

Segregation Academies: The Effect of “Whites Only” Private Education on Public Schools*

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Abstract

In response to public schools integrating in the 1960s and 1970s, Southern white parents organized all-white private schools known as “segregation academies.” Building a data set of the universe of segregation academies, I estimate the effects of the opening of a local segregation academy on public school enrollment. On average, a segregation academy causes total public school enrollment to decline by 14% across the Deep South. Evidence from Alabama and Louisiana, where I can measure enrollment by race, suggests white students drive this decline: openings cause a 36% decrease in white public enrollment, but have no effect on Black public enrollment. These schools offset approximately $\frac{1}{2}$ of court-ordered improvements in school integration. Consistent with a simple model of taste-based discrimination and costly outside options, these effects are largest in rural counties with a history of racial animus, low household income, and a high percentage of Black population. *JEL* codes: N32, N92, J15, H75.

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1 Introduction

“Just at the same time when our public schools are required by law to exercise courageous and imaginative compliance there are mushrooming across the state institutions . . . with the real, if not avowed, purpose of evading the [desegregation] compliance requirement.”
Adams and Covington (1969)

“Throughout interviews with local respondents of both races, there was only one area of clear agreement regarding the two systems: that the private schools were for whites and the public schools were for blacks.”

W. B. Johnson and Pearson (1982)

In the 1960s and 1970s, white parents in the Deep South (Alabama, Louisiana, South Carolina, Mississippi, and Georgia) reacted to the desegregation of public schools by organizing all-white private schools. In their most extreme form, “segregation academies” emulated and perpetuated the segregated, dual-system of public education that prevailed prior to *Brown v. Board of Education of Topeka (1954)*: public schools in at least nine counties with segregation academies became over 95% Black by 1985.¹

These extreme cases are part of a broader narrative of a distinctly Southern shift from public to private education in the 1960s and 70s. In the Northeast, West, and Midwest, rates of private school attendance fell as Catholic schools closed and stagflation pushed private school tuition out of reach (Clotfelter 2004). During the same period, groups of “concerned parents” and churches founded hundreds of private schools across the Deep South, where the rate of private school attendance doubled (Manson et al. 2022).

Work by historians and journalists describes segregation academies as all-white private schools founded with the purpose of avoiding integration, often by a formal or informal association of white parents (Nevin and Bills 1976; Walder and Cleveland 1971; Sheffield 2022; Harris 2019; Gladney 1974; Champagne 1973; K. Johnson 1971).

I study the impact of this then-new type of private school on public schools. I first describe

¹Source: author’s calculations from Reports of the State Departments of Education from Louisiana, Mississippi, SC, and AL.

the growth of the segregation academy movement by creating a comprehensive data set of the locations and founding years of segregation academies across the Deep South. I measure the effect of the opening of a segregation academy on public school enrollment. I estimate heterogeneity in such effects by population density, as segregation academies expanded an existing private sector in urban areas while creating a new private sector in rural areas. Finally, I explore whether the changing enrollment in public schools triggered by segregation academy openings lead to changes in school funding as well.

To classify schools, I draw on historical sources, contemporary newspaper articles, existing qualitative work on segregation academies, and sports schedules. I distinguish segregation academies from other types of private schools that were not founded to perpetuate racial segregation, such as Catholic schools,² boarding schools, schools for children with learning disabilities, and Montessori schools. I focus my analysis on the Deep South, where segregation academies were concentrated (Orfield 1969; Porter, Howell, and Hempel 2014).

I use an event study to identify the effect of the establishment of segregation academies on enrollment and public school integration. This relies on variation in the timing of establishment of segregation academies. If a segregation academy is always established the same year as a court ordered integration, I would be unable to distinguish the effect of segregation academies from the effect of court orders. However, groups of parents established schools both in *anticipation of* and *in response to* court ordered integration—the timing does not coincide 89% of the time. This difference in timing allows me to study the interaction of these two events. Differential enrollment declines occur both before *and* after a major court order in areas with segregation academies; unsurprisingly, they are larger after. To further describe my target estimand, that is, the marginal decrease in public school enrollment induced by the establishment of a segregation academy, I provide a brief sketch of a theoretical framework that models public school enrollment losses as a function of taste-based discrimination and the cost of outside options. Consistent

²The official stance of the Catholic Church was that schools should be integrated (“School Segregation and Integration” 2022)

with this framework, I find the largest enrollment losses in poor, relatively Black areas with a history of racial animus.

I estimate that, on average, the opening of a segregation academy induced a 9-14% overall decrease in total public school enrollment. In states that recorded enrollment by race (Alabama and Louisiana), white enrollment decreased by approximately 36%. The opening of a segregation academy offset court-ordered induced gains in integration, measured by changes in the exposure index, by as much as $\frac{1}{2}$.

An extensive literature on the effect of court orders on short term and long term outcomes for students finds positive labor market and academic outcomes for Black students (R. C. Johnson 2011; S. G. Rivkin 2000; Anstreicher, Fletcher, and Thompson 2022; Ashenfelter, W. J. Collins, and Yoon 2006; Guryan 2004). While I find segregation academies caused a reduction in public school integration, I cannot measure the effect on students in both public schools and private schools directly. I proxy for this by estimating the effect of openings on public school inputs and find mixed evidence. In Alabama, the average number of teachers per pupil increased, but in South Carolina, I find that average teacher salary decreases, potentially reflecting a decrease in average teacher tenure.

State funding, which legislators tied to Average Daily Attendance (ADA), significantly decreased, including on a per-pupil basis. Historical evidence indicates that in areas like Macon County, Alabama, where primarily Black school boards were elected, officials mitigated these funding reductions by utilizing newly available federal funds from the Elementary and Secondary Education Act (W. B. Johnson and Pearson 1982). This approach, coupled with declining enrollment, led to a relative increase in total *per-pupil* funding (total funding relatively decreased).

Previous literature has found that the white enrollment declines caused by court ordered desegregation plans range from 14-24%, with the largest effects occurring in central urban districts (Baum-Snow and Lutz 2011; Reber 2005; Welch and Light 1987). The existing literature that

studies the role that residential segregation and migration play in public school segregation (S. G. Rivkin 1994; Boustan 2012; Baum-Snow and Lutz 2011) focuses on enrollment responses in large cities. Urban parents unwilling to send their children to integrated public schools could choose to move to nearby predominantly white suburbs or opt-in to the preexisting private school system. Baum-Snow and Lutz 2011 find the first response, migration to nearby, predominantly white school districts, drives enrollment losses in urban areas. Additionally, the authors find a negative association between *contemporaneous* private school enrollment and white public school enrollment in central urban districts.

I contribute to this literature by analyzing the direct effect of segregation academies on enrollment in rural areas, an understudied setting. Clotfelter 2001 and Reber 2005 highlight that the degree of expected white flight increases with the availability of outside options, such as existing private schools and nearby suburbs. However, prior to 1960, few, if any, private schools existed in rural communities. Moreover, the large, county-wide school districts typical of the rural South—an artifact of low population density and the operation of two racially segregated school systems (Fischel 2009)—precluded moves to nearby suburbs. In the absence of existing outside options, white parents in Wilcox County, Alabama *created* one in 1968: Catherine Academy, a segregation academy (“Catherine Academy Graduation Slated” 1969). Another academy, Wilcox Academy, opened in 1970. Wilcox County schools remain racially segregated to this day (Sheffield 2022; Maney 2024). I demonstrate that this pattern—the institutionalization of white flight from public schools through the establishment of segregation academies—occurred throughout the South. Furthermore, I show that, particularly in rural areas, the creation of a segregation academy significantly increased the magnitude and persistence of white public school enrollment losses, or white flight.

This paper proceeds as follows: in Section 2, I describe the historical context and evolution of the segregation academy movement, explain my classification criteria, and present descriptive statistics on the location and characteristics of segregation academies. Section 3 describes my outcome and control data. In Section 4, I define treatment and my target estimand, outline my

theoretical framework, and give my reduced form estimation equation. Section 5 reports results on relative enrollment and integration decreases, Section 6 reports correlates of differential enrollment losses, and Section 7 describes the effect of segregation academies on public school inputs.

2 Historical Context and Segregation Academy Criteria

In this section, I trace out the history of the segregation academy movement and describe how this history informs my classification criteria. I then outline the systematic process by which I create a data set of segregation academies.

2.1 Historical Context

“The outnumbered whites ‘will withdraw into an already flourishing private school system, abandoning the public schools to the blacks. . . Southern Regional Council, which works to promote better race relations, estimates 300,000 white students are attending what it calls ‘segregation academies’ this year—perhaps 10 times more than there were five years ago.”

Montgomery, Jenkins, and W. Collins (1969)

The term “segregation academy” first appeared in a 1969 report by the Southern Regional Council that described the segregated private schools that white students were fleeing to en masse (“Council Reports 300,000 Whites Go to Private Schools in South” 1969). While the report was published in 1969, at the peak of the segregation academy movement, schools began forming as early as 1952.

In 1950, the Court ruled in favor of prohibiting segregation in higher education (*Sweatt v. Paint* and *McLaurin v. Oklahoma State Regents*). This set the stage for the white student exodus from public schools to schools like the First Baptist Church School, established in 1949 in Charleston, South Carolina. While information about the founding circumstances of the First Baptist Church School is scarce, the school was a founding member of the South Carolina

Independent School Association (SCISA), the “unstated purpose [of which] was to avoid the federally court-ordered racial desegregation of the public schools” (Turnipseed 2022). The rulings of the Supreme Court did not apply to these new private schools—an 1819 case, *Trustees of Dartmouth College v. Woodward*, established that private schools are “corporations,” thus prohibiting the government from interfering with their contracts.

The exodus became more formal and widespread after the 1954 Supreme Court ruling on *Brown v. BOE* that public schools must desegregate, and the subsequent *Brown II* ruling in 1955 that desegregation must occur “with all deliberate speed” (See Appendix Table B1 for an abbreviated legal history). The vague phrase “all deliberate speed” gifted segregationist policy makers and interest groups time to form strategies to circumvent integration. In 1959, Prince Edward County in Virginia voted to defund its public schools as part of a political campaign against integration called “Massive Resistance.” The same year, a group of parents founded the private Prince Edward Academy to educate the white students of the county. This school was the quintessential segregation academy, held up as a blueprint by parents’ associations forming segregation academies across the southeast. Public schools in Prince Edward County remained closed through 1964 (Nevin and Bills 1976).

From 1954-1964, the NAACP Legal Defense Fund began suing individual school districts, focusing on large urban southern districts. But “even when attorneys . . . brought a school district to court, many district judges tended to approve ‘almost anything’ the board was willing to submit as an integration plan” (Orfield 1969). By 1964, 59 segregation academies had been established in the Deep South.³

In 1964, the Civil Rights Act mandated that school districts must be non-discriminatory in order to be eligible for federal funds. In 1965, the Elementary and Secondary Education Act made unprecedented amounts of federal funding available to compliant districts. Accordingly, in 1965, many school districts, especially high poverty districts, began submitting voluntary

³Author’s calculations

plans of desegregation (Cascio et al. 2010). These “freedom of choice” plans gave Black parents the option to transfer their child to the formerly white public school. A combination of “overcrowding” clauses, which gave schools the ability to refuse students, intimidation of Black parents by white residents, and lack of support by government officials meant that most of these plans amounted to tokenism (Barry and Garman 1965). In spite of the limited impact of these plans on integration, there were 143 segregation academies in the Deep South by 1967.

One of these schools was Lowndes Academy in Lowndesboro, Alabama. Established in 1966 by an organization of parents known as the Lowndes County Private School Foundation, it was a founding member of the Alabama Private School Association (APSA) (Figure C2), the analogous organization to SCISA. George Wallace, governor of Alabama, publicly endorsed the school, encouraging others to donate to the \$500,000 fundraising effort (“[Lowndes Private School Sets \\$500,000 Goal](#)” 1966). 95% of the students attending Lowndes Academy today are white.⁴ In contrast, 99% of the students attending Central High, the local public high school, are Black.⁵

Courts began striking down freedom of choice plans as unconstitutional and implementing more significant plans after *Green vs. Connelly* (1968). Cited as the start of “real desegregation”, this ruling affected school districts under an active or future court order. *Swann vs. Charlotte-Mecklenburg* in 1971 further called for stronger enforcement by the courts. 263 additional segregation academies were established from 1968-1971.

In Jackson, Mississippi, the White Citizens’ Council (WCC)⁶ organized a system of 12 private “Council Schools.” As early as 1960, this resulted in zero white students attending Jackson’s public schools.⁷ The WCC, founded 55 days after Brown v. BOE in Jackson, intended to maintain school desegregation by creating an entirely separate school system for white students. In 1968, these schools became founding members of the Mississippi Private School Association

⁴PSS Private School Universe Survey data for the 2021-2022 school year

⁵Common Core of Data Public school data for 2022-2023 school year

⁶For a history of the WCC, see McMillen (1994).

⁷Author’s calculations

(MPSA), an organization helmed by the editor of the official publication of the WCC, *The Citizen's Council* (Flora 2023). The reach of the WCC extended beyond Mississippi. South Carolina and Alabama had particularly strong regional presences (White 2016; Vaught 2003).

The segregation academy movement faded in the late 1970s: in 1978, the IRS began revoking the tax-exempt status of explicitly segregated private schools. The IRS paused the revocations from 1980-1982 at the behest of the Reagan administration (Babcock 1982). Even post 1982, tax exempt status continued for schools who advertised non-discriminatory admission statements. This resulted in the peculiar habit of many all-white schools that did not admit or discouraged applications from Black students advertising non-discriminatory policies.⁸ Only the most extreme of these academies (and the ones unlucky enough to be subject to an audit) lost their tax exempt status as a result of this ruling (Lowndes Academy lost its tax exempt status in 1982). However, the combination of this ruling and the decrease of federal school integration activity meant that no new segregation academies were founded after 1980.

2.2 Defining Segregation Academies

As stated in the introduction, scholars define segregation academies as all-white private schools founded with the purpose of avoiding integration. Some schools unambiguously meet this criteria. Examples include the previously described Council Schools and Lowndes Academy, as well as Marlboro Academy, established in 1969 in Bennettsville, South Carolina. One of the founders, Frank B. Rogers Jr., told *The State*: “The object of this school is quality education. It is not a flight away from integration, although that does have some bearing on it” (“Marlboro Parents Forming Private, Segregated Schools” 1969). I label these schools as “Confirmed” segregation academies.

Frank B. Rogers Jr.’s statement hints at the obfuscation of intent common during this period. The IRS’s threat to revoke the tax-exempt status of racially discriminatory schools (Kurlander

⁸For an example of such an advertisement, see Figure C1.

2022) invoked pecuniary consequences for openly racist admission policies. There existed social consequences as well: schools often distanced themselves from the negative connotations carried by the term “segregation academies,” which appeared widely in newspaper and academic articles by the 1970s. A 1969 *Charlotte Observer* article title captures this effort: “Parents Call Goal Quality Education.”

Furthermore, all-white schools that were segregationist in impact may not have been *explicitly* segregationist in intent. New private school parents pulled their children from the public schools for a combination of racist, religious, and politically conservative reasons. For example, in 1962, the Supreme Court ruled in *Engel v. Vitale* that school-sponsored prayer violated the First Amendment. A 1975 placement for Victory Christian Academy in Millbrook, Alabama advertised “Private, Christian, Orderly” education as a contrast to the “Public, secular, disorderly” alternative. The founders of Victory Christian and other fundamentalist Christian schools established during this time period may legitimately state their mission as providing a much more explicitly faith-based and/or conservative approach to their children’s education than possible in the public school system. But emergent conservative ideologies, namely the New Right and Religious Right, tied together these motivations ideologically, making the individual personal motivations of each parent or founding organization difficult to disentangle (Perlstein 2020; Nevin and Bills 1976). For example, Goldsboro Christian School in North Carolina did not admit Black students because “We believe that God in his plan and purpose and wisdom separated men into . . . races and that those races should be preserved” (“North Carolina’s School’s Racial Policy Follows a Rather Unveven Color Line” 1982). When the Internal Revenue Service (IRS) revoked the tax exempt status of Goldsboro and other segregation academies on the basis of their explicitly racially discriminatory admission policies, the Reagan Administration, closely aligned with the religious right, requested that the IRS to reinstate their tax exempt status (Babcock 1982).⁹

⁹The Supreme Court sided with the IRS, ruling that Goldsboro and Bob Jones University should lose their tax exempt status in *Bob Jones Univ. v. United States*, 461 U.S. 574 (1983)

To develop a comprehensive list of segregation academies, I consider it essential to include historically **all-white** schools founded during this period that occupied similar spaces as confirmed segregation academies. These include schools that shared sports leagues, private school associations, and used similar language indicative of socially conservative ideologies. I categorize these schools as “Likely” segregation academies in my analysis (Orfield 1969; Blaiklock 2022; Perlstein 2020).

