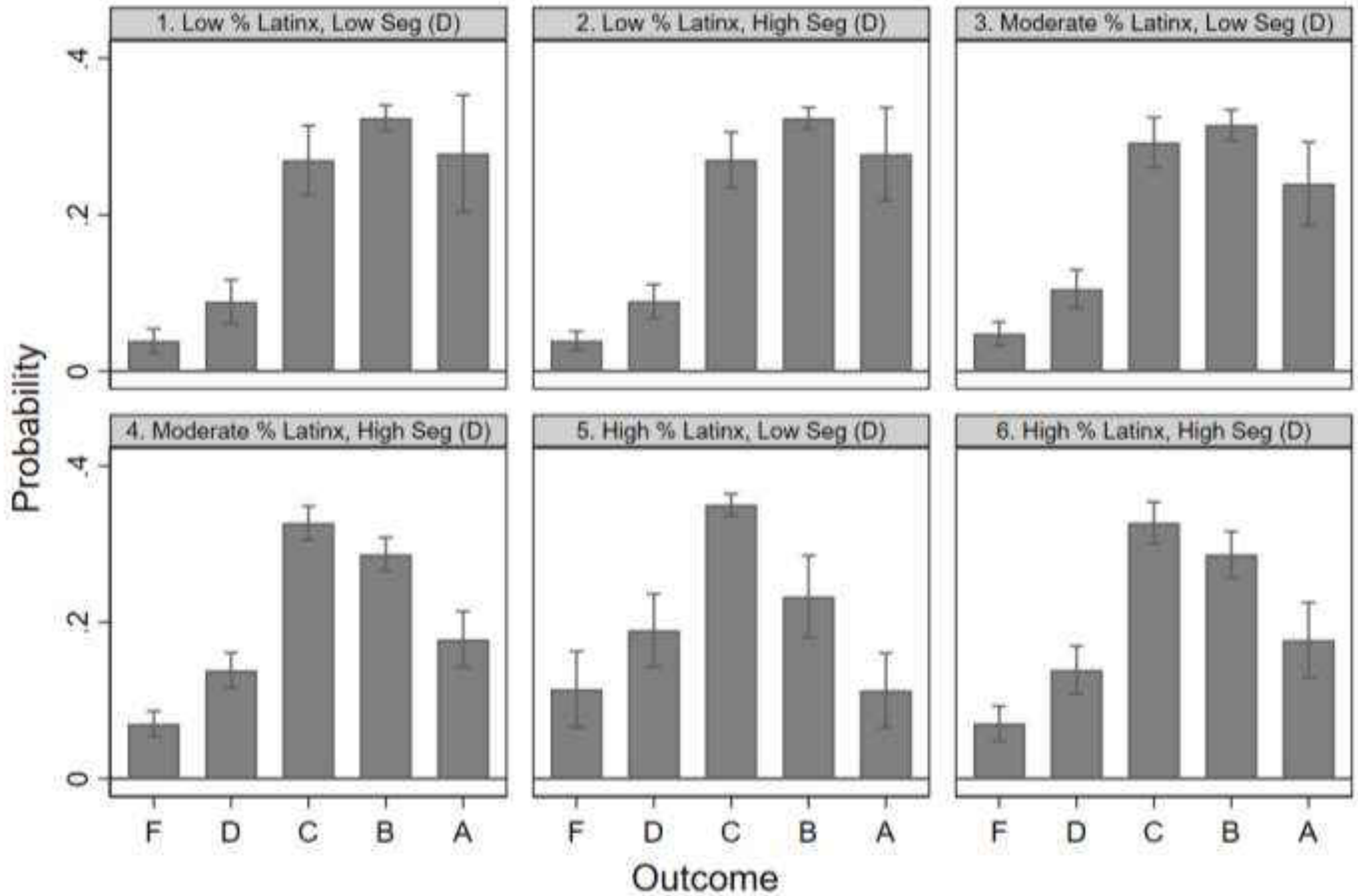
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* *N*=10,369. Figure shows smoothed values from a kernel-weighted local polynomial regression of Black-White segregation between school districts on percent of White student population within schools by school rating.

FIGURE 10. Predictive Margins with 95 Percent CI. Metropolitan-level Black-White segregation (D), Black student concentration and predicted school rating.



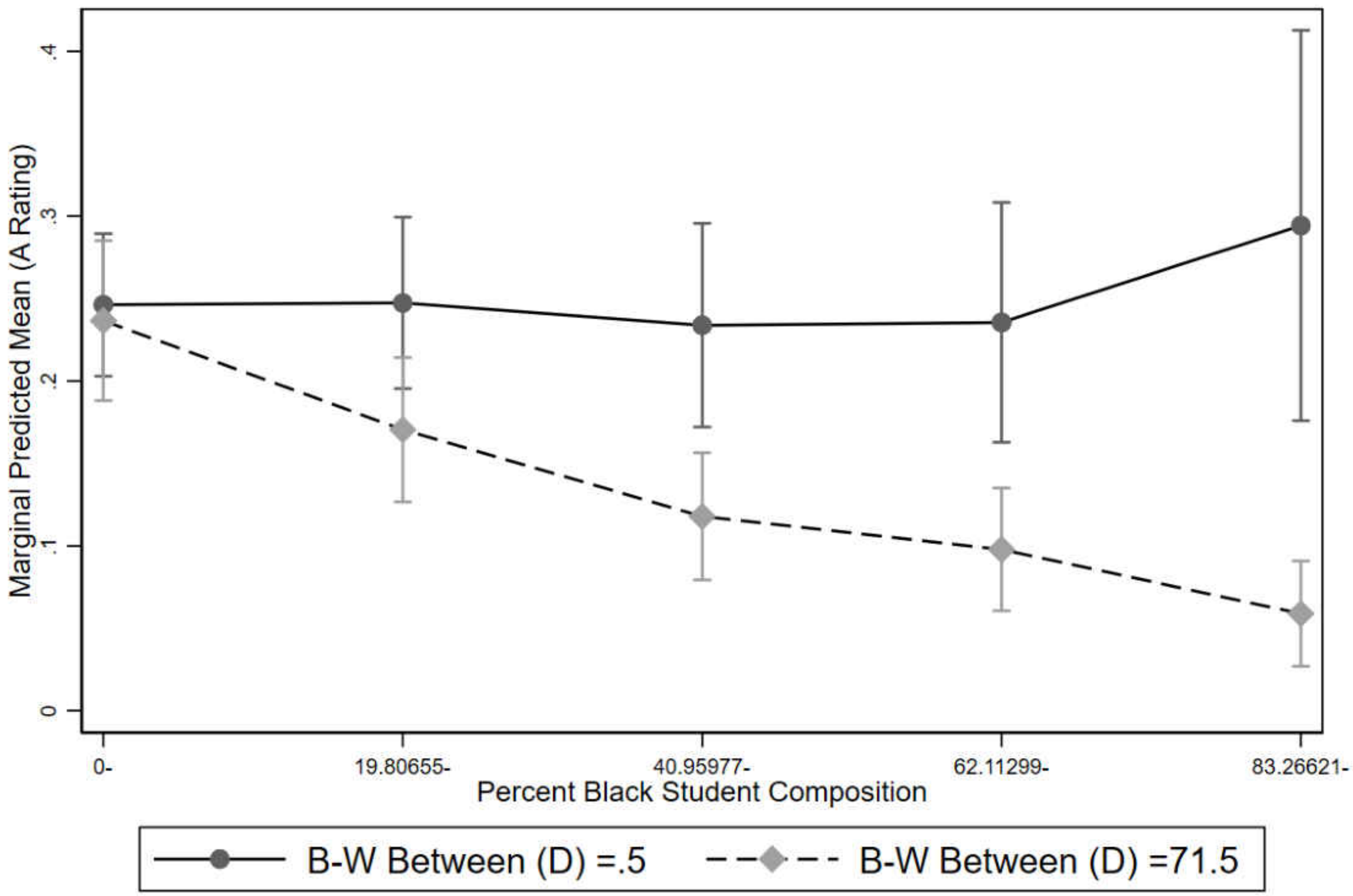
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows predicted probabilities of school rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools. Categories based on cutpoints in Table 2. % Black: Low (0-19%); Moderate (42-62%); High (83-100%). Seg (D): Low (0); High (70).

FIGURE 11. Predictive Margins with 95 Percent CI. Metropolitan-level Latinx-White segregation (D), Latinx student concentration and predicted school rating.



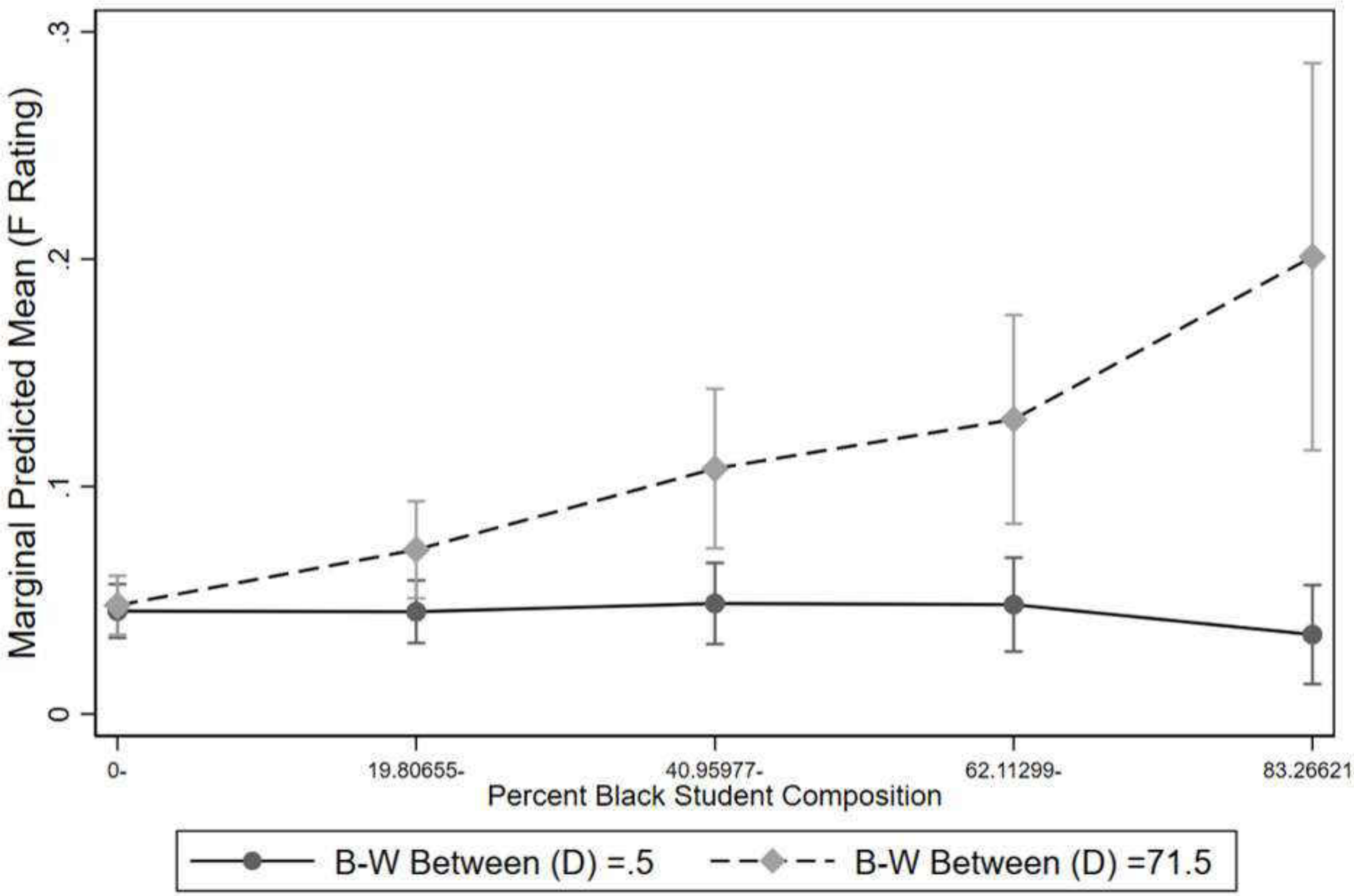
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows predicted probabilities of school rating for varying levels of between-district Latinx-White segregation and percentage categories of Latinx student population within schools. Categories based on cutpoints in Table 2. % Latinx: Low (0-5%); Moderate (30-55%); High (81-100%). Seg (D): Low (0); High (50).

FIGURE 12. Predictive Margins with 95 Percent CI. Metropolitan-level Black-White segregation (D), Black student concentration and A rating.



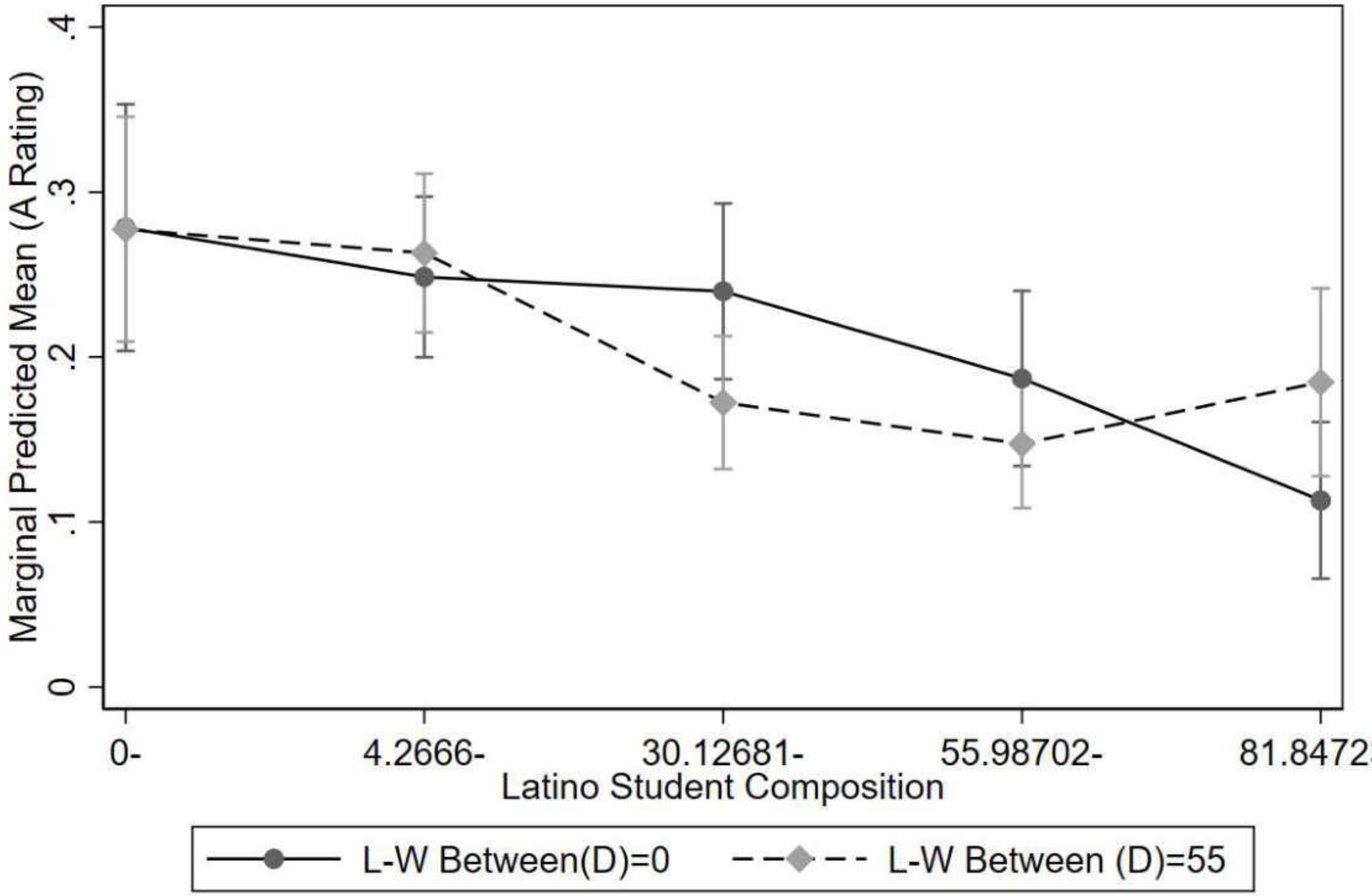
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows the predicted probability of a school receiving an A rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools.

FIGURE 13. Predictive Margins with 95 Percent CI. Metropolitan-level Black-White segregation (D), Black student concentration and F rating.



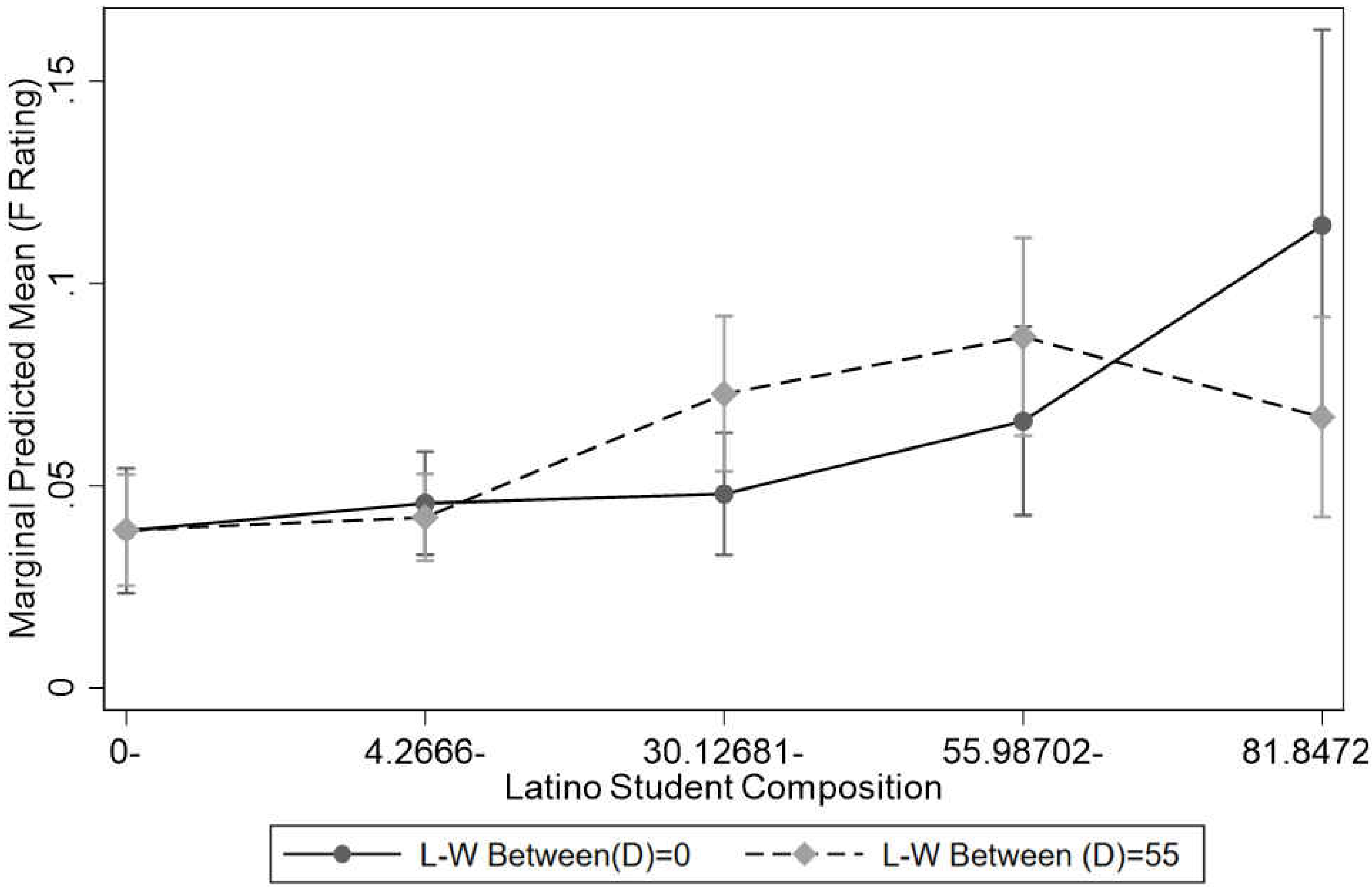
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows the predicted probability of a school receiving an F rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools.

