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From *Brown* to Busing*

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Abstract

Brown v. Board of Education had little immediate effect on the dual system of education in the South; by the early 1970s, however, Southern schools were the most racially integrated in the country. This paper uses newly assembled and uniquely comprehensive data to document how different types of Southern school districts made this transition. Controlling for other factors, we find larger districts were more likely to be under court supervision both early and ever; over time the enrollment threshold for court supervision fell. Poorer districts—which stood to lose larger federal grants if they failed to desegregate—were particularly likely to desegregate between 1964 and 1968. Black enrollment share did not impede "token" desegregation, but was an important predictor of both resistance to intensive desegregation and being supervised by a court in later years. By the end of our sample, in 1976, districts in Alabama and Louisiana were still significantly less integrated than in other states. Within states, however, despite having begun the 1960s with higher levels of segregation and retained them for longer than other districts, districts with stronger historical preferences for segregation had desegregated nearly as much as other districts by 1976; this may be related to their higher rate of court supervision in later years.

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1. Introduction

In 1954, the Supreme Court ruled in *Brown v. Board of Education* that schools racially segregated by law were unconstitutional.[1] Very little desegregation happened immediately after the *Brown* and *Brown II*[2] rulings, which left lower federal courts to desegregate the South on a district-by-district basis.[3] By the early 1970s, however, schools in the South were more integrated than in any other region.

How did the South make such a dramatic transition after years of resistance? In this paper, we use new and uniquely comprehensive panel data at the school district level to document trends in desegregation and the likelihood of court supervision for the average Southern school district in the two decades following *Brown*. These data also allow us to examine how the transition to racial integration varied by district characteristics. While trends in average levels of desegregation have been documented previously, a complete time-series of court supervision has not. And while qualitative accounts of desegregation have long noted that some districts were more resistant to desegregation than others, researchers have been ill-equipped to fully document the nature of such heterogeneity due to a lack of representative district-level data.

We estimate that about half of Southern school districts were never supervised by a court by 1976. That is, about half of Southern districts *chose* to desegregate. While these choices were made in a context of increasingly strong economic incentives and legal pressures, not all districts responded in the same way to the changing policy environment. The preferences of the local electorate and differences in the costs associated with

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[1] *Brown v. Board of Education of Topeka Kansas*, 347 U.S. 483 (1954)
[2] 349 U.S. 294 (1955)
[3] In this paper, we refer to the states of the former Confederacy as the South. Our data indicate that in 1960, only 3.2 percent of Southern districts had any blacks in school with whites, and even in desegregated districts, more than 98 percent of blacks were attending all-black schools.

desegregation may therefore have influenced the timing and means of racial integration. Stratifying districts by pre-existing enrollment, demographics, and preferences regarding segregation – as measured by support for Strom Thurmond's candidacy in the 1948 Presidential election – we are able to examine how trends in desegregation and court supervision varied across the South.[4]

To interpret our findings, it is essential to understand how federal policy changed in the years following *Brown*. For a decade, policy was little changed, but in 1964, the Civil Rights Act (CRA) gave the Justice Department authority to bring lawsuits against school districts and required non-discrimination by entities receiving federal funding; one year later, Title I of the Elementary and Secondary Education Act (ESEA) dramatically increased federal funding for public schools. The Supreme Court then strengthened desegregation requirements, first requiring districts to take affirmative steps toward eliminating the dual system, rather than relying on blacks' exercise of "free choice" to attend identifiably white schools (*Green v. New Kent County*, 1968[5]), and later sanctioning the use of busing to achieve racial balance (*Swann v. Charlotte-Mecklenburg*, 1971[6]).

Our analysis reinforces the previous insight from aggregated data that meaningful desegregation occurred after the introduction of CRA and ESEA in the mid-1960s.[7] Indeed, by 1968, nearly all Southern school districts had at least some black and white students attending school together, and in some places, the degree of integration was

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[4] Giles (1975a, 1975b) examines heterogeneity in desegregation patterns, but limits his analysis to 1968 and 1970 and uses fewer explanatory variables than considered here. Several other papers attempt do the same for earlier years, but these are either limited to districts (or counties) in only a few states (Pettigrew, 1957; Pettigrew and Cramer, 1959) or use state-level aggregate data (Harris, 1968; Vanfossen, 1968). Each of these papers covers fewer years than the present study, and none measure "explanatory" district characteristics *before* they may have been affected by the desegregation process.

[5] 391 U.S. 430

[6] 401 U.S. 1

[7] See, for example, Orfield (1969, 2000), Rosenberg (1991), Boozer, Krueger, and Wolkon (1992) and Ashenfelter, Collins, and Yoon (2006).

substantial. For the typical Southern school district, these gains came about without court supervision. Further, for the average Southern district, most desegregation was complete by 1970, once again without court enforcement or oversight of desegregation plans.

Within the South, school districts did not all desegregate at the same time or in the same fashion. Controlling for other factors, larger districts were more likely to be under court supervision both early and ever; over time the enrollment threshold for court supervision fell. Our results also point to a role for the financial incentives provided by CRA and ESEA after 1964: Poorer districts—which had larger federal grants on the line—were particularly likely to desegregate between 1964 and 1968. Black enrollment share did not impede "token" desegregation, but was an important predictor of both resistance to more intensive desegregation and being supervised by a court in later years. Not surprisingly, controlling for state fixed effects, districts with stronger historical preferences for segregation both began the 1960s with higher levels of segregation and retained them for longer than other districts; these districts were also more likely to be supervised by the courts. By 1976, such districts had desegregated nearly as much as the rest of the sample. There is some evidence that preferences continued to impede desegregation even in 1976 as two states that were particularly resistant to segregation according to the historical record—Alabama and Louisiana—remained somewhat more segregated by 1976. These findings suggest the existing literature on school desegregation is incomplete even descriptively, and that further investigation into the causes and consequences of school desegregation in the South is warranted.

2. What Influenced School Desegregation in the South?

For simplicity, think of districts as falling into one of two categories at any given point in time. For districts supervised by a court, the level of segregation is determined by the court based on the current state of the law as well as idiosyncratic factors related to the judge's preferences and conditions in the district.[8] For districts not under court supervision, the level of segregation is chosen by the school board balancing the opportunity cost of maintaining segregated schools against voters' preferences for segregated schools. A district desegregates "voluntarily" – that is, without court supervision – if the benefits of doing so exceed the costs. In the remainder of this section, we describe specific events that may have changed the costs and benefits of maintaining a particular level of segregation and the potential determinants of court involvement during the period covered by our sample (1956 to 1976), as well as previous literature on the causes of Southern school desegregation.[9]

2.1. From Brown to the Civil Rights Act

Though *Brown* and one year later *Brown II* declared the dual system of education to be unconstitutional, the decisions left the higher courts and Executive branch with little power to eliminate it proactively, effectively remanding all enforcement to federal trial courts on a district-by-district basis. In these early years, state laws in the South requiring segregation by race were generally not repealed, and what little desegregation occurred was likely the result of lawsuits filed by the families of black children seeking admission to white schools. The NAACP Legal Defense and Educational Fund (LDF) was able to assist local counsel in some of these suits, and at times it sought out plaintiffs, but the organization's limited

[8] This is a simplification because even for districts under court supervision, the school board would have made some decision about how much to fight any particular plan or order.
[9] We refer the reader to Patterson (2001) for an excellent comprehensive overview of desegregation during this period.

resources and the costs of serving as plaintiff meant that few districts were likely to have been under court order even a full decade after *Brown*. Indeed, by 1964, the NAACP had assisted in bringing only 30 cases (Rosenberg, 1991), which generally resulted in only token desegregation.

Over this period, variation across districts in the presence of a court order most likely depended on how the LDF and others supporting litigation in the region chose which districts to sue. The LDF might have considered a variety of factors: the probability of winning (which likely depended on the extent of resistance in the district as well as legal factors and the judge), the number of children affected conditional on winning, the availability of an effective plaintiff, and the potential effect on future cases through precedent. Overall, being under court order during this period was arguably less an indicator of being resistant to desegregation – as it would later become – than of being a good target for litigation for other reasons. Indeed, the LDF may have focused its efforts on districts with weaker preferences for segregation, because plaintiffs would have been less intimidated.[10]

By the time the Civil Rights Act was passed in 1964, some Southern districts apparently perceived the benefits of desegregation to be greater than the costs and desegregated without court supervision. We consider such desegregation "voluntary," even though in many cases such plans may have been adopted under duress. For example, districts desegregating voluntarily during this period, by our definition, may have perceived a greater threat of litigation, possibly because they had characteristics similar to those already

[10] The LDF did not have standing to sue a district on its own until passage of the Civil Rights Act. Although nearly all districts blatantly failed to comply with *Brown* in the early years, plaintiffs were often difficult to find, as intimidation of blacks asserting their rights was widespread. Many blacks "discovered that 'to get along, go along.'" (Peltason, 1971, p. 101).

sued.[11] Alternatively, they may have had weaker preferences for segregation or simply felt a greater benefit of following the Supreme Court's ruling.[12] It is possible that some districts preferred to be desegregated even before *Brown*, but were constrained by state laws requiring segregation; this seems unlikely, however, for most districts in the former Confederacy.[13]

2.2. The Civil Rights Act and Beyond

The Civil Rights Act and other federal legislation of the mid-1960s changed the costs and benefits associated with maintaining segregation, generating new sources of pressure on school districts to desegregate. In July 1964, CRA granted the Department of Health, Education and Welfare (HEW) the power to withhold federal funding from school districts that discriminated on the basis of race; it also granted the Attorney General authority to sue such districts. In principle, both the threat of withdrawn federal funding and the heightened threat of litigation would have raised the opportunity costs of remaining segregated. One year later, the Voting Rights Act (VRA) enfranchised blacks in places where they had long been denied the right to vote, potentially reducing the segregationist preferences of the typical voter.

What was considered a legally acceptable level of racial segregation in schools changed as the Civil Rights Act was enforced and interpreted by federal courts. In 1965, HEW issued its first desegregation guidelines for receipt of federal funds, requiring school

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[11] However, anecdotal evidence (e.g. Peltason, 1971) suggests that, at least in the South, the typical school district did not perceive a significant threat from litigation at this time, particularly given the extensive use of legal tactics to delay meaningful integration even among districts under court order (p. 45). Peltason suggests that, in many cases, even if a school board did want to comply with *Brown* immediately, it would await a court order to do so in order to satisfy segregationist constituencies (p. 96-99).

[12] Typically, public officials who disagree with Supreme Court rulings denounce them but agree to comply; the response to *Brown* was unusual from a historical perspective in that public officials openly refused to accept the ruling as law.

[13] For example, some districts might not have been able to take full advantage of economies of scale when schools were segregated; this would have been especially true for small districts and districts with small shares of students of one race. The results presented below do not generally support the notion that capitalizing on economies of scale was an important consideration. Doing so would require actually eliminating black schools, whereas desegregation during this period typically involved moving a few black students to white schools.

districts to submit a court order or a voluntary desegregation plan as evidence of non-discrimination.[14] These first HEW guidelines were set so as not to conflict with existing court orders and thus required desegregation plans to move only a handful of black children into white schools; by 1968, HEW required districts to devise plans to eliminate racially identifiable schools within a year.[15] While some court orders over this period were more lenient than the HEW standards (Orfield, 1969 and Orfield, 2000, citing the 1967 U.S. Commission on Civil Rights), the 1968 Supreme Court decision in *Green* applied HEW standards for voluntary desegregation to court-ordered plans. Like the 1968 HEW guidelines, the *Green* decision emphasized outcomes, arguing that desegregation plans had to "promise realistically to convert promptly to a system without a 'white' school and a 'Negro' school, but just schools."[16] In 1971, the Supreme Court decision in *Swann v. Charlotte-Mecklenburg* reaffirmed *Green* and upheld the use of busing to achieve racial balance.