2.3 Classification of Segregation Academies

A contribution of this paper is the creation of a data set of segregation academies. This data set is the most extensive catalogue of segregation academies in the Deep South currently available.¹⁰ I rely on primary and secondary sources, especially contemporary newspaper articles, to develop my classification criteria. Section A.3 contains a full description of the criteria used to classify schools into each category:

1. *Confirmed*: Schools confirmed as founded to avoid public school integration by other scholarly work or primary sources.
2. *Likely*: Historically all-white schools that had implicit, if not explicit, racial criteria for admission. I deduce this through a combination of news coverage, name, year founded, and other observable factors. This category includes many “Christian Schools”¹¹ and schools founded in the late 1960s and early 1970s that recount origin stories involving “concerned parents” on their respective school history pages. First Baptist Church School in South Carolina, described in Section 2, is an example.
3. *True Maybe*: Schools founded during the time period of 1954-1982 for which limited information exists. This also includes schools with indeterminable founding years that share traits with “Likely” segregation academies.

¹⁰Hobbyists have compiled lists of segregation academies on Wikipedia and Renee (2022). Their work is gratefully acknowledged.

¹¹See (Bowler 1970)

4. *Likely Not*: Schools that likely did not have explicit or implicit racial criteria for admission, but for which I do not have sufficient information to make a definitive call. This category includes many Catholic schools.
5. *Definitely Not*: Schools I can definitely rule out as being segregation academies; for example, schools for students with learning disabilities.

I begin by cleaning the data set “Universe of Private Schools,” which contains all private schools in operation during 1976, 1977, 1978, or 1979 that report their statistics to the National Center of Education Statistics (NCES). This report contains enrollment data, school name, address, highest grade, lowest grade, and religious affiliation, among other characteristics, but does not contain the two pieces of information crucial for my analysis: whether or not the school is a segregation academy and year founded. I manually collect year founded during the classification process from newspaper articles, school websites, and, occasionally, tax records. If not enough information can be found about the school (for example, if founding year is indeterminable), I omit it from my sample. I compile information from the NCES, year founded, final reasons for determining classification, and relevant sources into a database.

It is possible that I have inadvertently omitted some segregation academies from my database (Nevin and Bills (1976) acknowledges that some academies did not report statistics to the NCES). I identified at least nine segregation academies mentioned in other historical records that did not report statistics to the NCES and thus were not included in the UPSS report. Because these schools are missing an address, they are not geo-located and thus dropped from the sample. As a result, some districts are classified as control districts during years where they are, in fact, treated. I expect the hypothetical effect of these academies and any other missing academies to attenuate the absolute value of my estimates. However, I do not anticipate that this effect is large—around 1 in 4 treated school districts are treated by more than 1 segregation academy.

I test my classification system to see if segregation academies differ significantly from other

private schools. The descriptive evidence I present in Table 1 reinforces that hypothesis: segregation academies today are poorer quality and whiter. A graduate of Lamar High School in Mississippi provides an illustrative anecdote: “The school felt temporary. Built like a warehouse with aluminum siding and a flat roof. . .From a basketball coach who very unenthusiastically taught us science to a history teacher, also a coach, who left out huge chunks of world events, I had a slipshod education” (Riley 2019).

Segregation academies served different purposes in different communities. For some communities, particularly rural counties, segregation academies were the only alternative to public education. As described in the introduction, segregation academies completely supplanted public schools in at least nine counties.¹² In urban areas, however, segregation academies had to compete with other private schools and suburban public schools. The size and number of segregation academies in each district thus varied. The average enrollment of segregation academies across 1976-1980 was 357 with a standard deviation of 206.

3 Data

As described below, I combine raw data collected from the district and county level to perform my analysis. Controls are generally collected at the county level, outcomes at the school district level, and locations of segregation academies at the coordinate level. School districts are typically equivalent to counties in the Deep South. Cities sometimes, but not always, had separate school districts.

¹²The public schools became over 95% Black in these counties: Bullock County, AL; Caddo Parish, Louisiana; Clarendon County, SC; Coahoma County, Mississippi; Greene County, AL; Hinds County, Mississippi; Lowndes County, AL; Sumter County, AL; and Wilcox County, AL. Source: author’s calculations derived from State Department of Education Reports. 10 represents a lower bound—it is possible that more counties met this criteria in states or years where enrollment by race was not recorded.

3.1 Outcome Data

Enrollment, Funding, and Teacher Measures

Enrollment, funding, and the numbers of teachers come from reports compiled by southern State Departments of Education (DOE). State DOEs assembled reports to update the state legislature on the policy priorities and successes of public schools. Though the exact format of the reports vary across states and years, they typically consist of a narrative section that describes policy areas of focus and a statistical section with tables of metrics such as enrollment and sources of funding. Each state legislature had different standards; Mississippi, for example, has exceptionally detailed data on funding, while South Carolina shines in its coverage of private school enrollment and academic outcomes. Alabama and Louisiana report enrollment by race throughout the study period, while other states either stop reporting enrollment by race in the early 1960s or report it inconsistently.

Sarah Reber compiled and generously shared the reports for 1960 through the mid 1970s, depending on the state. I extend the time series through 1985 with newly digitized data.¹³ Because these data span 1960-1985, my analysis should be interpreted as the effect of opening a segregation academy *after* 1960. These data contain 646 school districts with enrollment data, 529 of which I use in my main analysis. I use newly digitized annual school level enrollment data for both private and public schools to decompose enrollment losses. I then link this to my data set of segregation academies by school name and county.

Segregation Measures

Data on school level segregation comes from Office of Civil Rights (OCR) Surveys digitized by Sarah Reber and compiled by Owen Thompson. The combined data provides school level enrollment by race data for the years 1966-1980. The purpose of these reports was to monitor compliance with desegregation rules. They thus contain a selected sample of school districts.

¹³Additional years were transcribed by me or an undergraduate research assistant. Ashley Sorey Dees at the University of Mississippi Library was especially helpful in acquiring additional years for Mississippi.

For example, in 1967, the survey covered school districts of 3,000 or more pupils or southern school districts that were actively desegregating, by either voluntary plan or court mandate. 350 out of 646 school districts have this data available, 216 of which I use in my main analysis. For a full description of the data, see Thompson ([2022](#)).

3.2 Control Data

Baseline Characteristics

I use the following county level variables from the 1950 census (ICPSR 2896: Haines [2005](#)): median family income, population, percent of households that are families, and population density. I choose the 1950 census because it predates *Brown v. BOE*, and, as a result, segregation academies. The earliest confirmed segregation academy in my sample opened in 1952. The earliest in the sample used in my main analysis opened in 1960. I calculate percentage of the population that is Black in 1950 using population levels disaggregated by race from the City and County Databooks (ICPSR 07736 and 07735, respectively). While all analyses performed in this paper can be run using percentage “non-white” instead of percentage Black, I prefer to use percentage Black because, historically, Jim Crow and other race-based discrimination in the Deep South targeted Black people.

I also use data from Cascio et al. ([2010](#)): the share of county vote share for Strom Thurmond in 1948, a standard measure of racial animus in the literature. Strom Thurmond was a vocal segregationist who ran under the States’ Rights, or “Dixiecrat,” party. However, using Strom Thurmond’s vote share as an indicator of racial animus is problematic due to Alabama’s decision to exclude incumbent President Harry S. Truman from the ballot. This decision distorts across-state comparisons and limits within-state variation in Alabama (Strom Thurmond won 79.7% of the vote in pre-Voting Rights Act Alabama) ([1948 — The American Presidency Project 2023](#)). To address this limitation, I also approximate racial animus with the number of lynchings and number of Klans scaled by 1950 population. Lynching data comes from the American Lynching

Project, compiled by the Equal Justice Initiative.¹⁴ The number, founding date, and location of Ku Klux Klans were compiled by Virginia Commonwealth University as part of the Mapping the Ku Klux Klan Project (1915-1940).

Timing of Court Ordered Integration

In order to disentangle the effect of the opening of segregation academies from the effect of court ordered integration and to estimate the interaction of these events, I assemble a database of court orders and court cases. I draw from existing sources: the American Communities Project (Logan 2023), ProPublica (from the U.S. Department of Education, U.S. Department of Justice, Stanford University, and ProPublica research), and Anstreicher, Fletcher, and Thompson (2022). I further augment this data by adding court cases compiled by the Alabama School Connection (Crain 2013), the Civil Rights Legislation Clearinghouse, the Georgia (South Carolina) Advisory Committee to the United States Commission on Civil Rights (report published in 2007 (2008)), and the United States Commission on Civil Rights (Civil Rights 2007). Finally, I search for any districts with missing years in legal databases such as [casetext](#). This yields a comprehensive data set that includes district name, year founded, and type of event. Types of events include court orders, court cases (which may or may not result in a court order, depending on the perceived quality of a district's submitted plan), and desegregation events.

To facilitate comparability of my results with previous literature, I use year of implementation as the desegregation year. In the case of multiple court cases, I use the year associated with a “major” plan, as defined by either Welch and Light 1987 or Anstreicher, Fletcher, and Thompson 2022, which expands the Welch and Light sample to 187 large ($> 15,000$ students) school districts by combining it with Logan 2023. In the example of Birmingham featured in Table B2, I use the year 1970 to define the *desegPost* variable (this is also the year used by Reber 2005). 429 of the 646 school districts have a desegregation year defined.

¹⁴This data was generously shared by Martin Fiszbein and Thomas Pearson.

3.3 Geographic Data

I follow Reber (2005) and use 1990 school district boundaries, as recorded in shape files compiled by NCES (*School District Boundaries 1995*). Maps of school district boundaries are not available before 1990. While this practice could be potentially problematic if school district boundary changes are endogenous, Reber (2005), which studies the effect of policies implemented in the seventies, uses 1990 school district boundaries because boundaries between 1970 and 1990 changed “little, if at all.”

Similarly, I use 1990 county boundaries compiled by the Census Bureau (*Cartographic Boundary Files 1990*). As documented by Bureau (2022), county boundaries in Alabama, Mississippi, Louisiana, Georgia, and South Carolina are stable from 1970-1990.

In the Deep South, school districts in rural areas and counties typically share the same boundaries. For municipal school districts where this is not the case, I reconcile county and district level data by creating a cross walk using the method first described by Donaldson and Hornbeck (2016) and adapted by Ferrara, Testa, and Zhou (2022). I create a county to school district crosswalk by using QGIS to creating weights based on the percentage of the 1950 population of each county located in the corresponding district. 1km x 1km grid level population estimates are taken from Fang and Jawitz (2018).¹⁵

4 Estimation Strategy

In this section, I discuss the definition of treatment, my target estimand and my reduced form estimation strategy.

¹⁵I use the m5 model. For a detailed description of the data, see Fang and Jawitz (2018).

4.1 Determining Treatment Status

A challenge of my setting is that private schools, unlike public schools, do not have a formal catchment area, meaning I cannot define treatment by using school district or county boundaries. I instead adopt a spatial definition of treatment: a school district, my unit of observation, is determined as “treated” if 30% of the land area of the unit is within 10 miles, or a roughly 25 minute commute, of a “confirmed” or “likely” segregation academy. Though 10 miles may seem far, there are contemporary accounts of parents traveling even farther. A parent quoted in a 1969 article in *The Charlotte Observer* traveled 14 miles to “to send her daughter . . . to another all-white private school . . . Wake Christian Academy” (Adams and Covington 1969).

I use straight line distance instead of network distance when defining my circles of treatment. Straight line distance may bias my estimates downward because areas considered “treated” may not be within a feasible commuting distance to school. However, this downward bias is preferable to the alternative: the potential endogeneity introduced by the use of network distance. Roads have the potential to reflect a government’s investment priorities. Network distance is a measurement of modern-day commute time that can be obtained from the Google Maps API (historical commute time is not available). Thus, if a local government built more roads to a segregation academy in order to make the school more accessible, a larger percentage of its land area would be considered treated. School addresses come from the Universe of Private Schools: 1976-1980 (National Center for Education Statistics 2000). I then geolocate these addresses using Geocod.io. Using QGIS, I create a multi-ring buffer of 5, 10, and 15 miles around the segregation academies. This allows me to determine the percentage of land area within (5, 10, 15) miles of a segregation academy. I then use this percentage to determine treatment status.

Because of the inherently arbitrary nature of the spatial treatment definition, I do not expect there to be a discontinuous treatment effect 10 miles from a segregation academy. To create a clean set of control districts, I omit “partially treated” districts that have 15 – 30% of area with

a 10 mile radius of a segregation academy. In Figure A.4, I show how results differ when using different distance and percent coverage combinations to define treatment. As the definition grows more restrictive, results become noisier. The average southern school district was quite large. Shelby County in Alabama, for example, is 810 square miles. If a segregation academy was located in the middle of the county, approximately 40% of the county would be treated.

Once a school district is treated, it remains treated. Figure 3 shows the distribution of treatment timing: a large spike occurs in the school year beginning in 1970. The year prior, the Supreme Court mandated immediate desegregation in *Alexander v. Holmes County Board of Education*, putting an end to the “all deliberate speed” language of *Brown II*. It was common for multiple segregation academies to open with overlapping catchment areas. 28% of treated school districts meet the treatment definition in more than one year. For example, Saint James School, Montgomery’s first segregation academy, opened in 1955. In the following years, four other academies opened: Montgomery Academy in 1959 and Central Alabama Academy, Stephen Spears School, and Trinity Presbyterian school in 1970. However, this 5-academy story is not typical: 61% school districts treated by more than one segregation academy (28% of all treated school districts) had only two.

I conceive of the formation of additional segregation academies as an intensification of the initial treatment over time. My treatment is thus binary and the causal parameter I recover should be interpreted as the average effect that the *introduction* of segregation academies in a school district has on school districts that have segregation academies, that is, the average effect of treatment on the treated (ATT).

4.2 Theoretical Framework and Target Estimand

In this section, I develop a theoretical framework to define my target estimand. Consider a model of taste-based discrimination inspired by Becker (1957). In Becker’s canonical model, employers who have a taste for discrimination will forgo money to avoid interacting with mi-

norities. Parents who pull their children out of free public schools to prevent their child from interacting with minority children can be thought of similarly.

For each school district, let $r^i \geq 0$ represent a parent i 's taste for discrimination (or racism). Each school district d is endowed with some distribution of $r \sim F_d(r)$. Let b_{pub} represent the ratio of Black students to white students in the local public school. Let $c_{pub}^i(r^i, b)$ represent a white parent's "psychic cost" of sending their child to public school. Note $c_{pub}^i(r^i, b)$ is a function of the product of r and b such that $c_{pub}^i(0, b_{pub}) = c_{pub}^i(r^i, 0) = 0$. For example, a parent with a high taste of discrimination r^i that sent their child to a perfectly de jure segregated public school ($b = 0$) would incur a psychic cost of zero.

White parents with a positive r^i had three options: (1) relocate to different school district, (2) enroll their kids in an existing private school, or (3) form and/or enroll in a segregation academy.

Total white enrollment losses can thus be expressed as

$$W = W_{move} + W_{priv} + W_{segac}$$

Attending a different school than the neighborhood public school incurred costs. The cost of (1) is an increasing function of the distance to the move m^i and the product of r^i and b_{alt} , the ratio of Black students to white students in the alternative school district: $c_{move}^i(m^i, r^i, b_{alt})$. The cost of (2) is increasing in ratio of private school tuition to family income $tuition_{priv}^i$, commuting distance to the nearest private school $dist_{priv}^i$, and the product of r^i and b_{priv} , the ratio of Black students to white students in the nearest private school: $c_{priv}^i(tuition_{priv}^i, dist_{priv}^i, r^i, b_{priv})$. Note that for most existing private schools, $b_{priv} \approx 0$. The cost of (3) is an increasing function in tuition and start-up costs: $c_{segac}(tuition_{segac}, startup_{segac})$.¹⁶ Anecdotally, many segregation academies offered low tuition and instead asked parents to contribute to the school's infrastructure, either via labor or a financial contribution to a "building fund." I thus assume $16b_{segac} = 0$ by definition, $\therefore c_{segac}(tuition_{segac}, startup_{segac}, r^i, 0) = c_{segac}(tuition_{segac}, startup_{segac})$

$$tuition_{segac}^i < tuition_{priv}^i.$$

A white child exits the public school system if the cost of some outside option is less than c_{pub}^i .

White enrollment losses W are equal to the sum of individuals i for which c_{pub}^i is greater than the cost c_{type}^i of at least one outside option:

$$W = \sum_0^I \mathbf{1}\{c_{pub}^i - \min(c_{segac}^i, c_{move}^i, c_{priv}^i) > 0\} \quad (1)$$

The marginal white parent is shifted into leaving the public school system **by the establishment of a segregation academy** if

$$c_{segac}^i < c_{pub}^i(r^i, b) < \min(c_{move}^i, c_{priv}^i)$$

My **target estimand** is the effect of segregation academies on marginal white enrollment losses, w_{segac} . It can be expressed as:

$$w_{segac} = \sum_0^I \mathbf{1}\{c_{segac}^i < c_{pub}^i < \min(c_{move}^i, c_{priv}^i)\} \quad (2)$$

These conditions are most likely to hold in areas where $F(r_i)$ has a long left tail (a high proportion of people are racially prejudiced) *and* the cost of attending an existing private school *and* moving to a racially homogeneous school district is high.