FIGURE 14. Predictive Margins with 95 Percent CI. Metropolitan-level Latinx-White segregation (D), Latinx student concentration and A rating.



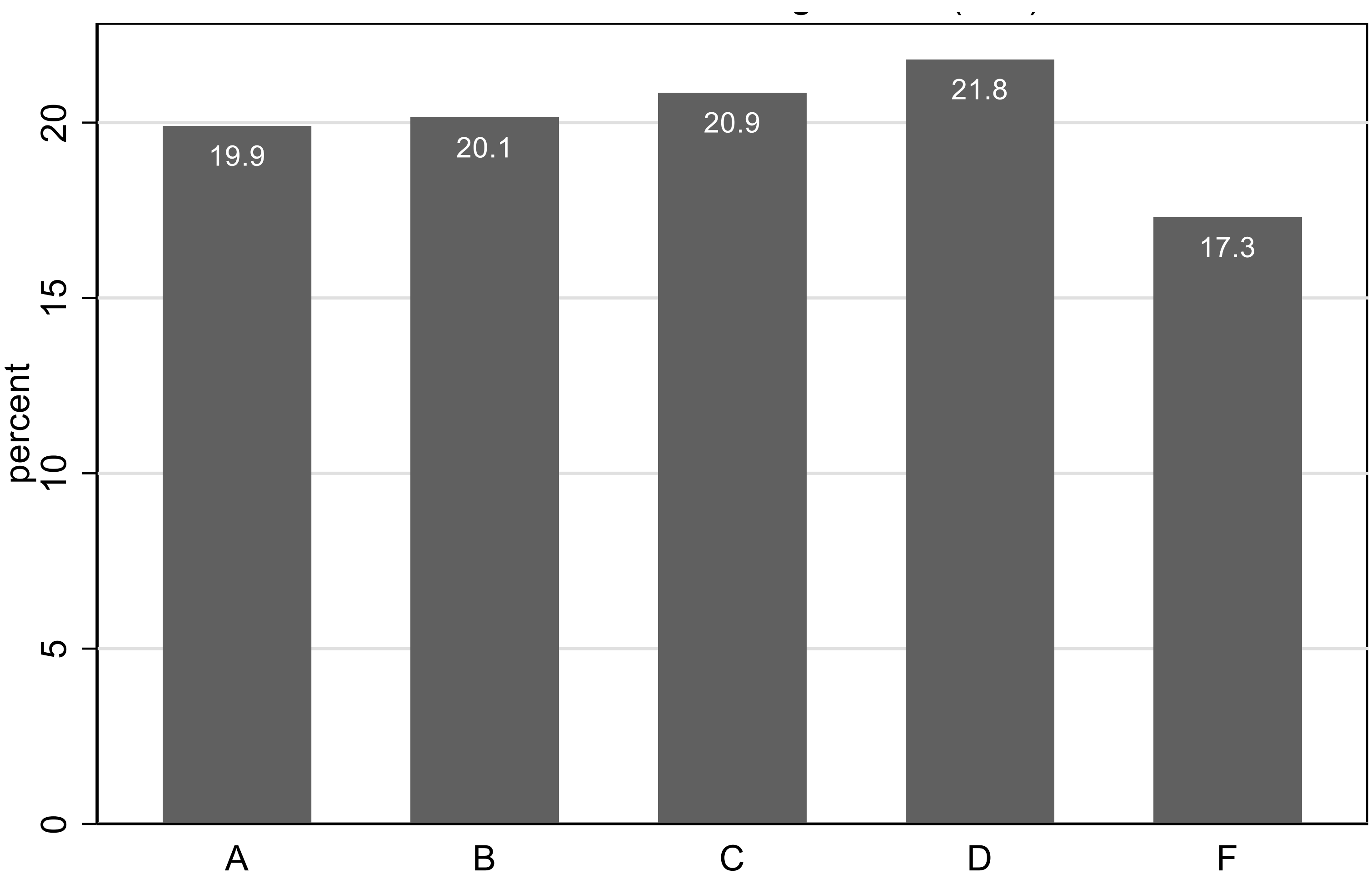
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows the predicted probability of a school receiving an A rating for varying levels of between-district Latinx -White segregation and percentage categories of Latinx student population within schools.

FIGURE 15. Predictive Margins with 95 Percent CI. Metropolitan-level Latinx-White segregation (D), Latinx student concentration and F rating.



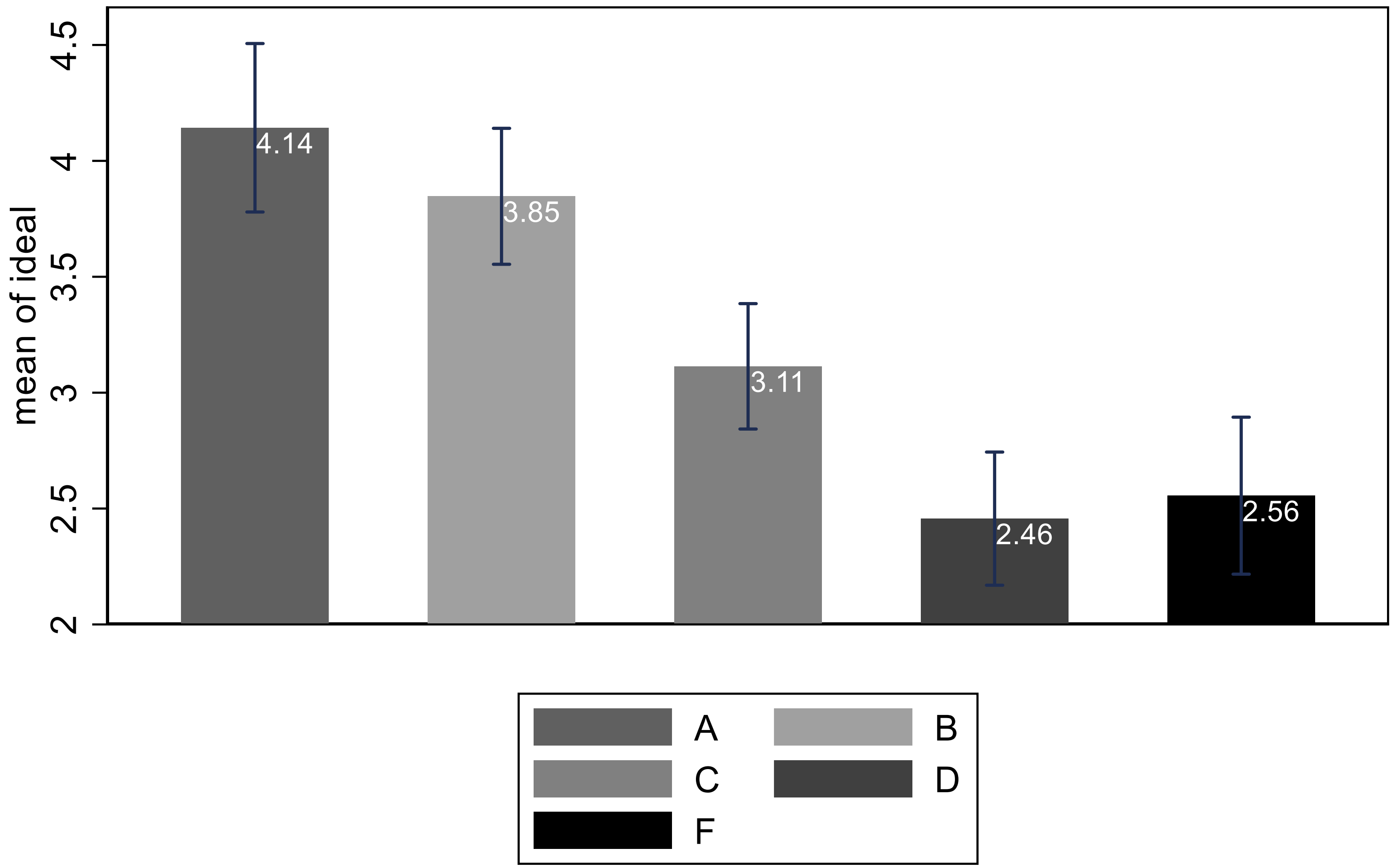
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Figure shows the predicted probability of a school receiving an F rating for varying levels of between-district Latinx -White segregation and percentage categories of Latinx student population within schools.

FIGURE 16. Unweighted distribution of parents' exposure to a school rating in the experiment.



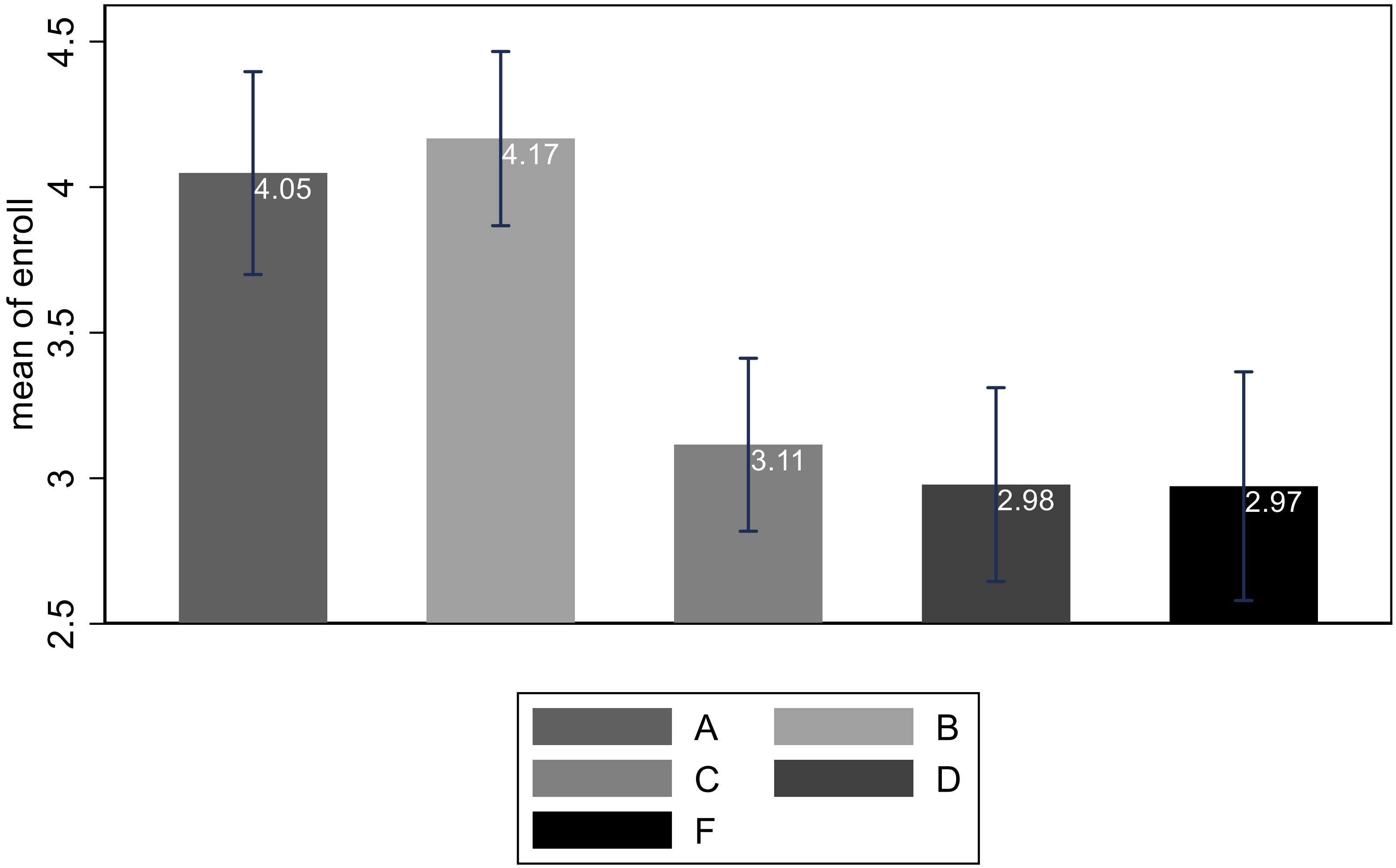
Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* *N*=414

FIGURE 17. Unweighted distributions of perceptions of school quality: By exposure to school rating.



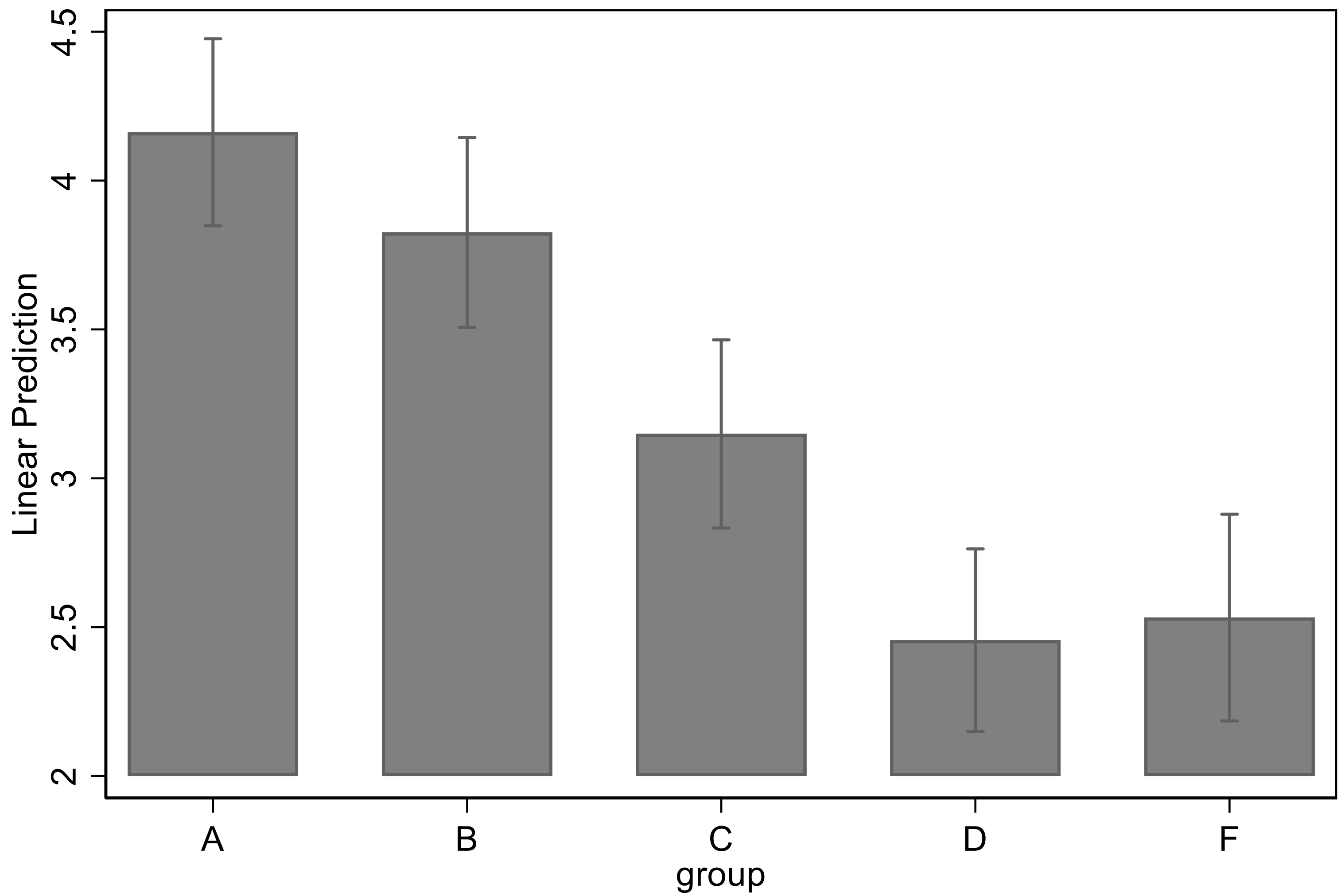
Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* *N*=414. Confidence intervals (95 percent).

FIGURE 18. Unweighted distributions of likelihood to enroll: By exposure to school rating.



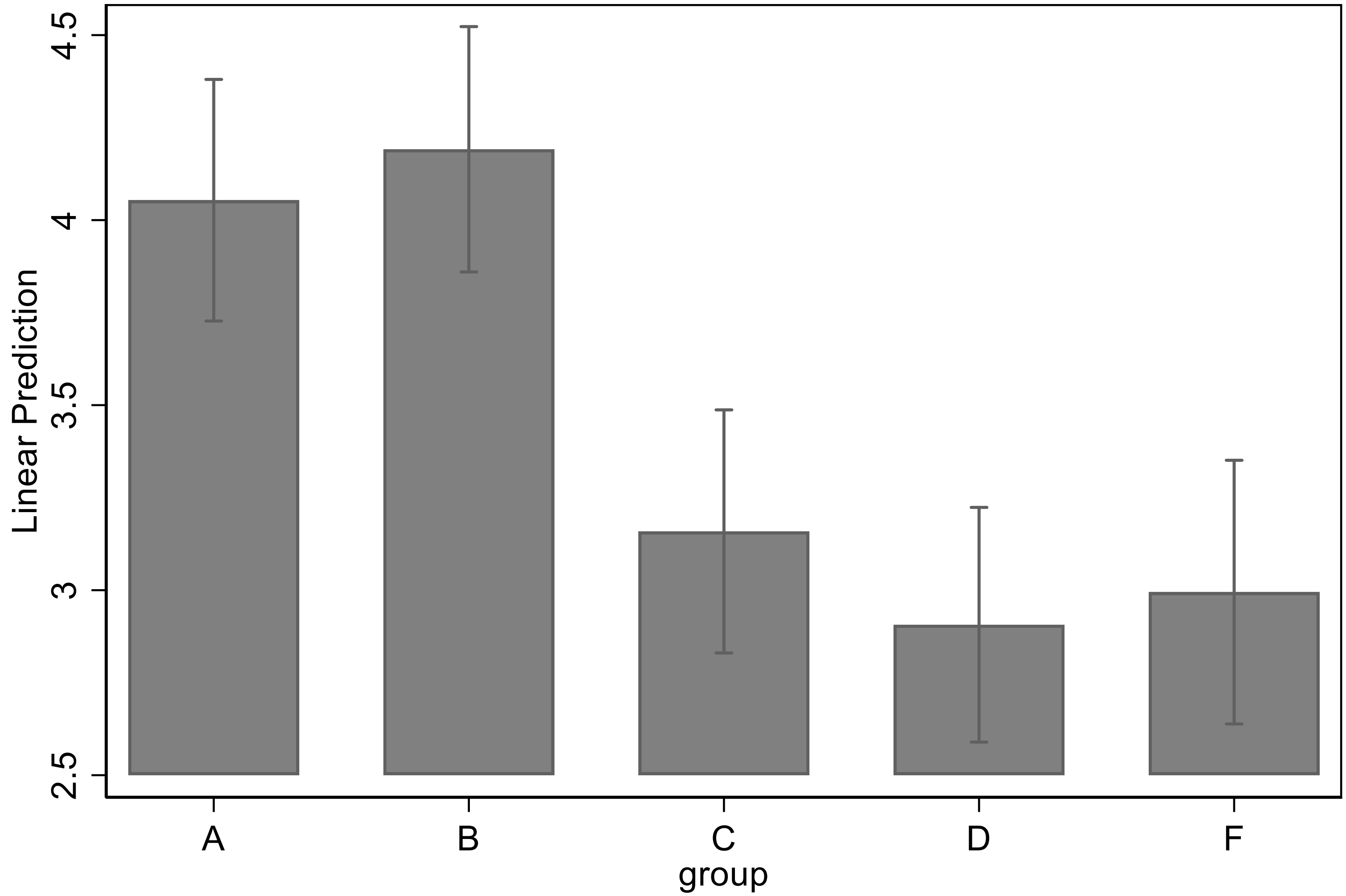
Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* *N*=414. Confidence intervals (95 percent).