We do not expect all Southern districts to have met this "moving target" voluntarily or, if they had, to have acted voluntarily for the same reasons. For example, the fund-withholding provisions of CRA likely generated a stronger impetus for desegregation in districts with more federal funding on the line. Title I of ESEA – the largest federal education program and a substantial source of revenue in most Southern districts– allocated more funds to districts with higher rates of child poverty starting in fall 1965, suggesting that

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[14] A school district could also submit an "assurance of compliance" (later referred to as Form 441) if it was uni-racial or had already desegregated. While this method of compliance was common in the Border region, which also had a history of segregating schools by law, it rarely applied in the South.

[15] Through 1968, districts could be in full compliance with the law by submitting freedom-of-choice plans, which allowed students in a district to apply to any school. These plans resulted in few black transfers to white schools. Blacks that applied to white schools were sometimes denied admission on supposedly race-blind criteria, and widespread intimidation and harassment reduced the number of black applicants (U.S. Commission on Civil Rights, 1966).

[16] The Fifth Circuit decision in *U.S. v. Jefferson County Board of Education* (372 F. 2d 836, 876 (1966)) said much the same thing.

poorer districts would have been more responsive to this incentive, all else constant.[17] Even with substantial funding on the line, larger Southern districts may have faced more logistical difficulties in meeting desegregation targets – particularly the elimination of the all-black school – and districts with relatively strong preferences for segregation may have resisted integration as long as possible. After 1964, we expect that the LDF and the Justice Department focused their efforts on districts that failed to desegregate sufficiently on their own, whatever the reason. Thus, we surmise that a district might have ended up under court order after 1964 either because it was sued earlier or because it was resistant to integration.[18]

2.3. Previous Research

When viewed through this lens, school desegregation should have proceeded at a different pace and for different reasons across the South. However, most research on Southern school desegregation to date has relied on data where an exploration of heterogeneity in desegregation paths across districts is either not possible or limited in scope. To some extent, existing interpretations of the causes of desegregation in the South reflect these data constraints.

One line of previous research, much of it focused on whether desegregation caused "white flight," relies on periodic data on the racial composition of schools first released by the federal government for fall 1968. The underlying federal survey in principle makes it possible to document heterogeneity in desegregation paths and is therefore used for later years of the present analysis (see Section 3). However, most studies using these data have restricted attention to larger and predominantly urban districts, where most black children

[17] The median Southern district stood to gain about 20 percent of its pre-existing level of current expenditures from the Title I program through compliance. (These are the authors' calculations from administrative school revenue data for the sample of districts described below.) While limited resources made it difficult for HEW to confirm desegregation in practice, the agency did terminate funds to districts that failed to submit a plan for the 1965-66 year, and funding cutoffs for unacceptable plans became more common over time.
[18] Districts were rarely released from court supervision over our sample period.

reside outside of the South.[19] Though the goal of this literature is not to argue which institutions were responsible for desegregation, its national focus and restriction to large school districts after 1968 leave the impression that the courts – court orders and the Supreme Court decisions in *Green* and *Swann* – were the primary policy levers effecting school desegregation in the South.[20] However, most blacks in the South resided in school districts smaller than those included in these studies. As we show below, smaller Southern districts were significantly less likely to be under court order at any point in time and desegregated significantly prior to 1968.

A second strand of the previous literature has relied on regional segregation statistics constructed from a small individual-level survey (e.g., Boozer, Krueger, and Wolkon, 1992; Ashenfelter, Collins, and Yoon, 2006) or published state aggregates of other data used here (e.g., Rosenberg, 1991; Orfield, 2000).[21] Both of these data sources are representative of the entire South – not just selected (e.g., urban) areas – and cover years prior to 1968. These data show that substantial desegregation took place in the South in the mid-1960s, calling attention to the potential importance of civil rights legislation in the desegregation process. With aggregated data, however, it is impossible to identify the school districts likely to have been most responsive to legislation.

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[19] See, for example, Coleman, Kelly, and Moore (1975), Farley, Richards, and Wurdock (1980), Welch and Light (1987), and Rossell and Armor (1996), and Reber (2005). Other studies have used similar samples to study the effects of court-ordered desegregation on educational attainment (Guryan, 2004) and crime (Weiner, Lutz, and Ludwig, 2007) and the causes of resegregation (Lutz, 2005).

[20] For example, Rossell and Armor (1996) write that before *Green*, "…substantial majorities of both Black and White students were enrolled in predominantly one-race schools… However, this began to change after *Green*, and the changes accelerated with *Swann v. Charlotte-Mecklenberg* in 1971," (p. 271). Others, for example Farley, Richards, and Wurdock (1980), suggest that busing—and therefore *Swann*—was necessary to achieve meaningful integration. They write, "Within large cities, the residential isolation of blacks from whites prevented integration. Thus in 1970 a federal judge ordered that the enrollment in each of Charlotte's schools be approximately 71 percent white and 29 percent black and that busing be used to obtain such ratios. The Supreme Court unanimously upheld this order [in *Swann*]… As a result, substantial reductions in segregation were achieved within many southern districts." (p. 123).

[21] The individual-level survey is called the National Survey of Black Americans (NSBA). The NSBA surveys fewer than 100 respondents who would have attended school in the South in any given year. The question about the racial composition of schools in the NBSA is retrospective.

Indeed, we are aware of no work that comprehensively documents how school desegregation and the means by which it was achieved – by court supervision or what we have called voluntarily – varied across school districts in the South over the two decades following *Brown*. For the present study, we have assembled the district-level data on desegregation and court supervision necessary to fill this gap in the literature. Further, we have augmented these data with information on district characteristics, measured before most desegregation was likely to have taken place. Using these data, we are able to document for the first time some of the district characteristics associated with segregation and court supervision and how these associations changed over time. Although a full account of the causal effects of different segregation-related policies is outside the scope of this paper, this approach begins to reveal which policies and other factors (preferences, opportunity costs) were most important in desegregating different types of Southern school districts.[22]

3. Data

Our empirical analysis draws on many data sources. Here, we briefly summarize these sources, describe key variables related to measuring the extent of desegregation and its "source" (court-ordered or voluntary), and discuss how our sample is constructed. Throughout the paper, measures of desegregation and court supervision are taken in the fall of the school year. More information is provided in Appendix A.

3.1. Data on Court Involvement and Desegregation

A key contribution of this research is that we observe whether a district was desegregating under court order or without direct court supervision ("voluntarily"). Our

[22] We save the evaluation of particular policies for future research.

data on court supervision were originally collected by different organizations to monitor desegregation activity after *Brown*. From 1956 to 1964, the Southern Education Reporting Service (SERS)—an organization of Southern newspaper editors funded by the Ford Foundation—compiled annual lists of school districts that had a desegregation policy and whether that policy was court-enforced. In later years, we observe how districts complied with CRA, using data collected by HEW (in 1966) and by the Office for Civil Rights (in 1968, 1970, 1972, and 1976).[23] We use these data to construct an indicator for whether the district was under court supervision (*COURTORDER*).

Our desegregation data come from many of the same sources. Through 1964, SERS collected data on the number of blacks enrolled with whites for districts that had any desegregation activity. In 1966, SERS reported these data for most school districts. For 1968, 1970, 1972, and 1976, the OCR surveys cited above provide school-level data on enrollment by race, also for most school districts. We construct three measures of desegregation from these sources. The indicator variable *DESEG* measures the extensive margin of desegregation, i.e., whether any blacks were in school with any whites in the district. By 1968, 99 percent of districts were desegregated on this margin, so we consider *DESEG* as an outcome only for earlier years. We then construct two measures of desegregation on the intensive margin. The first is the fraction of blacks attending all-black schools (*FRACALLBLACK*), which we calculate for all years.[24,25] The second is the

[23] Collecting information on which school districts were supervised by courts is difficult because not all opinions or plans were published, and there is no central clearinghouse of court-ordered desegregation plans. Because the number of desegregation plans in the early 1960s was small, SERS was able to keep track of them for that time period. In both data sources, a district would be considered "under court order" as long as they had a desegregation plan that was overseen and enforced by a court, whether or not the plan was published as part of a judicial opinion.

[24] For years before 1968, the denominator (the number of black students in the district) is not directly available. To estimate the total number of black students, we multiply the average black share of enrollment in the early 1960s by the current year enrollment. In the few cases where this yields a fraction greater than 1, *FRACALLBLACK* is recoded to 1.

dissimilarity index (*DISSIM*), which we calculate beginning in 1968. *DISSIM* can be interpreted as the share of black students in a district who would need to change schools in order for each of the district's schools to have the same racial composition.[26]

SERS and OCR collected the variables that captured the margins on which segregation was changing at the time, so the fact that we lack the necessary school-level data to calculate the dissimilarity index prior to 1968 is not a major limitation. The dissimilarity index is on balance the most appropriate measure for later years of this analysis. Other segregation indices, such as the exposure index, are mechanically related to district fraction black, one of our key explanatory variables. The dissimilarity index also more closely matches the margins of desegregation the courts considered after 1968, as busing and other court-sanctioned remedies often sought to achieve racial balance across a district's schools.[27]

3.2. Sample Construction and Representativeness

Our analysis focuses on the states of the former Confederacy (the "South").[28] Based on Census data, Table 1 shows that in 1960, 57 percent of black school-aged children lived in the South, while less than 10 percent lived in the states bordering the South that maintained segregated schools by law prior to *Brown* (the "Border" region).[29] Our sample

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[25] Note that an all-black school could be eliminated by transferring one white to it. In practice, however, schools with very low white enrollment shares were rare throughout the period. Changes in the share of blacks in all-black schools were driven primarily by moving blacks to relatively white schools.
[26] The formula for the dissimilarity index is provided in Appendix A.
[27] The dissimilarity index does, however, have some limitations. For example, if white enrollment share is low or falling in a district, measured segregation could be low according to the dissimilarity index even though blacks have little exposure to whites. The exposure index captures this effect, but is subject to more important limitations discussed above.
[28] These states are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia.
[29] The Border region includes Delaware, Kentucky, Maryland, Missouri, Oklahoma, and West Virginia. Unfortunately, segregation data for the Border region are not consistently available by district, so a comparison of districts across the two regions is not possible. Table 1 shows, however, that desegregation proceeded much more quickly in the Border region on average.

excludes Mississippi and Texas due to data limitations.[30] However, it still covers 79 percent of black school-aged children in the South and 45 percent of black school-aged children in the United States overall.

In addition to containing the majority of black school-aged children in the South, the sampled states were demographically similar to the entire South in 1960. In particular, as shown in Table 1, the proportions of school-aged children who were black, living in families with income under $2000, and residing in urban areas were similar in the sampled states and the South as a whole. When measured at the school district level, these will be key covariates in our analysis. As a proxy for segregationist preferences, we include the vote share in the 1948 presidential election for Strom Thurmond, who ran on an explicitly segregationist ("states rights") platform, in our analysis. Along this dimension, the sampled states and the South overall were also quite similar. The sampled states also appear representative of the South in terms of the level of racial segregation in 1964, as measured by the proportion of blacks in all-black schools.

Our sample includes 942 districts. To arrive at this sample, we began with all districts in the sampled Southern states as identified in each state's relevant school finance publication. Because district boundaries were not constant over time, we aggregated districts to the smallest unit consistently observed over the whole period.[31] From this working sample of "aggregated" districts, we excluded those missing at least one of the key explanatory variables, those for which we do not have segregation measures for at least one even-numbered year after 1965, those with average black share in enrollment in the early

[30] SERS did not collect the necessary segregation data for Texas (so we do not have measures of school desegregation before 1967); we could not obtain the relevant state-level enrollment and school finance data for Mississippi. Our sample thus includes school districts in Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, and Virginia.

[31] This process and the school finance publications are described in Appendix A. Excluding districts with boundary changes (about 8 percent of our working sample) does not affect our findings.