Policy makers and institutions can and did influence the scale of W and w_{segac} by lowering the cost of outside options. School district secession of racially homogeneous areas ([EdBuild — Fractured 2019](#)) lowered the cost of moving, while private tuition voucher programs, and over 450 state laws and resolutions, some of which explicitly directed public funding for private schools, lowered the tuition burden on families ([The Racist Origins of Private School Vouchers](#)

2022). In 1961 Georgia, for example, \$3.6 million dollars (in 2013 value) were allocated to provide tax funded scholarships for students to attend any non-sectarian private schools ([A History of Private Schools & Race in the American South 2022](#)). To defray the cost of founding a new school, local governments sold segregation academies textbooks and other school supplies at bargain prices from the state. Segregation academies even operated on campuses of public schools closed via boycott or consolidation. While many of these rules were eventually rolled back (Cascio et al. 2010), funding continued via tax exemptions for individual donations to these schools and tax exempt status for the schools. These were deemed unconstitutional in 1968 by *Green vs. Connelly*, but remained in practice until 1978, then again from 1980 to 1983.

4.3 Reduced Form Estimation

Identification of my target estimand requires me to isolate the marginal effect of segregation academies on enrollment. The simplest way to distinguish these enrollment losses from the enrollment losses that would have occurred irrespective of the establishment of a segregation academy is to use a standard two-way fixed effects event study estimator:

$$Y_{i,t} = \underset{\text{district}}{\alpha_i} + \underset{\text{year}}{\lambda_t} + \sum_{\ell \neq -1} (\delta_\ell \cdot D_{i,t}^\ell) + \epsilon_{i,t}$$

where ℓ denotes event time and $D_{i,t}^\ell = 1$ for treated districts at event time ℓ . Take a school district where the first segregation academy was established in 1965. Years 1963, 1964, 1966, and 1967 would correspond to event times -2, -1, 1, and 2, respectively. The coefficients of interest, δ_ℓ , are interpreted as the effect of treatment at event time ℓ . I use $\ell = -1$ as my reference period to account for any possible anticipation of treatment in the year prior. I cluster standard errors at the school district level.

However, a large body of literature has shown that estimates of δ_ℓ are biased by treatment effects from other periods when treatment timing is staggered (Roth and Sant'Anna [2023](#);

Callaway and Sant’Anna 2022; Sun and Abraham 2021). Additionally, an assumption of the standard event study is that treatment paths are homogeneous among different cohorts e , or groups of school districts that share a treatment year. This assumption is violated in my context. For example, the enrollment response in a school district where a segregation academy was established in 1959, when most public schools were de jure segregated, can reasonably be expected to differ from the enrollment response in a school district treated in 1970, when public schools were integrating.

To deal with these concerns—namely, staggered treatment timing and heterogeneous treatment effects—I adopt the method described in Sun and Abraham (2021). This method refines the traditional two-way fixed effect specification by including terms interacting relative period indicators with cohort indicators, which relaxes the treatment effect homogeneity assumption.

$$Y_{i,t} = \alpha_i_{\text{district}} + \lambda_t_{\text{year}} + \theta_{s(i)t}_{\text{year by state}} + \gamma desegPost_{i,t} + \sum_e \sum_{\ell \neq -1} \delta_{e,\ell} (\mathbf{1}\{E_i = e\} \cdot D_{i,t}^{\ell}) + \epsilon_{i,t} \quad (3)$$

$desegPost_{i,t} = 1$ once a school district has been placed under a major court order, and $\theta_{s(i)t}$ allows the time fixed effect to vary between states. I take the log of my dependent variables, enrollment and white enrollment. This allows me to measure the *percentage change* in enrollment, rather than the level change. The latter, of course, would be an artifact of the population of the school district and is not of interest. I measure changes in both the level and log of percentage white.

The coefficients on these interaction terms, $\delta_{e,\ell}$ are interpreted as the Cohort Average Treatment Effects on the Treated:

$$CATT_{e,\ell} = E[Y_{i,e+\ell} - Y_{i,e+\ell}^{\infty} | E_i = e] \quad (4)$$

Where e is the year that a segregation academy was established, ℓ is the number of years from initial treatment, $Y_{i,e+\ell}^{\infty}$ is the counterfactual outcome, and $Y_{i,e+\ell}$ is the observed outcome.

I am interested in how the $CATT_{e,l}$ changes over ℓ , the distance from initial treatment. Thus, I

again follow Sun and Abraham (2021) by estimating a weighted average of each cohort, defined as a group that receives the initial treatment in the same time period e , average treatment effect at time from event ℓ . The vector of $CATT_{e,\ell}$ is aggregated by weighting each cohort-period treatment effect by $Pr\{E_i = e | E_i \in [-\ell, T - \ell]\}$, or the share of each cohort in the sample in period ℓ . This weighting addresses the contamination bias and thus allows for staggered treatment timing.

$$\nu_\ell = \sum_e CATT_{e,\ell} Pr\{E_i = e | E_i \in [-\ell, T - \ell]\} \quad (5)$$

ν_ℓ can be interpreted as w_{segac} if the following assumptions hold.

Assumption 1: In the absence of a segregation academy, enrollment in treated districts would have increased or decreased in a fashion parallel to untreated districts. This assumption is the most problematic in my context, and the one I will take the most time justifying in Section 5. Segregation academies were not built in random locations. As discussed in 2.3 and shown in Figure 2, the location of these academies is highly correlated with the percentage of the population that is Black and measures of preexisting racial animus. Recall that the “psychic cost” of attending an integrated school, $c_{pub}^i(r^i, b_{pub})$, is increasing in both of these variables. This presents a threat to identification if c_{pub}^i is changing *differentially* in treated vs. control counties because of something other than segregation academies during this time period. Alternatively, the cost of other outside options could change differentially in treated vs. control areas. If either of these factors hold, ν_ℓ should be interpreted as some combination of W_{move} , W_{priv} , and W_{segac} . Both of these would bias my estimates of w_{segac} away from zero.

Assumption 2: Parents must not either enroll their kids in public school or take them out of public in school in anticipation of the formation of a segregation academy. The former does not seem plausible. The latter does: consider a public education loving parent who hears that a group of “concerned citizens” is going to start a private school and wage war on the public schools. This parent might decide that this community is not the best place to raise their child, and leave the school district prior to the establishment of a segregation academy. By lowering

enrollment before the event time, this would bias my estimates of the effect of the opening of a segregation academy on enrollment towards zero.

Assumption 3: Any differential enrollment loss in public schools in treated vs. control districts is driven by white students. If not, ν_ℓ is some combination of W and B , where B is the average difference of changes in Black enrollment in treated vs. control districts. This assumption is necessary because I only have enrollment data disaggregated by race for two of the five states in the Deep South.

5 Relative Enrollment and Integration Decrease

The establishment of segregation academies caused a significant decline in public school enrollment. Evidence from Alabama and Louisiana, where enrollment data stratified by race are available, suggest that this effect is driven by a decrease in white enrollment. Evidence from South Carolina, where detailed private school enrollment data is available, shows that this decrease in white enrollment is primarily due to parents opting into segregation academies rather than white residential flight or preexisting private schools. Enrollment losses are largest in rural areas, where the costs of taking up an alternative outside option are the highest. While enrollment losses occur prior to a court order, they are significantly larger after the implementation of a major court order. The opening of segregation academies offset approximately $\frac{1}{2}$ of the gains in integration associated with court orders, thus potentially mitigating the positive effects of these orders.¹⁷

Throughout this section, I report enrollment results for all five states of the Deep South. White enrollment results are reported for Alabama and Louisiana, private enrollment results for Louisiana and South Carolina, and segregation academy enrollment results for South Carolina

¹⁷Cascio et al. (2010), S. Rivkin and Welch (2006), R. C. Johnson (2011), Card and Rothstein (2007), Ashenfelter, W. J. Collins, and Yoon (2006), Guryan (2004), and Anstreicher, Fletcher, and Thompson (2022), among others

only. Because institutional contexts and thus enrollment responses varied by state, estimates from sub-samples should be interpreted accordingly.

5.1 Decrease in Enrollment Driven by White Enrollment Flight

In Table 2, I report the results from Equation 3. Panel A reports results on the full sample of the 5 states of the Deep South (Alabama, Louisiana, Mississippi, Georgia, South Carolina). Panel B reports the effect on white enrollment in Alabama and Louisiana.

Segregation academies induce a 14% (13 log points) decline in enrollment in nearby public school districts across the Deep South (Table 2, Panel (A), column (ii)). This effect deepens over time to 15%. Seven years post the establishment of a segregation academy, this effect is remarkably stable, suggesting a permanent gouging of public school enrollment (Figure 5).

In Alabama and Louisiana, white enrollment decreased by 37% 15 years post treatment (Figure 6). There is no effect on Black enrollment (Figure 6) in these states, which supports Assumption 3 and allows me to reasonably infer that white students drive enrollment losses.

5.2 Decomposition of Enrollment Losses

The estimate of w_{segac} will be biased away from zero if the cost of attending a preexisting private school, the cost of moving school districts, or the psychic cost (to racially biased white parents) of attending the local public school changes *differentially* in treated versus control districts during the period of study. Court orders, which were widely implemented during this period, affect the cost of attending the local public school directly by changing the public school's ratio of Black students to white students. In all estimates, I control for the effect of court orders directly via the *deseqPost* variable.

I disentangle the effect of white flight unrelated to segregation academies in Column (4) of Panel A and B in Table 2 by allowing for a divergence in the time trend of enrollment that is specific to preexisting population changes. School districts experiencing population decline prior to 1960, for example, could experience a faster rate of relative enrollment decline than school districts experiencing preexisting population growth. I estimate white residential flight (W_{move}) accounted for a maximum of 46% of the average effect on enrollment in the Deep South (.06 log points), and 16% of the effect on white enrollment in Alabama and Louisiana (.05 log points).

Segregation academies could induce residential flight if Black and/or white families move because they anticipate negative spillovers on public schools. Government endorsement of segregation academies could signal a de-prioritization of public education. Segregation academies, as a signal of white racism, could also compel Black families to leave, though segregation academies were often established in areas with preexisting histories of racism (see, for example, Lowndes County and Figure 2).

In Table 4, I analyze the effect of treatment on population directly. I adjust population for each period using the identity:

$$AdjustedPopulation = Population + Deaths - Births$$

Changes in population from period to period can thus be interpreted as changes induced by migration rather than an increase in birth rate or mortality. Data comes from ICPSR 36603 (Bailey et al. 2016). Estimates are imputed between decennial census years in the raw data. To prevent the imputation method from influencing my results, I restrict the data to 1950, 1960, 1970, 1980, and 1990.

I find no statistically significant effect of the establishment of a segregation academy on population.

Increase in Segregation Academy Enrollment

I also compare the magnitude of the public school enrollment losses to the increase in private school enrollment in Table 3. I estimate Equation 3 using the level of enrollment rather than the log so I can compare the total number of students leaving the public schools to the number entering the private schools. On average, in the Deep South, segregation academies lead to an enrollment decrease of 369 students (1), while in Louisiana and South Carolina, private school enrollment increased by 453 students (2).

In Columns (3) through (6), I narrow my sample to South Carolina, where State DOE reports include enrollment data by school. This allows me to directly compare the number of students leaving the public schools to the number entering segregation academies. In Column (5), I separate out segregation academies from other private schools (Column (4)). Increases in segregation academy enrollment account for 116% of the gain in private school enrollment. I expect this percentage to smaller in Louisiana and other places where there were more preexisting private schools.

Public schools lost 429 students (3) while segregation academies gained 288 (5). The gap in this number—141 students—can be interpreted as either the number of students that migrated out of the school district (W_{move}) or attended schools not included in the State Report.¹⁸ This amounts to 43% of the observed effect, a number consistent with the 46% figure cited previously.

Effect Larger in States with Strong Private School Associations

Enrollment effects varied by state (Table 6). In Alabama, Mississippi, and South Carolina, the effect on enrollment ranges from -11% to -17% (-.1 to -.16 lp) and is highly significant (.01 level). In Louisiana, the effect (-9%) is only significant at the .10 level, and in Georgia, there is no effect on enrollment. Part of this heterogeneity by state can be attributed to demographic differences (percent Black, percent rural) between states.

¹⁸Some segregation academies resisted government intervention by refusing to report statistics

However, this heterogeneity also sheds light on how policy makers and institutional context influenced the cost of attending segregation academies and ultimately the size of the white enrollment losses into segregation academies (W_{segac}). Mississippi, the state with the largest effect on enrollment (-17%), was the birthplace of the first White Citizens Council (WCC). As described in Section 2, Alabama and South Carolina also had strong WCC, and all three states had private school associations that explicitly promoted segregation academies (APSA, MPSA, SCISA) that received direct and indirect support from state and local officials.

While Louisiana also had a private school association (the Louisiana Independent School Association), the private school tradition in Louisiana predated integration thanks to the surplus of parochial schools started by Catholic descendants of the state's French and Spanish colonial settlers (Figure 1 reflects this). The distance to, and thus cost of, attending a preexisting private school was on average lower in Louisiana. In short, it was cheaper for parents to avoid segregation by attending a preexisting private school rather than a segregation academy, thus weakening the association between the founding date of segregation academies and enrollment losses.

The lack of an effect in Georgia could be due to a combination of a lack of institutional support and measurement error. Georgia's private school movement turned from segregation academies relatively early. The state's original private school association, the Georgia Independent School Association (GISA), was founded in 1967, around the same time as APSA and MPSA. However, in 1972, GISA required all member schools to post a non-discriminatory admissions policy. The six schools that refused to do so splintered off to form the Southeastern Association of Independent Schools (SEAIS). The lack of institutional support may have meant that segregation academies in Georgia were smaller and less organized. Smaller, poorly connected segregation academies are the schools most likely to be missing from my data set. Georgia also has the fewest years of enrollment data available (Table ??).

Effects Larger After Court Ordered Desegregation

I rule out the possibility of a simultaneous desegregation shock driving my results by controlling for desegregation events (court orders) directly in my main specification (Equation 3) through the inclusion of the binary variable *desegPost*, which = 1 after a school district is placed under a court order. Additionally, in Figure 4, I show the timing of court orders is distinct from the timing of the establishment of segregation academies.

However, *conditional on having access to a segregation academy*, white parents may be more likely to exit public schools after a major court order than before. In Table 5, I show that this is the case—the effect on enrollment changes from negative .08 log points prior to court ordered integration to negative .13 log points after court ordered integration. The effect on white enrollment in Alabama and Louisiana is even more dramatic—the effect changes from a statistically insignificant -.04 to -.56 log points.

Column (2) can be interpreted as the effect on enrollment of having a segregation academy prior to or in the absence of a court order. Column (3) can be interpreted as the effect of having a segregation academy in the presence of the court order. Note that because I limit my sample in (3) to *only districts under a court order*, I am comparing school districts under court order with a segregation academy to school districts under court order without a segregation academy. (3) is thus the *marginal* effect that segregation academies have on enrollment, not the effect of the court orders on enrollment.

5.3 Reduction in Public School Integration

I estimate the effect on public school integration on a sub-sample of 216 schools districts and years using equation 3. To measure integration, I calculate the Exposure Index:¹⁹

$$ExpIndex_d = 1 - \sum_1^S \left[\frac{n_{B,s}}{N_{B,d}} \times \frac{n_{B,s}}{n_{B,s} + n_{W,s}} \right] \quad (6)$$

¹⁹See Massey and Denton (1988).

Where $n_{B,s}$ is the number of Black students in school s and $N_{B,d}$ is the number of Black students in district d . The Exposure Index ranges from 0 (total segregation) to the ratio of White students in the district (total integration) and reflects the average percentage of school-mates of a Black student that are white. Changes in the level of this measure could be biased by control districts having a higher percentage white population than treated districts. Accordingly, I report the effect on log.

The OCR only collected data from school districts that met one of two criteria: 3,000 or greater students or school districts in the process of desegregating. As a result, small, rural districts that were not under supervision by the OCR are omitted from the analysis. I also omit “always treated” districts (districts where a segregation academy was established prior to 1966).²⁰ As in my main analysis, I omit districts where 15 – 30% of the land area is within 10 miles of a segregation academy.

School level data, which is required to calculate the Exposure Index at the district level, was collected by the OCR for nine years between 1966-1980.²¹ Because data are not available to estimate an informative pre-period, I report the ATT for this outcome instead of a full event study.

In large districts and districts implementing desegregation plans (that is, school districts included in OCR reports), segregation academies offset approximately $\frac{1}{2}$ of the gains in across-school integration induced by court ordered desegregation. This number is calculated by dividing Column (1) of Table 7, the log decrease in the Exposure Index induced by the establishment of a segregation academy, by Column (3), the log increase in the Exposure Index induced by a major desegregation order. For interpretability, columns (2) and (4) report the respective effects on the level of the Exposure Index.

²⁰24% of treated districts.

²¹OCR did not collect data for 1969, 1971, 1975, 1977, and 1979.