FIGURE 19. Predictive Margins with 95 Percent CI. Parents' perceptions of the quality of the hypothetical school: By exposure to school rating.



Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* *N*=414. Confidence intervals (95 percent).

FIGURE 20. Predictive Margins with 95 Percent CI. Parents' likelihood to enroll in hypothetical school: By exposure to school rating.



Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes: N*=414. Confidence intervals (95 percent).

TABLES

TABLE 1. Metropolitan-level Black-White and Latinx-White segregation (D) by region.

	Schools	Districts	MSAs	Total metro segregation	[min,max]	Within districts	[min,max]	Between districts	[min,max]
14 State Total	10,369	885	112						
Black-White (D)				56.3	[32.5, 63.4]	36.8	[0.0, 70.4]	36.3	[0, 72.4]
Latinx-White (D)				50.8	[35.4, 54.8]	33.2	[0.1, 72.2]	30.7	[0, 54.5]
8 Southern States	7,607	504	77						
Black-White (D)				55.7	[43.2, 63.0]	40.1	[0.0, 70.4]	31.4	[0, 72.2]
Latinx-White (D)				51.0	[40.7, 54.3]	35.4	[0.0, 72.2]	27.8	[0, 54.5]
3 Western States	842	89	6						
Black-White (D)				47.2	[32.5, 51.7]	29.3	[0.3, 61.7]	36.9	[14.1, 45.3]
Latinx-White (D)				51.2	[35.4, 54.8]	32.2	[0.4, 57.9]	37.7	[10.9, 46.6]
3 Midwestern States	1,920	292	29						
Black-White (D)				62.8	[62.3, 63.4]	27.2	[0.2, 64.6]	55.5	[0, 72.3]
Latinx-White (D)				50.0	[47.4, 52.6]	24.6	[0.2, 64.2]	39.4	[0, 52.4]

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Segregation calculated using Dissimilarity indices (D). For a list of Southern states and a complete list of segregation indices by MSAs and see Appendix D. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

TABLE 2. Descriptive statistics for all categorical demographic variables included in the analysis: Overall and by school rating.

VARIABLES	Mean/Prop	St. Dev.	All Schools	A	B	C	D	F
Percent Latinx	32.01	26.65	32.01	28.05	33.18	34.12	30.64	32.11
Constructed Categories								
0-	-	-	10.08	8.35	9.37	9.76	12.26	16.22
4.27-	-	-	51.57	57.36	46.90	44.71	46.93	58.22
30.13-	-	-	19.66	19.43	21.75	21.37	19.30	19.33
55.99-	-	-	12.64	9.54	14.39	17.12	14.47	13.78
81.85-	-	-	6.06	5.34	7.60	7.04	7.04	8.67
Percent Black	18.72	20.40	18.72	16.15	17.98	19.34	22.32	23.03
Constructed Categories								
0-	-	-	64.78	73.96	69.34	66.83	62.31	59.56
19.81-	-	-	19.67	15.41	19.25	19.48	17.89	18.89
40.96-	-	-	8.89	6.01	6.14	7.47	10.75	11.56
62.11-	-	-	4.84	3.43	3.85	4.29	6.13	7.78
83.27-	-	-	1.82	1.19	1.42	1.93	2.91	2.22

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Categories based on SD of continuous measures of Latinx and Black students. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

TABLE 3. Descriptive statistics for all variables included in the analysis.

VARIABLES	Mean/Prop	St. Dev.	A	B	C	D	F
School level							
Percent Black	20.3	21.0	17.1	19.4	21.0	29.7	31.3
Percent Latinx	30.1	25.9	27.4	31.5	31.4	26.5	26.7
Percent White	41.2	27.2	44.9	40.8	40.1	35.5	34.9
Percent FRL	52.9	30.3	45.1	53.5	57.1	57.8	54.1
Charter	7.4	-	32.5	28.9	27.6	8.4	2.5
Letter Rating	87.23	-	91.60	89.42	84.27	81.61	84.44
South	79.7	-	21.1	31.1	32.6	10.6	4.5
Midwest	16.3	-	16.7	32.1	27.0	16.6	7.7
West	4.0	-	19.6	29.9	34.2	13.7	3.7
Total Population	531.8	226.4	562.7	528.7	531.5	498.8	473.9
District and Metropolis level							
B-W Metro Seg. (D)	36.2	19.2	33.7	37.8	34.7	37.1	41.1
L-W Metro Seg. (D)	30.6	16.0	30.0	32.2	29.4	29.3	32.3
B-W District Seg. (D)	37.0	16.8	37.2	36.9	37.9	37.8	37.3
L-W District Seg. (D)	33.3	15.7	32.6	33.4	33.8	34.6	34.2
B-W Exposure	8.0	10.7	7.7	8.0	7.6	7.0	7.3
L-W Exposure	7.9	10.6	7.4	7.9	7.5	7.1	7.6
District Poverty	812.0	88.3	801.4	811.7	819.2	814.2	805.0
Property Tax Rev.	253.7	407.3	329.5	249.8	253.8	186.1	183.2
Prior Mandate	3.5	-	18.7	32.0	35.0	10.5	3.7
Recent Mandate	4.6	-	28.0	35.0	20.4	10.7	6.0

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Charter status, prior/ recent mandates and region variables are dichotomous. Letter rating is a dichotomous indicator of states that use A-F relative to those in the data that use another 1-5 rating system. District poverty is an income-to-poverty ratio and tax revenue is shown in thousands. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

TABLE 4. Regional categorization of 14 states by region included in the analysis.

South	**Midwest**	**West**
Alabama	Indiana	Arizona
Arkansas	Ohio	New Mexico
Florida	Wisconsin	Utah
Louisiana		
Mississippi		
North Carolina		
South Carolina		
Texas		

Source: Adjusted to include states in the analysis developed by Orfield and Monfort (1992). Cited in Clotfelter 2004; Logan et al. 2008.

TABLE 5. Multi-level ordered logistic regression results for District-level Black-White Segregation (D).

VARIABLES	B-W Within (D), Model 1	B-W Within (D), Model 2
B-W Within (D)	0.00	0.00
	(0.00)	(0.00)
20-41 percent Black	-0.19	-0.10
	(0.15)	(0.16)
42-62 percent Black	-0.54*	-0.59*
	(0.25)	(0.26)
63-82 percent Black	-0.32	-0.44
	(0.38)	(0.39)
83-100 percent Black	-1.21*	-1.37*
	(0.60)	(0.61)
B-W Within (D) * 20-41 percent Black	-0.00	-0.00
	(0.00)	(0.00)
B-W Within (D) * 42-62 percent Black	0.00	0.00
	(0.01)	(0.01)
B-W Within (D) * 63-82 percent Black	-0.00	-0.01
	(0.01)	(0.01)
B-W Within (D) * 83-100 percent Black	0.01	0.01
	(0.01)	(0.01)
School-level variables		
Percent Latinx (School)	-0.01***	-0.01***
	(0.00)	(0.00)
Percent Poverty (FRL)	-0.01***	-0.01***
	(0.00)	(0.00)
Charter	0.30***	0.31***
	(0.08)	(0.09)
Letter Rating	0.25*	0.29*
	(0.12)	(0.12)
South	-0.14	-0.05
	(0.13)	(0.14)

Midwest	-0.97***	-1.00***
	(0.15)	(0.16)
District-level variables		
District Poverty (IPR)	0.00*	0.00
	(0.00)	(0.00)
Percent White (District)	-0.00	-0.00
	(0.00)	(0.00)
Recent Mandate (1990-2003)	1.19***	1.25***
	(0.16)	(0.16)
Prior Mandate (1980-1989)	-0.10	-0.09
	(0.30)	(0.30)
Property Taxes		0.11*
		(0.04)
cut1	-3.93***	-2.81***
	(0.23)	(0.49)
cut2	-2.45***	-1.42**
	(0.23)	(0.49)
cut3	-0.71**	0.31
	(0.23)	(0.49)
cut4	0.92***	1.92***
	(0.23)	(0.49)
var(_cons[district])	0.61***	0.56***
	(0.06)	(0.06)
Observations	10,369	9,138
Number of groups	854	759

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. District poverty is an income-to-poverty ratio and tax revenue is shown in thousands. Property taxes are transformed into the natural log. based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

TABLE 6. Multi-level ordered logistic regression results for District-level Latinx-White Segregation (D).

VARIABLES	L-W Within (D) Model 1	L-W Within (D) Model 2
L-W Within (D)	0.00	0.00
	(0.01)	(0.01)
5-29 percent Latinx	-0.02	-0.02
	(0.15)	(0.15)
30-55 percent Latinx	-0.37	-0.33
	(0.21)	(0.22)
56-80 percent Latinx	-0.77**	-0.83**
	(0.26)	(0.26)
81-100 percent Latinx	-0.55	-0.66
	(0.34)	(0.34)
L-W Within (D) * 5-29 percent Latinx	-0.00	-0.00
	(0.00)	(0.00)
L-W Within (D) * 30-55 percent Latinx	0.00	-0.00
	(0.01)	(0.01)
L-W Within (D) * 56-80 percent Latinx	0.00	0.00
	(0.01)	(0.01)
L-W Within (D) * 81-100 percent Latinx	-0.00	-0.01
	(0.01)	(0.01)
School-level variables		
Percent Black (School)	-0.01***	-0.01***
	(0.00)	(0.00)
Percent Poverty (FRL)	-0.01***	-0.01***
	(0.00)	(0.00)
Charter	0.29***	0.32***
	(0.08)	(0.09)
Letter Rating	0.24*	0.28*
	(0.12)	(0.12)
South	-0.08	0.03

	(0.13)	(0.14)
Midwest	-0.90***	-0.89***
	(0.16)	(0.16)
District-level variables		
District Poverty (IPR)	0.00*	0.00
	(0.00)	(0.00)
Recent Mandate (1990-2003)	1.18***	1.22***
	(0.16)	(0.16)
Prior Mandate (1980-1989)	-0.04	-0.07
	(0.30)	(0.30)
Percent White (District)	-0.00	-0.00
	(0.00)	(0.00)
Property Taxes	-	0.09*
		(0.04)
cut1	-3.94***	-2.89***
	(0.30)	(0.51)
cut2	-2.46***	-1.50**
	(0.29)	(0.51)
cut3	-0.71*	0.23
	(0.29)	(0.51)
cut4	0.91**	1.84***
	(0.29)	(0.51)
var(_cons[district])	0.60***	0.55***
	(0.06)	(0.06)
Observations	10,369	9,138
Number of groups	854	759

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes* Percent Latinx thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. District poverty is an income-to-poverty ratio and tax revenue is shown in thousands. Property taxes are transformed into the natural log. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

TABLE 7. Multi-level ordered logistic regression results for Metropolitan-level Black-White Segregation (D).

VARIABLES	B-W Between (D), Model 1	B-W Between (D), Model 2
B-W Between (D)	0.00	-0.00
	(0.00)	(0.00)
20-41 percent Black	0.05	0.01
	(0.11)	(0.12)
42-62 percent Black	0.09	-0.07
	(0.16)	(0.17)
63-82 percent Black	0.07	-0.06
	(0.20)	(0.21)
83-100 percent Black	0.27	0.30
	(0.30)	(0.33)
B-W Between (D) * 20-41 percent Black	-0.01*	-0.01*
	(0.00)	(0.00)
B-W Between (D) * 42-62 percent Black	-0.01***	-0.01**
	(0.00)	(0.00)
B-W Between (D) * 63-82 percent Black	-0.02***	-0.02***
	(0.00)	(0.00)
B-W Between (D) * 83-100 percent Black	-0.03***	-0.03***
	(0.01)	(0.01)
School-level variables		
Percent Latinx (School)	-0.01***	-0.01***
	(0.00)	(0.00)
Percent Poverty (FRL)	-0.01***	-0.01***
	(0.00)	(0.00)
Charter	0.30***	0.31***
	(0.08)	(0.09)
Letter Rating	-0.06	0.12
	(0.22)	(0.22)
South	-0.62*	-0.60*
	(0.25)	(0.26)

Midwest	0.00**	0.00
	(0.00)	(0.00)
District-level variables		
District Poverty (IPR)	1.12***	1.18***
	(0.23)	(0.23)
Recent Mandate (1990-2003)	0.20	0.19
	(0.29)	(0.29)
Prior Mandate (1980-1989)	-0.01*	-0.01
	(0.00)	(0.00)
Property Taxes	-	0.13**
		(0.04)
Metropolitan-level variables		
Percent White (Metro)	0.26	0.36*
	(0.15)	(0.16)
cut1	-4.18***	-2.55***
	(0.36)	(0.62)
cut2	-2.70***	-1.16
	(0.36)	(0.62)
cut3	-0.95**	0.57
	(0.36)	(0.62)
cut4	0.67	2.19***
	(0.36)	(0.62)
var(_cons[msa])	0.11**	0.12**
	(0.04)	(0.04)
var(_cons[msa>district])	0.44***	0.43***
	(0.06)	(0.06)
Observations	10,369	9,138
Number of groups	112	102

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. District poverty is an income-to-poverty ratio and tax revenue is shown in thousands. Property taxes are transformed into the natural log. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

TABLE 8. Multi-level ordered logistic regression results for Metropolitan-level Latinx-White Segregation (D).

VARIABLES	L-W Between (D), Model 1	L-W Between (D), Model 2
L-W Between (D)	0.00	-0.00
	(0.01)	(0.01)
5-29 percent Latinx	-0.18	-0.18
	(0.18)	(0.19)
30-55 percent Latinx	0.01	-0.23
	(0.21)	(0.22)
56-80 percent Latinx	-0.43	-0.59*
	(0.25)	(0.25)
81-100 percent Latinx	-1.06***	-1.24***
	(0.30)	(0.31)
L-W Between (D) * 5-29 percent Latinx	0.00	0.00
	(0.01)	(0.01)
L-W Between (D) * 30-55 percent Latinx	-0.01*	-0.01
	(0.01)	(0.01)
L-W Between (D) * 56-80 percent Latinx	-0.01	-0.01
	(0.01)	(0.01)
L-W Between (D) * 81-100 percent Latinx	0.01	0.01
	(0.01)	(0.01)
School-level variables		
Percent Black (School)	-0.01***	-0.01***
	(0.00)	(0.00)
Percent Poverty (FRL)	-0.01***	-0.01***
	(0.00)	(0.00)
Charter	0.29***	0.30***
	(0.08)	(0.09)
Letter Rating	0.20	0.29
	(0.15)	(0.16)
South	0.05	0.22
	(0.22)	(0.23)

Midwest	-0.62*	-0.59*
	(0.25)	(0.26)
District-level variables		
District Poverty (IPR)	0.00**	0.00
	(0.00)	(0.00)
Recent Mandate (1990-2003)	1.12***	1.19***
	(0.23)	(0.24)
Prior Mandate (1980-1989)	0.14	0.12
	(0.29)	(0.29)
Property Taxes		0.13**
		(0.04)
Metropolitan-level variables		
Percent White (Metro)	-0.01	-0.00
	(0.00)	(0.01)
cut1	-3.96***	-2.43***
	(0.42)	(0.65)
cut2	-2.48***	-1.05
	(0.42)	(0.65)
cut3	-0.74	0.68
	(0.42)	(0.65)
cut4	0.89*	2.30***
	(0.42)	(0.65)
var(_cons[msa])	0.12**	0.13**
	(0.04)	(0.04)
var(_cons[msa>district])	0.44***	0.42***
	(0.05)	(0.05)
Observations	10,369	9,138
Number of groups	112	102

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Latinx thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. District poverty is an income-to-poverty ratio and tax revenue is shown in thousands. Property taxes are transformed into the natural log. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

TABLE 9. Average marginal effects associated with categorical comparisons of schools' Black student composition : By Metropolitan-level Black-White segregation.

VARIABLES	Schools	Districts	MSAs	A	B	C	D	F
All Metropolitan Regions	9,138	761	102					
Average Predictions				.225	.307	.302	.114	.053
Pr (y | base)								
19.81- vs. 0-				-.034	-.015	.019	.019	.012
40.96- vs. 0-				-.071	-.039	.036	.043	.030
62.11- vs. 0-				-.083	-.049	.040	.053	.039
83.27- vs. 0-				-.089	-.067	.034	.066	.057
40.96- vs. 19.81-				-.036	-.023	.017	.024	.018
62.11- vs. 19.81-				-.048	-.034	.021	.034	.027
83.27- vs. 19.81-				-.055	-.052	.015	.047	.001
62.11- vs. 40.96-				…	…	…	…	…
83.27- vs. 40.96-				…	-.028	…	…	…
83.27- vs. 62.11-				…	…	…	…	…
Metropolitan Regions with Medium to High Levels of B-W Between (D) Segregation: >30	6,616	659	60					
Average Predictions				.200	.325	.292	.121	.062
Pr (y | base)								
19.81- vs. 0-				-.054	-.026	.030	.029	.021
40.96- vs. 0-				-.101	-.066	.050	.065	.053
62.11- vs. 0-				-.124	-.094	.054	.087	.077
83.27- vs. 0-				-.145	-.124	.052	.110	.108
40.96- vs. 19.81-				-.047	-.040	.020	.036	.032
62.11- vs. 19.81-				-.070	-.067	.024	.058	.056
83.27- vs. 19.81-				-.091	-.098	.022	.080	.087

62.11- vs. 40.96-				…	…	…	…	…
83.27- vs. 40.96-				-.044	-.057	…	.044	.055
83.27- vs. 62.11-				…	…	…	…	…
Metropolitan Regions with Low Levels of B-W Between (D) Segregation: ≤30	2,522	102	42					
Average Predictions				.275	.263	.331	.096	.035
Pr (y | base)								
19.81- vs. 0-				…	…	…	…	…
40.96- vs. 0-				…	…	…	…	…
62.11- vs. 0-				…	…	…	…	…
83.27- vs. 0-								
40.96- vs. 19.81-				…	…	…	…	…
62.11- vs. 19.81-				…	…	…	…	…
83.27- vs. 19.81-				…	…	…	…	…
62.11- vs. 40.96-				…	…	…	…	…
83.27- vs. 40.96-				…	…	…	…	…
83.27- vs. 62.11-				…	…	…	…	…

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Only significant coefficients are shown ($p<0.05$). Based on continuous measures of Black students and 1 SD increase. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

TABLE 10. Average marginal effects associated with categorical comparisons of schools' Latinx student composition : By metropolitan-level Latinx-White segregation.