1960s less than 3 percent, and those with students of only one race in any year of the sample.[32] Despite these drops, the typical district in our sample looks similar to the typical district in the region (see Appendix Table A1).[33]

3.3. Sample Characteristics

Table 2 reports the characteristics of school districts in our sample. With the exception of the majority urban indicator, all characteristics in Panel A are measured in the late 1950s or early 1960s; data sources are discussed in Appendix A. As shown in the upper panel, the average district in our sample enrolled 7,714 students in the early 1960s (*ENROLL*), and was 36 percent black (*FRACBLACK*) and 31 percent poor (*FRACPOOR*). Slightly over one third of the sampled districts were majority urban (*URBAN*). The size and population density of the districts in our sample are notably different from those of the samples used in some of the existing literature on school desegregation, which consist of larger and more often urban districts, as discussed above. Below, we show that the timeline and means of school desegregation for such districts were different from those of districts in the region overall.

We will use these measures of school district demographics to examine heterogeneity in patterns of desegregation because we think they are likely to reflect the district-specific costs and benefits of desegregation, as discussed in more detail below.[34] We are particularly

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[32] We began with 1322 aggregated districts. We excluded 189 aggregated districts because black share, enrollment, urbanicity, or poverty rate is not observed. Fifty-five of the remaining aggregated districts were dropped because segregation data are not available after 1965. Of the sample remaining, we dropped 131 aggregated districts with a black share in enrollment less than 3 percent in the early 1960s and 5 aggregated districts observed to have students of only one race at any point in the sample period. Such districts raise difficulties in calculating some of the segregation measures; their elimination does not substantially reduce our sample's coverage of black students.

[33] The most notable differences between the full sample and that remaining after the selection restrictions are that the typical district in the restricted sample is marginally larger and blacker than in the full sample.

[34] Ideally, we would observe pre-existing residential segregation in a school district, which may have made school desegregation more costly. Unfortunately, we lack the data needed to calculate indices of residential segregation for all districts in our sample. However, some characteristics we do observe at the district level, such as urbanicity and size, may partially proxy for residential segregation.

interested in how patterns of desegregation varied with attitudes towards race. We lack a district-level proxy for these attitudes, but we do have a potential proxy at the county level in the share of county residents who voted in the 1948 presidential election for Strom Thurmond. We assign each school district the Thurmond vote share of its county and cluster standard errors at the county level in the regressions that follow.[35, 36] As Table 2 shows, mean county-level Thurmond vote share (*THURMOND*) for districts in our sample was 29 percent, and there was considerable heterogeneity in support for his candidacy within the South.

The bottom panel of Table 2 shows summary statistics on several segregation measures for key years. Note that the sample size varies somewhat depending on the year and outcome. This is mainly due to the fact that the OCR surveyed all districts that were supervised by courts or "of interest" to HEW and only a sample of other districts, with the probability of being sampled decreasing with size.[37] This means that the sample after 1966 is somewhat weighted towards larger districts and districts that were more resistant to desegregation. Even so, using the sampling weights does not substantially alter the observed trends in segregation, and the characteristics of districts reporting in each year are quite similar (see Appendix Table A1). We use all the available districts in each year, not a

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[35] While many Southern districts were entirely coincident with county lines, many were not; in our sample, there are approximately 1.5 districts per county. In results not reported, we controlled for additional county-level covariates from the 1960 Census—the share of adults with less than a high school education, the unemployment rate, the share of employment in manufacturing, the share of employment in agriculture, and the share of employment in the federal government (1965 federal employment divided by 1960 total employment). The coefficients on these variables were not consistently substantively or statistically significant, generally did not add much explanatory power to the regressions, and generally did not change the coefficients on the other variables of interest but did reduce their precision. In one case (desegregation on the extensive margin in 1964), the inclusion of these covariates did change the estimated coefficient on one explanatory variable substantially, though the qualitative story is unaffected (see below).

[36] For simplicity, we refer to a district's Thurmond vote share throughout the paper; the variable is always defined at the county level, however.

[37] We are also occasionally missing data on some outcomes because not all consolidation partners of a district are observed in the raw data. See Appendix A.

balanced panel, in order to retain a sample as large and representative of Southern districts as possible.[38]

4. Aggregate Trends in Desegregation and Court Supervision

Figure 1 shows trends in desegregation and court supervision for districts in our sample. These trends are consistent with previously reported findings.[39] In 1956, two years after *Brown*, there was virtually no desegregation in the average Southern school district.[40] The share of districts with any desegregation grew slowly through the early 1960s then jumped from 26 percent in 1964 to 99 percent in 1966, as also shown in the published state-level aggregates of the SERS data cited in existing academic research (e.g., Rosenberg, 1991, Orfield, 2000). While desegregation efforts in the South by 1964 were largely token, the all-black school had all but disappeared by 1970, with the share of blacks attending all-black schools falling from 99 to 5 percent in the average district. About half of that decline took place before the *Green* decision. The National Survey of Black Americans, used by Boozer, Krueger and Wolkon (1992) and Ashenfelter, Collins, and Yoon (2006), shows a similar drop in the fraction of blacks attending all-black schools over this period.

After the virtual elimination of all-black schools, the share of black students in all-black schools does not capture further changes in segregation; the dissimilarity index therefore becomes our most relevant desegregation measure after 1968. This measure also shows substantial declines in segregation between 1968 (the first year available) and 1970. In 1968, 69 percent of black students in the average district would have had to have been reassigned to another school in order to replicate the racial composition of the district as a

[38] A balanced panel is weighted toward districts under court order or particularly resistant to desegregation.
[39] Each district in the sample is given equal weight in calculating the statistics plotted.
[40] In fact, only one district had any desegregation. This was Hot Springs, Arkansas, where less than one percent of blacks attended school with any whites.

whole in each school; by 1970, that figure had fallen to 25 percent. While all measures suggest continued progress toward integration in the typical Southern district between 1970 and 1976, as previously documented (e.g., U.S. Commission on Civil Rights, 1977), Figure 1 makes clear that these changes were small in comparison to those achieved between 1968 and 1970 – before *Swann* and more widespread use of busing. By 1976, all districts had established some mixed-race schools, and 20 percent of black students would have needed to change schools in order for the typical district to have the same racial composition in each of its individual schools.

As noted, an important contribution of this work is that we have been able to incorporate information on whether courts were directly involved in the desegregation process. Consistent with the small number of suits brought by the NAACP (Rosenberg, 1991), the share of districts in our sample with court-ordered desegregation plans grew slowly between *Brown* and the passage of CRA in 1964, possibly due to resource constraints on the part of would-be litigants. As shown in Figure 1, the mid-1960s through the early 1970s saw large increases in the rate of court supervision, particularly between 1964 and 1966 (after CRA and other civil rights legislation was passed) and again between 1970 and 1972 (after *Swann*). As described above, the circumstances under which districts were placed under court supervision varied over time, with the earliest court orders most likely reflecting that the district had been singled out as a good case for litigation and later court orders most likely indicating that desegregation in the district was significantly delayed.

Figure 1 reveals that a significant share of Southern school districts appears to have desegregated without court supervision. Such voluntary desegregation was important even

in the early 1960s, and became more so after CRA was passed in 1964.[41] A sizable gap between the share of districts desegregated and the share under court order persisted, pointing to the importance of voluntary desegregation throughout the entire sample period. While voluntary desegregation was certainly strategic in some cases, or could be interpreted as being coerced, districts still ultimately exercised some degree of choice in the desegregation process.

As noted in Section 3, much of the previous quantitative literature on school desegregation has focused on larger districts, mostly since 1968; an advantage of our dataset is that we can examine a more representative sample of districts for a longer time frame. Figure 2 plots trends in desegregation and court supervision for a sub-sample of relatively large districts similar to samples employed in some previous studies of school desegregation, especially in the literature on white flight.[42] While the trends are broadly similar, important differences—often missed in the previous literature—emerge. Large districts were significantly more likely to be under court order than districts overall. They also desegregated on the extensive margin earlier than the typical district and experienced greater reductions in segregation in the early 1970s, perhaps reflecting a larger impact of *Swann*. Still, much desegregation had been achieved even in these districts by 1970.

With our data, we are able to document heterogeneity in segregation outcomes over time for districts with different characteristics including, but not limited to, district size. We turn to this analysis next.

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[41] The extent of "voluntary" desegregation is the difference between the share of districts with any desegregation and the share with a court order. We find that court orders were generally effective at ensuring desegregation on the extensive margin (results not shown). Defining voluntary desegregation as desegregated and not under court order therefore yields nearly identical trends.

[42] We follow Welch and Light (1987) in defining large districts those with at least 15,000 students. (Welch and Light use 1968 enrollment, apply additional criteria and only sample districts between 15,000 and 50,000 enrollment, leaving only 42 districts in the South; we include all 81 Southern districts with more than 15,000 enrollment in the early 1960s.) The Welch and Light (1987) sample has been frequently used by economists (Guryan, 2004; Reber, 2005; Weiner, Lutz, and Ludwig, 2007).

5. Heterogeneity in Desegregation and Court Supervision Trends

5.1. Methods

To explore heterogeneity in desegregation paths systematically, we estimate regressions with desegregation outcomes as alternative dependent variables and the district and county characteristics described in Section 3 as independent variables, one year at a time. The regression specification is given by equation (1), where *d* indexes district, *c* indexes the county in which district *d* is located, and *t* indexes year:

$$
\begin{aligned}
\text{OUTCOME}_{\text{d,t}} = \alpha_t &+ \eta_t \text{FRACPOOR}_{\text{d,pre}} + \theta_{\text{t}} \text{URBAN}_{\text{d,1969}} \\
&+ \text{BLACK_DEC}_{\text{d,pre}}{}' \gamma_t + \text{ENROLL_DEC}_{\text{d,pre}}{}' \delta_t \\
&+ \text{THURMOND_QUIN}_{\text{c,pre}}{}' \kappa_t + \text{STATE}' \lambda_t + \varepsilon_{\text{d,t}}
\end{aligned}
\tag{1}
$$

OUTCOME represents *COURTORDER*, *DESEG*, *FRACALLBLACK*, or *DISSIM*, depending on *t* (see below). There are five explanatory variables of interest: the share of district enrollment that is black (*FRACBLACK*), total district enrollment (*ENROLL*), the district's child poverty rate (*FRACPOOR*), an indicator for whether a district was majority urban in 1969 (*URBAN*), and the share of votes cast in the county for Strom Thurmond in the 1948 Presidential election (*THURMOND*). Because most of these measures are from 1963 and earlier, we consider them exogenous or pre-determined with respect to subsequent desegregation outcomes (hence the "pre" subscript).[43]

[43] With the exception of *FRACPOOR* and *THURMOND*, all district characteristics are current rather than pre-existing in the first year of our regression analysis, 1961. However, so few districts were desegregated by 1961 and the level of desegregation was so low that it is highly unlikely that major demographic shifts occurred in response to the desegregation process. In addition, *URBAN* is measured in 1969, so is not predetermined for some early years in our analysis. However, because *URBAN* is a dichotomous variable equal to 1 if more than half the district is urban, changes in this variable over the 1960s are likely to be minimal.

We find important non-linearities in the relationship between some of the dependent variables and some of the independent variables.[44] We therefore specify fraction black and enrollment in deciles and the Thurmond vote share in quintiles, always omitting the first quantile from our regressions. Thus, *BLACK_DEC* and *ENROLL_DEC* are vectors of dummy variables for deciles two through ten of fraction black and enrollment, respectively, in the early 1960s, and *THURMOND_QUIN* is a vector of dummy variables for quintiles two through five of the 1948 Thurmond vote share. The minimum and maximum values of the deciles and quintiles are given in Appendix Tables B1 and B2. Equation (1) is the most parsimonious specification that captures the relevant non-linearities across years and outcomes.

We also include a vector of state dummies (*STATE*) in equation (1). The coefficients on these dummies capture unobserved state-level determinants of outcomes at any point in time. For example, the state dummies account for the effects of state-level policies towards segregation, such as a federal circuit court ruling that resulted in all districts in Alabama coming under court supervision in 1967. The state dummies also capture the effects of attitudes about race and preferences for segregation held in common across all districts in a state. An analysis dropping the state dummies suggests that they do pick up something about attitudes and preferences: for most outcomes and in most years, the omission of state dummies from model (1) substantially increases the explanatory power of the Thurmond vote share indicators, our proxy for the strength of segregationist sentiment.[45]

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[44] In just one of many examples, we find the linear effect of log enrollment to be statistically significant and positive in predicting court supervision in 1961 (not shown); Table 3 shows that this finding is driven solely by districts in the top decile of enrollment (districts with enrollment above 13,690).