5.4 Robustness of Event Study Results

In order to identify the effect on enrollment, parallel trends must hold. As noted in Sun and Abraham (2021), it is sufficient if these assumptions hold conditional on covariates. I provide a visual test of pre-trends in event-study plots in Figures 5 and 6.

Additionally, I follow Sun and Abraham (2021) by using never-treated cohorts as my control group. I adopt this because it mitigates the possibility of anticipation effects distorting estimates in not-yet-treated school districts. However, using the never-treated group as a control group can be problematic if differing baseline characteristics of the treated and never-treated population cause a divergence in trends in periods post treatment that would have occurred irrespective of treatment. Indeed, Figure 2 shows that treated locations have statistically significant different pre-treatment characteristics than control districts.

Of particular concern is the possibility that the establishment of segregation academies coincided with *unobserved* integration events that changed the psychic cost (to white parents with nonzero racial animus) of attending the local public school, c_{pub}^i , by affecting the ratio of Black students in the local public school, b_{pub} (I control for observed integration events with *desegPost*). In other words, in order for **Assumption 1** to hold, c_{pub}^i must not increase differentially in treated versus control areas. This would lead to enrollment declines irrespective of the establishment of a segregation academy, because the sum of parents for whom $c_{pub}^i >$ the cost of some outside option would increase (Equation 1). Even if I observe that these parents sent their child to a segregation academy, it is possible that, had the segregation academy not existed, they may have moved their family or attended a different private school.

As shown in Figure 2, segregation academies were established in school districts with a relatively large Black share of population (38% of treated school districts were majority Black in 1950, compared to 20% of control districts). I control for a time trend specific to the quartile percentage of the population that is Black in 1950 in column (3) of Table 2, which essentially

allows for the possibility that c_{pub}^i was increasing differentially in areas with different Black population shares. This shrinks the overall ATT from .13 log points to statistically insignificant .03 log points. There is still a statistically significant white enrollment decline of .22 log points. However, because percent Black in 1950 significantly predicts my treatment, the inclusion of this control could bias my estimates *towards* zero. Consider the case where ever-treated is perfectly associated with quartile Black. The inclusion of a quartile Black \times year trend would be equivalent to including separate time trends for treated versus control districts, which would absorb some variation that is due to treatment, biasing the treatment effect towards zero.

Across my sample, majority Black counties experienced a median enrollment decline of 31%, compared to an enrollment decline of 7% in majority white school districts. However, treated school districts experienced *larger* enrollment declines: 31.5% vs. 28.1% for treated vs. control majority Black districts, respectively, and 13.2% vs. 4.4% for treated vs. control majority white districts.

My results are unchanged when I allow the time trend to vary with preexisting measures of racial animus (Column (5) of Table 2). Results are also robust to controlling for an alternate measure of racial animus, number of Klans per 1950 population.

I cannot entirely rule out the possibility that enrollment declines would not have occurred had segregation academies not existed. However, the cost of the two alternative outside options—moving or attending a preexisting private school—would have been very high. School districts in the South, especially in low density, rural areas, typically comprise entire counties. Furthermore, it is not clear where families would have moved. (Cascio et al. 2008) analyze the extent of desegregation occurring in the South from both observed and unobserved desegregation events. They find that by 1964-1966, most Southern school districts had desegregated to some extent, and by 1970, most desegregation in the South was complete. Preexisting private schools were concentrated in cities, which could have meant a prohibitively long commute for rural working parents.

These methods, as well as a matching exercise I describe in Appendix Section A.4, thus provide a conservative lower bound for my treatment effect.²² Appendix Section A.4 includes a more detailed discussion of the matching exercise.

6 Correlates of Differential Enrollment Losses

In this section, I test the predictions of my theoretical framework. Recall that the marginal white parent is shifted into leaving the public school system **by the establishment of a segregation academy** if the cost of attending a segregation academy $< c_{pub}^i <$ the cost of moving to a racially homogeneous school district or the cost of enrolling in an existing private school.

I expect the marginal decrease in enrollment to be largest in areas where outside options are costly. Cost reflects commute time to the nearest private school, a family's ability to afford private school tuition, or the feasibility of moving. Recall that I assume $tuition_{priv} > tuition_{segac}$ based on anecdotal historical evidence.

I test these predictions by estimating differential enrollment losses for each school district by adapting the imputation style estimator described in Borusyak, Jaravel, and Spiess 2021.

6.1 Imputation Method for Calculating Enrollment Losses

Ideally, I would calculate unit-level treatment effects. Instead, I calculate the difference in predicted enrollment and observed enrollment. These estimates differ from unit-level treatment effects τ_i by $\sum_{l>-1} \epsilon_{i,t}$, or the sum of the error term across the post treatment periods: $\hat{\tau}_i^* = \tau_i + \sum_{\ell>-1}^{T-\ell} \epsilon_{i,t}$. This allows me to do two things. First, it allows me to create a map that shows which treated areas have the largest differential enrollment losses, allowing me to identify

²²The corresponding event studies can be viewed in Figure A.2.

geographic patterns. Second, I am able to estimate correlates of losses.

First, using untreated and not yet treated observations Ω_0 , I estimate coefficients: $\hat{\alpha}_i$, $\hat{\lambda}_t$, $\hat{\alpha}_{s(i)t}$, $\hat{\delta}$.

$$Y_{it}(0) = \underset{\text{school district}}{\alpha_i} + \underset{\text{year}}{\lambda_t} + \underset{\text{year by state}}{\theta_{s(i)t}} + \delta \text{desegPost}_{i,t}$$

For treated observations Ω_1 , I set

$$\hat{Y}_{it}(0) = \underset{\text{county}}{\hat{\theta}_i} + \underset{\text{year}}{\hat{\lambda}_t} + \underset{\text{state} \times \text{year}}{\hat{\alpha}_{s(i)t}} + \hat{\delta} \text{desegPost}_{i,t}$$

Then, I estimate the differential enrollment loss $\hat{\tau}_{it}$:

$$\hat{\tau}_{it} = Y_{it} - \hat{Y}_{it}(0) \tag{7}$$

The differential enrollment loss for each school district i is thus the sum of the differences in predicted enrollment and observed enrollment in each post treatment time period. I weight each time period equally.

$$\hat{\tau}_i^* = \sum_{it \in \Omega_1} w_{it} \hat{\tau}_{it} \tag{8}$$

6.2 Results

I graph the geographic distribution of my results in Figure 7. In the bottom panel of Figure 7, I regress $\hat{\tau}_{it}$ on pre-treatment characteristics. I find that enrollment losses associated with segregation academies were larger in sparsely populated, poor, and relatively Black areas with a history of racial animus. For example, a one standard deviation increase in percent Black is associated with .1 log point more children leaving the public schools for segregation academies.

I expect $c_{pub}^i(r^i, b_{pub})$ to be increasing in the three characteristics—percent of the population

that was Black in 1950, the share of votes for Strom Thurmond in 1948, and lynchings per capita. The latter two act as proxies for r^i , while the former is directly related to b_{pub} . All of these characteristics are associated with larger enrollment losses, implying the intuitive result that segregation academies had a larger effect in areas where more families were opposed to integration.

Population density, population Δ from 1940 to 1950, and median family income act as inverse proxies for distance to the nearest private school \bar{dist}_{priv} , average moving cost \bar{m} , and ratio of private school tuition to family income $\bar{tuition}_{priv}$. The cost of other outside options (moving or attending a preexisting private school) are increasing in these factors. I thus expect w_{segac} to be *decreasing* in these factors. Indeed, enrollment losses are negatively associated with these factors. We can think of these communities as places where the cost of exiting public school would have been prohibitively high if a segregation academy had not been founded.

This sheds light on how segregation academies functioned within their communities. Anecdotal historical evidence suggests that in some communities, particularly rural communities, segregation academies completely displaced public schools for white parents. These are communities like Monroeville, Alabama, where Monroe Academy enrolls 409 students in PreK-12, 408 of which are white. The local public high school, Monroe County High School, enrolls 333 students, 93% of which are Black—there are only 23 white students. If a third of Monroe Academy high schoolers attended Monroe County High School today, the school would be 35% Black, a figure much more in line with Monroe County’s demographics (54% white).²³ Contemporary examples include Lowndes Academy in Lowndes County, Alabama where in 1982 “the student body of the private system is 100 percent white, and the student body of the public school system is 99 percent black” and Warrior Academy in Greene County, Alabama: “Since the white flight to the academy, Greene’s public school enrollment has ranged from 95 to 99 percent black, and the faculty has been 80 percent or more black” (W. B. Johnson and

²³Data for Monroe Academy comes from [Private School Review](#), which retrieves its data from the NCES and is current as of 2023. I was unable to locate Monroe Academy in the NCES Private School Finder. Data for Monroe County comes from the U.S. Census and is current as of 2020.

Pearson 1982). Anecdotally, to ease the cost burden for families and maximize the number of students, segregation academies would allow parents to forgo tuition in exchange for labor or scale tuition to meet each family's ability to pay. These schools saw themselves as (white) community institutions with a mission to serve the (white) children of the community.

7 Effect on Public School Inputs

“Some politicians are going to do their damndest to see to it that as little money as possible is spent on schools, particularly in counties where all or most of the pupils are black.”
The Baltimore Sun, December 8, 1969

“It is clear that private schools have had a negative effect on public schools, particularly in the area of school finance. First, by siphoning off large numbers of students who would otherwise attend public schools, private schools consequently reduce average daily attendance figures on which State funding levels are based.”

W. B. Johnson and Pearson (1982)

In the previous sections, I have demonstrated that the opening of a segregation academy caused declines in public school enrollment, particularly white enrollment. As previously noted, this offset gains in integration by $\frac{1}{2}$. A large body of literature has established the benefits of integration on the long and short-run outcomes of Black students (see R. C. Johnson 2011). Papers such as Anstreicher, Fletcher, and Thompson 2022 attribute part of this effect to an increase in investment in public schools. In this section, I ask if the exodus to private schools caused *disinvestment* from public schools. I find mixed evidence: while total funding and average teacher salary decline, the large decreases in enrollment cause per pupil funding to increase and average class size to decrease.

A white voter may be less willing to vote to fund public education (either directly or through the election of a public school friendly politician) if the proportion of students attending private school increases or if public schools are perceived as primarily serving Black students (Alesina, Baqir, and Easterly 1999). A report on 16 counties in the Black Belt of Alabama, published

in 1982, describes this mechanism directly: “needed tax increases to support public schools are blocked by whites whose children by and large attend private schools” (W. B. Johnson and Pearson 1982). Similarly, in Virginia, Orfield (1969) describes how “one county fell from eleventh to ninety-first position [in ranking of local public support for education] in the state after a private school movement took hold.” In an open letter to the Caddo Parish School Board (Louisiana), a person writes: “Your attention is invited to the ... private schools ... several thousand fewer children will attend the public (federal) schools ... we then come to the small matter of a ... increase in your budget ... more to spend on ... fewer students may strike some taxpayers as being slightly more than needed” (The Shreveport Journal, April 3, 1970).

I corroborate in Figure 8 that log local funding does decrease after the opening of a segregation academy, and the decrease deepens over time. However, Column (1) of 8 shows that this effect is not statistically significant, a potential byproduct of the heterogeneous results by state: local funding decreased by .10 log points (Column (3) of Appendix Table A.1) in Mississippi (significant at the .10 level) and in Alabama and South Carolina (not statistically significant). It could also be the case that in the types of counties that had segregation academies—that is, relatively poor counties—“the tax base . . . generally is nonexistent” (W. B. Johnson and Pearson (1982), writing about Alabama’s Black Belt). In other words, the already minimal level of local funding may have prevented any further decreases.

In contrast to local funding, state funding decreases by a statistically significant .10 log points (Table 8, Column (2)), perhaps because state funding in all four states was at least partially determined by enrollment at this time. This component drives the overall decrease in total funding (Table 8, Column (3)). Figure 8 show that decreases in log local, state, and total funding deepen over time.

Columns (4)-(6) of Panel A of Table 8 demonstrate the decline in enrollment more than offsets the decrease in funding *with the exception of state funding*. Total funding per pupil increases by \$40 post segregation academy opening, a 7% increase relative to the control mean of \$604

total funding per pupil (the control mean for local funding per pupil is \$161). Anecdotal historical evidence suggests that school boards—especially majority Black ones like that of Greene County, Alabama—effectively counteracted losses in state funds by successfully applying for federal funds made available by the ESEA (total funding is the sum of local, state, and federal revenue).

In Panel B, I narrow my focus to Alabama, where data on student teacher ratio (class size) exist. Per pupil funding increases even more in Alabama (column (2))—\$63, or approximately 10% of the control mean for Alabama (\$644). A decrease of approximately 3/4 of a student per class (control mean: 20 students) accompanies this increase. However positive, both of these results could be due to a lack of an immediate response to declining enrollments. For example, average class size may decrease in the short run, but increase in the long run as schools adjust. Counter to this story, Panel A of Figure 9 suggests average class size remains smaller in treated counties at least 10 years out. Though class size stayed small, it is possible that the average tenure of teachers may have decreased after the establishment of a segregation academy. For example, in Monroe County, Alabama, a historian has documented that at least seven teachers left the public schools to teach at the local segregation academy (Monroe Academy).²⁴

TKTKT: could also be decline in number of white teachers – SC paid based on exam (Cascio and Lewis 2023)

In Panel C, I proxy for the teacher experience by testing for changes in average teacher salary in South Carolina (teacher salary typically increases with tenure). I find a decrease of approximately \$215, or 3% of the control mean of \$8,400. This decrease deepens over time, as shown in Figure 9. This, combined with the lack of a significant increase in per pupil funding (despite experiencing large enrollment declines, see Table 6) suggests that students in South Carolina public schools may have been worse off after the opening of a segregation academy.

²⁴Source: Amberly Sheffield, who compared Monroe County Board of Education minutes to Monroe Academy's first yearbook

But impacts on public students likely varied by community. In Clarke County, Alabama, home of four segregation academies,²⁵ a 1982 report stated “respondents familiar with the public schools believe that... the public schools compare favorably with the private academies in terms of staffing, facilities, and curriculum. They also believe that the public schools are often better off without students whose parents oppose school desegregation.”

8 Conclusion

“The movement itself appears to be fundamentally viable and **segregationist academies are likely to be a permanent part of the education picture in the south.**”

Nevin and Bills ([1976](#))

I show that the establishment of segregation academies—a backlash by white parents to desegregating public schools—caused white flight from public schools *beyond* that induced by integration, ultimately weakening efforts to effectively integrate schools. I create a novel data set that documents the location and nature of these schools and show that they are different than other private schools. In a counterfactual world in which white parents were not able to receive support and summon the resources to establish these segregated academies, public schools would have been more integrated 15 years out. The net effect on public schools input is indeterminate.

I contribute to the literature on school desegregation by compiling both descriptive and causal evidence that segregation academies affected effective levels of integration. Court orders are often treated as exogenous sources of variation, but many segregation academies were established prior to court orders. This implies that the measured effect of integration on outcomes such as white enrollment losses may be tainted by the presence of segregation academies.

Previous literature that decomposes white enrollment losses into migration and private school

²⁵Grove Hill Academy, Thomasville Academy, Salt Springs Academy, and Jackson Academy. The headmaster at Salt Springs agreed to be a guest speaker at a 1977 Ku Klux Klan rally, members of which financially supported the academy (Rawls [1977](#); “KKK Plans to Hold Statewide Rally” [1977](#))

enrollment have focused on large cities (Baum-Snow and Lutz 2011) and have found the primary channel to be migration. I fill a gap in this literature by studying an institution, segregation academies, that had disproportionately large effects in rural areas. This enriches our understanding of how white flight happened outside of the cities.

These academies, and the politics that shaped them, remain a part of the American education landscape (Carr 2012). In 1985, members of the White Citizens' Councils founded the Council of Conservative Citizens (CCoC). As of 2011, CCoC still funds two private schools—Calhoun Academy and Carroll Academy, both in Mississippi. Some politicians serving in Mississippi politics are openly members of the CCoC (Beirich and Potok 2022). While this paper focuses on the contemporary effects of these schools, 121 of the 385 schools I identify as segregation academies still existed in 2017. These schools educate 46,500 students, or 1 in 8 students attending private school and 1 in 100 students overall (*Digest of Education Statistics, 2017* 2023).

Where a person goes to school affects who they interact with, who their parents interact with, and the diversity of backgrounds to which they are exposed (Murnane 2018; Fischel 2009). By forbidding the admittance of Black students, segregation academies ensured that the networks built via their classrooms were racially exclusionary. In future research, I will investigate the long term effects these schools had on the neighborhoods and people surrounding them.