VARIABLES	Schools	Districts	MSAs	A	B	C	D	F
All Metropolitan Regions	9,138	761	102					
Average Predictions				.224	.308	.303	.113	.053
Pr (y | *base)*								
4.27- vs. 0-				…	…	…	…	…
30.13- vs. 0-				-.078	-.027	.044	.037	.023
55.99- vs. 0-				-.114	-.047	.063	.059	.039
81.85- vs. 0-				-.126	-.055	.068	.068	.045
30.13- vs. 4.27-				-.057	-.023	.032	.29	.018
55.99- vs. 4.27-				-.093	-.043	.050	.051	.034
81.85- vs. 4.27-				-.105	-.051	.056	.059	.041
55.99- vs. 30.13-				-.036	-.020	.018	.022	.016
81.85- vs. 30.13-				-.048	-.029	.024	.031	.022
81.85- vs. 55.99-				…	…	…	…	…
Metropolitan Regions with Medium to High Levels of L-W Between (D) Segregation: >30	5,706	548	41					
Average Predictions				.207	.325	.289	.119	.061
Pr (y | *base)*								
4.27- vs. 0-				…	…	…	…	…
30.13- vs. 0-				-.087	-.031	.048	.041	.028
55.99- vs. 0-				-.116	-.058	.059	.064	.051
81.85- vs. 0-				-.104	.048	.055	.055	.042
30.13- vs. 4.27-				-.062	-.026	.034	.032	.022
55.99- vs. 4.27-				-.091	-.053	.045	.054	.044
81.85- vs. 4.27-				-.079	-.043	.041	.045	.036

55.99- vs. 30.13-				-.029	-.027	…	.023	.022
81.85- vs. 30.13-				…	…	…	…	…
81.85- vs. 55.99-				…	…	…	…	…
Metropolitan Regions with Low Levels of L-W Between (D) Segregation: ≤30	3,432	213	61					
Average Predictions				.255	.280	.321	.103	.042
Pr (y | base)								
4.27- vs. 0-				…	…	…	…	…
30.13- vs. 0-				…	…	…	…	…
55.99- vs. 0-				…	…	…	…	…
81.85- vs. 0-				-.108	-.042	.062	.056	.032
30.13- vs. 4.27-				…	…	…	…	…
55.99- vs. 4.27-				…	…	…	…	…
81.85- vs. 4.27-				-.102	-.043	.058	.055	.032
55.99- vs. 30.13-				…	…	…	…	…
81.85- vs. 30.13-				-.076	-.035	.042	.044	.025
81.85- vs. 55.99-				-.063	-.031	.034	.038	.048

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Only significant coefficients are shown ($p<0.05$). Based on continuous measures of Latinx students and 1 SD increase. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

TABLE 11. Descriptive statistics for all parents included in the experiment.

VARIABLES	Mean/Prop	St. Dev./Std. Err.	Min.	Max
Sociodemographic Characteristics				
Political Views (*extremely liberal to extremely conservative*)	3.18	1.43	1	6
Education (*less than high school to graduate school*)	3.92	1.01	1	6
Age	34.83	8.78	18	73
Female	.38	.02	0	1
Race/ethnicity				
White	.66	.03	0	1
Black	.23	.02	0	1
Latinx	.05	.01	0	1
Asian	.06	.01	0	1
Number of Children				
1 or 2	.79	.02	0	1
3 or more	.21	.02	0	1
Type of School Children Attends/ed				
Public	.63	.02	0	1
Private	.27	.02	0	1
Charter	.05	.01	0	1
Voucher	.03	.01	0	1
Other*	.01	.01	0	1
Region*				
South	.35	.02	0	1
Northeast	.19	.19	0	1
Midwest	.15	.02	0	1
West	.21	.01	0	1

Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* Referent for female is male. 6 respondents indicated that they homeschooled their child. 40 respondents did not provide state location. *N*=414.

TABLE 12. Ordinary least squares regression results from original survey experiment for perceptions of school quality.

VARIABLES	Quality 1	Quality 2
B Rating	-0.296	-0.336
	(0.223)	(0.228)
C Rating	-1.029***	-1.013***
	(0.221)	(0.228)
D Rating	-1.686***	-1.706***
	(0.219)	(0.224)
F Rating	-1.587***	-1.630***
	(0.233)	(0.238)
Female		0.016
		(0.155)
Political Views		0.055
		(0.053)
Education		-0.076
		(0.074)
Northeast		-0.022
		(0.208)
Midwest		-0.230
		(0.225)
West		-0.212
		(0.203)
US-broadly		-0.278
		(0.281)
Age		0.006
		(0.009)
Black		-0.123
		(0.185)
Latinx		-0.243
		(0.331)
Asian		0.162
		(0.328)

3 or more children		-0.012
		(0.187)
Private School		0.201
		(0.174)
Charter		-0.398
		(0.335)
Voucher		0.207
		(0.446)
Other		-1.327*
		(0.607)
Constant	4.143***	4.192***
	(0.158)	(0.479)
Observations	421	413
R-squared	0.180	0.211

Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes*. Referents are A Rating, Male, South, White, 1-2 children and Public School. N=414. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

TABLE 13. Ordinary least squares regression results from original survey experiment for enrollment decisions.

VARIABLES	Enroll 1	Enroll 2
B Rating	0.118	0.138
	(0.240)	(0.237)
C Rating	-0.933***	-0.895***
	(0.238)	(0.237)
D Rating	-1.070***	-1.147***
	(0.235)	(0.232)
F Rating	-1.076***	-1.059***
	(0.249)	(0.245)
Female		-0.422**
		(0.161)
Political Views		-0.106
		(0.056)
Education		0.042
		(0.077)
Northeast		-0.003
		(0.215)
Midwest		-0.330
		(0.233)
West		-0.242
		(0.211)
US-broadly		0.158
		(0.291)
Age		0.002
		(0.009)
Black		0.342
		(0.191)
Latinx		-0.024
		(0.349)
Asian		-0.160
		(0.340)

3 or more children		-0.151
		(0.194)
Private School		0.188
		(0.181)
Charter		0.751*
		(0.353)
Voucher		1.074*
		(0.462)
Other		-1.395*
		(0.628)
Constant	4.048***	4.248***
	(0.170)	(0.496)
Observations	419	411
R-squared	0.107	0.198

Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* Referents are A Rating, Male, South, White, 1-2 children and Public School. *N*=414. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

APPENDICES

APPENDIX A. Key Supreme Court and congressional decisions concerning segregation.

Plessy v Ferguson, 163 U.S. 537 (1896): The Supreme Court concluded that racial segregation did not constitute discrimination under the Fourteenth Amendment, so long as the separate facilities were equal. The doctrine of "separate but equal," meant that the federal government sanctioned segregation.

Brown v. Board of Education of Topeka, 347 U.S. 483 (1954) ("Brown I"): The Supreme Court unanimously concluded that state-imposed segregated schools were "inherently unequal" and mush be abolished. The ruling stuck down the "separate but equal" doctrine.

Brown II, 349 U.S. 294 (1955): The Supreme Court attempted to define how and when desegregation would be achieved. The Court ruled that desegregation should occur with "all deliberate speed."

The Civil Rights Act of 1991 (Pub. L. 102-166) (CRA): The act embodied two key aspects pertaining to education and segregation. First, it authorized the Attorney General to initiate class action law suits against districts failing to comply with *Brown*. Second, it provided the Secretary of Education to withhold federal funding if districts excluded on the basis of race.

Green v. County School Board of New Kent County, 391 U.S. 430 (1968): The Supreme Court ruled that schools must dismantle segregated dual (or segregated) systems "root and branch" and that desegregation must be achieved with respect to facilities, staff, faculty, extracurricular activities and transportation. These factors became the standard by which to determine whether school districts achieved "unitary status" or fully integrated schools.

Alexander v. Holmes County [Mississippi] Board of Education, 396 U.S. 19 (1969): The Supreme Court unanimously declared that desegregated systems must be achieved "at once" and "…operate now and hereafter only unitary schools."

Swann v. Charlotte-Mecklenberg Board of Education, 402 U.S. 1 (1971): The Supreme Court ruled that desegregation must be achieved in each of a district's schools to the greatest possible extent and approved bussing as a means to do so.

Keyes v. Denver School District No. 1, 413 U.S. 189 (1973): This was the first ruling to extend school segregation orders beyond *de jure* states – in the North and West where no explicit statutes required segregation. The Supreme Court rules that districts were responsible for policies that resulted in segregation in the school system, including constructing schools in racially isolated neighborhood and gerrymandering catchment zones. If intentional segregation was found on the part of the school board in a portion of the district, then the entire district was presumed to be illegally segregated. This was the first ruling which also recognized Latinxs' right to desegregation.

Milliken v. Bradley, 418 U.S. 717 (1974): The Supreme Court blocked efforts for interdistrict, city-suburban desegregation as a means to integrate racially isolated urban schools. The Court prohibited such remedies unless the plaintiffs could demonstrate that the suburbs or state took specific actions to contribute to the segregation of the city.

Milliken v. Bradley II, 433 U.S. 267 (1977): The Supreme Court ruled that a court could order a state to pay for educational programs to repair the harms caused by segregation.

Riddick v. School Board of the City of Norfolk, Virginia, 784 F.2d 521 (4^{th} Cir. 1986): The first federal court ruling that permitted a school district, once declared unitary, to dismantle its desegregation plan and return to local government control.

Board of Education of Oklahoma v. Dowell, 498 U.S. 237 (1991): The Supreme Court ruled that a school district, once declared unitary, released the district from its obligations to maintain desegregation.

Freeman v. Pitts, 503 U.S. 467 (1992): The Supreme Court ruled that school districts could be partially released from their desegregation obligations even if integration had not been achieved in all the specific areas determined in *Green v. County School Board of New Kent County.*

Missouri v. Jenkins, 115 S. Ct. 2038 (1995): The Supreme Court ruled that *Milliken II* equalization remedies should be limited in time and extent and that districts need not show any actual correction of the educational harms of segregation.

Grutter v. Bollinger, 539 U.S. 306 (2003): The Supreme Court ruled that within Higher Education the use of an applicant's race as one factor in an admissions policy of a public educational institution does not violate the Equal Protection Clause of the Fourteenth Amendment. Instead, the Court declared that, if narrowly tailored, it promotes a diverse student body and can be used as a holistic process to evaluate applicants along with other factors.

Parents Involved in Community Schools v. Seattle School Dist. No. 1, 551 U.S. 701 (2007): The Supreme Court ruled that the district's goal of preventing racial imbalance did not meet the standards for a constitutionally legitimate use of race. Instead, the Court declared that voluntary race-conscious student assignments to schools violated the Equal Protection Clause of the Fourteenth Amendment.

Source: Adjusted from Orfield and Eaton 1996: xxi; summaries of key opinions and decisions.

APPENDIX B. Accountability and reporting current systems across the United States.

States	Rating system	Minimum factors in elementary and middle school ratings	Statute and regulation citations
Alabama	A-F	Student Achievement, Achievement Gap, Student Growth	Ala.Code 1975 § 16-6C-2; Alabama Administrative Code 290-4-1.03
Alaska	Index	Student Achievement, Attendance/Chronic Absenteeism, School Growth/Progress,	4 AAC 06.812
Arizona	A-F	Student Achievement, English Language Proficiency/Progress + multiple measures of school quality	A.R.S. § 15-241
Arkansas	A-F	Student Achievement, English Language Proficiency/Progress, Student Growth	A.C.A. § 6-15-2105, -2108
California	Index	Student Achievement, Attendance/Chronic Absenteeism, Dropout/Reenrollment Rates	West's Ann.Cal.Educ.Code § 52052, 52052.1
Colorado	Accreditation	Student Achievement, Student Growth, Achievement Gap, Literacy/Reading (3/4th)	C.R.S.A. § 22-11-204, 207
Connecticut	1-5	Student Achievement	C.G.S.A. § 10-223e
Delaware	Descriptive	Student Achievement, Attendance/Chronic Absenteeism	14 Del.C. § 154; 14 Del. Admin. Code 103
D.C.	Not in policy	-	-
Florida	A-F	Student Achievement, Student Growth, Acceleration Readiness, Achievement Gap	West's F.S.A. § 1008.34
Georgia	Index	Student Achievement, Student Growth, Achievement Gap	Ga. Code Ann., § 20-14-33
Hawaii	Not in policy	Student Achievement, Dropout/Reenrollment Rates, Attendance/Chronic Absenteeism	HRS § 302A-1004
Idaho	Not in policy	Student Achievement, Achievement Gaps, English Proficiency, Literacy, Readiness, Student/Parent Engagement	IDAPA 08.02.03.112
Illinois	Descriptive	Student Achievement, Student Growth, Readiness, Achievement Gap	105 ILCS 5/2-3.25a
Indiana	A-F	Student Achievement, Achievement Gap, Student Growth	IC 20-31-8-3; 511 IAC 6.2-10-3 - 6.2-10-6
Iowa	Accreditation	Student Achievement	I.C.A. § 256.7; Iowa Admin. Code 281-12.8(256)
Kansas	Accreditation	Student Achievement, Test Participation, Attendance/Chronic Absenteeism + 12 quality measures.	K.A.R. 91-31-32
Kentucky	Other	Student Achievement, School Climate, English Proficiency/Progress	KRS § 158.6455
Louisiana	A-F	Student Achievement, Achievement Gap, Dropout/Reenrollment Rates + dropout accumulation	La. Admin Code. tit. 28, Pt XI, § 301, § 405, 409, & 413, § 1101
Maine	Not in policy	Student Achievement, Readiness	20-A M.R.S.A. § 6214
Maryland	Index	Student Achievement, School Climate + 3 school quality indicators	MD Code, Education, § 7-203
Massachusetts	1-5	Student Achievement, Student Growth	603 CMR 2.02-2.06
Michigan	Not in policy	-	M.C.L.A. 380.1280.
Minnesota	Not in policy	Student Achievement, Achievement Gap, Growth + enrichment experiences	M.S.A. § 120B.11, 120B.35
Mississippi	A-F	Student Achievement, Student Growth, Achievement Gap, Attendance	Miss. Code Ann. § 37-17-6; Miss. Admin. Code 7-1-10:I-2, 7-1-10:II-7
Missouri	Accreditation	Student Achievement, Student Growth, Achievement Gap, Readiness, Attendance	5 Mo. Code of State Regulations 20-100.105
Montana	Accreditation	Student Achievement, Science Achievement Growth	Mont.Admin.R. 10.55.601-607

Nebraska	Tiers of support	Student Achievement, Student Growth	Neb.Rev.St. § 79-760.06; Neb. Admin. R. & Regs. Tit. 92, Ch. 10, § 010 & Appendix G
Nevada	Not in policy	Student Achievement, Student Growth	N.R.S. 385A.720, 385A.600, 385A.670
New Hamp.	Not in policy	Input based and performance based system	N.H. Rev. Stat. § 193-E:3-b - E:3-d
New Jersey	Tiers of support	Student Achievement, Student Growth	N.J.A.C. 6A:33–2.1
New Mexico	A-F	Student Achievement, Achievement Gap, Attendance, School Climate, School Growth, Student/Parent Engagement	N. M. S. A. 1978, § 22-2E-4; N.M. Admin. Code 6.19.8
New York	Tiers of support	Student Achievement	McKinney's Education Law § 211-a, 211-f; 8 NYCRR 100.18(i)-(j), 100.19
N. Carolina	A-F	Student Achievement, English Proficiency, Science Growth, Student Growth	N.C.G.S.A. § 115C-83.15-.16;
North Dakota	Not in policy	-	NDCC, 15.1-02-17; Accreditation system: NDCC, 15.1-06-06
Ohio	A-F	Student Achievement, Achievement Gap, Literacy/Reading, Student Growth	Ohio Rev. Code Ann. § 3302.03; Ohio Admin. Code 3301-28-9, 3301-28-10
Oklahoma	A-F	Student Achievement, Student Growth, English Proficiency, Absenteeism	70 Okl.St.Ann. § 1210.541, 1210.545
Oregon	1-5	Student Achievement, Growth, Test Participation, Achievement Gap	O.R.S. § 329.105, 329.115
Pennsylvania	Not in policy	Student Achievement, Attendance	22 Pa. Code § 403.3
Rhode Island	Not in policy	Student Achievement	Gen.Laws 1956, § 16-7.1-5; R.I. Admin. Code 21-2-53:G-15-3
S. Carolina	Descriptive	Student Achievement, English Proficiency, Student Growth	Code 1976 § 59-18-900
South Dakota	Descriptive	Student Achievement, Growth, Attendance	ARSD 24:55:03:01-:05
Tennessee	Tiers of support	Student Achievement, Student Growth + other	T. C. A. § 49-1-602
Texas	Descriptive	Student Achievement, Achievement Gap, Growth	V.T.C.A., Education Code § 39.053; 19 TAC §97.1001
Utah	A-F	Student Achievement, Achievement Gap, Growth	U.C.A. 1953 § 53A-1-1105 - 1108
Vermont	Not in policy	Student Achievement, Test Participation	16 V.S.A. § 165; Vt. Admin. Code 7-1-8:2500 - 2582
Virginia	Accreditation	Student Achievement	VA Code Ann. § 22.1-253.13:3; 8 VAC 20-131-280 & -300
Washington	Tiers of support	Student Achievement	West's RCWA 28A.657.110, 28A.305.130
West Virginia	A-F	Student Achievement, Achievement Gap, Growth, Attendance, Literacy/Reading (3/4th) + at-risk reduction	2016 WV REG TEXT 422861 (NS) - Section 126.13.4, 126.13.5
Wisconsin	1-5 stars	Student Achievement, Achievement Gap, Growth, Attendance	W.S.A. 115.38, 115.385
Wyoming	Descriptive	Student Achievement, Achievement Gap, Growth, English Proficiency	Wyo. Stat. Ann. § 21-2-204

Source: Adjusted from the Education Commission of the States 2018 (http://ecs.force.com/mbdata/mbQuest6S?rep=SA171)

APPENDIX C. Accountability and weighting for states included in the analysis.