[45] However, dropping the state fixed effects does not significantly change the estimated coefficients on the district-level demographic characteristics included in equation (1). This suggests that these district-level characteristics do not proxy preferences as much as the costs of segregation or, prior to 1966, a district's attractiveness as a target for litigation.

For expositional clarity, we do not present estimates of equation (1) for every year for which we have data, but rather choose years surrounding key pieces of legislation and court cases (1961, 1964, 1966, 1968, 1970, and 1976). Because the explanatory variables are time-invariant, the change in the coefficient on a particular characteristic over time indicates the extent to which that characteristic predicts changes in the outcome variable for the same period.[46] There are substantial changes in these coefficients over time, indicating that districts with different characteristics did indeed change their behavior at different times. In order to test the statistical significance of changes in coefficients, we estimate a stacked version of equation (1), including all years in a single regression and fully interacting all of the explanatory variables with year indicators.[47] Because this regression yields the same coefficient estimates as the year-by-year regressions, we do not separately report the results. However, we focus our attention on substantively and statistically significant changes in these coefficients below.

5.2. Results

In the 1950s, there was so little desegregation activity (Figure 1) that there is little heterogeneity to explain.[48] We therefore begin our regression analysis in 1961. To familiarize the reader with the presentation of our estimates, we discuss the findings for 1961 in some detail before turning to subsequent years.

[46] With a given sample and time-invariant x, regressing the change in y on x yields a coefficient equal to the coefficient on x in period 2 less the coefficient on x in period 1. In our case, the sample of districts is not exactly the same in every year, but has the same average characteristics.
[47] In the stacked model, standard errors account for arbitrary correlation over time within counties.
[48] In 1958, only 0.4 percent of districts were under court order and 0.6 percent of districts were desegregated. The pattern observed in 1961 begins to emerge by 1958, with urbanicity and the top decile of enrollment predicting both court order and desegregation; few coefficients are significant, however.

Table 3 reports the estimates of equation (1) for *COURTORDER* (column 1), *DESEG* (column 2), and *FRACALLBLACK* (column 3) in 1961.[49] The upper part of the table presents coefficients on the district-level variables. The estimates imply that what little desegregation had occurred by 1961 happened in the largest, primarily urban, lower-poverty districts. Urban districts were significantly more likely to be under court order and desegregated, while poorer districts were significantly less likely to be desegregated, all else constant. Consistent with the trends shown in Figures 1 and 2, districts in the top decile of enrollment (those with enrollment greater than 13,690) were also significantly more likely to have desegregated by this time and to have been under court order, suggesting that these districts were considered good targets for litigation. The vast majority of the 2.4 percent of districts that had desegregated voluntarily by 1961 were also relatively large, possibly because they perceived a stronger threat of being litigated as well.

On the other hand, districts desegregating voluntarily may have had relatively weak preferences for segregation. The coefficients on the Thurmond indicators and the state dummies, presented in the bottom part of the table, suggest that preferences were important determinants of which districts had desegregated at this early date. For example, school districts in Arkansas and Virginia had a significantly higher probability of being desegregated on the extensive margin than otherwise similar school districts in Alabama (the omitted state). Given that there was more resistance to segregation in the Deep South, these findings suggest that districts with less progressive attitudes toward race had made significantly less progress in desegregating their schools by the early 1960s. Consistent with this idea, within state, districts in counties with higher levels of political support for Strom Thurmond in 1948 were also less likely to have desegregated and to have found themselves under court

[49] Standard errors are consistent under the assumption that error terms are potentially heteroskedastic and potentially correlated across districts in the same county.

order in 1961 than districts with the least support for Thurmond. This suggests that private litigants did not pursue the most recalcitrant districts, perhaps because of the difficulty in serving as plaintiff or a perceived low probability of victory.

To ease interpretation of the large number of coefficients in equation (1), we present the coefficients on the fraction black and enrollment decile indicators graphically from here forward. In particular, rescaled versions of these coefficients (described below) are shown in Figure 3 for 1961, 1964, and 1966 and in Figure 4 for 1968, 1970, and 1976. Coefficients on *URBAN*, *FRACPOOR*, and the Thurmond quintile indicators from the same underlying regressions are then shown in Table 4a and Table 4b. Due to space constraints, we do not present the coefficients on the state dummies. However, we do discuss significant changes over time in their coefficients, where relevant. For reference, the full regression results for 1964 and later are shown in Appendix Tables C1 through C5.

The top row of Figure 3 plots rescaled versions of the coefficients on the fraction black and enrollment deciles shown in Table 3. The upper-left panel (Panel A.1) corresponds to column (1), showing the results for the regression with *COURTORDER* as the dependent variable; the solid line corresponds to coefficients on the dummies for deciles of fraction black while the dashed line corresponds to coefficients on the dummies for enrollment deciles. Because any of the deciles could have been omitted, the level of the coefficients is not identified; within year, our discussion therefore focuses on the pattern of coefficients across deciles.[50] However, to facilitate comparisons of the average level of any given outcome across years – in addition to differential changes across deciles over time – we rescale the coefficients so that the average coefficient across all deciles corresponds to the

[50] Standard errors are given in Appendix Tables C1 through C5 for later years; we focus our discussion only on significant differences across deciles.

average level of the outcome that year.[51] The graphs make clear that desegregation by 1961 had occurred primarily in the largest Southern districts and with court supervision, as already noted (Panels A.1 and A.2).

The next row of Figure 3 shows rescaled coefficients on the decile indicators for enrollment and fraction black from estimation of equation (1) for 1964. Between 1961 and 1964, there was little change in patterns of court supervision, with court orders relatively more common in the largest districts (Panel B.1). However, enrollment became positively associated with the probability of desegregation over nearly its entire range. Together these two findings imply that, of districts that had desegregated by fall 1964, voluntary desegregation was relatively more common among those that enrolled fewer students. By the same token, voluntary desegregation was also more common in urban and richer districts, as shown in the second column of Panel B in Table 4a.[52] As was the case in 1961, these districts may have perceived a greater threat of litigation or had weaker segregationist preferences than suggested by local support for Strom Thurmond. Although Thurmond vote share no longer predicts desegregation on the extensive margin by 1964, preferences for segregation still mattered, as the coefficients on the state fixed effects indicate that states deeper in the South (Alabama, Georgia, and especially Louisiana) continued to lag their other Southern counterparts (Appendix Table C1).

By 1966, all but half of one percent of districts had at least some black children enrolled in public school with white children, as already noted in reference to Figure 1. Given the near uniformity of this outcome, it is not surprising that it did not vary

[51] This is achieved by adding a constant equal to the average outcome in the data less the average of all the coefficients (including zero for the first decile) to all the coefficients. Note that the *difference* between the coefficients on each decile is maintained. Also note that while the scaled coefficients are plotted in the figures, the original coefficients are reported in the tables.

[52] When the additional county-level controls from the 1960 Census discussed above are included in the regression, the coefficient on the poverty rate falls (in absolute value) from -0.42 to -0.24; it is still statistically different from zero at the five percent level.

systematically with enrollment or fraction black, as shown in Panel C.2 of Figure 3, or with the poverty rate, as shown in Panel B of Table 4a. This means that school districts that had been relatively slow to desegregate by 1964 – poorer districts, smaller districts – moved quickly and were as likely to be desegregated as other districts by 1966. These years of rapid desegregation activity correspond to a period of key civil rights legislation: ESEA, which gave "bite" to the fund-withholding provisions of CRA, and the Voting Rights Act were both passed in 1965. Nineteen-sixty-six is therefore the first year in which the effects of these pieces of legislation may be evident in our data.

We next examine the determinants of desegregation on the intensive margin in 1966, where there was substantially more variation across districts. While districts with higher poverty rates had significantly higher shares of black children in all-black schools in 1964 – due mainly to their lower probability of having desegregated at all by this time – the relationship between *FRACPOOR* and *FRACALLBLACK* was no longer statistically significant in 1966 (Panel A of Table 4b, columns 2 and 3). Relatively poor districts were also significantly less likely to be under court order in 1966 (though not in 1964), suggesting that poorer districts achieved a comparable level of segregation as their richer counterparts by choice. Given that poorer districts had more Title I funds at risk with non-compliance, the timing of this pattern is suggestive of a direct effect of CRA and ESEA on behavior.[53]

By comparison, districts with relatively high black shares were significantly further behind in desegregating on the intensive margin in 1966 than they were in 1964 (Figure 3, Panels B.3 and C.3); these districts also generally became more likely to be supervised by the

[53] However, for neither COURTORDER nor FRACALLBLACK can we reject the null hypothesis that the coefficients on FRACPOOR are the same in 1964 and 1966. In other work, we use a more idiosyncratic component of the variation in Title I grants across districts to estimate the causal effect of financial incentives on desegregation directly (Cascio, Lewis, Gordon, and Reber, 2005).

courts over this period.[54] The same patterns of more court involvement and less intensive desegregation among blacker districts persisted through 1968 (Figure 4, row 1). This suggests that voters in districts with higher black shares were relatively resistant to the more intensive desegregation that became required of Southern schools in the mid 1960s. These districts may have been pursued by the DOJ or may have sought out what they perceived to be weaker remedies through the courts rather than desegregate voluntarily.

Through 1968, resistance to intensive desegregation was also positively associated with our more direct measure of preferences for segregation. Districts in counties with higher Thurmond vote shares maintained a higher level of segregation through 1968, as measured by *FRACALLBLACK* and *DISSIM* (Table 4b, Panel A). Although they were less likely to be under court supervision in 1964, districts in the top quintile of 1948 Thurmond vote share (where Thurmond received at least 48.3 percent of votes cast) were significantly more likely to be under supervision in 1968 than districts in the bottom quintile (where Thurmond received no more than 9.4 percent of votes cast). This suggests once again that, whether undertaken by choice or by force, court supervision after 1964 was relatively more common in districts with stronger preferences for segregation.

It is important to note that, all else constant, districts with higher black shares in enrollment or higher vote shares for Thurmond were potentially ones where the Voting Rights Act of 1965 had a relatively large impact on black voter registration. For example, disenfranchisement of blacks was historically more severe in jurisdictions with higher black shares in the population (Bond, 1934, Margo, 1990). If VRA increased the pro-integrationist

[54] When compared to districts in the first decile of black share (less than or equal to 9.5 percent), districts with black shares between 16.0 and 34.2 percent (deciles three to five) and over 46.6 percent (deciles eight to ten) experienced significantly higher increases in court supervision between 1964 and 1966 (Figure 3, Panels B.1 and C.1).

sentiments of school board constituencies, there would have, if anything, been more resistance to integration in its absence.[55]

As shown in Figure 1, the dual system in the typical Southern district was eliminated by 1970, at least in part because this was required by the Supreme Court decision in *Green*. Some districts with the strongest preferences for segregation were brought into compliance at this time. By 1970, for instance, within a given state, districts where support for Strom Thurmond in 1948 had been the strongest were just as racially integrated as districts where his support had been the weakest (Table 4b, column 5). On the other hand, segregation persisted at a higher rate in two states of the Deep South (Alabama and Louisiana), suggesting historical segregationist preferences were not completely overcome (see Appendix Table C4).