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Descriptive Characteristics of Segregation Academies vs. Non Segregation Academies
2017-2018

	Non Segregation Academy	Segregation Academy	Difference
Enrollment	372.78	384.04	11.26
Average Percent 4 Year College	85.03	68.3	-16.73***
Average Percent White	76.39	88.99	12.6***
Average Percent Black	11.6	5.62	-5.99***
Average Percent Hispanic	5.81	2.38	-3.42***
Average Class Size	13.16	11.56	-1.6***
Modal Religion	Catholic	Not Affiliated	
N	171	121	

Table 1. Data from the 2017-2018 Public School Survey. This data is limited to schools that appear in both the 1976-1980 Universe of Private Schools and the 2017-2018 Private School Survey in Alabama, Mississippi, Louisiana, Georgia, and South Carolina. *** indicates significance at the 1% level using a two sample t-test to test difference in means. Religion consists of the following mutually exclusive categories: not affiliated, Seventh Day Adventist, Catholic, Baptist, Jewish, Episcopal; Church of Christ; Lutheran; Christian Interdenominations and Nondenominations; Amish, Mennonite, Amish-Mennonite; Assembly of God; Methodist; Presbyterian; Pentacostal; other.

Effect on Enrollment and White Enrollment

Panel A: Enrollment (Alabama, Mississippi, Louisiana, Georgia, SC)

	Log Enrollment					
	Baseline (1)	Black Pop (2)	Pop Change (3)	Thurmond (4)	Full (5)	Matched (6)
ATT	-0.13*** (0.03)	-0.03 (0.02)	-0.07*** (0.02)	-0.10*** (0.02)	-0.06*** (0.02)	-0.06** (0.03)
Desegregation Post	-0.08*** (0.03)	-0.02 (0.03)	-0.05* (0.03)	-0.08*** (0.03)	-0.03 (0.02)	-0.06* (0.03)
Year × Quartile Black Pop Pct		-0.01*** (0.00)			0.00*** (0.00)	
Year × Pop Delta 50-60			0.00*** (0.00)		0.00*** (0.00)	
Year × Share Vote Strom Thurmond				0.00 (0.00)	0.00** (0.00)	
Observations	13,671	12,528	9,298	11,854	8,132	6,757
R ²	0.98	0.97	0.97	0.97	0.98	0.97
Within R ²	0.20	0.20	0.29	0.14	0.45	0.19
School District fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓
Year-State fixed effects	✓	✓	✓	✓	✓	✓

Panel B: White Enrollment (Alabama, Louisiana)

	Log White Enrollment					
	Baseline (1)	Black Pop (2)	Pop Change (3)	Thurmond (4)	Full (5)	Matched (6)
ATT	-0.31*** (0.08)	-0.22*** (0.08)	-0.26*** (0.07)	-0.31*** (0.08)	-0.24*** (0.07)	-0.33*** (0.12)
Desegregation Post	0.04 (0.06)	0.03 (0.05)	-0.04 (0.06)	0.01 (0.05)	-0.01 (0.06)	0.03 (0.07)
Year × Quartile Black Pop Pct		-0.01** (0.00)			0.00 (0.00)	
Year × Pop Delta 50-60			0.00*** (0.00)		0.00*** (0.00)	
Year × Share Vote Strom Thurmond				0.00 (0.00)	0.00 (0.00)	
Observations	4,895	4,701	4,099	4,447	3,740	2,473
R ²	0.93	0.93	0.94	0.93	0.94	0.92
Within R ²	0.23	0.28	0.36	0.26	0.43	0.28
School District fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓
Year-State fixed effects	✓	✓	✓	✓	✓	✓

Table 2. Event studies in Figure 5 reflect estimates from (2). Results from a matched data set are in (7). I add covariates interacted with year in columns (3) through (5) and include the full set of covariates interacted with year in column (6). Observations numbers change from (2) to (7) because of availability of covariates. Enrollment results are estimated for Alabama, Mississippi, Louisiana, Georgia, and South Carolina. White enrollment results are estimated for Alabama and Louisiana. Data ranges from 1960-1985. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors are clustered at the school district level and appear in parentheses.

Private Enrollment vs. Public Enrollment

	Public Enroll Deep South	Private Enroll LA and SC	Public Enroll	Private Enroll	Seg Ac Enroll SC	Non Seg Ac Enroll
	(1)	(2)	(3)	(4)	(5)	(6)
ATT	-369.22* (209.92)	453.56*** (148.63)	-429.93* (220.43)	248.55** (107.13)	288.15*** (105.37)	-39.60 (28.98)
Desegregation Post	-393.21* (213.10)	138.42 (230.33)	-89.96 (421.39)	104.79 (161.80)	107.61 (152.80)	-2.83 (70.32)
Observations	11,798	2,213	1,622	983	983	983
R ²	0.96	0.97	0.98	0.84	0.80	0.90
Within R ²	0.11	0.09	0.12	0.30	0.37	0.31
School District fixed effects	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓
State-Year fixed effects	✓					

Table 3. Changes in private and public enrollment. Estimated using equation 3. States included in the sample are indicated in the second row of the headers. Because the results in column (3) through (6) are estimated using data from South Carolina only, I drop *state* \times *year* FE. Standard errors are clustered at the school district level and appear in parentheses.

Population changes

	Log Black Pop (1)	Log White Pop (2)	Log Total Pop (3)
ATT	-0.03 (0.03)	0.00 (0.03)	0.00 (0.02)
Desegregation Post	-0.02 (0.02)	0.01 (0.02)	-0.01 (0.02)
Observations	1,142	1,143	1,178
R ²	0.99	0.99	0.99
Within R ²	0.01	0.00	0.00
County fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓
State-Year fixed effects	✓	✓	✓

Table 4. Log population in treated counties, estimated using equation 3. Population analysis is at the county level—I substitute county FE for school district FE accordingly, and cluster my standard errors at the county level. I set $\text{AdjustedPopulation} = \text{Population} - \text{Births} + \text{Deaths}$. Population data comes from Bailey et al. 2016, which uses population estimates from the decennial censuses and impute estimates in the intervening years. To prevent this imputation from affecting my results, I limit my data to the years 1940, 1950, 1960, 1970, 1980, and 1990. Observations are at the county by decade level.

Effect on Enrollment Pre and Post Court Order

Panel A: Deep South Enrollment

	Log Enrollment		
	(1)	(2)	(3)
ATT	-0.10*** (0.02)	-0.08** (0.04)	-0.13*** (0.03)
Desegregation Post	-0.07** (0.03)		
Observations	13,201	7,021	5,927
R ²	0.96	0.96	0.99
Within R ²	0.10	0.08	0.10
School District fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓
State-Year fixed effects	✓	✓	✓

Panel B: White Enrollment (Alabama & Louisiana)

	Log White Enrollment		
	(1)	(2)	(3)
ATT	-0.31*** (0.08)	-0.04 (0.05)	-0.56** (0.28)
Desegregation Post	0.04 (0.06)		
Observations	4,895	1,964	2,799
R ²	0.93	0.97	0.95
Within R ²	0.23	0.15	0.07
School District fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓
State-Year fixed effects	✓	✓	✓

Table 5. Estimation is the same as equation 3 in column (1). In column (2) and (3), I drop the *desegPost* dummy variable. Instead, I split my sample to measure enrollment losses pre and post a significant court order. Column (2) limits the sample to years before a major court order. In districts where there was no court order, all years are included. Column (3) limits the sample to years after a major court order. Across the Deep South (Alabama, Georgia, Mississippi, Louisiana, SC), there is an effect on enrollment both before and after a major court order. In the joint sample of Alabama and Louisiana, there is no effect on white enrollment in the years prior to a court order. However, this could be an artifact of the changing sample—there no effect on enrollment Alabama and Louisiana in the years prior to a court order (Appendix Table ??). ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors are clustered at the school district level and appear in parentheses.

Enrollment Losses by State

	Log Enrollment				
	AL (1)	GA (2)	LA (3)	MS (4)	SC (5)
ATT	-0.10*** (0.03)	0.02 (0.02)	-0.09* (0.05)	-0.16*** (0.04)	-0.11*** (0.04)
Desegregation Post	0.11** (0.04)	-0.18*** (0.04)	-0.06 (0.09)	-0.08 (0.06)	-0.03 (0.08)
Observations	2,438	3,287	2,469	3,321	1,685
R ²	0.97	0.97	0.94	0.92	0.98
Within R ²	0.14	0.15	0.19	0.13	0.18
School District fixed effects	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓

Table 6. Log enrollment by state. Estimation is the same as equation 3 with no *State* × *Year* FE. I split my sample to perform estimation for each state separately. The largest effects are in Alabama, Mississippi, and SC. In Georgia, segregation academies did not affect enrollment. The effect on enrollment in Louisiana is only significant at the .10 level. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors are clustered at the school district level and appear in parentheses.

Effect on the Exposure Index

Treatment Scale	Segregation Academy		Court Order	
	Log	Level	Log	Level
	(1)	(2)	(3)	(4)
ATT	-0.15*	-0.03**	0.32***	0.05**
	(0.08)	(0.02)	(0.08)	(0.02)
Observations	2,731	2,752	2,731	2,752
R ²	0.82	0.89	0.81	0.89
Within R ²	0.03	0.01	0.01	0.01
School District fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Year-State fixed effects	✓	✓	✓	✓

Table 7. The impact of segregation academies and court orders on the percentage of classmates of Black students that are white. Values are estimated using 3 with no *deseqPost* dummy. A positive value indicates higher relative levels of integration. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors are clustered at the school district level and appear in parentheses.

Education Input Outcomes

Panel A: Alabama, Louisiana, Mississippi, South Carolina Public School Funding

	Log Local (1)	Log State (2)	Log Federal (3)	Log Total (4)	Local PP (5)	State PP (6)	Federal PP (7)	Total PP (8)
ATT	-0.04 (0.03)	-0.10*** (0.03)	0.18 (0.14)	-0.06* (0.03)	2.63 (15.05)	-11.33* (5.86)	23.94*** (5.75)	40.25** (16.88)
Desegregation Post	-0.05 (0.04)	-0.04 (0.04)	0.16** (0.08)	-0.01 (0.03)	-29.00 (21.03)	5.61 (4.78)	11.14* (6.03)	-1.30 (21.52)
Observations	9,009	8,238	7,882	8,426	8,989	7,636	7,882	8,406
R ²	0.98	0.99	0.94	0.99	0.72	0.99	0.89	0.96
Within R ²	0.05	0.06	0.07	0.05	0.04	0.15	0.10	0.05
School District fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year-State fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

Panel B: Alabama

	Log Total (1)	Total PP (2)	Student Teacher Ratio (3)
ATT	-0.05 (0.03)	63.35*** (21.62)	-0.73*** (0.21)
Desegregation Post	0.10** (0.05)	-9.78 (19.85)	-0.31 (0.28)
Observations	2,137	2,134	1,346
R ²	0.99	0.98	0.89
Within R ²	0.06	0.16	0.09
School District fixed effects	✓	✓	✓
Year fixed effects	✓	✓	✓

Panel C: South Carolina

	Log Total (1)	Total PP (2)	Avg Teacher Salary (3)
ATT	0.05** (0.02)	2.30 (3.21)	-215.47** (78.55)
Desegregation Post	-0.02 (0.04)	-8.56** (4.12)	-578.82*** (197.61)
Standard-Errors		School District	County
Observations	1,101	1,101	579
R ²	0.99	0.97	0.99
Within R ²	0.15	0.12	0.17
School District fixed effects	✓	✓	
Year fixed effects	✓	✓	✓
County fixed effects			✓

Table 8. The impact of segregation academies on public school funding. Total revenue is the sum of local, state, and federal revenue. Georgia is omitted because it only has funding data available for 11 of the 25 years of interest, and no data is available after 1976. Control means for local funding (revenue) per pupil and total funding per pupil are \$161 and \$604, respectively. Corresponding event studies are in Figure 8. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors appear in parentheses.

Locations of Private Schools and Segregation Academies

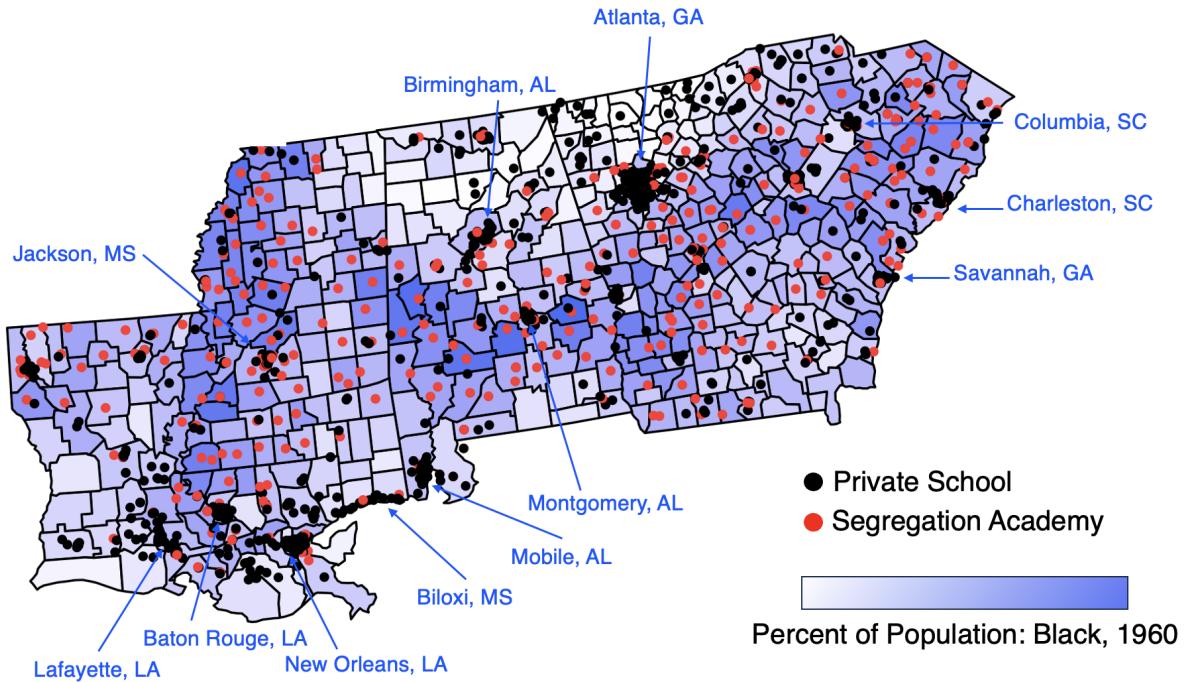


Figure 1. Data from the 1976-1980 Universe of Private School Survey (UPSS). Locations of segregation academies are in red. Locations of private schools are in black. Major urban areas are highlighted with blue text. Percentage of the population that is Black is shown by the blue gradient. The scale ranges from 0 to 84%.

Correlates of School District Treatment

Predominantly Nonwhite, Urban, Dense School
with High Indicators of Racial Violence