States	Rating system	Categories by weight percentage of contribution to overall elementary rating	State Source
Alabama	A-F	achievement (40%/weighted); Growth (50%/weighted); Absenteeism (10%). Weights based on achievement levels (I-IV: 0-1.25); Growth categories (low, average high: 0, 1, 1.5).	https://www.alsde.edu/sec/acct/Resources/AL%20Technical%20Guide%20January%20 2018.pdf
Arizona	A-F	Proficiency (30%); Growth (50%); ELL (10%, if ELL pop>20) Readiness (10%)	https://azsbe.az.gov/sites/default/files/media/FINAL%20A-F%20Plan_1.pdf
Arkansas	A-F	Achievement (35%); Growth for ELP (50%); Progress to ELP (weighted by ELP); School quality and student success (15%).	http://dese.ade.arkansas.gov/public/userfiles/Legal/Legal-Current%20Rules/ade_334_--_Rules_Governing_the_School_Rating_System.pdf
Florida	A-F	Sum of points for each divided by total available: Math achievement (100); English achievement (100); Learning gains ELA (100) Learning gains math (100); Learning gains lowest 25% ELA (100); Learning gains lowest 25% math (100); Science (100); ELP Progress (100).	http://www.fldoe.org/core/fileparse.php/18534/urlt/SchoolGradesCalcGuide19.pdf
Indiana	A-F	Performance on English; Performance on Math; Growth in English; Growth in Math. Can not receive an A unless the school has reduced achievement gaps in each student subgroup.	https://www.doe.in.gov/sites/default/files/accountability/f-accountability-presentation.pdf
Louisiana	A-F	Performance (75%); Student Progress (25%).	https://www.louisianabelieves.com/docs/default-source/teacher-leader-summit/2018-teacher-leader-summit/s030--what's-new-in-louisiana's-school-and-school-system-accountability-policies.pdf?sfvrsn=2
Mississippi	A-F	Out of 700 points: Reading (95); Math (95); Science (95); Growth in reading for all students (95); Growth in math for all students (95); Growth in reading for lowest 25% of students (95); Growth in math for lowest 25% of students (95); English progress (35).	https://msrc.mdek12.org/downloads/MSRCUserGuide.pdf
New Mexico	A-F	Proficiency (25); Value-Added (15); School Improvement (10); Improvement of higher-performing students (e.g. growth,	https://aae.ped.state.nm.us/SchoolGradingLinks/1718/Technical%20Assistance%20for%20Educators/Technical%20Guide%202018.pdf

		20); Improvement of lowest-performing students (20); Attendance (5); Classroom/Parent Survey (5). Bonus Points (e.g. reducing truancy, engaging families etc. +5).	
N. Carolina	A-F	Achievement (80%); Growth (20%).	http://www.ncpublicschools.org/docs/accountability/reporting/2018/documentation/business-rules/accountability-model.pdf
Ohio	A-F	Achievement (20%); Progress (20%); Graduation Rate (15%); Gap Closing (15%); Improving At-Risk K-3 Readers (15%); Prepared for Success (15%).	http://education.ohio.gov/getattachment/Topics/Data/Report-Card-Resources/Report-Card-Guide.pdf.aspx
S. Carolina	Descriptive: Unsatisfactory to Excellent	Points: Achievement (40); Preparing for Success (10); Progress (20); Lowest 20 percent progress (20); School Quality (10). With 20+ Els: Achievement (35); Preparing for Success (10); Progress (17.5); Lowest 20 percent progress (17.5); School Quality (10); ELP (10).	https://ed.sc.gov/data/report-cards/sc-school-report-card/files/accountability-manual/
Texas	A-F	Achievement (30%); Growth (50%); ELP (10%); Achievement STARR (10%)	https://tea.texas.gov/sites/default/files/Entire%202018%20Accountability%20Manual.pdf
Utah	Descriptive: Critical Needs to Exemplary	Achievement (37%); Growth (37%); EL Progress (9%); Growth of Lowest 25 percent (17%). If percent of Els<10, weight is distributed to Achievement (41%); Growth (41%); Growth of Lowest (18%).	https://www.schools.utah.gov/file/70235d75-cf35-4e04-9d2b-34ff388968b5
Wisconsin	1-5 stars: Fails to meet to Significantly exceeds expectations	Weighted average: Achievement (100); Growth (100) based on percent of students who are economically disadvantaged. Combined with Closing Gaps (100); On-Track Readiness (100) and deductions.	https://dpi.wi.gov/sites/default/files/imce/accountability/pdf/Report%20Card%20Technical%20Guide%202016-17.pdf

Source: The Departments of Education for: Alabama, Arizona, Arkansas, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* States use various measures to calculate key components. Components are often the result of various weights and measures. For instance, Ohio's Progress component accounts for 20% of the overall rating, but this component is a result of multiple measures. The final component is a result of All Students (55%); Gifted Students (15%); Students with Disabilities (15%) and Student's whose performance is in the lowest 20 percent (15%). Similar methods are present across states and measures.

APPENDIX D. Metropolitan and district-level Black-White and Latinx-White segregation (D) by metropolis.

Metropolis, State	B-W Between Districts	L-W Between Districts	B-W Within Districts	L-W Within Districts
Abilene, TX	28.68	23.08	69.64	16.94
Akron, OH	56.69	28.37	0.27	2.48
Albuquerque, NM	14.44	10.92	34.59	40.55
Alexandria, LA	0.00	0.00	35.01	50.86
Amarillo, TX	30.68	23.62	11.82	12.04
Anniston, AL	35.28	35.24	3.63	11.36
Appleton/Oshkosh/Neenah, WI	21.36	19.19	15.92	15.17
Asheville, NC	25.50	13.69	40.67	29.59
Auburn/Opelika, AL	26.55	19.19	1.96	1.14
Austin/San Marcos, TX	33.52	34.52	34.60	28.21
Baton Rouge, LA	66.88	48.95	5.36	7.32
Beaumont/Port Arthur, TX	72.19	54.52	6.35	5.56
Biloxi/Gulfport/Pascagoula, MS	29.82	37.13	19.84	28.53
Birmingham, AL	52.69	32.33	38.65	51.21
Brazoria, TX	17.32	14.15	22.14	25.48
Bryan/College Station, TX	30.71	42.06	40.92	44.86
Canton/Massillon, OH	46.63	25.22	21.19	16.19
Charleston/North Charleston, SC	10.00	8.45	62.21	70.63
Charlotte/Gastonia/Rock Hill, NC/SC	37.27	31.25	23.59	29.89
Cincinnati, OH/KY/IN	72.33	41.48	8.19	15.11
Cleveland/Lorain/Elyria, OH	69.53	52.45	5.56	3.99
Columbia, SC	44.51	30.67	27.94	19.64
Columbus, OH	56.22	38.37	39.03	38.79
Corpus Christi, TX	35.94	28.67	35.45	30.91
Dallas, TX	48.04	50.48	31.87	43.90
Dayton/Springfield, OH	47.79	28.36	20.70	13.99
Daytona Beach, FL	2.41	7.25	20.70	17.73
Decatur, AL	46.44	38.79	51.07	20.11

Metropolis, State (cont.)	B-W Between Districts	L-W Between Districts	B-W Within Districts	L-W Within Districts
Dothan, AL	40.25	24.77	51.66	25.56
El Paso, TX	9.74	27.55	26.34	37.11
Elkhart/Goshen, IN	32.90	19.42	3.44	4.89
Fayetteville, NC	1.75	1.13	42.03	28.03
Fayetteville/Springdale/Rogers, AR	25.64	46.56	32.60	29.09
Florence, AL	41.04	38.69	5.58	14.15
Florence, SC	10.47	16.46	13.75	17.02
Fort Lauderdale, FL	0.00	0.00	57.98	32.43
Fort Myers/Cape Coral, FL	0.00	0.00	55.16	32.20
Fort Pierce/Port St. Lucie, FL	37.71	14.29	33.39	19.33
Fort Walton Beach, FL	0.00	0.00	35.96	21.11
Fort Wayne, IN	43.36	37.70	64.61	46.03
Fort Worth/Arlington, TX	51.46	41.16	5.56	5.17
Gainesville, FL	1.38	1.92	38.92	20.09
Galveston/Texas City, TX	54.01	33.65	38.57	13.05
Gary, IN	68.88	43.73	3.74	3.18
Goldsboro, NC	8.10	9.81	45.34	43.62
Green Bay, WI	40.72	45.43	32.73	17.42
Greensboro/Winston-Salem/High Point, NC	33.81	23.07	53.78	51.75
Greenville, NC	8.96	4.50	36.73	38.07
Greenville, SC	14.22	13.00	25.73	30.46
Greenville/Spartanburg/Anderson, SC	32.63	22.10	11.61	11.36
Hamilton/Middletown, OH	24.37	20.23	23.81	22.17
Hickory/Morganton/Lenoir, NC	27.07	16.23	24.14	16.27
Houma, LA	10.22	6.91	39.29	40.16
Houston, TX	44.94	40.33	64.74	68.29
Huntsville, AL	34.83	34.24	60.83	60.17
Indianapolis, IN	64.81	52.31	32.43	44.23

Metropolis, State (cont.)	B-W Between Districts	L-W Between Districts	B-W Within Districts	L-W Within Districts
Jackson, MS	39.64	26.44	12.27	34.39
Jacksonville, FL	38.00	19.49	48.07	29.30
Jacksonville, NC	0.00	0.00	36.26	20.99
Janesville/Beloit, WI	53.47	37.08	19.88	15.98
Kenosha, WI	20.70	19.00	47.05	36.76
Killeen/Temple, TX	36.71	19.71	16.97	20.84
Kokomo, IN	40.80	21.36	21.88	10.17
Lafayette, IN	33.12	26.80	22.96	12.24
Lafayette, LA	11.61	22.96	39.38	40.44
Lake Charles, LA	19.96	4.93	47.53	30.39
Lakeland/Winter Haven, FL	0.00	0.00	29.55	30.59
Lima, OH	51.48	32.02	17.44	9.77
Little Rock/North Little Rock, AR	54.05	34.36	58.51	67.70
Longview/Marshall, TX	46.83	41.27	8.80	1.65
Lubbock, TX	42.46	27.62	51.08	41.38
Madison, WI	42.17	38.47	7.28	11.95
Mansfield, OH	57.80	20.16	5.31	14.35
Melbourne/Titusville/Palm Bay, FL	0.00	0.00	41.79	26.30
Miami, FL	0.00	0.00	70.36	49.93
Milwaukee/Waukesha, WI	66.55	48.94	19.84	12.54
Mobile, AL	32.10	11.83	59.57	25.73
Monroe, LA	16.70	4.20	61.39	37.30
Montgomery, AL	56.65	52.98	57.80	59.59
Muncie, IN	45.56	29.65	12.02	14.17
Myrtle Beach, SC	0.00	0.00	39.72	31.25
Naples, FL	0.00	0.00	57.02	50.66
New Orleans, LA	44.14	48.87	57.92	44.59
Ocala, FL	0.00	0.00	35.01	25.91
Odessa/Midland, TX	8.51	16.13	34.43	27.29

Metropolis, State (cont.)	B-W Between Districts	L-W Between Districts	B-W Within Districts	L-W Within Districts
Orlando, FL	15.72	16.12	34.53	19.73
Panama City, FL	7.17	42.70	45.61	39.89
Pensacola, FL	38.89	10.42	46.03	29.59
Phoenix/Mesa, AZ	45.31	46.57	20.39	20.10
Pine Bluff, AR	64.39	28.61	29.08	22.41
Provo/Orem, UT	14.13	24.31	13.83	31.52
Punta Gorda, FL	0.00	0.00	21.58	15.61
Racine, WI	30.94	27.21	42.52	41.29
Raleigh/Durham/Chapel Hill, NC	42.61	25.52	48.53	44.74
Rocky Mount, NC	17.53	6.40	42.51	37.29
Salt Lake City/Ogden, UT	36.14	37.17	13.66	26.53
San Angelo, TX	5.41	0.07	23.11	24.51
San Antonio, TX	32.54	30.59	21.91	57.60
Sarasota/Bradenton, FL	14.68	21.02	48.22	31.21
Sheboygan, WI	26.47	24.38	25.18	29.23
Sherman/Denison, TX	32.14	35.23	13.85	29.31
Shreveport/Bossier City, LA	26.32	9.29	27.45	20.26
South Bend, IN	54.34	46.36	42.15	19.25
Sumter, SC	0.00	0.00	31.79	32.38
Tallahassee, FL	11.26	33.47	64.01	39.74
Tampa/St. Petersburg/Clearwater	21.55	28.01	30.67	23.06
Terre Haute, IN	0.00	0.00	36.74	17.94
Texarkana, TX/AR	0.00	0.00	18.56	7.19
Toledo, OH	57.87	28.89	20.01	16.31
Tucson, AZ	35.13	34.41	36.34	40.47
Tuscaloosa, AL	30.03	1.18	58.16	52.96
Tyler, TX	39.79	42.07	44.67	65.24
Victoria, TX	1.74	4.85	34.48	33.52
Waco, TX	62.43	53.48	33.26	30.57

Metropolis, State (cont.)	B-W Between Districts	L-W Between Districts	B-W Within Districts	L-W Within Districts
Wausau, WI	9.03	10.39	21.57	34.95
West Palm Beach/Boca Raton, FL	0.47	0.37	59.36	48.80
Wichita Falls, TX	16.94	16.14	39.77	33.89
Wilmington, NC	12.45	6.03	56.88	40.57
Youngstown/Warren, OH	63.89	41.89	1.58	5.20
Yuma, AZ	17.55	21.95	33.25	15.86

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Segregation calculated using Dissimilarity indices (D). *Notes:* . Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. MSAs with levels (D) that exceed 60 are highlighted, indicating that nearly 40 percent of one student demographic (e.g. whites) would have to relocate to balance the domain (e.g. district or school).

APPENDIX E. Cross-tabulations of data for all schools: By fixed covariates using at(spec) option for metropolitan Black-White segregation.

Percent Black *Constructed Categories*	Total School-level data for All levels of B-W Between (D)	Total School-level data *if* B-W Between (D) = 0	Total School-level data *if* B-W Between (D) <30	Total School-level data *if* B-W Between (D) >50	Total School-level data *if* B-W Between (D) >70
0-	6,994	414	1,926	675	98
19.81-	2,124	202	685	147	25
40.96-	960	86	347	103	19
62.11-	522	48	182	94	16
83.27- 100	196	24	74	35	7

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black thresholds are categorical based on Table 2. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX F. Cross-tabulations of data for schools with an F rating: By fixed covariates using at(spec) option for metropolitan Black-White segregation.

Percent Black *Constructed Categories*	Total School-level data for All levels of B-W Between (D)	Total School-level data *if* B-W Between (D) = 0	Total School-level data *if* B-W Between (D) <30	Total School-level data *if* B-W Between (D) >50	Total School-level data *if* B-W Between (D) >70
0-	-	5	75	103	14
19.81-	-	8	30	36	3
40.96-	-	3	23	23	1
62.11-	-	1	4	25	2
83.27- 100	-	1	2	10	3

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black thresholds are categorical based on Table 2. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX G. Cross-tabulations of data for schools with an A rating: By fixed covariates using at(spec) option for metropolitan Black-White segregation.

Percent Black *Constructed Categories*	Total School-level data for All levels of B-W Between (D)	Total School-level data *if* B-W Between (D) = 0	Total School-level data *if* B-W Between (D) <30	Total School-level data *if* B-W Between (D) >50	Total School-level data *if* B-W Between (D) >70
0-	-	141	449	255	12
19.81-	-	62	158	65	1
40.96-	-	27	71	31	1
62.11-	-	20	48	19	2
83.27- 100	-	9	23	0	0

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black thresholds are categorical based on Table 2.Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

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APPENDIX H. Cross-tabulations of data for all schools: By fixed covariates using at(spec) option for metropolitan Latinx-White segregation.

Percent Latinx *Constructed Categories*	Total School-level data for All levels of L-W Between (D)	Total School-level data *if* L-W Between (D) = 0	Total School-level data *if* L-W Between (D) <30	Total School-level data *if* L-W Between (D) >40	Total School-level data *if* L-W Between (D) >50
0-	1,088	40	568	268	124
4.27-	5,567	349	2,467	1,894	743
30.13-	2,122	221	807	930	288
55.99-	1,365	88	391	678	201
81.85- 100	654	76	214	292	70

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Latinx thresholds are categorical based on Table 2. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

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APPENDIX I. Cross-tabulations of data for schools with an F rating: By fixed covariates using at(spec) option for metropolitan Latinx-White segregation.

Percent Latinx *Constructed Categories*	Total School-level data for All levels of L-W Between (D)	Total School-level data *if* L-W Between (D) = 0	Total School-level data *if* L-W Between (D) <30	Total School-level data *if* L-W Between (D) >40	Total School-level data *if* L-W Between (D) >50
0-	-	5	56	26	11
4.27-	-	8	80	99	42
30.13-	-	4	29	56	18
55.99-	-	1	19	30	12
81.85- 100	-	0	15	11	0

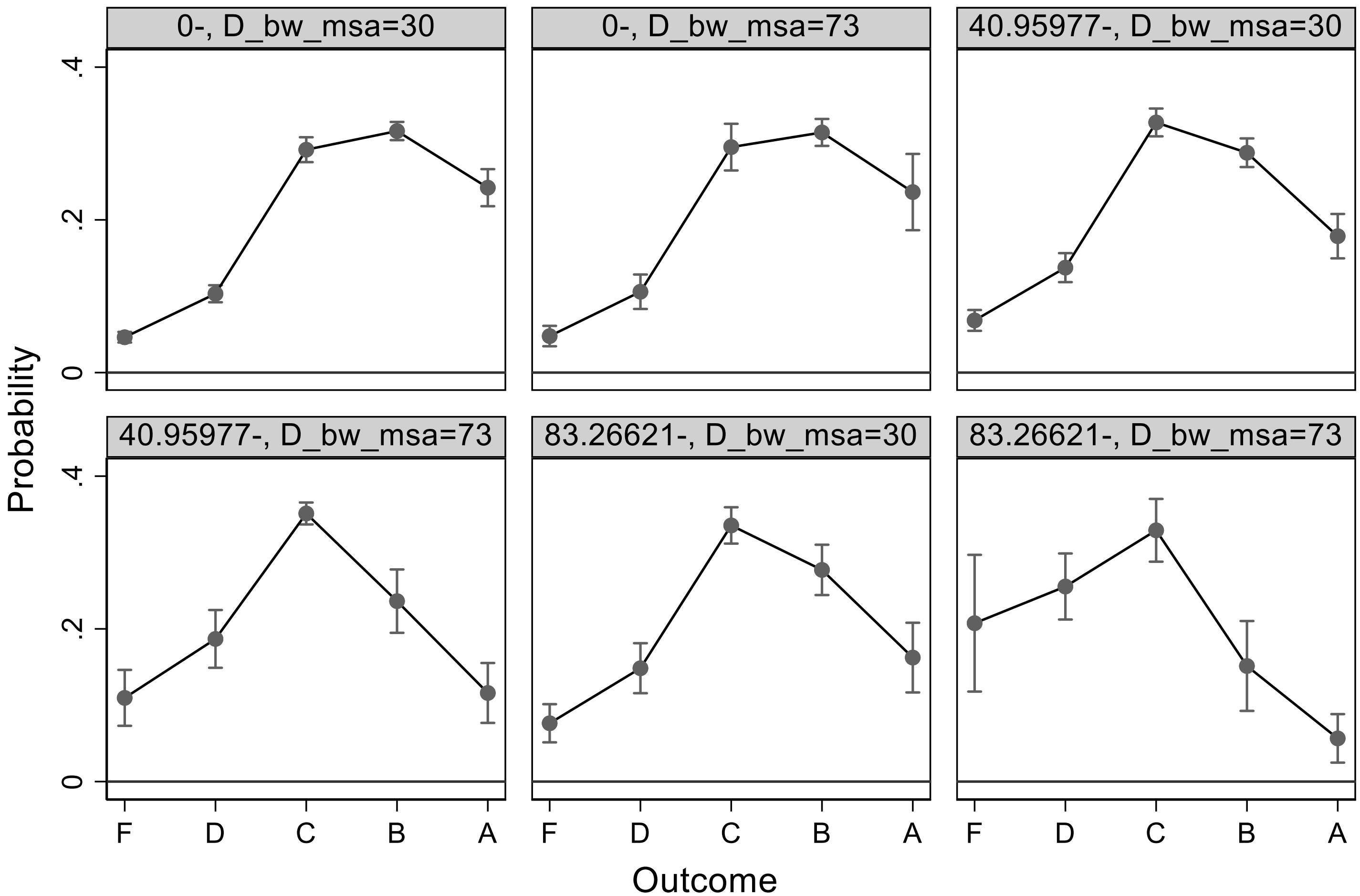
Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Latinx thresholds are categorical based on Table 2. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX J. Cross-tabulations of data for schools with an A rating: By fixed covariates using at(spec) option for metropolitan Latinx-White segregation.