Further, while the relationship between black share and segregation was greatly attenuated between 1968 and 1970, blacker districts, especially those in the top decile (fraction black at least 64.2 percent), continued to have more blacks in all-black schools (Figure 4, Panels B.2 and C2). Blacker districts were also more segregated in both 1970 and 1976 according to the dissimilarity index, compared to districts in the middle of the black share distribution. While they effectively eliminated all-black schools, districts in the bottom decile of black enrollment share (no more than 9.5 percent black) did not spread blacks as evenly across schools as did districts with black enrollment shares between 9.8 and 63.8 percent (deciles two through nine) (Figure 4, Panels B.3 and C.3). This suggests that it may have been less acceptable to voters to spread students of both races across schools evenly

[55] The direct effects of VRA might be small. For example, our calculations from historical voting records in a sub-sample of Southern counties suggest that the median voter switched from white to black in fewer than 3 percent of Southern counties between 1960 and 1967. Further, of all of these states subject to greater federal regulation and oversight after VRA, only Virginia saw a relatively large reduction in the fraction of blacks attending all black schools between 1964 and 1966. (As shown in Appendix Tables C1 and C2, Virginia had significantly fewer blacks in all-black schools (than Alabama) in both years, and the coefficients on the Virginia dummies are significantly different in the 1964 and 1966 regressions.)

when shares of students in either race were low.[56] Alternatively, achieving racial balance may pose particular logistical or transportation problems when the share of either race is low.

The remaining significant differences across Southern districts in the level of integration in 1976 were primarily associated with size. Looking down the first column of Figure 4, we see that between 1968 and 1976, enrollment was consistently and strongly positively related to the probability of being supervised by the courts, with the overall level of supervision rising over time.[57] Coefficients on the enrollment deciles in the models for the dissimilarity index, shown in the third column of Figure 4, mirror those shown in the first column for court orders, with the level of segregation strongly positively related to size in all years between 1968 and 1976. The largest districts were also more likely to have some black children attending all-black schools in 1970 and 1976, after the dual system had elsewhere been eliminated (Figure 4, Panels B.2 and C.2). These findings may reflect the logistical difficulty of integration in larger districts.

6. Discussion

Compared to existing research, this paper presents a more complete timeline of the court supervision and desegregation of Southern schools in the two decades following *Brown* and shows how different types of school districts experienced different paths to desegregation. Stylized facts emerge from this new timeline, many of which have been reported previously in parts of the literature, but have not been emphasized jointly. We first note that most Southern school districts desegregated at least to some extent between 1964

[56] Note that there is not a mechanical relationship between the black enrollment share and the dissimilarity index except for districts with very high or very low shares where there may not be enough students of one race to spread them evenly across all schools. (For example, if there are five black students and ten schools, the dissimilarity index could not reach zero). Only one district in our sample (in 1976) has less than one student of either race per school.

[57] Linearity in deciles of enrollment is rejected at the 5 percent level for regressions with *COURTORDER* as the dependent variable in all years.

and 1966, suggesting that comprehensive analysis of desegregation must start before 1968, when some data sets and much of the existing quantitative literature begin. Second, most desegregation in the South was complete by 1970, suggesting the role of busing (following the *Swann* ruling in 1971) may not have been as important as previously suggested. Third, while all districts were desegregated at least partially by 1976, nearly half of districts were never under court supervision by 1976, suggesting that the need for court involvement to achieve desegregation may have been overemphasized for the typical Southern district.[58]

Our main finding is the extent to which not all districts followed the same path to desegregation. Our analysis of how district characteristics related to trends in segregation and court involvement provides suggestive evidence about the effectiveness of desegregation policies, as well as the preferences and constraints of different districts over time. First, not surprisingly, districts in the states of the Deep South and, within states, those that voted in larger shares for Thurmond in 1948, were more resistant to desegregation. They desegregated less in the early years and were more likely to come under court order eventually. The fact that most such districts were no longer substantially more segregated than others by 1976 – with the notable exception of Alabama and Louisiana remaining more segregated on the intensive margin - suggests that the courts and other policies were quite successful at overcoming these preferences.

Second, while the experiences of urban and rural districts were not systematically different, the number of students enrolled was an important predictor across outcomes and years. The courts were substantially more involved in the desegregation of the largest school districts throughout the period. At the same time, larger districts were more likely to

[58] To say that the role of courts has been overemphasized is not to say that the courts had no role in Southern desegregation. Indeed, we have presented evidence that courts may have been important in reducing dissimilarity in large urban districts and in heavily black districts that resisted intensive desegregation.

desegregate voluntarily on the extensive margin early, suggesting larger districts were *less* resistant to desegregation in principle. Alternatively, larger districts may have perceived a greater threat of litigation (seeing other large districts targeted for lawsuits) and desegregated voluntarily to deter costly litigation. Together, these two results are consistent with the LDF targeting large districts in hopes of winning cases in districts where opposition to desegregation was weaker and a large number of students would be affected upon success. While larger districts achieved token desegregation earlier, they were slower to eliminate all-black schools and never achieved racial balance (as measured by the dissimilarity index) to the same extent as their lower-enrollment counterparts, perhaps because of greater logistical difficulties due to higher residential segregation and complex transportation requirements.

Third, districts with high black enrollment shares were particularly resistant to intensive desegregation, as evidenced by their slower elimination of all-black schools (all-black schools persisted through 1976 primarily in top-decile fraction black districts) and higher rate of court supervision in later years. The fact that blacker districts did not lag nearly so much in desegregation on the extensive margin in the early years suggests that whites in such districts were not more opposed to desegregation in principle; rather, they were opposed to significant exposure to black students.

Finally, poorer districts lagged substantially in allowing *any* desegregation by 1964—suggesting they had stronger segregationist preferences. But poorer districts were particularly likely to desegregate over the following two years and had caught up by 1966, suggesting that the financial incentives under CRA and ESEA may have been important. Explaining desegregation activity before 1966 in particular has received little attention relative to later years and warrants further attention; we plan to pursue this in future work.

This contribution to the historical record is particularly timely. Half a century after *Brown*, the Supreme Court's ruling in *Parents Involved in Community Schools v. Seattle School District #1*[59] has changed the legal question from what school districts *must* do to desegregate their schools to what school districts *may* do, declaring that school districts can no longer use race as a "tie-breaker" in assigning students to oversubscribed elementary and secondary schools. The extent to which districts will be legally permitted to enforce desegregation plans beyond freedom of choice plans after this ruling is unclear,[60] and it is too soon to identify empirically the effect of the ruling. It is also unclear whether ESEA Title I funds could be used to enforce a new interpretation of CRA prohibiting race-based school assignment formulas. Our historical heterogeneity results are relevant in considering how districts will respond to the decision already issued, and how they might respond to enforcement by withholding Title I funds. Would the same types of districts who accepted desegregation most readily in the twentieth century be leaders in innovative approaches to maintaining desegregation without using race as a factor in school assignment (for example, through strategic use of magnet or charter schools), or have preferences and their correlation with demographics changed significantly? Might existing district-level school choice measures be more important than demographics in predicting desegregation in the future? In any case, our findings suggest that district-level variation in compliance with any change in the law—and in overall segregation levels following the rulings—is likely to be substantial.

[59] Parents Involved in Cmty. Schs. v. Seattle Sch. Dist. #1, 2007 WL 1836531,551 U.S. --- (2007).
[60] The plurality decision is clear that race cannot be used at all as a factor, but Justice Kennedy, concurring with the judgment, concurred with only parts of the decision, leaving considerable uncertainty in the interpretation of the ruling.

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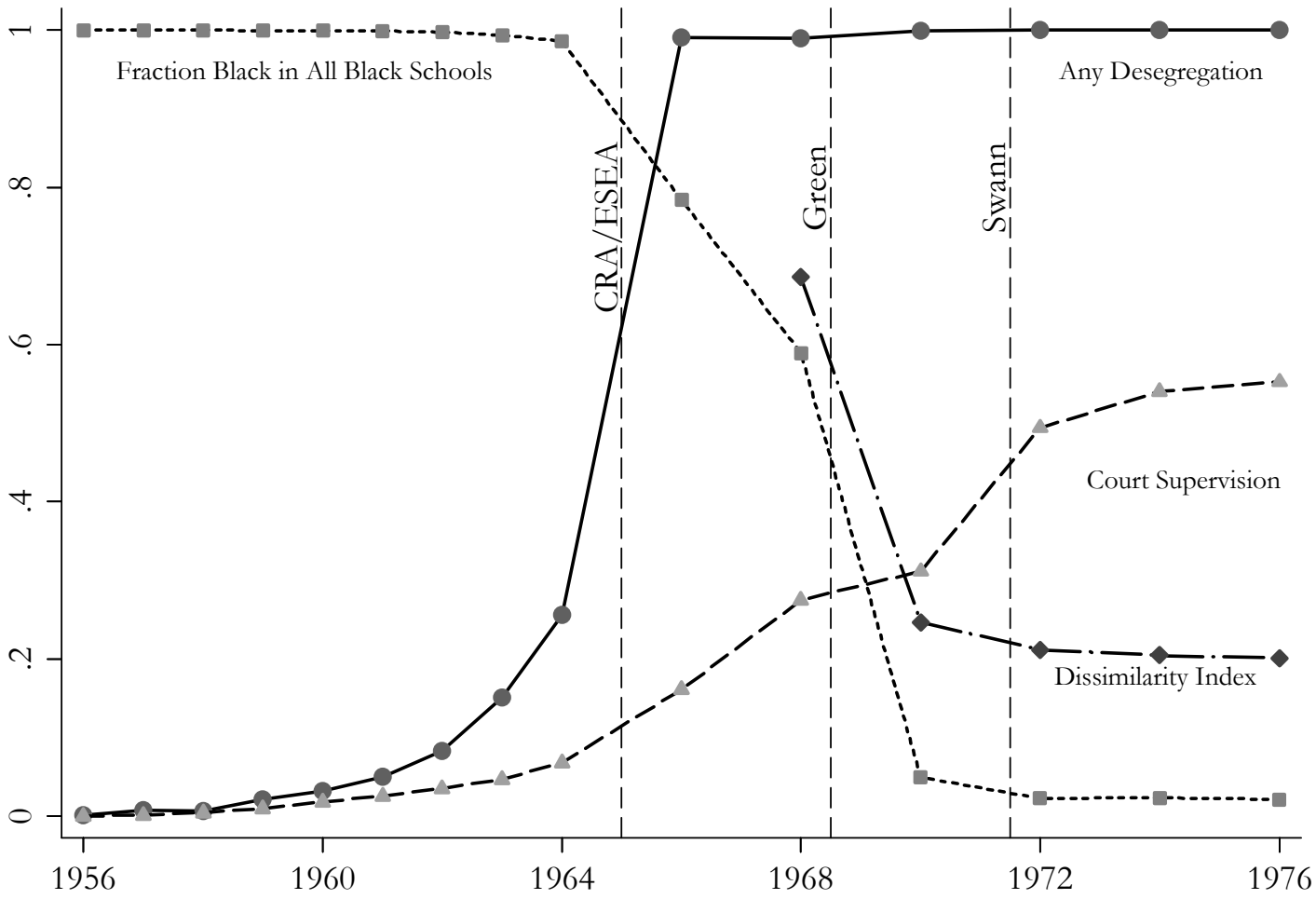
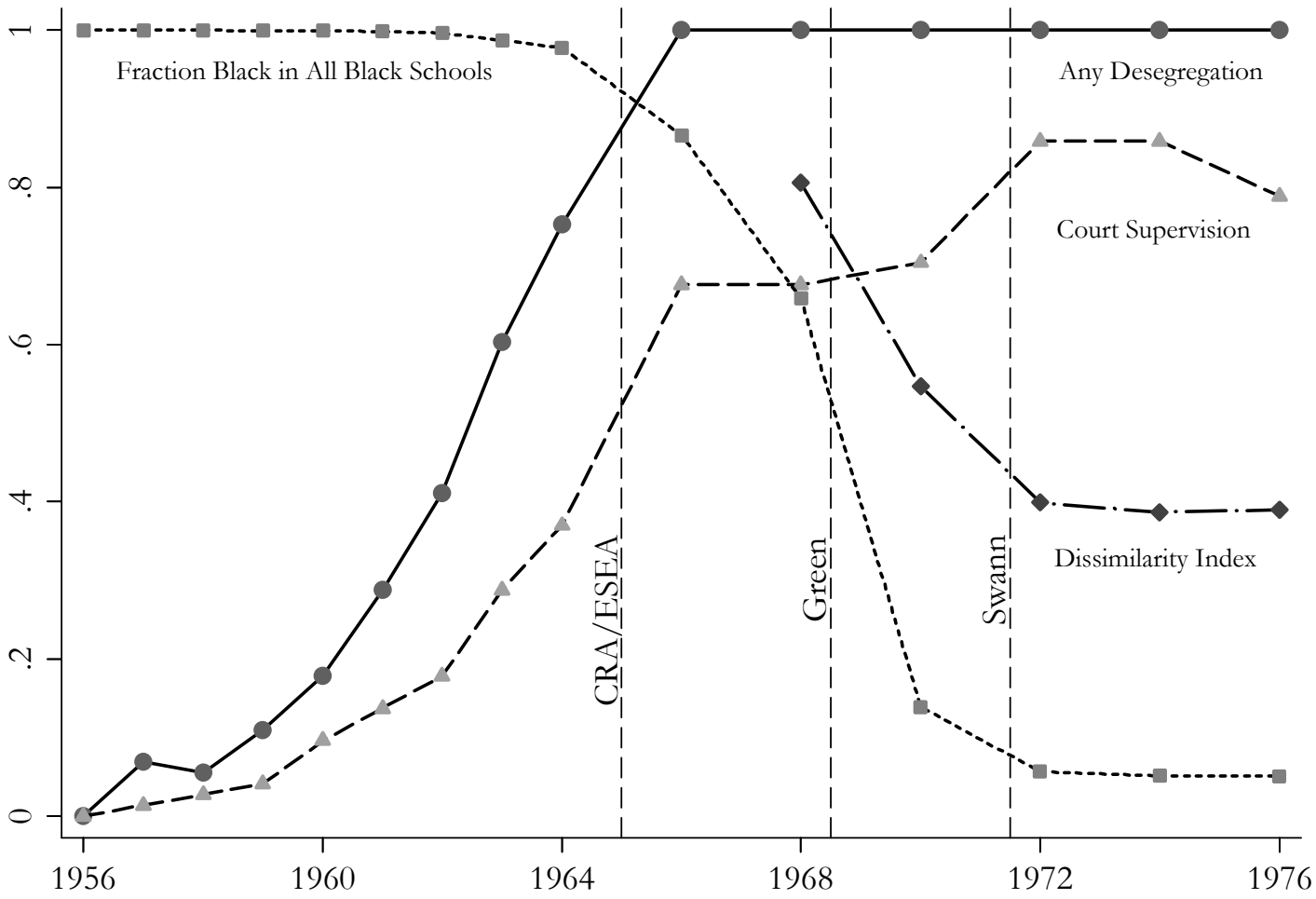
Figure 1. School Desegregation and Court Supervision: All Southern School Districts