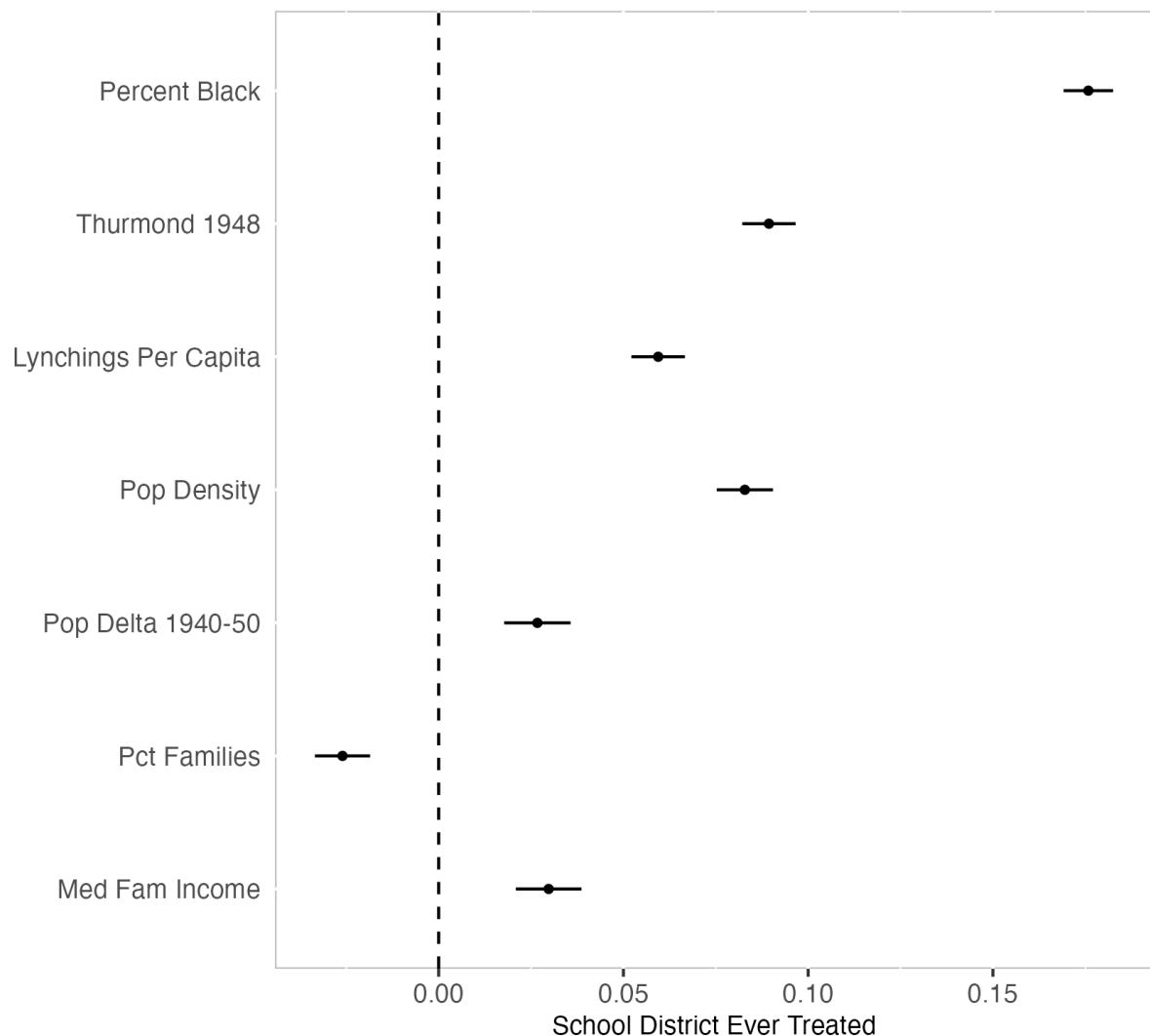
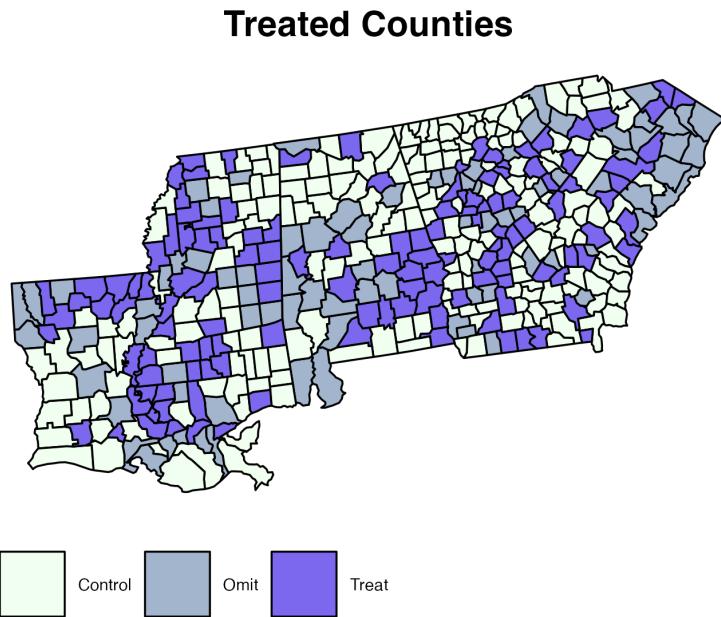
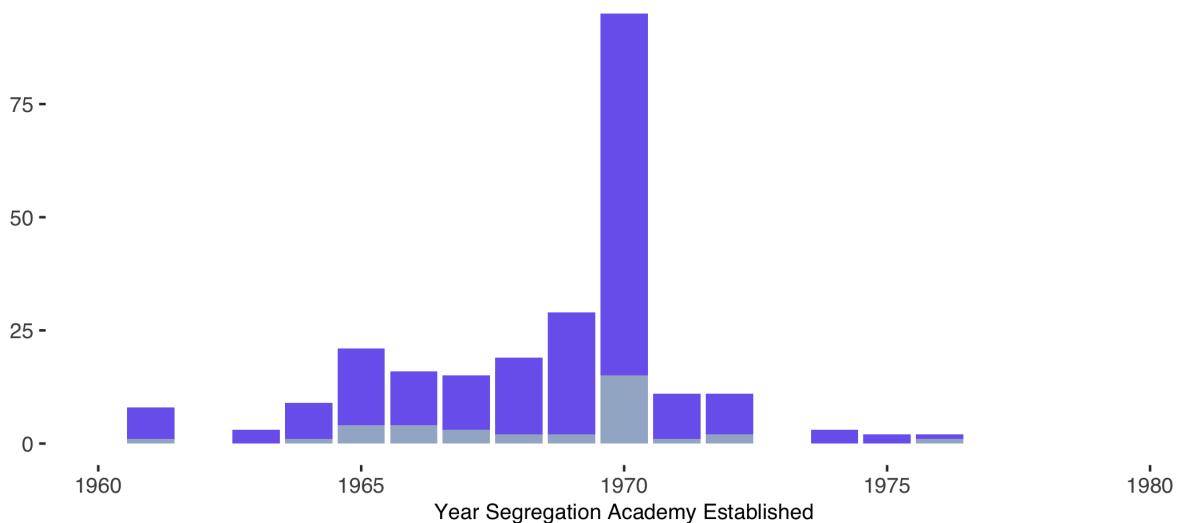


Figure 2. Graph shows correlation of characteristic on y axis with treatment residualized within a state. “At least one segregation academy” indicates at least 30% of a school district’s area is within 10 miles of a segregation academy. The comparison group are never treated school districts. Variables from 1950 census.



(a) Map of treated counties. In my main specification, I use school districts instead of counties, but map counties here because they are easier to visualize.

Distribution of Treatment Timing



(b) Distribution of treatment timing.

Figure 3. Treatment is defined as a county with at least 30% of their land area within a 10 mile radius of a “confirmed” or “likely” segregation academy. Control counties are not considered treated in any year.

Treatment vs. Court Order Timing

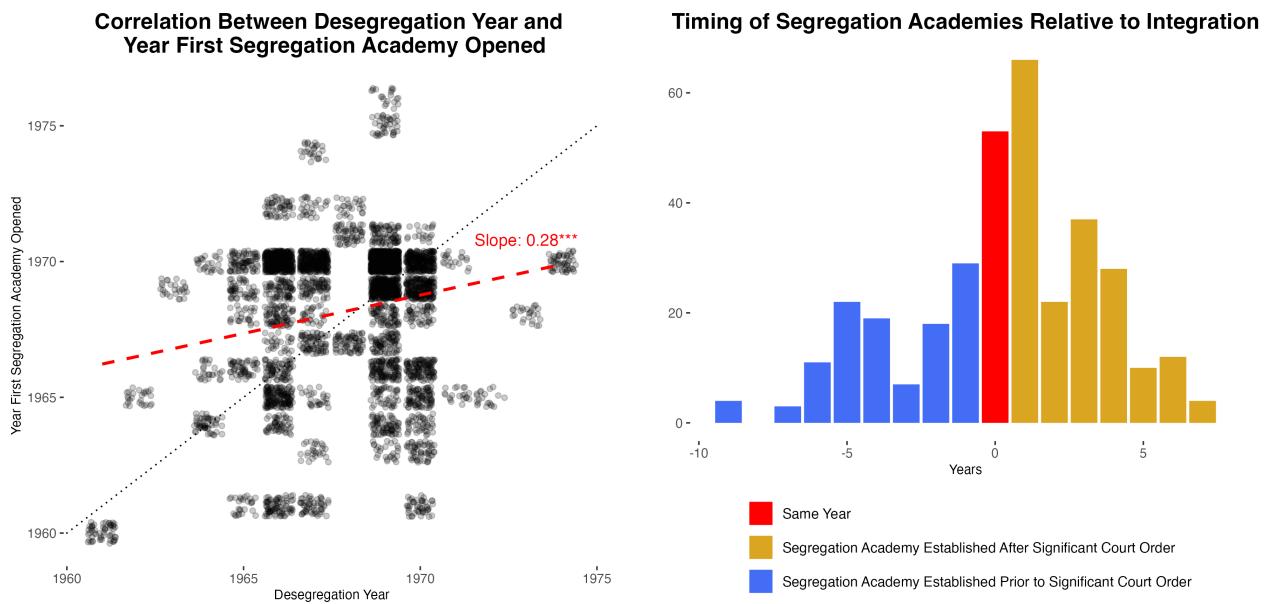


Figure 4. Treatment year corresponds to the first year a school district is treated by a segregation academy. Graphs only include treated school districts that experienced a major court order. On the left, dots above the line represent school districts that were treated prior to a major court order, which corresponds with blue bars on the right. Dots below the line represent the converse (yellow bars). Grid cells on the dotted 45 degree line represent school districts where a segregation academy opened in the same year as a desegregation order (red bar). The significant slope < 1 indicates that segregation academies were more likely to be established after a significant court order than prior.

Enrollment: Alabama, Louisiana, Mississippi, Georgia, South Carolina

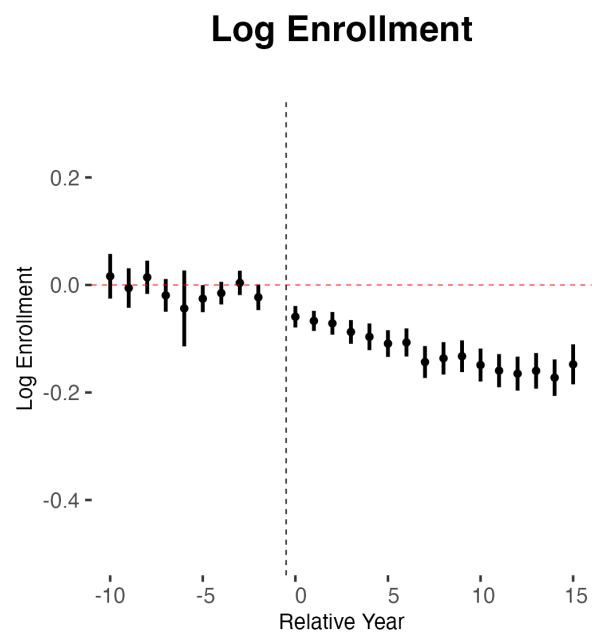


Figure 5. Y axis shows change in log enrollment for Alabama, South Carolina, Georgia, Louisiana, and Mississippi. Points reflect estimates from Equation 3 and Column (2) of Panel A of Table 2. The estimation equation includes year-state fixed effects, school district fixed effects, year fixed effects, and an indicator for if the school district is under court order. Vertical lines represent 95% confidence intervals. Standard errors are clustered at the school district level.

Main Results: Alabama & Louisiana

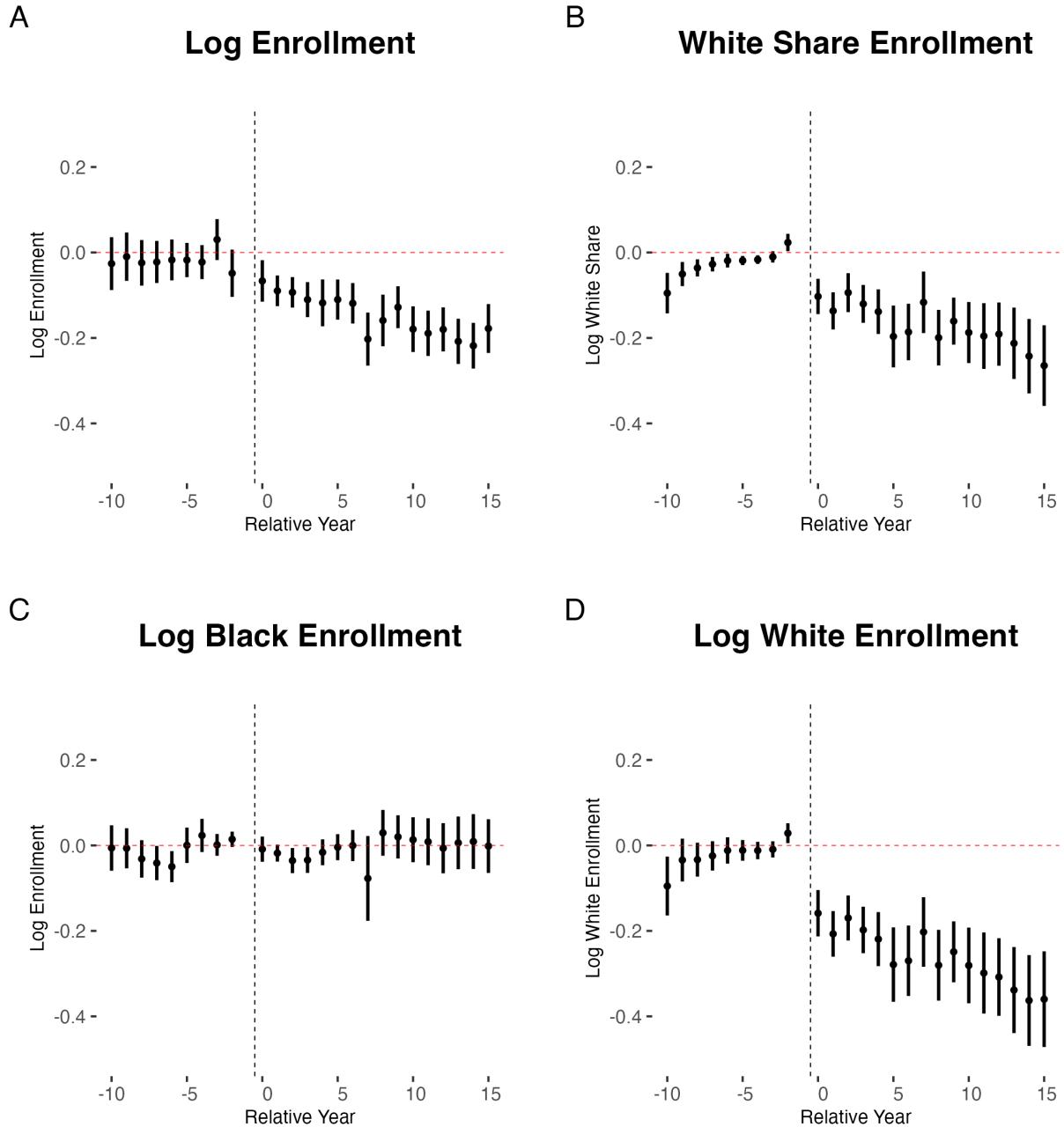
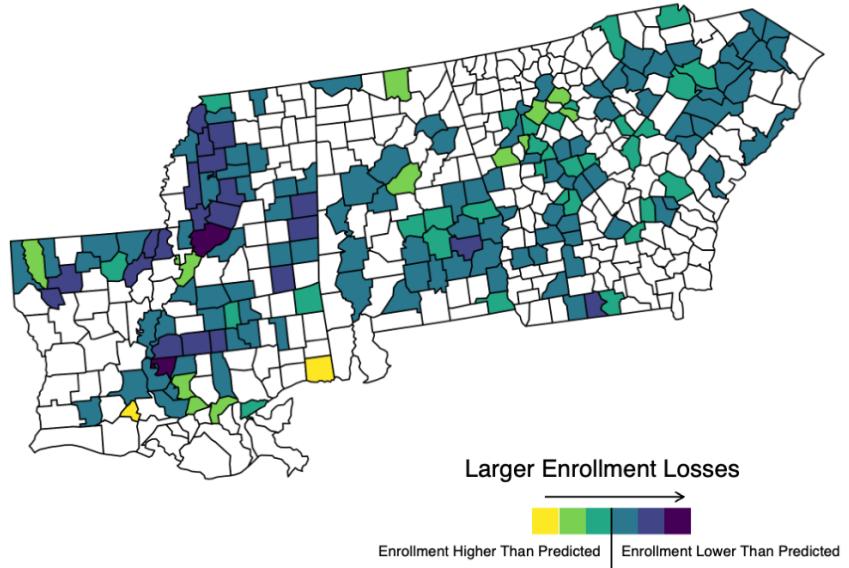


Figure 6. Estimates for Alabama and Louisiana, where by race enrollment data is available. Vertical lines represent 95% confidence intervals. Standard errors are clustered at the school district level.

Largest Differential Enrollment Declines in Rural Areas

30% within 10 miles of segregation academy



Correlates of Differential Enrollment Decreases

Decreases in Enrollment Larger (More Negative)
in Predominantly Black, Poor, Rural Areas
with a History of Racial Animus

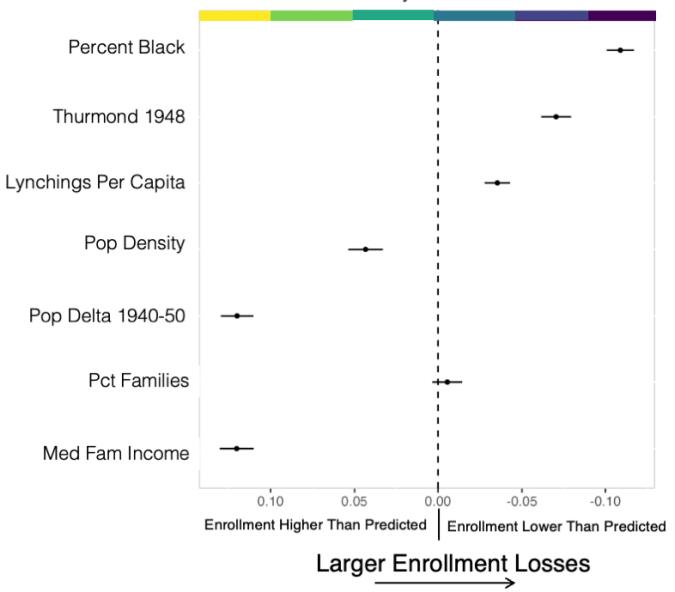


Figure 7. Geographic distribution and correlates of differential enrollment losses. Correlates are standardized within states. Enrollment losses are defined as the difference between predicted enrollment and observed enrollment. Enrollment is predicted using not-yet-treated and never-treated observations, as described in Section 6.1. The x-axis indicates the change in estimated treatment effect associated with a one standard deviation change in the correlate. For example, a one standard deviation increase in Percent Black is associated with an additional .1 log point loss in enrollment due to segregation academies.