Percent Latinx *Constructed Categories*	Total School-level data for All levels of L-W Between (D)	Total School-level data *if* L-W Between (D) = 0	Total School-level data *if* L-W Between (D) <30	Total School-level data *if* L-W Between (D) >40	Total School-level data *if* L-W Between (D) >50
0-	-	8	92	44	22
4.27-	-	107	505	546	245
30.13-	-	84	194	141	38
55.99-	-	35	90	84	13
81.85- 100	-	25	54	43	7

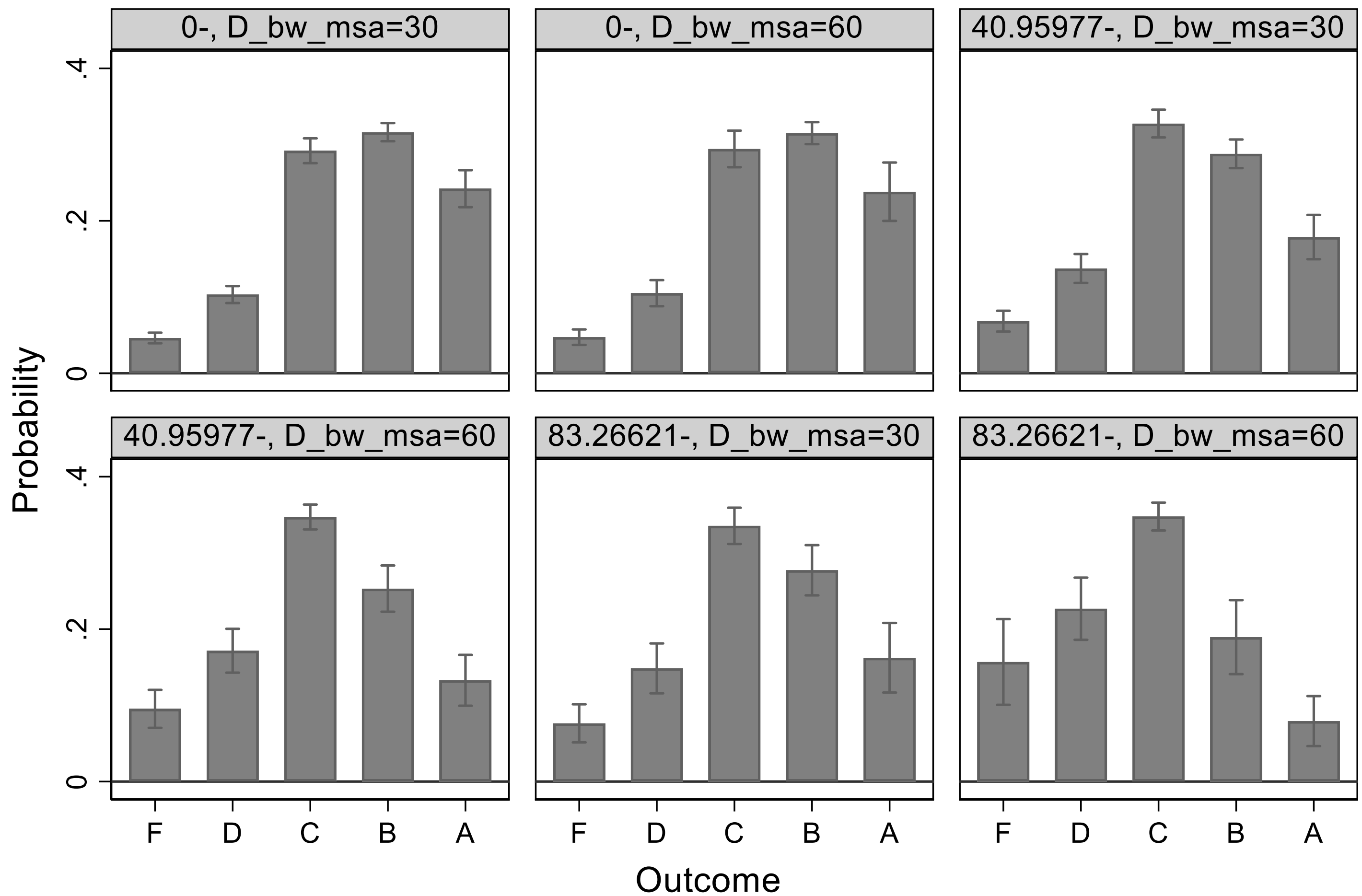
Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Latinx thresholds are categorical based on Table 2. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX K. Additional Cut Points: Predictive Margins with 95 Percent CI. Metropolitan-level Black-White segregation (D), Black student concentration and predicted school rating.



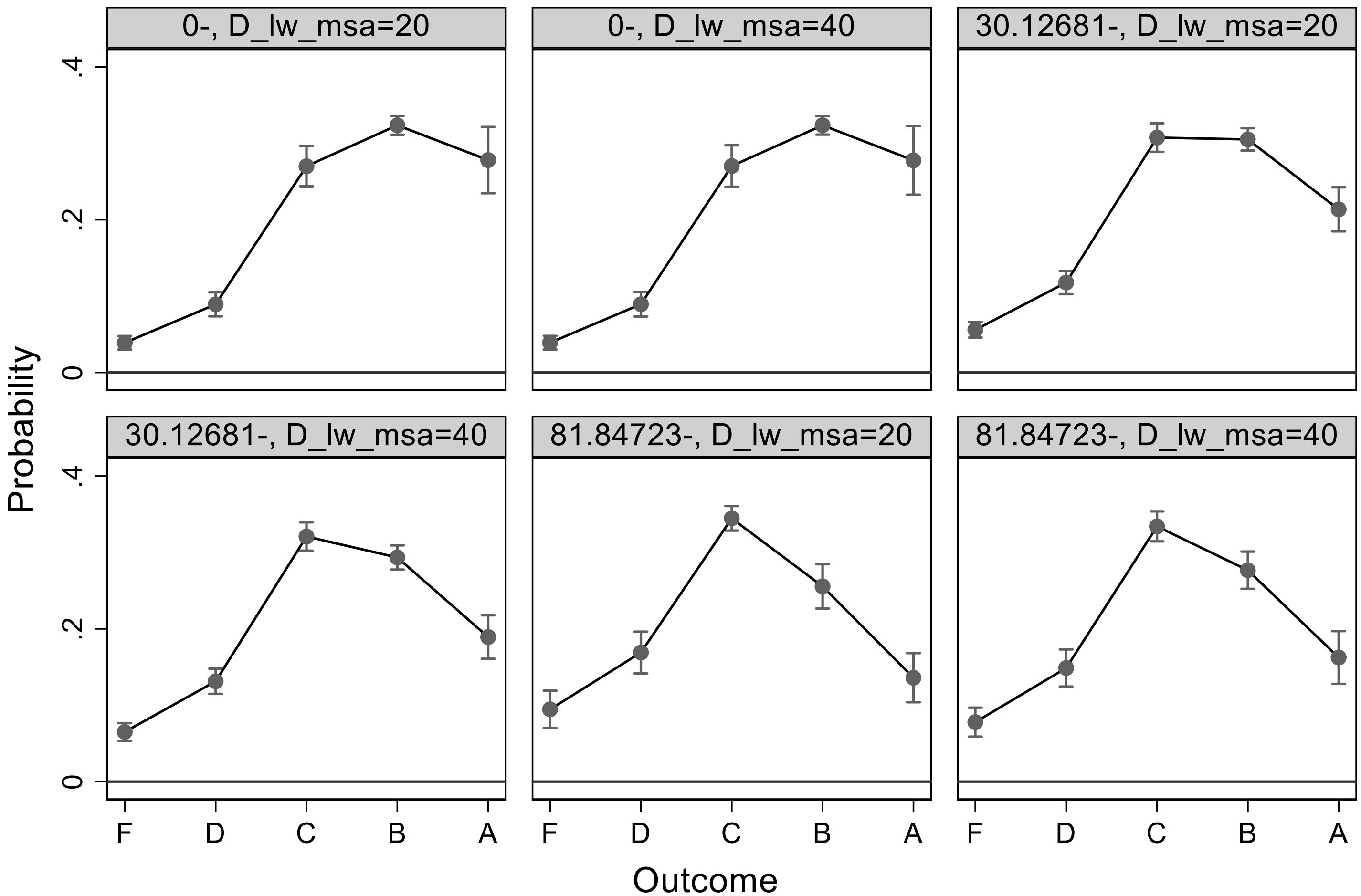
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:*. Appendix shows predicted probabilities of school rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools.

APPENDIX L. Additional Cut Points: Predictive Margins with 95 Percent CI. Metropolitan-level Black-White segregation (D), Black student concentration and predicted school rating (Bar).



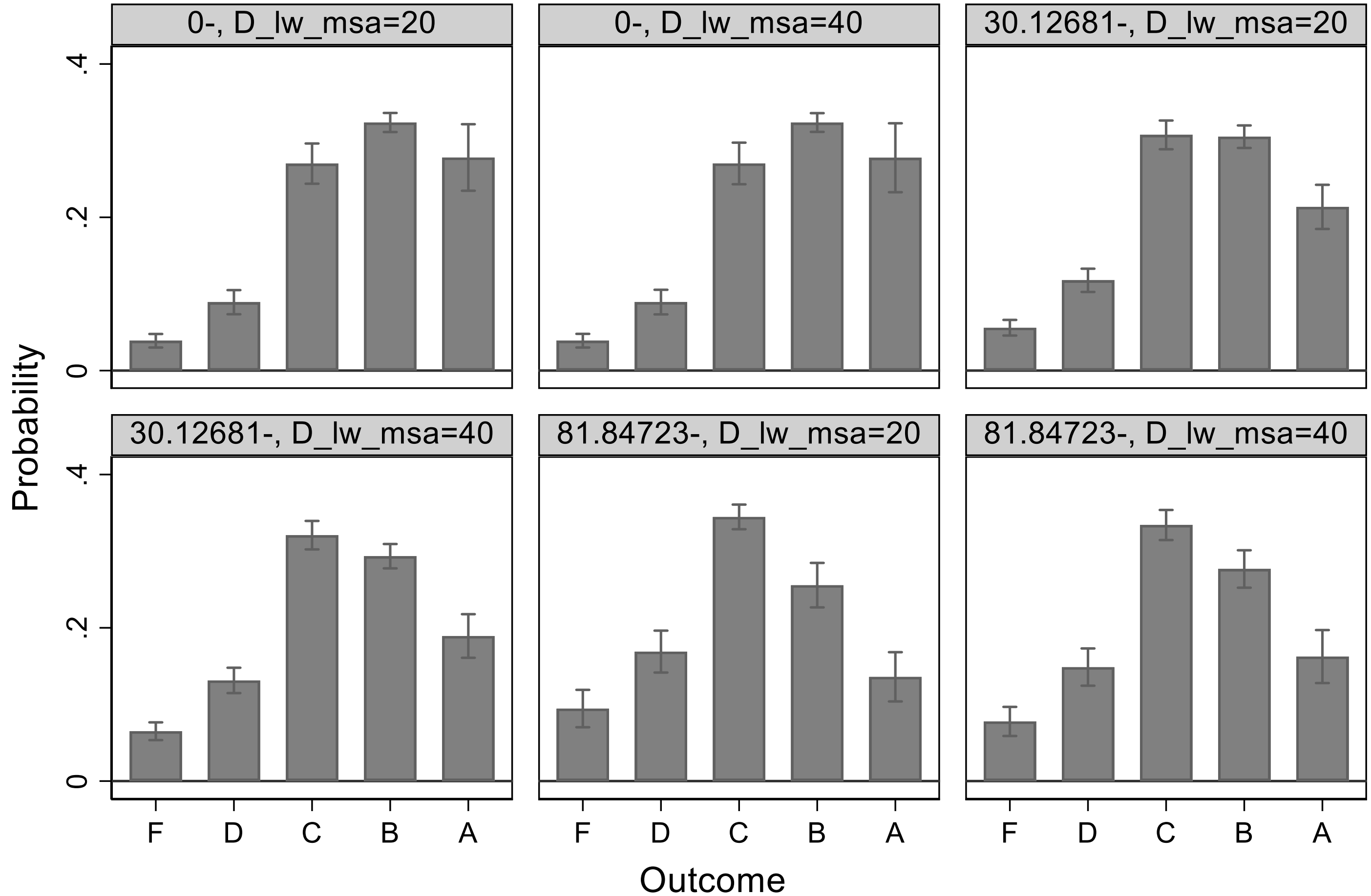
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:*. Appendix shows predicted probabilities of school rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools.

APPENDIX M. Additional Cut Points: Predictive Margins with 95 Percent CI. Metropolitan-level Latinx-White segregation (D), Latinx student concentration and predicted school rating.



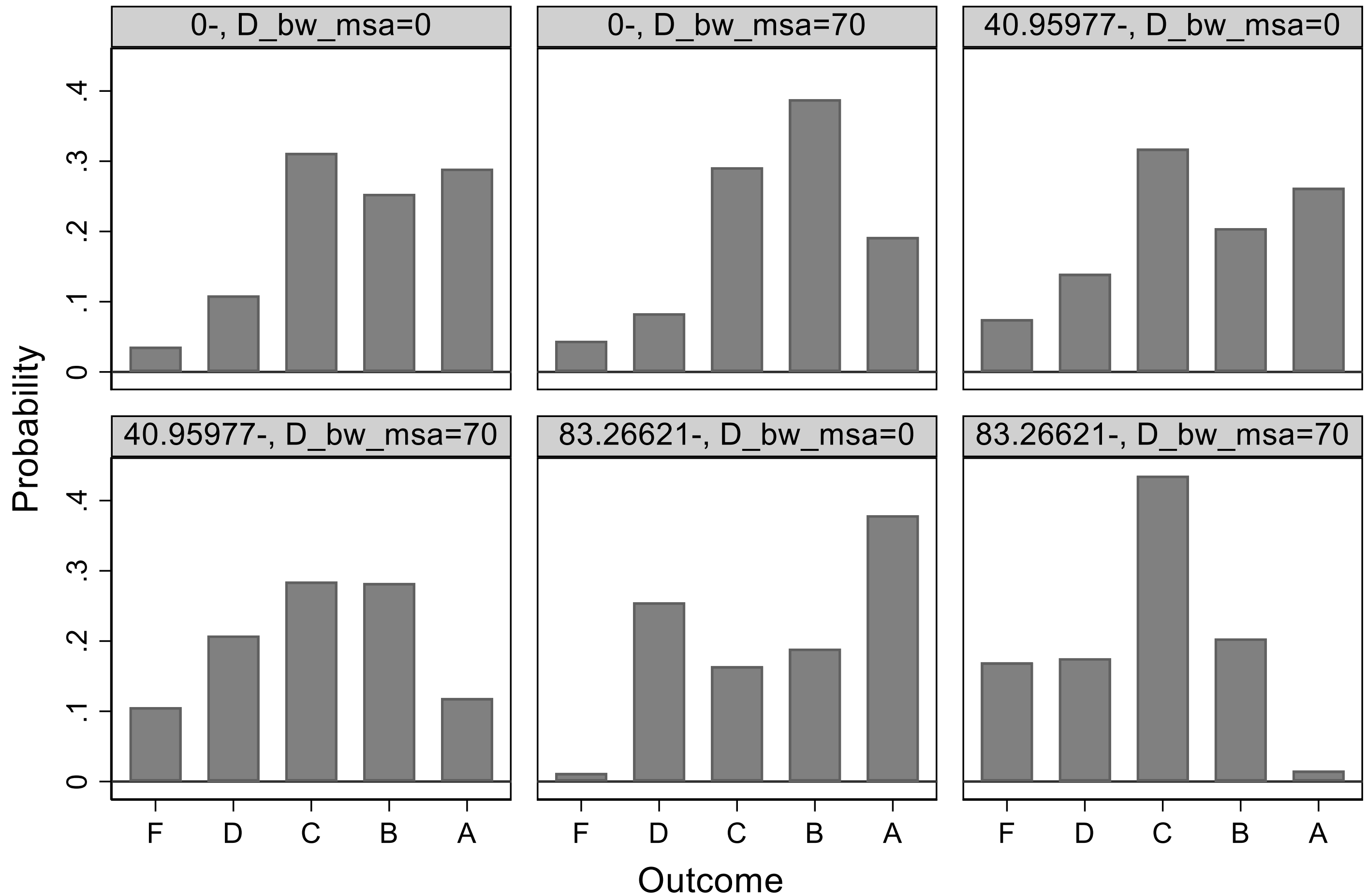
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:*. Appendix shows predicted probabilities of school rating for varying levels of between-district Latinx-White segregation and percentage categories of Latinx student population within schools.

APPENDIX N. Additional Cut Points: Predictive Margins with 95 Percent CI. Metropolitan-level Latinx-White segregation (D), Latinx student concentration and predicted school rating (Bar).



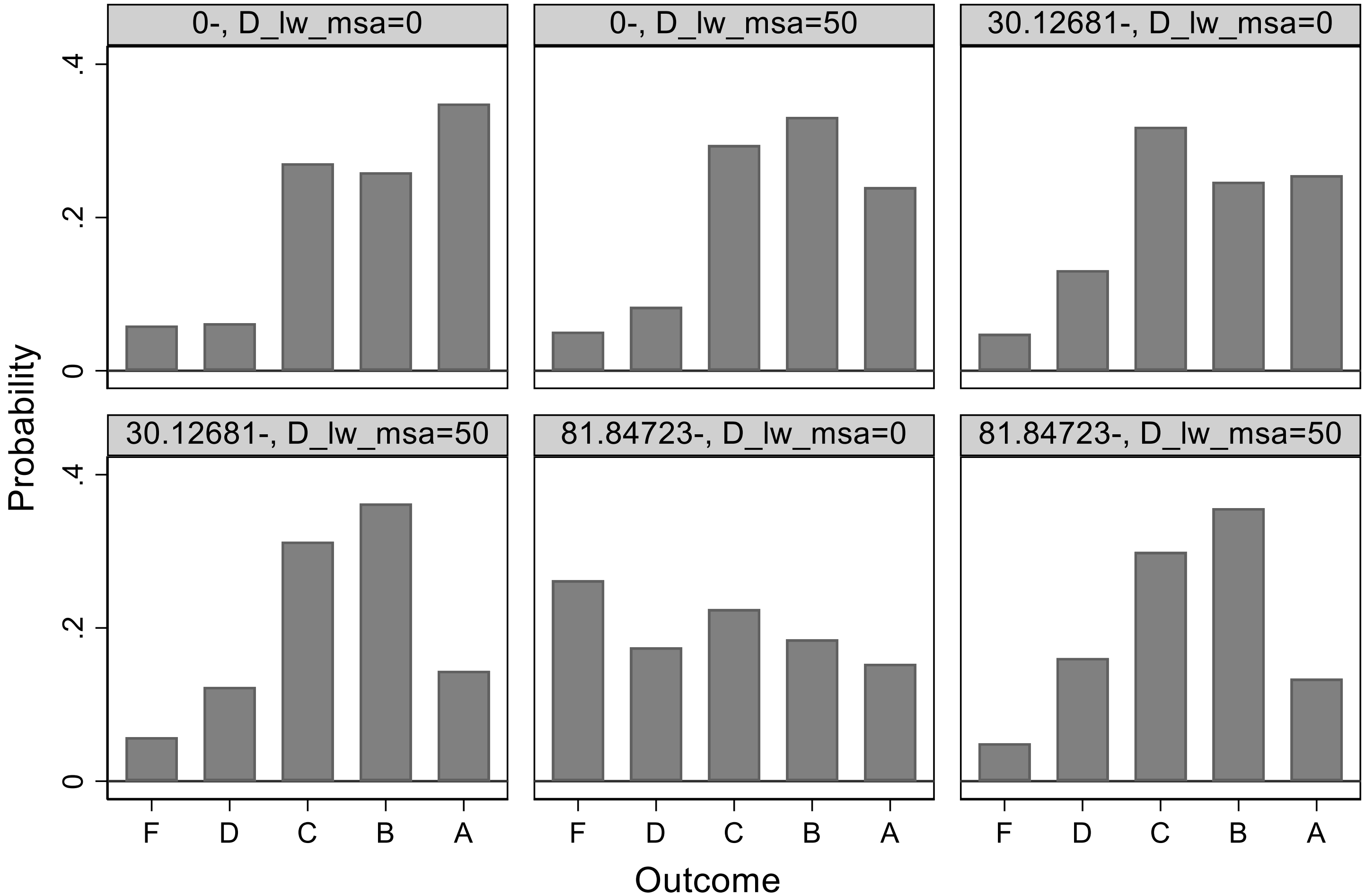
Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:*. Appendix shows predicted probabilities of school rating for varying levels of between-district Latinx-White segregation and percentage categories of Latinx student population within schools.