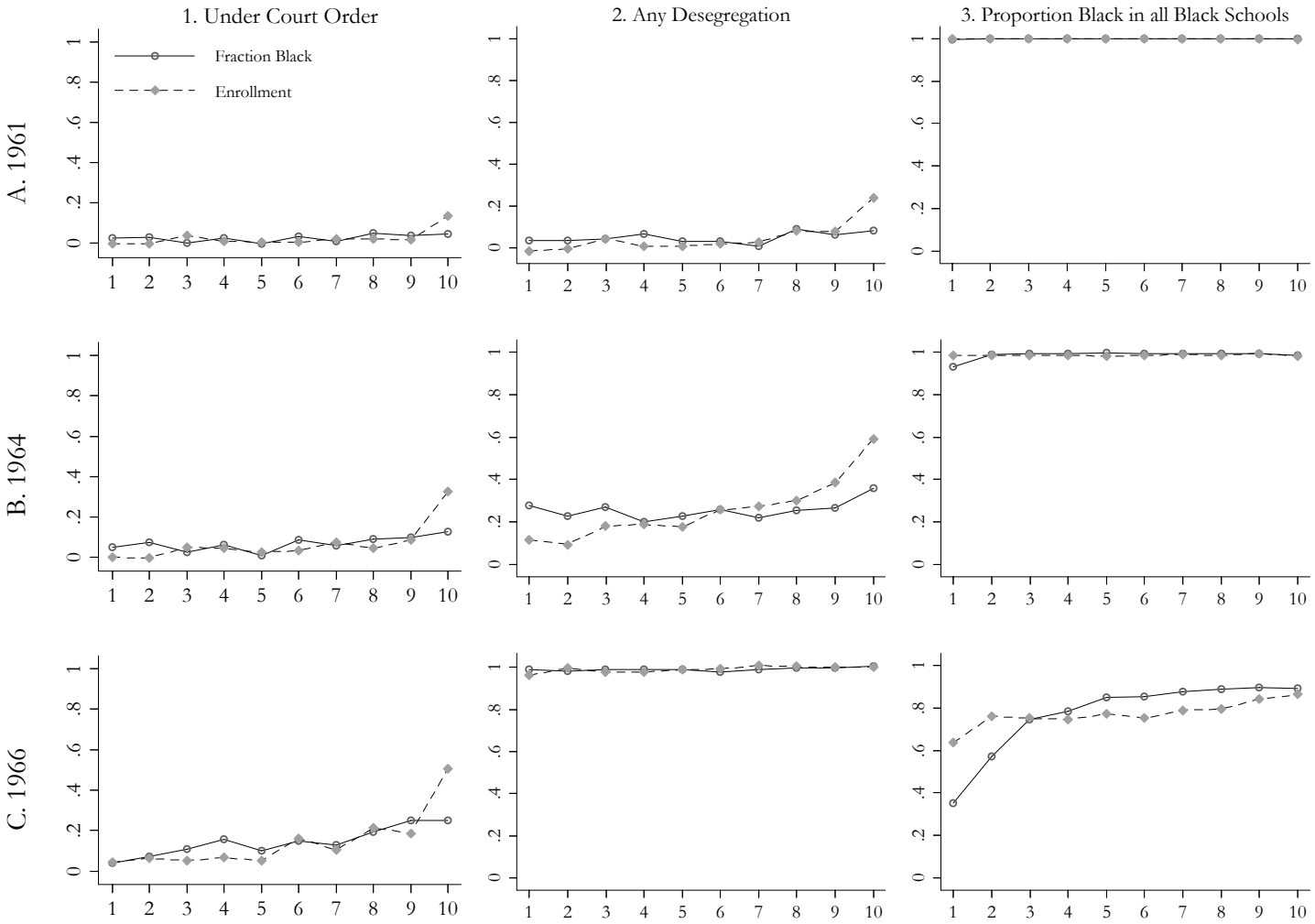
Notes: Authors' calculations based on Southern Education Reporting Service, Department of Health Education and Welfare, and Office of Civil Rights data. Figures are weighted by school district. See Appendix A for details.

Figure 2. Desegregation and Court Supervision: Large Southern School Districts



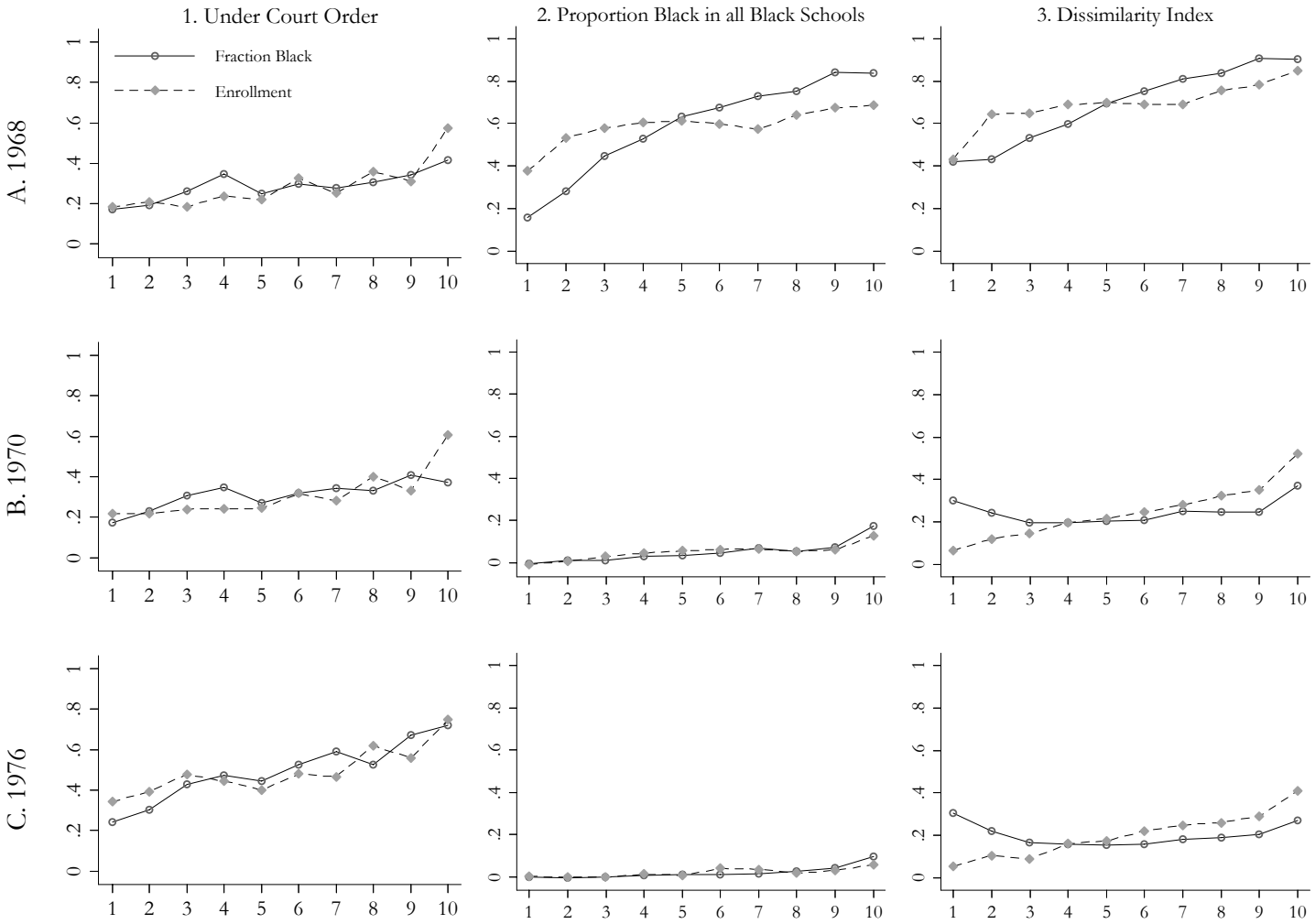
Notes: Authors' calculations based on Southern Education Reporting Service, Department of Health Education and Welfare, and Office of Civil Rights data. Sample includes 71 districts averaging enrollment of more than 15,000 students in 1960-1963. Figures are weighted by school district.

Figure 3. Desegregation Outcomes by Decile of Enrollment and Fraction Black, 1961-1966



Notes: Each panel presents results from a single regression with the outcome indicated as the dependent variable and fraction poor, urban, quintiles of Thurmond vote share, and deciles in fraction black and enrollment as explanatory variables (Equation 1); state fixed effects are also included. Graphs present the coefficients on the fraction black and enrollment deciles. Coefficients have been rescaled so that the average of the coefficients is equal to the average of the dependent variable in the sample. See tables in Appendix C for all the coefficients and standard errors.

Figure 4. Desegregation Outcomes by Decile of Enrollment and Fraction Black, 1968-1976



Notes: See notes for Figure 3.