Funding Outcomes: Alabama, Louisiana, Mississippi, South Carolina

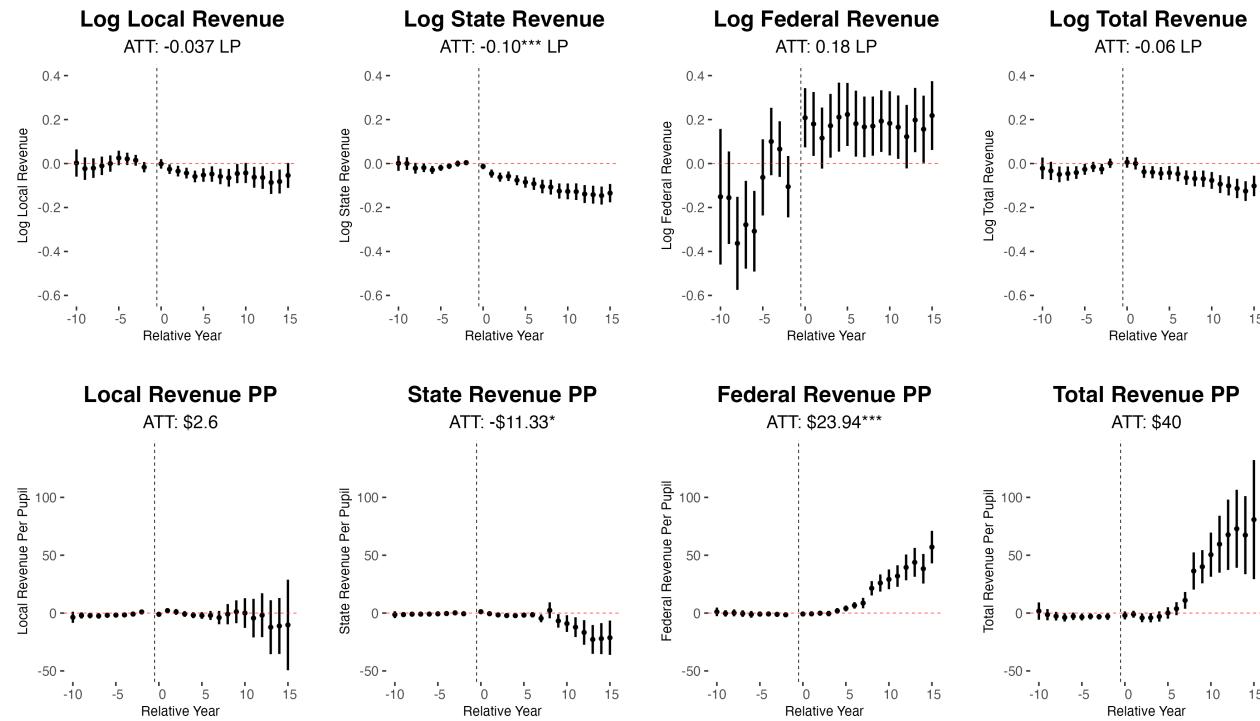


Figure 8. The impact of segregation academies on funding outcomes. Georgia is omitted because it only has funding data available for 11 of the 25 years of interest, and no data is available after 1976. Panels A-D correspond to columns (1)-(4) of Table 8, respectively. Control means for local funding per pupil, state funding per pupil, federal funding per pupil, and total funding per pupil are \$161, \$339, \$81, and \$604, respectively. 95 percent confidence intervals are represented by vertical bars.

Teacher Outcomes

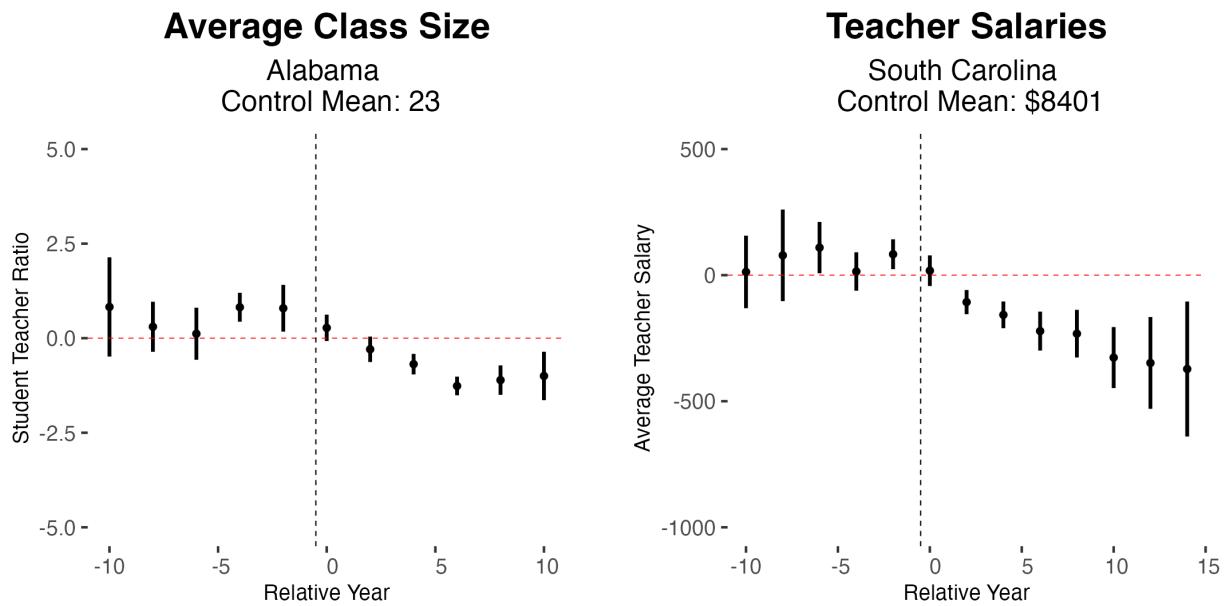


Figure 9. The impact of segregation academies on teacher inputs. 95 percent confidence intervals are represented by vertical bars.

A Appendix

A.1 Tables

Impact on Funding by State

	Log Local				Log State			
	AL (1)	LA (2)	MS (3)	SC (4)	AL (5)	LA (6)	MS (7)	SC (8)
ATT	-0.04 (0.07)	0.11 (0.09)	-0.10* (0.05)	-0.10 (0.07)	-0.04 (0.03)	-0.10* (0.05)	-0.15*** (0.06)	-0.01 (0.04)
Desegregation Post	0.08 (0.12)	-0.03 (0.08)	-0.09 (0.07)	-0.09 (0.10)	0.12 (0.08)	-0.11 (0.09)	-0.06 (0.06)	-0.02 (0.07)
Observations	2,137	1,866	3,322	1,684	1,631	1,617	3,306	1,684
R ²	0.93	0.97	0.97	0.99	0.98	0.98	0.98	1.00
Within R ²	0.08	0.14	0.09	0.12	0.14	0.09	0.11	0.15
School District fixed effects	✓	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓

Table A.1. Log revenue by state. Estimation is the same as equation 3 with no *State* \times *Year* FE. I split my sample to perform estimation for each state separately. I exclude Georgia because no revenue data is available after 1976. ***, **, and * indicate significance at the .01, .05, and .10 levels, respectively. Standard errors are clustered at the school district level and appear in parentheses.

A.2 Figures

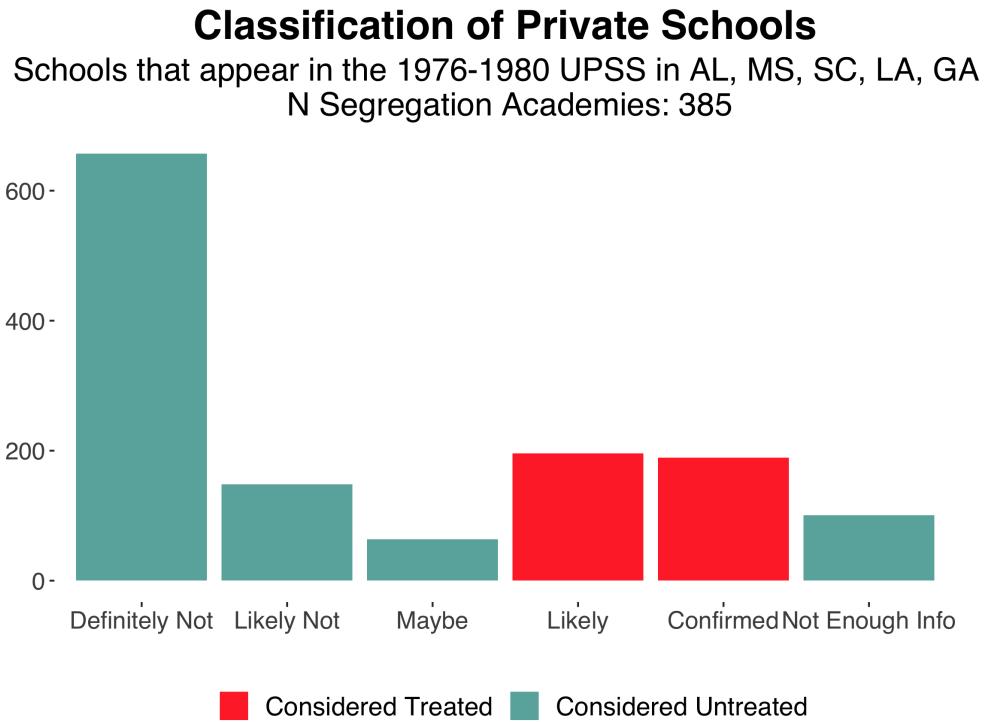


Figure A.1. Distribution of private schools among labels.

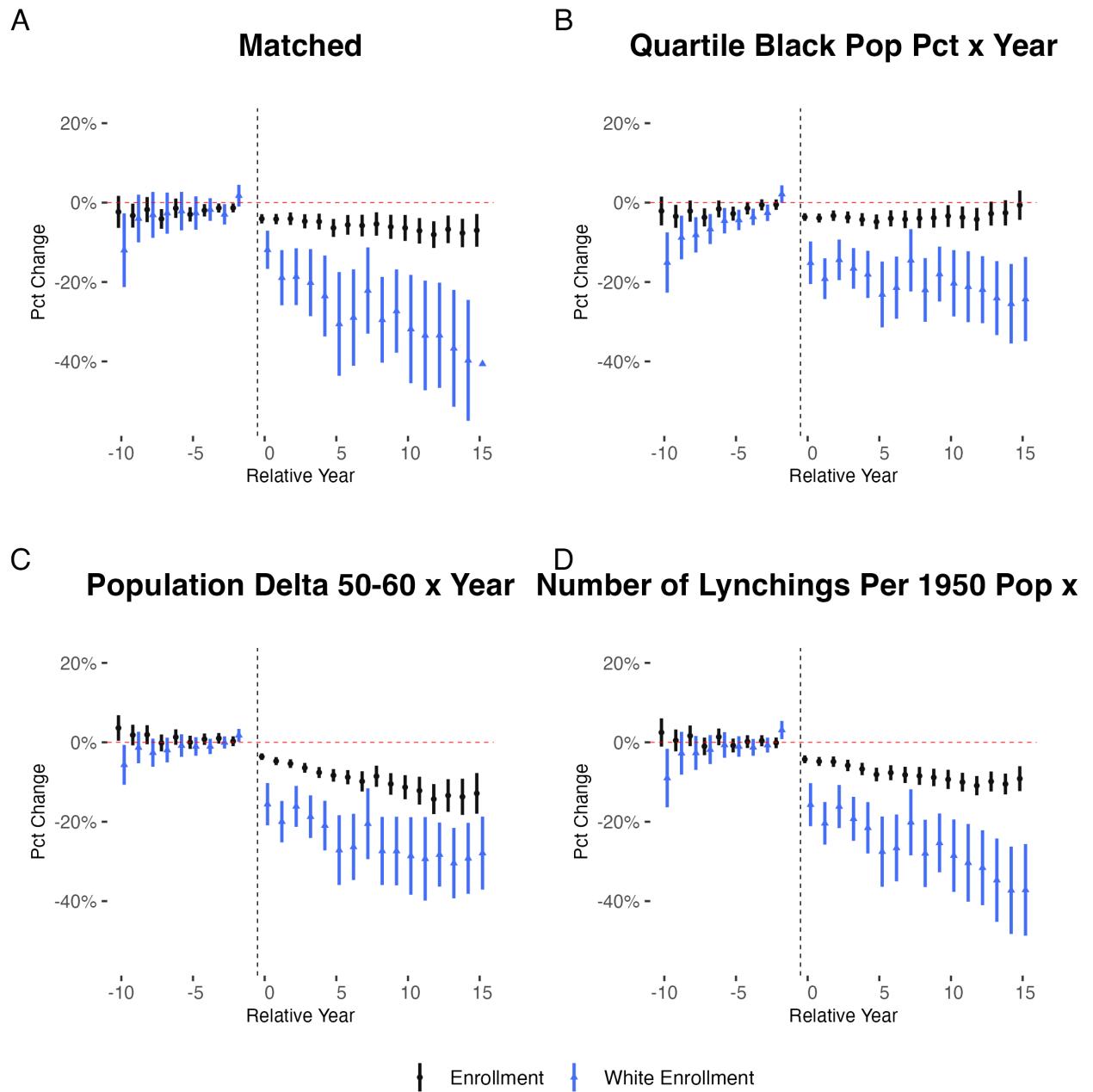


Figure A.2. Event studies showing results from Table 2.

Alt Event Study Specifications

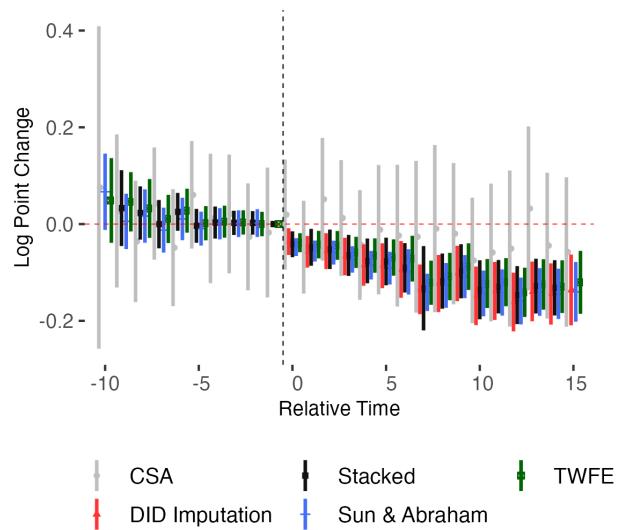


Figure A.3. Results using alternate TWFE specifications. CSA refers to Callaway and Sant'Anna 2020. Points represent the average of the estimates; bars represent the 95% confidence intervals of these estimates.