APPENDIX O. Predictive Margins from golotit2 output: Metropolitan-level Black-White segregation (D), Black student concentration and predicted school rating (Bar).



Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Appendix shows predicted probabilities of school rating for varying levels of between-district Black-White segregation and percentage categories of Black student population within schools. Produced from gologit2 command with all covariates included in Model 2, Table 7 with robust clusters at the metropolitan-level.

APPENDIX P. Predictive Margins from golotit2 output: Metropolitan-level Latinx-White segregation (D), Latinx student concentration and predicted school rating (Bar).



Sources: The Departments of Education for the following states utilizing a similar 5-pt scale: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Appendix shows predicted probabilities of school rating for varying levels of between-district Latinx-White segregation and percentage categories of Latinx student population within schools. Produced from gologit2 command with all covariates included in Model 2, Table 8 with robust clusters at the metropolitan-level.

APPENDIX Q. Average marginal effects associated with a one standard deviation increase in percent Black: By metropolitan-level Black-White segregation.

VARIABLES	Schools	Districts	MSAs	A	B	C	D	F
All Metropolitan Regions	9,138	761	102					
Average Predictions				.226	.306	.300	.114	.054
Pr (y | base)								
Percent Black								
+SD				-.036	-.019	.018	.021	.015
p-value				.000	.000	.000	.000	.000
Metropolitan Regions with Medium to High Levels of B-W Between (D) Segregation: >30	6,616	659	60					
Average Predictions				.201	.324	.291	.121	.062
Pr (y | base)								
Percent Black								
+SD				-.052	-.032	.026	.033	.026
p-value				.000	.000	.000	.000	.000
Metropolitan Regions with Low Levels of B-W Between (D) Segregation: ≤30	2,522	102	42					
Average Predictions				.277	.262	.330	.096	.035
Pr (y | base)								
Percent Black								
+SD				-.005	-.001	.003	.002	.001
p-value				.651	.653	.651	.651	.652

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Based on continuous measures of Black students and 1 SD increase. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX R. Average marginal effects associated with a one standard deviation increase in percent Latinx: By metropolitan-level Latinx-White segregation.

VARIABLES	Schools	Districts	MSAs	A	B	C	D	F
All Metropolitan Regions	9,138	761	102					
Average Predictions				.226	.308	.301	.113	.053
Pr (y | base)								
Percent Latinx								
+SD				-.054	-.027	.029	.031	.022
p-value				.000	.000	.000	.000	.000
Metropolitan Regions with Medium to High Levels of L-W Between (D) Segregation: >30	5,706	548	41					
Average Predictions				.209	.324	.287	.119	.061
Pr (y | base)								
Percent Latinx								
+SD				-.051	-.031	.024	.032	.027
p-value				.000	.000	.000	.000	.000
Metropolitan Regions with Low Levels of L-W Between (D) Segregation: ≤30	3,432	213	61					
Average Predictions				.254	.280	.321	.102	.042
Pr (y | base)								
Percent Latinx								
+SD				-.031	-.011	.019	.015	.008
p-value				.006	.024	.004	.012	.018

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Based on continuous measures of Latinx students and 1 SD increase. Indices based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100.

APPENDIX S. Multi-level ordered logistic regression results for district-level Black-White and Latinx-White segregation (D) without financial control variables.

VARIABLES	B-W Within (D)	L-W Within (D)
B-W Within (D)	0.01	-
	(0.00)	-
20-41 percent Black	-0.30*	-
	(0.15)	-
42-62 percent Black	-0.73**	-
	(0.25)	-
63-82 percent Black	-0.57	-
	(0.38)	-
83-100 percent Black	-1.38*	-
	(0.60)	-
B-W Within (D) * 20-41 percent Black	-0.00	-
	(0.00)	-
B-W Within (D) * 42-62 percent Black	0.00	-
	(0.01)	-
B-W Within (D) * 63-82 percent Black	-0.01	-
	(0.01)	-
B-W Within (D) * 83-100 percent Black	0.01	-
	(0.01)	-
L-W Within (D)		0.01
	-	(0.00)
5-29 percent Latinx	-	-0.06
	-	(0.15)
30-55 percent Latinx	-	-0.55**
	-	(0.21)
56-80 percent Latinx	-	-1.10***
	-	(0.25)
81-100 percent Latinx	-	-1.06**
	-	(0.33)
L-W Within (D) * 5-29 percent Latinx	-	-0.00

	-	(0.00)
L-W Within (D) * 30-55 percent Latinx	-	-0.00
	-	(0.01)
L-W Within (D) * 56-80 percent Latinx	-	0.00
	-	(0.01)
L-W Within (D) * 81-100 percent Latinx	-	-0.00
	-	(0.01)
School-level variables		
Percent Latinx (School)	-0.02***	-
	(0.00)	-
Percent Black (School)	-	-0.02***
	-	(0.00)
Charter	0.35***	0.35***
	(0.08)	(0.08)
Letter Rating	0.36**	0.34**
	(0.12)	(0.12)
South	-0.20	-0.09
	(0.13)	(0.13)
Midwest	-0.95***	-0.81***
	(0.16)	(0.16)
District-level variables		
Recent Mandate (1990-2003)	1.07***	1.06***
	(0.16)	(0.16)
Prior Mandate (1980-1989)	0.00	0.09
	(0.31)	(0.31)
Percent White (District)	-0.01*	-0.01*
	(0.00)	(0.00)
cut1	-3.85***	-3.80***
	(0.24)	(0.30)

cut2	-2.37***	-2.32***
	(0.23)	(0.30)
cut3	-0.62**	-0.57
	(0.23)	(0.30)
cut4	1.00***	1.05***
	(0.23)	(0.30)
var(_cons[district])	0.65***	0.63***
	(0.06)	(0.06)
Observations	10,369	10,369
Number of groups	854	854

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black and Latinx thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. Based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

APPENDIX T. Multi-level ordered logistic regression results for metropolitan-level Black-White and Latinx-White segregation (D) without financial control variables.

VARIABLES	B-W Between (D)	L-W Between (D)
B-W Between (D)	-0.00	-
	(0.00)	-
20-41 percent Black	-0.10	-
	(0.11)	-
42-62 percent Black	-0.23	-
	(0.15)	-
63-82 percent Black	-0.38*	-
	(0.19)	-
83-100 percent Black	-0.26	-
	(0.29)	-
B-W Between (D) * 20-41 percent Black	-0.01*	-
	(0.00)	-
B-W Between (D) * 42-62 percent Black	-0.01*	-
	(0.00)	-
B-W Between (D) * 63-82 percent Black	-0.01**	-
	(0.00)	-
B-W Between (D) * 83-100 percent Black	-0.02**	-
	(0.01)	-
L-W Between (D)	-	0.00
	-	(0.01)
5-29 percent Latinx	-	-0.20
	-	(0.18)
30-55 percent Latinx	-	-0.10
	-	(0.21)
56-80 percent Latinx	-	-0.66**
	-	(0.24)
81-100 percent Latinx	-	-1.37***
	-	(0.30)
L-W Between (D) * 5-29 percent Latinx	-	0.00

	-	(0.01)
L-W Between (D) * 30-55 percent Latinx	-	-0.02*
	-	(0.01)
L-W Between (D) * 56-80 percent Latinx	-	-0.01
	-	(0.01)
L-W Between (D) * 81-100 percent Latinx	-	0.00
	-	(0.01)
School-level variables		
Percent Latinx (School)	-0.02***	-
	(0.00)	-
Percent Black (School)	-	-0.01***
	-	(0.00)
Charter	0.35***	0.34***
	(0.08)	(0.08)
Letter Rating	0.37*	0.28
	(0.16)	(0.16)
South	-0.17	-0.01
	(0.22)	(0.23)
Midwest	-0.58*	-0.59*
	(0.26)	(0.26)
District-level variables		
Recent Mandate (1990-2003)	0.98***	1.02***
	(0.23)	(0.24)
Prior Mandate (1980-1989)	0.42	0.38
	(0.29)	(0.29)

Metropolitan-level variables		
Percent White (Metro)	-0.02***	-0.01**
	(0.00)	(0.00)
cut1	-4.46***	-4.10***
	(0.36)	(0.42)
cut2	-2.98***	-2.62***
	(0.35)	(0.41)
cut3	-1.23***	-0.88*
	(0.35)	(0.41)
cut4	0.39	0.74
	(0.35)	(0.41)
var(_cons[msa])	0.12**	0.13**
	(0.04)	(0.04)
var(_cons[msa>district])	0.48***	0.47***
	(0.06)	(0.06)
Observations	10,369	10,369
Number of groups	112	112

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black and Latinx thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. Based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

APPENDIX U. Sensitivity analyses: Multi-level ordered logistic regression results for metropolitan-level Black-White segregation (D) with additional restrictive inclusion criteria.

VARIABLES	Metropolitan Black Student Population >=500	Metropolitan Black Student Population >=1,000	Metropolitan Black Student Population >=5,000	Metropolitan Black Student Population >=10,000
B-W Between (D)	-0.00	-0.00	0.00	0.01
	(0.00)	(0.00)	(0.00)	(0.01)
20-41 percent Black	0.00	-0.00	-0.10	-0.22
	(0.12)	(0.12)	(0.14)	(0.17)
42-62 percent Black	-0.08	-0.08	-0.16	-0.19
	(0.17)	(0.17)	(0.19)	(0.22)
63-82 percent Black	-0.06	-0.07	-0.08	0.07
	(0.21)	(0.21)	(0.23)	(0.25)
83-100 percent Black	0.29	0.29	0.23	-0.27
	(0.33)	(0.33)	(0.35)	(0.38)
B-W Between (D) * 20-41 percent Black	-0.01*	-0.01*	-0.01	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
B-W Between (D) * 42-62 percent Black	-0.01**	-0.01**	-0.01*	-0.01*
	(0.00)	(0.00)	(0.00)	(0.00)
B-W Between (D) * 63-82 percent Black	-0.02***	-0.02***	-0.02**	-0.02***
	(0.00)	(0.00)	(0.00)	(0.01)
B-W Between (D) * 83-100 percent Black	-0.03***	-0.03***	-0.03***	-0.02*
	(0.01)	(0.01)	(0.01)	(0.01)
School-level variables				
Percent Latinx (School)	-0.01***	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Percent Poverty (FRL)	-0.01***	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)

Charter	0.30***	0.30***	0.29**	0.29**
	(0.09)	(0.09)	(0.10)	(0.11)
Letter Rating	0.36*	0.37*	0.34	0.17
	(0.16)	(0.16)	(0.20)	(0.23)
South	0.10	0.12	-0.58	-0.65*
	(0.24)	(0.23)	(0.31)	(0.31)
Midwest	-0.68*	-0.65*	-1.49***	-1.60***
	(0.28)	(0.27)	(0.36)	(0.39)
District-level variables				
District Poverty (IPR)	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Recent Mandate (1990-2003)	1.24***	1.11***	1.29***	1.31***
	(0.24)	(0.24)	(0.26)	(0.35)
Prior Mandate (1980-1989)	0.18	0.20	0.00	0.12
	(0.29)	(0.29)	(0.32)	(0.35)
Property Taxes	0.15***	0.14**	0.16**	0.20***
	(0.04)	(0.04)	(0.05)	(0.05)
Metropolitan-level variables				
Percent White (Metro)	-0.00	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)
cut1	-2.36***	-2.58***	-2.85***	-2.58**
	(0.64)	(0.64)	(0.77)	(0.84)
cut2	-0.98	-1.20	-1.44	-1.19
	(0.64)	(0.64)	(0.77)	(0.84)
cut3	0.76	0.54	0.31	0.59
	(0.64)	(0.64)	(0.77)	(0.84)
cut4	2.37***	2.16***	1.90*	2.22**
	(0.64)	(0.64)	(0.77)	(0.84)

var(_cons[msa])	0.12**	0.10**	0.06	0.06
	(0.04)	(0.04)	(0.03)	(0.04)
var(_cons[msa>district])	0.43***	0.43***	0.43***	0.40***
	(0.06)	(0.06)	(0.06)	(0.07)
Observations	9,035	8,904	7,085	5,972
Number of groups	96	89	45	27

Source: National Center for Education Statistics CCD public school data 2016-2017, 2018-2019 school years in: Alabama, Arkansas, Arizona, Florida, Indiana, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Ohio, Texas, Utah, Wisconsin. *Notes:* Percent Black and Latinx thresholds are categorical based on Table 2. Charter status, rating, prior/ recent mandates and region variables are dichotomous. Based on demographic data available for students in grades Pre-K through 6 when demographic enrollment > 5. Districts include schools>1. Metropolis includes districts>1 and demographic enrollment>100. Models progressively restrict inclusion criteria at the metro-level from >=500 Black students in the metro to >=5,000 Black students in the mero. Standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05.

APPENDIX V. Adjusted differences in linear predictions by exposure group.

	lincom	*p*
Perceptions of quality		
A-B	.336	-
A-C	1.013	<.001
A-D	1.706	<.001
A-F	1.630	<.001
B-C	.677	.003
B-D	1.369	<.001
B-F	1.294	<.001
C-D	.693	.002
C-F	.617	.011
D-F	-.076	-
Likelihood of enrollment		
A-B	-.138	-
A-C	.895	<.001
A-D	1.147	<.001
A-F	1.059	<.001
B-C	1.033	<.001
B-D	1.285	<.001
B-F	1.197	<.001
C-D	.252	-
C-F	.164	-
D-F	-.088	-

Sources: Original data collected on Qualtrics via Amazon Mechanical Turk Panel. *Notes:* *N*=414. *Notes:* Based on the regression models contained in Table 12 and Table 13 with control variables held at the means. Linear predictions shown in Figure 19 and Figure 20. Lincom is the difference in these linear predictions by exposure group; p is the p-value from tests of difference between predictions and delta-method standard errors. Only significant coefficients are shown ($p<0.05$).

APPENDIX W. Institutional review board consent.

University of Wisconsin – Milwaukee

Consent to Participate in Research

Researchers: Marcus L. Britton, Ph.D.; Michael A. Miner, M.A., Ph.D. Candidate; Department of Sociology. We're inviting you to participate in a research study. Participation is completely voluntary. If you agree to participate, you can always change your mind and withdraw. There are no negative consequences, whatever you decide.

What is the purpose of this study?: We want to understand parental perceptions and attitudes toward school ratings.

What will I do?: This survey will ask you questions about your perception of school ratings and your attitudes toward enrolling your child in a similar school. This will take approximately 5-10 minutes of your time.

Risks:

- Some questions may be very personal or upsetting. You can skip any questions you don't want to answer, or stop the survey entirely.
- Online data being hacked or intercepted: This is a risk you experience any time you provide information online. We're using a secure system to collect this data, but we can't completely eliminate this risk.
- Amazon could link your worker ID (and associated personal information) with your survey responses. Make sure you have read Amazon's MTurk participant and privacy agreements to understand how your personal information may be used or disclosed.
- Breach of confidentiality: There is a chance your data could be seen by someone who shouldn't have access to it. We're minimizing this risk in the following ways:
    - All identifying information is removed and replaced with a study ID.
    - We'll store all electronic data on a password-protected, encrypted computer.

Possible benefits: There are no benefits to you other than to further research. Larger benefits include helping researchers understand how parents evaluate school ratings.

Estimated number of participants: 385 parents

How long will it take? 5-10 minutes

Costs: None**.**

Compensation: You will receive $0.60 for completing the survey.

Future research: De-identified data (all identifying information removed) may be shared with other researchers. You won't be told specific details about these future research studies.

Where will data be stored? On the researchers' computers**.**

How long will it be kept? : De-identified data will be kept for up to 5 years.

Who can see my data?

- We (the researchers) will have access to your responses and de-identified demographic information. This is so we can analyze the data and conduct the study.
- The Institutional Review Board (IRB) at UWM, the Office for Human Research Protections (OHRP), or other federal agencies may review all the study data. This is to ensure we're following laws and ethical guidelines.
- We may share our findings in publications or presentations. If we do, the results will be aggregate (grouped) data, with no individual results**.**
- Amazon: Because they own the MTurk internal software, and to issue payment, Amazon will have access to your MTurk worker ID. There is a possibility Amazon could link your worker ID (and associated personal information) with your survey responses.

Contact information:
For questions about the research, complaints, or problems please contact:
Michael A. Miner, minerm@uwm.edu

For questions about your rights as a research participant, complaints, or problems: Contact the UWM IRB (Institutional Review Board; provides ethics oversight) at 414-229-3173 / irbinfo@uwm.edu.

Please print or save this screen if you want to be able to access the information later.
IRB #: 20.146
IRB Approval Date: January 10, 2020

Agreement to Participate
If you meet the eligibility criteria below and would like to participate in this study, click the button below to begin the survey. Remember, your participation is completely voluntary, and you're free to withdraw at any time.

- I am at least 18 years old
- I am a parent of a child/children between the ages of 0 and 21 years old.

APPENDIX X. Institutional review board approval letter (exempt).

UNIVERSITY of WISCONSIN
UWMILWAUKEE
Department of University Safety & Assurances

Leah Stoiber
IRB Administrator
Institutional Review Board
Engelmann 270
P. O. Box 413
Milwaukee, WI 53201-0413
(414) 229-7455 *phone*
(414) 229-6729 *fax*

http://www.irb.uwm.edu
lstoiber@uwm.edu

New Study - Notice of IRB Exempt Status

Date: January 10, 2020

To: Marcus Britton, PhD
Dept: Sociology

CC: Michael Miner

IRB#: 20.146
Title: Parent's perceptions of school quality and enrollment decisions

After review of your research protocol by the University of Wisconsin – Milwaukee Institutional Review Board, your protocol has been granted Exempt Status under Category 2 as governed by 45 CFR 46.104(d).

This protocol has been approved as exempt for three years and IRB approval will expire on January 9, 2023. If you plan to continue any research related activities (e.g., enrollment of subjects, study interventions, data analysis, etc.) past the date of IRB expiration, please respond to the IRB's status request that will be sent by email approximately two weeks before the expiration date. If the study is closed or completed before the IRB expiration date, you may notify the IRB by sending an email to irbinfo@uwm.edu with the study number and the status, so we can keep our study records accurate.

Any proposed changes to the protocol must be reviewed by the IRB before implementation, unless the change is specifically necessary to eliminate apparent immediate hazards to the subjects. The principal investigator is responsible for adhering to the policies and guidelines set forth by the UWM IRB, maintaining proper documentation of study records and promptly reporting to the IRB any adverse events which require reporting. The principal investigator is also responsible for ensuring that all study staff receive appropriate training in the ethical guidelines of conducting human subjects research.

As Principal Investigator, it is also your responsibility to adhere to UWM and UW System Policies, and any applicable state and federal laws governing activities which are independent of IRB review/approval (e.g., FERPA, Radiation Safety, UWM Data Security, UW System policy on Prizes, Awards and Gifts, state gambling laws, etc.). When conducting research at institutions outside of UWM, be sure to obtain permission and/or approval as required by their policies.

Contact the IRB office if you have any further questions. Thank you for your cooperation, and best wishes for a successful project.