Table 1 - Comparison of Southern, Border, and Other States

Variable	Sampled States	All South	Border	Other
Fraction of 5-17 Year Olds in 1960:				
Black	0.307	0.309	0.242	0.083
	(0.075)	(0.111)	(0.252)	(0.024)
Living in Families with <$2000 Annual Income	0.234	0.243	0.139	0.081
	(0.055)	(0.077)	(0.056)	(0.013)
Residing in Urban Areas	0.492	0.501	0.663	0.757
	(0.116)	(0.140)	(0.245)	(0.105)
Preferences for Segregation				
Share of votes cast for Thurmond, 1948	0.297	0.335		
	(0.227)	(0.284)		
Racial Segregation of Public Schools:				
Fraction of Blacks in All-Black Schools, 1964	0.984	0.979	0.431	-
	(0.019)	(0.027)	(0.190)	
Share of Black 5-17 Year Olds in 1960:				
in Southern and Border Region	0.679	0.86	0.14	-
in United States	0.451	0.571	0.093	0.336
Number of States	9	11	7	30

Notes: Data are taken from the integrated public-use microdata sample of the 1960 Census (Ruggles et al., 2004), Southern Education Reporting Service (1967), and U.S. Senate (1965). (See Appendix Table A for further description of sources.) Underlying data are aggregated to the state level and statistics are weighted by the number of blacks aged 5 to 17 in the state in 1960. The sampled states are Alabama, Arkansas, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, and Virginia; the South includes these states as well as Mississippi and Texas. Border states are Delaware, Kentucky, Maryland, Missouri, Oklahoma, Washington, D.C., and West Virginia.

Table 2 - Sample Characteristics

	Mean	SD	Minimum	Maximum	N
	District Characteristics				
Enrollment, early 1960s (ENROLL)	7,714	14,366	101	205,363	942
Fraction black, early 1960s (FRACBLACK)	0.358	0.201	0.031	0.979	942
Fraction poor, early 1960s (FRACPOOR)	0.312	0.167	0	0.872	942
Majority urban, 1969 (URBAN)	0.342	0.475	0	1	942
Thurmond vote share (percent of county), 1948 (THURMOND)	29.1	23.2	0.1	98.2	942
	Segregation Measures				
Fraction black in all-black schools, 1964	0.986	0.065	0	1	925
Fraction black in all-black schools, 1968	0.588	0.374	0	1	877
Fraction black in all-black schools, 1976	0.021	0.090	0	0.891	838
Dissimilarity Index, 1968	0.688	0.290	0	1	877
Dissimilarity Index, 1976	0.201	0.173	0	0.891	838

Notes: Sample consists of all districts at least 3% black in the early 1960s with non-missing desegregation data in at least one year after 1965. See text and Appendix A for further details, including sources.

Table 3 - Predictors of Court Involvement and School Segregation, 1961

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	DESEG (=1)	FRACALLBLACK
Mean of dependent variable	0.0255	0.0499	0.999
s.d. of dependent variable	0.158	0.218	0.00629
URBAN	0.0231**	0.0427***	-0.00102*
	(0.011)	(0.015)	(0.00053)
FRACPOOR	-0.0437	-0.108**	0.0000137
	(0.034)	(0.045)	(0.0012)
FRACBLACK: 2nd decile	0.00789	-0.00280	0.00221
	(0.034)	(0.040)	(0.0017)
FRACBLACK: 3rd decile	-0.0240	0.00826	0.00236
	(0.028)	(0.035)	(0.0016)
FRACBLACK: 4th decile	0.00259	0.0303	0.00225
	(0.030)	(0.039)	(0.0016)
FRACBLACK: 5th decile	-0.0285	-0.00564	0.00315*
	(0.026)	(0.038)	(0.0016)
FRACBLACK: 6th decile	0.00918	-0.00452	0.00313*
	(0.031)	(0.034)	(0.0016)
FRACBLACK: 7th decile	-0.0146	-0.0268	0.00320**
	(0.026)	(0.031)	(0.0016)
FRACBLACK: 8th decile	0.0248	0.0518	0.00300*
	(0.035)	(0.041)	(0.0017)
FRACBLACK: 9th decile	0.0133	0.0244	0.00325*
	(0.032)	(0.036)	(0.0018)
FRACBLACK: 10th decile	0.0212	0.0461	0.00266
	(0.029)	(0.034)	(0.0017)
ENROLL: 2nd decile	-0.000654	0.00993	0.0000725
	(0.013)	(0.018)	(0.00060)
ENROLL: 3rd decile	0.0420*	0.0586**	-0.00117
	(0.023)	(0.028)	(0.0012)
ENROLL: 4th decile	0.0109	0.0228	0.000491
	(0.020)	(0.025)	(0.00052)
ENROLL: 5th decile	0.00859	0.0239	0.000704
	(0.019)	(0.026)	(0.00060)
ENROLL: 6th decile	0.00623	0.0336	0.000166
	(0.015)	(0.025)	(0.00061)
ENROLL: 7th decile	0.0232	0.0424*	-0.000108
	(0.016)	(0.024)	(0.00052)
ENROLL: 8th decile	0.0239	0.0955***	-0.00108
	(0.017)	(0.035)	(0.00075)
ENROLL: 9th decile	0.0190	0.0910***	0.000334
	(0.020)	(0.034)	(0.00073)
ENROLL: 10th decile	0.139***	0.254***	-0.00149
	(0.038)	(0.051)	(0.0013)
FRACTHURMOND: 2nd quintile	-0.0371	-0.0671**	0.00193**
	(0.023)	(0.031)	(0.00092)
FRACTHURMOND: 3rd quintile	-0.0453**	-0.103***	0.00143*
	(0.023)	(0.031)	(0.00086)
FRACTHURMOND: 4th quintile	-0.0547***	-0.0978***	0.00137*
	(0.021)	(0.029)	(0.00071)
FRACTHURMOND: 5th quintile	-0.0651***	-0.0940***	0.000998
	(0.024)	(0.033)	(0.00074)

AR	0.0164	0.0738***	-0.000707*
	(0.015)	(0.027)	(0.00042)
FL	-0.0311	0.00577	-0.000204
	(0.020)	(0.031)	(0.00052)
GA	-0.0131	-0.00322	-0.000527
	(0.012)	(0.017)	(0.00032)
LA	0.00212	-0.0179	-0.0000849
	(0.019)	(0.023)	(0.00037)
NC	-0.0489***	-0.00479	0.000155
	(0.017)	(0.032)	(0.00051)
SC	0.00507	0.00270	-0.000438
	(0.0094)	(0.014)	(0.00028)
TN	0.0141	0.0401	-0.000158
	(0.028)	(0.032)	(0.0011)
VA	0.0992***	0.107***	-0.00431***
	(0.033)	(0.037)	(0.0016)
Constant	0.0388	0.0413	0.997***
	(0.029)	(0.038)	(0.0017)
N	942	942	939
R^2	0.17	0.22	0.11

Notes: See text for description of sources, variables, and specifications. Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, ** significant at 10% level

Table 4a - Effects of Urbanicity, Poverty, and Support for Thrumond on Court Supervision and Desegregation, 1961-1976

Year	1961	1964	1966	1968	1970	1976
Panel A			Dependent Variable: Under Court Order (=1)			
Mean of dependent variable	0.0255	0.0679	0.144	0.286	0.310	0.493
s.d. of dependent variable	0.158	0.252	0.352	0.452	0.463	0.500
URBAN	0.0231**	0.0104	0.0597**	0.0542**	0.0348	0.0387
	(0.011)	(0.016)	(0.024)	(0.026)	(0.027)	(0.032)
FRACPOOR	-0.0437	-0.0840	-0.162*	-0.0922	0.0637	0.205*
	(0.034)	(0.055)	(0.090)	(0.098)	(0.11)	(0.12)
FRACTHURMOND: 2nd quintile	-0.0371	-0.00216	-0.00985	-0.000492	-0.0127	0.00684
	(0.023)	(0.033)	(0.034)	(0.039)	(0.041)	(0.049)
FRACTHURMOND: 3rd quintile	-0.0453**	0.00410	0.0258	0.0319	0.00980	0.0215
	(0.023)	(0.034)	(0.040)	(0.045)	(0.046)	(0.051)
FRACTHURMOND: 4th quintile	-0.0547***	-0.0226	0.0150	0.0708	0.0594	0.0905
	(0.021)	(0.032)	(0.043)	(0.053)	(0.053)	(0.058)
FRACTHURMOND: 5th quintile	-0.0651***	-0.0680*	0.0146	0.176***	0.187***	0.0951
	(0.024)	(0.039)	(0.058)	(0.060)	(0.062)	(0.064)
N	942	942	942	846	917	939
R^2	0.17	0.18	0.35	0.58	0.51	0.43
Panel B		Dependent variable: Desegregated (=1)				
Mean of dependent variable	0.0499	0.256	0.991			
s.d. of dependent variable	0.218	0.437	0.0969			
URBAN	0.0427***	0.121***	0.00346			
	(0.015)	(0.029)	(0.0065)			
FRACPOOR	-0.108**	-0.419***	-0.0331			
	(0.045)	(0.096)	(0.037)			
FRACTHURMOND: 2nd quintile	-0.0671**	-0.0716	0.0106			
	(0.031)	(0.049)	(0.0094)			
FRACTHURMOND: 3rd quintile	-0.103***	-0.0402	0.00392			
	(0.031)	(0.046)	(0.012)			
FRACTHURMOND: 4th quintile	-0.0978***	-0.0560	-0.0285			
	(0.029)	(0.050)	(0.025)			
FRACTHURMOND: 5th quintile	-0.0940***	-0.0520	-0.00581			
	(0.033)	(0.057)	(0.027)			
N	942	941	845			
R^2	0.22	0.46	0.06			

Notes: All specifications include the full vectors of decile dummies for fraction black and enrollment and state fixed effects; estimates of the complete specification are shown in Appendix Tables C1 through C5. Robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Table 4b - Effects of Urbanicity, Poverty, and Support for Thurmond on Desegregation, 1961-1976

Year	1961	1964	1966	1968	1970	1976
Panel A		Dependent variable: Fraction of black students in all-black schools				
Mean of dependent variable	0.999	0.986	0.771	0.588	0.0495	0.0212
s.d. of dependent variable	0.00629	0.0651	0.315	0.374	0.150	0.0903
URBAN	-0.00102*	-0.0115**	-0.0334*	0.0135	0.00464	0.00589
	(0.00053)	(0.0052)	(0.018)	(0.022)	(0.013)	(0.0050)
FRACPOOR	0.0000137	0.0329*	0.0816	0.188**	-0.0304	0.0283
	(0.0012)	(0.018)	(0.056)	(0.088)	(0.052)	(0.028)
FRACTHURMOND: 2nd quintile	0.00193**	0.00903	0.0874***	0.0550*	-0.00985	0.00428
	(0.00092)	(0.0088)	(0.029)	(0.030)	(0.011)	(0.0051)
FRACTHURMOND: 3rd quintile	0.00143*	-0.00196	0.0913***	0.0984***	-0.00569	-0.00305
	(0.00086)	(0.015)	(0.030)	(0.030)	(0.012)	(0.0053)
FRACTHURMOND: 4th quintile	0.00137*	0.00216	0.127***	0.136***	-0.0199	-0.0157
	(0.00071)	(0.011)	(0.034)	(0.036)	(0.019)	(0.0098)
FRACTHURMOND: 5th quintile	0.000998	-0.00331	0.115***	0.101**	0.0125	0.00535
	(0.00074)	(0.012)	(0.036)	(0.044)	(0.026)	(0.015)
N	939	925	797	877	912	838
R^2	0.11	0.19	0.63	0.61	0.17	0.23
Panel B				Dependent variable: Dissimilarity index		
Mean of dependent variable				0.688	0.247	0.201
s.d. of dependent variable				0.290	0.210	0.173
URBAN				0.0200	0.00709	-0.0366***
				(0.016)	(0.014)	(0.0096)
FRACPOOR				0.135*	-0.0957*	-0.0130
				(0.071)	(0.050)	(0.035)
FRACTHURMOND: 2nd quintile				0.0484**	-0.0139	0.00138
				(0.025)	(0.015)	(0.015)
FRACTHURMOND: 3rd quintile				0.0622**	-0.0173	-0.0155
				(0.026)	(0.019)	(0.015)
FRACTHURMOND: 4th quintile				0.0909***	-0.0248	-0.0166
				(0.029)	(0.022)	(0.018)
FRACTHURMOND: 5th quintile				0.0711**	-0.00292	-0.00943
				(0.035)	(0.028)	(0.023)
N				877	912	838
R^2				0.63	0.49	0.56