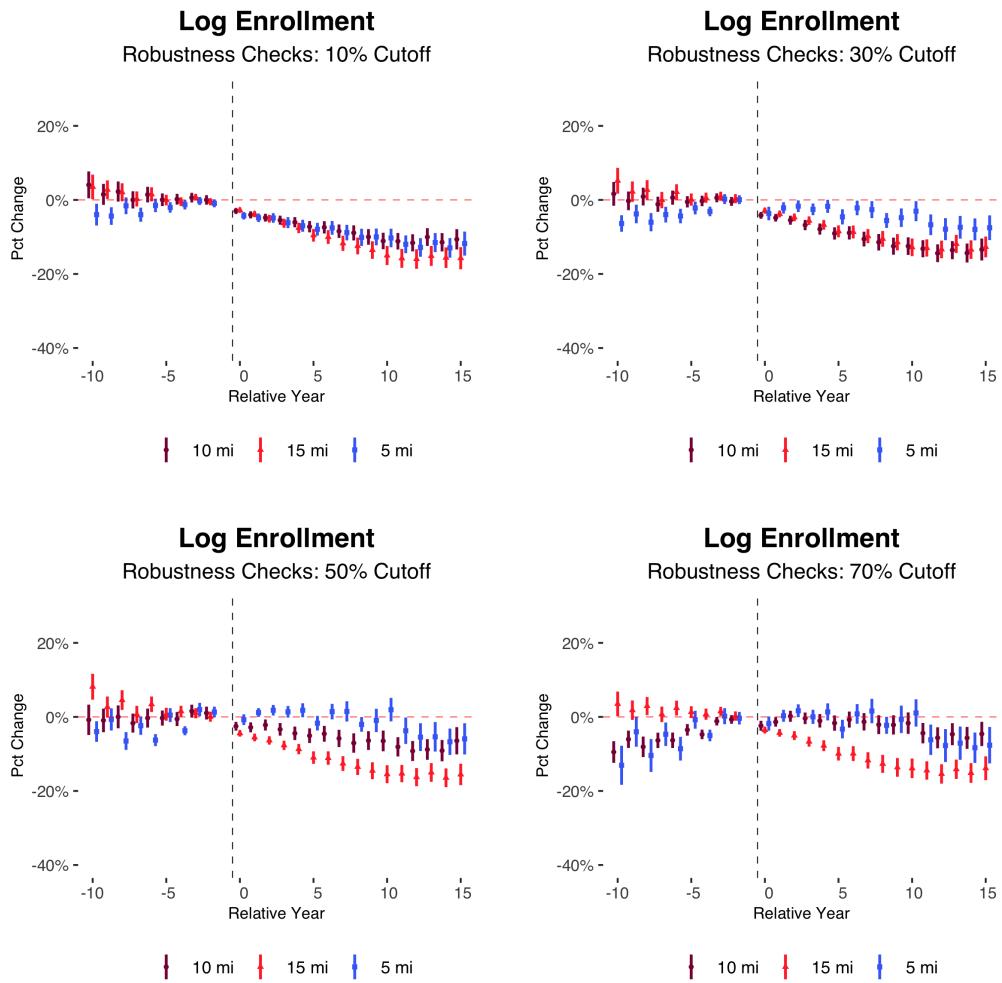


Figure A.4. Robustness checks. 10%, 30%, and 50% yield similar results. The more restrictive criteria of shrinking the radius of the catchment area to 5 miles or requiring 70% of the school district's area to be within the catchment area reduces the number of treated counties such that results become noisy and subject to pre-trends.

School Desegregation Court Cases

1819	<i>Trustees of Dartmouth College v. Woodward</i>	Private schools are corporations. Governments cannot interfere with their contracts.
1925	<i>Pierce v. Society of Sisters</i>	Children have the right to instruction from people other than public school teachers.
1936	<i>Murray v. Pearson</i>	Ordered University of Maryland to integrate. Effectively made segregation in Maryland illegal.
1938	<i>Missouri ex rel. Gaines v. Canada</i>	If a state provided public education to its white students, it also had to provide the same quality of public education to its Black students. Specifically dealt with the law school.
1948	<i>Sipuel v. Board of Regents</i>	Ordered the University of Oklahoma to admit Ada Lois Sipuel, a Black women, because the state did not provide a comparable facility for Black students.
1948	<i>Shelley v. Kramer</i>	Banned the use of restrictive covenants
1950	<i>Sweatt v. Painter, McLaurin v. Oklahoma State Regents</i>	Segregation not allowed in professional or graduate schools
1954	<i>Brown v. Board of Education of Topeka, Kansas</i>	Declared school segregation unconstitutional, overturning the “separate but equal” criteria of <i>Plessy v. Ferguson</i> (1896)
1955	<i>Brown v. Board of Education of Topeka, Kansas (2)</i>	Mandated that schools desegregate with “all deliberate speed”
1964	Civil Rights Act	School districts must desegregate to receive federal funding
1965	Elementary and Secondary Education Act	Established Title I funds for high poverty school districts
1968	<i>Green vs. New Kent County</i>	Banned “free choice” policy that placed the burden of desegregation on parents and students instead of school boards. Cited as start of “real desegregation”
1969	<i>Alexander v. Holmes County Board of Education</i>	Put an end to “all deliberate speed” ruling in Brown v. BOE by mandating immediate desegregation of schools
1970	Nixon administration	Rolls back withholding of Title I funds for schools that do not meet desegregation targets
1971	<i>Swann v. Charlotte-Mecklenburg Board of Education</i>	Created stronger desegregation requirements for court-supervised school districts and authorized the use of busing
1971	<i>Green v. Connelly</i>	Racially discriminatory private schools not eligible for federal tax exemptions. No federal income tax deductions for contributions to such schools.

1974	<i>Milliken v. Bradley</i> , <i>Allen Park Public Schools v. Bradley</i> , <i>Gross Pointe Public School System v. Bradley</i>	If city desegregation plans are not sufficient to achieve racial integration, multi-district desegregation plans are necessary
1976	<i>Runyon v. McCrary</i>	Cannot deny admissions to private schools on the basis of race
1982	Reagan administration	Rolls back <i>Green v. Connelly</i> ; allows tax exemptions if private school claims “color-blind” admissions
1983	<i>Bob Jones University v. United States</i>	Tax exempt status cannot be granted to racially discriminatory private schools

Table B1. Court cases descriptions adapted from [Oyez 2022](#). List expanded on from [Timeline of Events Leading to the Brown v. Board of Education Decision of 1954](#) 2016

Example Integration Events

Year	Event	Source
1960	Armstrong & U.S. v. Bd. of Educ. of City of Birmingham filed	United States Commission on Civil Rights
1961	West Birmingham Christian (segregation academy) established	Author's research (see online appendix)
1963	School board ordered to present desegregation plan	American Communities Project
1970	transfers/REZONING	Welch & Light (1987), Table A3
1976	magnets/rezoning/pair	Welch & Light (1987), Table A3
1981	magnets/rezoning/pair	Welch & Light (1987), Table A3

Table B2. Integration events for the city of Birmingham. Rows 3-5 are copied directly from Table A3 of Welch and Light 1987. Welch and Light indicated "major" plans through the use of all caps. These were the plans that resulted in the largest change in the dissimilarity index.

A.3 Private School Classification Criteria

1. Confirmed

- Written in a list of segregation academies compiled by another source. The primary list is from Wikipedia ([Segregation Academy 2022](#)), which I independently audit by consulting each school's reference. I then validate each school through some combination of contemporary newspaper articles, the school history website, and scholarly reports on the topic (Nevin and Bills [1976](#), Phillip [2005](#), Williams [1977](#)).
- *Founding* member of the Mississippi Private School Association (MPSA), sponsored by the White Citizens' Council, member of the Alabama Private School Association (APSA), or *founding member* South Carolina Independent School Association (SCISA). These associations explicitly catered to the segregation academy movement and openly admitted to being inspired by the Massive Resistance movement in Prince Edward County, VA.
- Confirmed as a segregation academy in an oral history, newspaper article, or one of the several theses that have been written on the topic (Sheffield [2022](#), Gladney [1974](#), Ernest Flora [2020](#), Phillip [2005](#)).
- Has a mascot that is a Rebel and founded in the late sixties. List of schools with rebels as their mascot and additional context on the schools are provided by Smith [2019](#)), who also explains that rebel mascots are often meant as homage to Confederate soldiers.

2. Likely

- Schools that have not been confirmed as segregation academies by outside sources, but are likely segregation academies. These schools often exhibit some combination of the following traits:
 - Exclusively play other known or likely segregation academies in sports. I make extensive use of the Alabama High School Football Historical Society's archive²⁶, which documents football schedules for Alabama and Mississippi schools. SCISA Football History²⁷ includes schedules as well as team photos of football teams in South Carolina that allow me to determine if the football team is all white.
 - All white student body in yearbook photos or historical photos on the school's website.
 - Founded during the 1960s or 1970s.
 - Member (but not a founding member) of MPSA or SCISA. All members of APSA are considered confirmed segregation academies.
 - Opening ad for school contains suggestive language.
 - Expanded rapidly after initial opening in a place not designed to house a school (typically a church).
 - School history page describes a group of parents, concerned with the “current state of public education”, coming together to found the school.
- The traits used in classifying each individual school are documented in the online appendix.

3. True Maybe

²⁶[ahsfhs.org](#)

²⁷[sites.google.com/site/scisafootballhistory](#)

- Schools founded during the time period of 1954-1982 for which there is limited information. For example, consider Chester Christian School in South Carolina. Factors that point towards the school being a segregation academy include its name—“Christian schools” were part of the second wave of segregation academies (Nevin and Bills 1976; Bowler 1970)—and its founding year (1967). However, according to the local Rock Hill, South Carolina newspaper, *The Herald*, the school’s tax exempt status was not threatened by the IRS rule that schools with racially discriminatory admissions policies would be denied tax exempt status. Further information about the school does not exist. Other examples can be found in the online appendix.

4. Likely Not

- Catholic schools. These schools largely predate Brown vs. Board of Education and court ordered integration. The official stance of the Catholic Church was that schools should be integrated: “The Catholic Church in 1957 or ’58 made a decision that they were going to desegregate the schools. They did it this way. The announcement was we have two programs. We have excommunication and we have integration. Make your choice by Friday.” ([“School Segregation and Integration” 2022](#)). Catholic schools in Memphis went so far as to resist the influx of white students into private schools during the 1960s and 1970s (Nevin and Bills 1976). However, I categorize these schools as “Likely Not” instead of “Definitely Not” because not all Southern Catholic churches abided by this doctrine (Newman 2020). To categorize schools as Catholic, a combination of the following traits was used: 1) the NCES religion code, 2) the school about page, 3) the name of the school (for example, all schools with “Immaculate Conception” or “St. Mary’s” in the name are considered Catholic).
- Elementary schools. The purpose of segregation academies was to provide a place for white children to “escape” integration. Such schools either opened as K-12 schools or rapidly added grades to accommodate as many white students as possible. Schools that strictly catered to elementary grades do not fit this definition. I also note that many of these schools are Catholic or Jewish. The exception to this rule are schools that, due to a lack of resources, began as elementary schools, then rapidly added grades (such schools are classified as “Likely”).

5. Definitely Not

- Schools with an explicit purpose other than religion. For example: schools for the deaf, schools for students with developmental disabilities, Montessori schools, all boys schools, and all girls schools.
- Schools with a primarily Black student body. For example, schools affiliated with the Josephites or Sisters of the Blessed Sacrament, which are Catholic orders that focus on Black congregants.
- Schools affiliated with religions not typically affiliated with the segregation academy movement (Nevin and Bills 1976). For example: Jewish, Lutheran, and Seventh Day Adventist. Religious status of these schools were determined using the NCES religion code or the school about page.
- Schools founded before 1954 (Brown vs. Board of Education). Exceptions to this rule

include Indian Springs School²⁸ in Shelby County, Alabama and the Carolina Academy²⁹ in Florence, South Carolina.

- Preschools, day care centers, and kindergartens.

²⁸Indian Springs was founded in 1952 but became coed in the 1975 (*Indian Springs History 2022*). Jones 2005 documents its status as a segregation academy. It is classified as a 5: Confirmed in the author's ranking system.

²⁹The Carolina Academy was founded in 1953, but lost its tax exempt status in 1982. “Schools That Lost Tax Exemptions” 1982 I infer this to be due to a racially discriminatory admissions policy, likely as a result of Green vs. Connally (see Legislative Timeline in the Appendix)

A.4 Matching Exercise

I match and weight my control districts using estimates from the method outlined by Ho et al. 2007. This is a more flexible, nonparametric method of controlling for district characteristics. Notably, it does not impose assumptions about the functional relationship between the district characteristics and the outcome variable. This nonparametric method weights untreated observations such that the distribution of the variables I match on, X_i do not depend on treatment, that is:

$$\tilde{p}(X|T = 1) = \tilde{p}(X|T = 0) \quad (9)$$

However, matching does come with a loss of precision: there are only 362 school districts in my matched sample, compared to 529 school districts in my main analysis. My matching dimensions of choice are the share of the population that was Black in 1950, 1950 population, population delta 1940 to 1950, population density 1950, number of lynchings scaled by 1950 population, share vote share for Strom Thurmond in 1948, median family income in 1950, and percent of households that are families in 1950. Figure 2 shows the correlation of these variables with my treatment indicator. All but the Thurmond vote share are obtained from the 1950 census. The vote share for Strom Thurmond in 1948 comes from Cascio et al. 2010.

Prior research about the nature of the school districts that housed these academies inform the matching variables I choose. Percent density, percent families, and population are used to control for size of a school district and the possibility that dense, highly populated areas with preexisting private alternatives to public schools may react differently to the introduction of a private alternative than rural areas with no preexisting private schools. Population delta 1940 to 1950 controls for enrollment growth or decline due to population growth or decline. Median family income in 1950 controls for the ability of white families to afford paying for sending their child to private school and the demand for the quality of the school (median level of schooling at age 25 was originally included then dropped because of a near perfect correlation with median family income). Finally, motivated by newspaper accounts of schools being located in districts with majority Black population (“Lowndes Private School Sets \$500,000 Goal” 1966), I control for the possibility that percent of non white residents could differ systematically between school districts with a segregation academy versus school districts without. In Section 5, I discuss how differences in effect size for school districts with different baseline characteristics inform my understanding of the mechanisms in play.

A.5 Newspaper Clippings

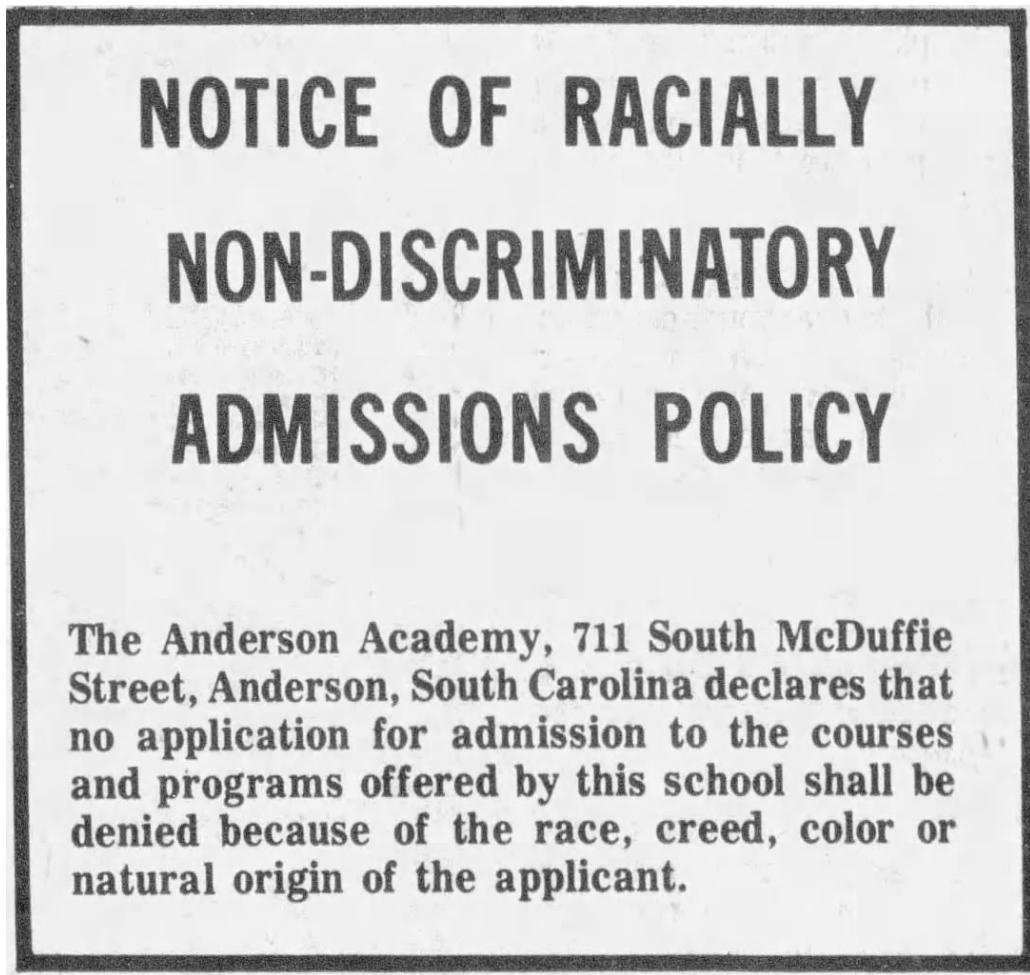


Figure C1. Anderson Independent Mail, December 12, 1973. Anderson, South Carolina

ALABAMA PRIVATE SCHOOL ASSOCIATION

88 West South Blvd.

N
Montgomery, Alabama 36105

CONCERNED PARENTS are encouraged to register your children in the school of their choice **NOW**. Alabama Private School Association members are offering control class size to insure quality programs, and immediate inquiry is recommended.



Many of our member schools in Montgomery County are approaching capacity, however, there are a few openings in the elementary grades of the Heritage School on South Court Street (281-1053).

DON'T DELAY—REGISTER NOW

For further information about member schools write or call my office or the school of your choice:
Heritage School—Marie Johnson, Administrator
Stephens-Spear School—Jimmy Spear, Adm.
Central Alabama Academy—Maxine Baker, As. Pr.
Trinity Presbyterian School—Raymond Boykin, Pr.
Hooper Academy—Herman Keeney, Principal
South Montg. County Acad.—John Faircloth, Prin.

Max Howell
Executive Secretary
Alabama Private School Association
288-3271

Ad. Pd. for by Heritage School, Montgomery, Alabama

Figure C2. Montgomery Advertiser, November 8 1971. Montgomery, Alabama