Respectfully,

Leah Stoiber

Leah Stoiber
IRB Administrator

[Insert consent form and IRB approval]
[Programming Note: Set UWM header in Qualtrics]
[Programming Note: Restrict to one question per page and no duplicates]

Question 1.
Are you a parent? [Please select one].
Radio buttons 1-2; 1=Yes; 2=No
[Programming Note: If 2 is selected, skip to End of Survey]

Question 2.
How many children do you have?
Radio buttons 1-6; 1=1; 2=2…6=More than 5
[Programming Note: Randomize choice options]
[Programming Note: Fix last option]

Question 3.
What type of school will you or did/do you send your children to?
Radio buttons 1-5 and open; 1=Voucher; 2=Charter; 3=Private; 4=Public; 5=Other[open]
[Programming Note: Randomize choice options]
[Programming Note: Fix last option]

Question 4.
Which of the following best describes your race or ethnicity?
Radio buttons 1-5 and open; 1=Black or African American; 2=Latino/a/x; 3=White; 4=Asian; 5=Other[open]
[Programming Note: Randomize choice options]
[Programming Note: Fix last option]

Question 5.
Which gender do you identify with? [Please select one].
Radio buttons 1-3 and open; 1=Male; 2=Female; 3=Other [open]
[Programming Note: Randomize choice options]
[Programming Note: Fix last option]

Question 6.
How old are you?
Open response
[Programming Note: Fix character minimum to 2]
[Programming Note: Fix character maximum to 2]

Question 7.
Which state in the United States do you live in? [Please use the two-letter abbreviation].
Open response

[Programming Note: Fix character minimum to 2]
[Programming Note: Fix character maximum to 2]

Question 8.
What is your highest level of education? [Please select one].
Radio buttons 1-6; 1=Less than a high school degree; 2=A high school degree; 3= Two-year college degree; 4= Four-year college degree; 5=Graduate degree 6=Doctoral degree

Question 9.
We hear a lot of talk these days about liberals and conservatives. Below is a seven-point scale of political views that people might hold. Where would you place yourself on this scale?
Radio buttons 1-7; 1=Extremely Liberal 6=Extremely Conservative

Introduction to School Data. Schools are required to provide the public with annual information on how well they are serving their students. Like how students receive report cards to evaluate their performance in subject areas, schools are evaluated on different areas and the information is issued in a school report card. School report cards are available to the public which allows people to judge how well schools are performing.

Imagine you are asked to evaluate your satisfaction with measures used on a school's report card. On the following screens, you will be asked to view school report card data for elementary schools.

School. Below are report card data for Cedar Elementary School. The performance of Cedar Elementary has been measured by the school's performance index scores and are listed for each area. The overall rating is a weighted combination of these measures. The overall rating scale is A-F. With the provided data, please answer the following questions.

Cedar Elementary School	
Overall School Rating	**(A-F)**
School and District Measures	**Performance Metrics**
Student Achievement on Standardized Tests (e.g. amount of students that are proficient or higher)	*Adequate Yearly Progress* in achievement on reading and language exams
Growth in Student Achievement Over Time (e.g. annual gains on exams)	*Adequate Yearly Progress* in growth on reading and language exams from year to year
Closing Achievement Gaps With Other Students (e.g. whites achievement scores compared to minority group achievement scores; students' scores that receive free/ reduced lunch compared to those that do not).	*Adequate Yearly Progress* in performance on narrowing these gaps in achievement
On-Track to Graduation (e.g. graduation rates; attendance at other schools)	*Adequate Yearly Progress* in student success in achieving milestones

[Programming Note: Order of School and District Measures Should Be Randomized]
[Programming Note: Overall School Rating Should Fixed In First Position]
[Programming Note: Overall School Rating Should Have Performance Varying A-F Randomly]

Question 10.
Imagine the IDEAL overall school rating for you and your household. How well do you think Cedar Elementary compared with your ideal?
Radio buttons 1-7; 1=Extremely far from my ideal; 7=Extremely close to my ideal

Question 11.
Imagine Cedar Elementary was your local neighborhood school. If cost were not an issue, how likely do you think you and your household would be to decide to enroll your child in Cedar Elementary School versus an Alternative School (such as a private school, voucher or charter)?Radio buttons 1-7; 1=Extremely likely to enroll in Cedar Elementary; 7= Extremely likely to enroll in Alternative School

Here is your ID
[${e://Field/Create%20New%20Field%20or%20Choose%20From%20Dropdown...}]
Copy this value to paste into MTurk. When you have copied this ID, please click the 'Next' button to submit your survey.
[Programming Note: Set random embedded data to generate unique code 100-5000]

We thank you for your time spent taking this survey.
Your response has been recorded.

[end]

Curriculum Vitae

Michael A. **Miner**

Ph.D. Candidate · Distinguished Fellow · Department of Sociology
University of Wisconsin, Milwaukee
Bolton Hall 718, 3210 N. Maryland Ave, Milwaukee, WI 53211
minerm@uwm.edu | /minerm/

Education

2020	Doctor of Philosophy Sociology, University of Wisconsin, Milwaukee
2017	Master of Arts Sociology, University of Wisconsin, Milwaukee
2015	Bachelor of Arts Sociology and Psychology, St. Joseph's College, Brooklyn

Professional Experience

	Facebook, Menlo Park, CA and New York, NY Instagram, Menlo Park, CA and New York, NY
2020-current	Research Scientist
Summer 2019	Research Scientist, PhD-Intern
Summer 2018	Research Scientist, PhD-Intern
2019-2020	St. Joseph's College, Brooklyn, Brooklyn, NY Visiting Research Scholar
	University of Wisconsin, Milwaukee, Milwaukee, WI
2019-2020	Distinguished Predoctoral Fellow
2017-2019	Predoctoral Fellow
2015-2020	Graduate Teaching Assistant and Research Assistant

Areas of Specialization

Sociology of Education, Segregation/Integration and Policy, Public Trust, Science, Knowledge and Technology, Medical Sociology, Social Inequality, Quantitative Methodology

Refereed Publications

Minor Revision **Miner, Michael A.** "Caught in Limbo: Mapping the Experiences of First-Generation Students in Graduate School" at *Sociological Perspectives*

Honorable Mention, Educational Problems Division Paper Award, Society for the Study of Social Problems, 2019

2019 **Miner, Michael A**. "Physicians, Nurse Practitioners, and the Shortage of Primary Care Providers: Professional Autonomy in the Public Discourse" *Sociological Imagination* 55(1):1-21.

First place, Barbara J. Johnston Paper Award, Midwest Sociological Society, 2018

2019 **Miner, Michael A**. "Unpacking the Monolith: Intersecting Gender and Citizenship Status in STEM Graduate Education" *International Journal of Sociology and Social Policy* 39(9/10): 661-679.

Under Review **Miner, Michael A.** "Unmet Promises: Diminishing Confidence in Education Among College Educated Adults from 1973-2018"

Under Review **Miner, Michael A.** and Marcus L. Britton "Repackaging Inequality? School Segregation and School Accountability Ratings in Metropolitan Milwaukee"

Under Review Gauchat, Gordon and **Michael A. Miner.** "Vaccination and Polarization: A Cultural Authority Model of Science Controversy"

"Residential Segregation and Very Preterm Birth among Non-Hispanic Black Women: The Role of Maternal Immigrant Status" (with Marcus L. Britton, in preparation)

"The Cultural Authority of Social Science: A Study of Public Perceptions on Inequality." (with Gordon Gauchat, in preparation)

"An Experiment on Parents: How School Ratings Influence Parent's Perceptions of School Quality and Impact Their Enrollment Decisions." (with Natasha Quadlin, in preparation)

"A Nation Rated, a Nation Divided: Understanding the Association of School Ratings and School Segregation at the Metropolitan Level." (with Marcus L. Britton, in preparation).

Research and Technical Reports

2019 **Miner, Michael A.** "Perceptions of Performance and Reliability: A Longitudinal Framework of People Using Instagram." *Prepared for Instagram and Facebook Inc.*

2019 **Miner, Michael A.** "Assessing Global Access: Perceptions of Performance and Reliability on Instagram Lite." *Prepared for Instagram and Facebook Inc.*

2019 **Miner, Michael A.** "Foundation Research: A Systemic Review of Performance and Reliability." *Prepared for Instagram and Facebook Inc.*

2018 **Miner, Michael A.** "Multinational Results: The Impact of Inappropriate Ad Content on Trust in Instagram around the World." *Prepared for Instagram and Facebook Inc.*

2018 **Miner, Michael A.** "Perceptions of Transparency, Trust and Personal Control on Instagram." *Prepared for Instagram and Facebook Inc.*

2018 **Miner, Michael A**. "Understanding Views of and Reactions to Inappropriate and Trust-Violating Content on Instagram." *Prepared for Instagram and Facebook Inc.*

Invited Talks

2020 **Miner, Michael A.** "From Academia to Industry: Being a Sociologist in Tech" *Midwest Sociological Society* Omaha, NE. †

2020 **Miner, Michael A.** Panelist. ""Speedgeeking": Sustaining a Career in Industry with a Degree in Sociology" *Midwest Sociological Society* Omaha, NE. †

2020 **Miner, Michael A.** Panelist. "Understanding and Unpacking the Peer-Review Process in Academic Publishing" *Department of Sociology* University of Wisconsin, Milwaukee.

2019 **Miner, Michael A.** Panelist. "Leveraging Graduate Study to Launch a Professional Career:" *Department of Sociology* University of Wisconsin, Milwaukee.

Presentations at professional meetings

2020 **Miner, Michael A.** "Shifting Rhetoric, Broken Promises, and 45-years of Diminishing Confidence in the Institution of Education" *Society for the Study of Social Problems,* San Francisco, CA

2020 **Miner, Michael A.** and Marcus L. Britton. "A Nation Rated? School Segregation and the Unequal Distribution of a School Resource in Metropolitan Public Schools" *Sociology of Education Association,* Monterey Bay, CA

2019 **Miner, Michael A.** "Declining Trust in Education Among College Educated Adults: 1974-2016" *American Sociological Association,* New York, NY

2019 **Miner, Michael A.** "Being First: How Social Capital Intersects with the Socialization Processes of First-Generation Students in Graduate School" *Society for the Study of Social Problems,* New York, NY

2019 **Miner, Michael A.** "A Conceptual Matrix of the Experiences of First-Generation Students in Graduate School" *Midwest Sociological Society,* Chicago, IL

2018 **Miner, Michael A.** and Marcus L. Britton. "Repackaging Inequality: Obscuring School Performance through Accountability Rankings" *Society for the Study of Social Problems,* Philadelphia, PA

2018 Gauchat, Gordon and **Michael A. Miner.** "The Credibility of Cultural Authorities on Vaccination Policy: A Relational Approach" *American Sociological Association,* Philadelphia, PA

2018 **Miner, Michael A.** "A Health Policy Issue is a Social Problem Too: Who Should Have Professional Autonomy?" *Society for the Study of Social Problems,* Philadelphia, PA

2018 **Miner, Michael A.** "Disaggregating the Monolithic Category: Citizenship and Choice of Academic Discipline Among STEM Graduate Students" *Midwest Sociological Society,* Minneapolis, MN

2017 **Miner, Michael A.** "Separate and Unequal: Predicting School Accountability Ratings" *American Sociological Association,* Montreal, ON

2017 **Miner, Michael A.** "Separate and Unequal: What Do School Accountability Labels Actually Measure in America's Most Segregated City?" *Society for the Study of Social Problems,* Montreal, ON

2017 **Miner, Michael A.** "Public Perceptions of Professional Autonomy in Primary Care Medicine," *Sociology Colloquium,* Milwaukee, WI

2017 **Miner, Michael A.** "Physicians, Nurse Practitioners, and the Shortage in Primary Care Medicine: A Contestation of Credentials and Experience *Midwest Sociological Society,* Milwaukee, WI

2016 **Miner, Michael A.** "Higher Education: A Discussion of Structural Inequalities" *Society for the Study of Social Problems,* Seattle, WA

2016 **Miner, Michael A.** "Issues in Education: Exploring the Experiences of Low-Income College Students" *Eastern Sociological Society,* Boston, MA

2015 **Miner, Michael A.** "Educational Inequalities: An Examination of Individual Triumphs Over Structural Barriers" *Research Symposium,* Brooklyn, NY

2015 **Miner, Michael A**. "Enhancing Narcissism through Social Media Use: The Introduction of the Cellular Phone" *Research Symposium,* Brooklyn, NY

Local Media Attention

2019 **Sociology@UWM Newsletter,** "Faculty and Student Accomplishments" (https://uwm.edu/sociology/wp-content/uploads/sites/151/2019/06/Sociology-Newsletter-2019.pdf)

2018 **Sociology@UWM Newsletter,** "Faculty and Student Accomplishments" (https://uwm.edu/sociology/wp-content/uploads/sites/151/2018/05/Sociology-Newsletter-2018.pdf)

2018 **SJCNY Magazine,** "Michael Miner '15 Gets Experience in Research Science From Social Media Giant" (https://oncampus.sjcny.edu/facebook-internship-opens-doors-for-sjc-brooklyn-alum/)

Grants, Fellowships and Accolades

External Grants

2020 Midwest Sociological Society, Scholarship Development Committee "A Nation Rated? School Ratings, School Quality and Enrollment Decisions: Evidence from a Survey Experiment."

Fellowships and Scholarships

2019 Distinguished Graduate Student Fellowship, (UWM)
2018 Advanced Opportunity Program Fellowship, (UWM)
2017 Advanced Opportunity Program Fellowship, (UWM)
2017 Chancellor's Graduate Student Fellowship, (UWM)
2015 Chancellor's Graduate Student Fellowship, (UWM))
2013 American Red Cross Scholarship, (New York Cares)
2011-2015 Clark Foundation Scholarship (SJC)
2011-2015 St. Joseph's Scholastic Scholarship (SJC)
2011 Chief Schenevus Scholarship (SJC)

Paper Awards

2019 Honorable Mention, Educational Division Paper Award, (SSSP)
2018 First Place, Barbara J. Johnston Student Paper Award, (MSS)

Internal and Travel Grants

2020 Graduate Student Travel Award, Sociology of Education Association (SEA)
2019 Student Forum Travel Award, American Sociological Association (ASA)
2019 Graduate Student Sociology Association, Student Association (UWM)
2018 Travel Grant, Midwest Sociological Society (MSS)
2018 Graduate Student Travel Grant, The Graduate School, (UWM)
2018 Graduate Student Sociology Association, Student Association (UWM)
2017 Graduate Student Travel Grant, The Graduate School, (UWM)

2017	Graduate Student Travel Grant, Department of Sociology, (UWM)
2016	Graduate Student Travel Grant, The Graduate School, (UWM)
2016	Graduate Student Travel Grant, Department of Sociology, (UWM)
2015	Graduate Student Travel Grant, The Graduate School, (UWM)
2015	Graduate Student Travel Grant, Department of Sociology, (UWM)

Honorable Recognition

2015	Social Sciences, Departmental Honors, (SJC)
2014, 2015	Sigma Iota Chi Honors, (SJC)
2014, 2015	Dean's Academic List, (SJC)

Research Experience

Research Internships

Summer 2019	Facebook, New York, New York Research Scientist, Ph.D.-Intern, Instagram: Infrastructure Foundation Research Team
Summer 2018	Facebook, Menlo Park, California Research Scientist, Ph.D.-Intern, Instagram: Trust and Transparency Research Team

Graduate Research Assistant

2017-2020	Department of Sociology, University of Wisconsin, Milwaukee Graduate Research Assistant
2017-2018	National Center for Distance Education and Technological Advancements Graduate Research Assistant

Teaching Experience

Graduate Teaching Assistant and Lab Instructor

2017	Introduction to Sociology (Principal Instructor: Tim O'Brien) Teaching Assistant
2016-2017	Department of Academic Services Supplemental Instructor
2016-2017	Statistics (Principal Instructor: Aki Roberts) Lab Instructor and Teaching Assistant
2015-2016	Introduction to Sociology (Principal Instructor: Jennifer Jordan) Teaching Assistant

SOFTWARE AND METHODOLOGY

STATISTICAL METHODS AND ANALYSES

Ordinary Least Squares (OLS), Logit/Probit, Ordered Logit/Probit, Structural Equation Models (CFA, Path, SR, MIMC, LGM), Time-Series Analysis, Multilevel Models, Mixed/Fixed Effects, Categorical Data Analysis, Multinomial, Predicted Probabilities, Negative Binomial, Poisson, Graphical Plots and Predictions and Model Diagnostics, Experimental Methods, Machine Learning and Predictive Analytics

OTHER RESEARCH DESIGN COMPETENCIES:

Coding, Content Analyses, Online Discussion Forums, Intercoderreliability, Focus Groups, Semi-Structured Interviewing, Unstructured Interviewing, Ethnographic and Participant Observation

Platforms and Data: Amazon MTurk, GfK Surveys, TESS Surveys, State Report Cards (Education), Common Core Data (CCD), National Center for Education Statistics (NCES), Census, American Community Survey (ACS and CPS), STEM Graduate Students, General Social Survey (GSS), Birth Data Files

Software: Stata, SPSS, Stattransfer, NVivo, Atlas.ti, Qualtrics, Microsoft Office, Google and Adobe Applications, (Novice: MPlus, SQL, R, Python and Tableau) Operation Systems: Windows, Apple

ACADEMIC MEMBERSHIP

American Sociological Association; Sociology of Education Association; Eastern Sociological Society; Society for the Study of Social Problems, Midwest Sociological Society, American Education Research Association

SERVICE TO PROFESSION

Manuscript Reviewer

Family Medicine, Sociological Inquiry, Sociological Forum, Sociological Perspectives, International Journal of Sociology and Social Policy, Social Problems, Sociological Focus, Journal of Higher Education Outreach and Engagement

Professional

2019-present **Advisory Board Member and Associate Editor:** *Social Problems*

2019-2022 **Student Director:** Midwest Sociological Society

2019-2022 **Board of Directors, Member:** Midwest Sociological Society

2020 **Organizer:** "How Technology is Transforming Education." *Society for the Study of Social Problems,* San Francisco, CA

2020-2022 **Chair:** Student Issues Committee, *Midwest Sociological Society,* Omaha, NE

2020 **3MT Judge:** *Midwest Sociological Society* †

2019-2022	**Committee Member:** Student Issues Committee, *Midwest Sociological Society,* Chicago, IL
2019-2022	**Committee Member:** Annual Meeting Committee, *Midwest Sociological Society,* Chicago, IL
2019-2022	**Committee Member:** Membership Committee, *Midwest Sociological Society,* Chicago, IL
2019	**Organizer** and **Discussant:** "Public Perceptions of Trust and Inequality." *Society for the Study of Social Problems,* New York, NY
2018	**Organizer** and **Presider:** "Inter-organizational Issues in Education and Policy." *Society for the Study of Social Problems,* Philadelphia, PA
2018	**Committee Member:** Michael Harrington Award Committee, *Society for the Study of Social Problems,* Philadelphia, PA
2017	**Discussant** and **Presider:** "Educated in Whiteness: Narratives of Reproduction and Resistance" *Society for the Study of Social Problems,* Montreal, ON
2017	**Presider:** "Health Care Practice and Patients' Experience" *Midwest Sociological Society,* Milwaukee, WI

University

2017-2019	**President:** Graduate Student Sociology Association (UWM)
2018, 2019	**Judge:** Undergraduate Research Symposium(UWM)
2017-2020	**Graduate Student Representative:** Sociology(UWM)
2016-2017	**Treasurer and Founding Member:** Graduate Student Sociology Association (UWM)

† Unable to deliver, conference canceled due to SARS-CoV-2 (COVID-19).

REFERENCES AVAILABLE UPON REQUEST