Notes: All specifications include the full vectors of decile dummies for fraction black and enrollment and state fixed effects; estimates of the complete specification are shown in Appendix Tables C1 through C5. Robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Appendix Table A1 - District Characteristics by Year and Sample

	1961	1964	1966	1968	1970	1976
	Observed in raw data with all pre-existing characteristics:					
COURTORDER	0.024	0.060	0.116	0.261	0.293	0.537
DESEG	0.049	0.250	0.982	0.991	0.999	1.000
FRACALLBLACKSCH	0.997	0.968	0.710	0.526	0.046	0.020
DISSIM				0.659	0.264	0.210
ENROLL	6,961	6,961	7,345	7,672	7,475	7,814
FRACBLACK	0.304	0.304	0.308	0.319	0.330	0.361
FRACPOOR	0.314	0.313	0.309	0.309	0.312	0.320
URBAN	0.312	0.311	0.324	0.336	0.322	0.337
N (DESEG)	1,133	1,132	933	985	1,015	896
N (FRACALLBL, DISSIM)	1,130	1,113	904	985	1,015	896
	Satisfies sample criteria:					
COURTORDER	0.025	0.068	0.148	0.287	0.310	0.545
DESEG	0.050	0.256	0.991	0.990	0.999	1.000
FRACALLBLACKSCH	0.999	0.986	0.771	0.588	0.050	0.021
DISSIM				0.688	0.247	0.201
ENROLL	7,714	7,716	8,124	8,035	7,778	8,052
FRACBLACK	0.358	0.358	0.350	0.357	0.363	0.383
FRACPOOR	0.312	0.312	0.304	0.310	0.313	0.323
URBAN	0.342	0.341	0.356	0.352	0.341	0.339
N (DESEG)	942	941	845	880	912	838
N (FRACALLBL, DISSIM)	939	925	797	877	912	838

Appendix Table A2 - Number of Districts by State, by Year and Dependent Variable

	1961	1964	1966	1968	1970	1976
	COURTORDER observations, with all pre-existing characteristics:					
Alabama	100	100	74	94	93	97
Arkansas	143	142	118	124	136	128
Florida	67	67	64	62	66	58
Georgia	166	166	142	131	165	158
Lousiana	65	65	51	55	65	65
North Carolina	124	124	122	123	121	109
South Carolina	92	92	91	81	91	91
Tennessee	80	80	80	75	77	56
Virginia	105	105	103	97	98	76
	DESEG and DISSIM observations, with all pre-existing characteristics:					
	DESEG	DESEG	DESEG	DISSIM	DISSIM	DISSIM
Alabama	100	100	74	95	93	97
Arkansas	143	142	118	130	136	128
Florida	67	67	64	63	66	58
Georgia	166	166	142	148	165	158
Lousiana	65	65	51	58	65	65
North Carolina	124	124	122	123	121	109
South Carolina	92	92	91	88	91	91
Tennessee	80	80	80	75	77	56
Virginia	105	105	103	100	98	76
	FRACALLBLACKSCH observations, with all pre-existing characteristics:					
Alabama	100	100	65	95	93	97
Arkansas	143	142	110	130	136	128
Florida	67	67	61	63	66	58
Georgia	166	166	131	148	165	158
Lousiana	65	65	49	57	65	65
North Carolina	121	116	120	123	121	109
South Carolina	92	89	88	87	91	91
Tennessee	80	78	80	75	77	56
Virginia	105	102	93	99	98	76

Appendix Table B1 - Cutpoints of deciles of pre-existing district fraction black and enrollment

	(1)	(2)	(3)	(4)
	Minimum	Maximum	Minimum	Maximum
Decile	Fraction black, early 1960s		Enrollment, early 1960s	
1st	0.031	0.095	101	1112
2nd	0.098	0.159	1121	1739
3rd	0.160	0.225	1740	2427
4th	0.225	0.279	2431	3185
5th	0.279	0.342	3203	4030
6th	0.342	0.407	4031	5055
7th	0.408	0.466	5071	6450
8th	0.467	0.549	6451	8485
9th	0.550	0.638	8502	13668
10th	0.642	0.979	13691	205363

Appendix Table B2 - Cutpoints of quintiles of county Thurmond vote share in 1948

	(1)	(2)
	Minimum	Maximum
Quintile	Thurmond vote share (percent), 1948	
1st	0.1	9.4
2nd	9.5	16.2
3rd	16.3	28.2
4th	28.3	48.2
5th	48.3	98.2

Appendix Table C1 - Predictors of Court Involvement and School Segregation, 1964

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	DESEG (=1)	FRACALLBLACK
Mean of dependent variable	0.0679	0.256	0.986
s.d. of dependent variable	0.252	0.437	0.0651
URBAN	0.0104	0.121***	-0.0115**
	(0.016)	(0.029)	(0.0052)
FRACPOOR	-0.0840	-0.419***	0.0329*
	(0.055)	(0.096)	(0.018)
FRACBLACK: 2nd decile	0.0244	-0.0498	0.0557***
	(0.044)	(0.059)	(0.020)
FRACBLACK: 3rd decile	-0.0256	-0.00602	0.0620***
	(0.040)	(0.060)	(0.020)
FRACBLACK: 4th decile	0.00959	-0.0774	0.0606***
	(0.042)	(0.059)	(0.020)
FRACBLACK: 5th decile	-0.0410	-0.0497	0.0665***
	(0.038)	(0.058)	(0.019)
FRACBLACK: 6th decile	0.0363	-0.0200	0.0620***
	(0.040)	(0.058)	(0.019)
FRACBLACK: 7th decile	0.00777	-0.0569	0.0618***
	(0.039)	(0.058)	(0.019)
FRACBLACK: 8th decile	0.0403	-0.0247	0.0608***
	(0.045)	(0.061)	(0.018)
FRACBLACK: 9th decile	0.0471	-0.0112	0.0610***
	(0.042)	(0.061)	(0.018)
FRACBLACK: 10th decile	0.0746*	0.0793	0.0541***
	(0.044)	(0.066)	(0.017)
ENROLL: 2nd decile	-0.000305	-0.0210	-0.0000852
	(0.017)	(0.038)	(0.0076)
ENROLL: 3rd decile	0.0505**	0.0660	-0.00203
	(0.025)	(0.046)	(0.0081)
ENROLL: 4th decile	0.0449*	0.0739	-0.00126
	(0.026)	(0.047)	(0.0087)
ENROLL: 5th decile	0.0273	0.0620	-0.00582
	(0.023)	(0.048)	(0.012)
ENROLL: 6th decile	0.0334	0.142***	-0.00201
	(0.025)	(0.052)	(0.0092)
ENROLL: 7th decile	0.0749***	0.159***	0.00329
	(0.027)	(0.052)	(0.0069)
ENROLL: 8th decile	0.0464*	0.187***	-0.00220
	(0.026)	(0.058)	(0.0094)
ENROLL: 9th decile	0.0858***	0.270***	0.00650
	(0.032)	(0.063)	(0.0096)
ENROLL: 10th decile	0.328***	0.477***	-0.00465
	(0.049)	(0.060)	(0.010)
FRACTHURMOND: 2nd quintile	-0.00216	-0.0716	0.00903
	(0.033)	(0.049)	(0.0088)
FRACTHURMOND: 3rd quintile	0.00410	-0.0402	-0.00196
	(0.034)	(0.046)	(0.015)
FRACTHURMOND: 4th quintile	-0.0226	-0.0560	0.00216
	(0.032)	(0.050)	(0.011)
FRACTHURMOND: 5th quintile	-0.0680*	-0.0520	-0.00331
	(0.039)	(0.057)	(0.012)

AR	-0.0567*	0.111**	-0.00607
	(0.032)	(0.049)	(0.0055)
FL	-0.0954**	0.105*	-0.00224
	(0.044)	(0.058)	(0.0045)
GA	-0.0964***	-0.00586	-0.00243
	(0.034)	(0.043)	(0.0035)
LA	-0.0685*	-0.108**	-0.00179
	(0.039)	(0.045)	(0.0034)
NC	-0.0888*	0.377***	-0.0227*
	(0.045)	(0.066)	(0.012)
SC	-0.0170	0.107**	-0.00497*
	(0.033)	(0.043)	(0.0027)
TN	0.0294	0.321***	-0.0411**
	(0.054)	(0.067)	(0.017)
VA	0.0396	0.547***	-0.0386***
	(0.049)	(0.063)	(0.0082)
Constant	0.0654	0.105	0.937***
	(0.044)	(0.072)	(0.017)
N	942	941	925
R^2	0.18	0.46	0.19

Notes: Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Appendix Table C2 - Predictors of Court Involvement and School Segregation, 1966

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	DESEG (=1)	FRACALLBLACK
Mean of dependent variable	0.144	0.991	0.771
s.d. of dependent variable	0.352	0.0969	0.315
URBAN	0.0597**	0.00346	-0.0334*
	(0.024)	(0.0065)	(0.018)
FRACPOOR	-0.162*	-0.0331	0.0816
	(0.090)	(0.037)	(0.056)
FRACBLACK: 2nd decile	0.0312	-0.0101	0.223***
	(0.042)	(0.012)	(0.044)
FRACBLACK: 3rd decile	0.0683	-0.000184	0.394***
	(0.046)	(0.0051)	(0.041)
FRACBLACK: 4th decile	0.118**	-0.000341	0.435***
	(0.048)	(0.0062)	(0.039)
FRACBLACK: 5th decile	0.0622	-0.00273	0.501***
	(0.046)	(0.011)	(0.038)
FRACBLACK: 6th decile	0.110**	-0.0124	0.504***
	(0.046)	(0.016)	(0.038)
FRACBLACK: 7th decile	0.0873*	-0.00144	0.527***
	(0.046)	(0.016)	(0.038)
FRACBLACK: 8th decile	0.154***	0.00437	0.540***
	(0.051)	(0.012)	(0.040)
FRACBLACK: 9th decile	0.213***	0.00642	0.548***
	(0.054)	(0.014)	(0.040)
FRACBLACK: 10th decile	0.210***	0.0141	0.541***
	(0.053)	(0.025)	(0.041)
ENROLL: 2nd decile	0.0207	0.0322	0.123***
	(0.035)	(0.022)	(0.043)
ENROLL: 3rd decile	0.0105	0.0150	0.114***
	(0.033)	(0.029)	(0.044)
ENROLL: 4th decile	0.0246	0.0137	0.110**
	(0.038)	(0.028)	(0.043)
ENROLL: 5th decile	0.00943	0.0254	0.135***
	(0.037)	(0.028)	(0.045)
ENROLL: 6th decile	0.121**	0.0294	0.115**
	(0.047)	(0.028)	(0.049)
ENROLL: 7th decile	0.0610	0.0450*	0.152***
	(0.045)	(0.025)	(0.044)
ENROLL: 8th decile	0.170***	0.0400	0.158***
	(0.051)	(0.025)	(0.045)
ENROLL: 9th decile	0.145***	0.0375	0.205***
	(0.050)	(0.025)	(0.044)
ENROLL: 10th decile	0.466***	0.0363	0.227***
	(0.059)	(0.026)	(0.047)
FRACTHURMOND: 2nd quintile	-0.00985	0.0106	0.0874***
	(0.034)	(0.0094)	(0.029)
FRACTHURMOND: 3rd quintile	0.0258	0.00392	0.0913***
	(0.040)	(0.012)	(0.030)
FRACTHURMOND: 4th quintile	0.0150	-0.0285	0.127***
	(0.043)	(0.025)	(0.034)
FRACTHURMOND: 5th quintile	0.0146	-0.00581	0.115***
	(0.058)	(0.027)	(0.036)

AR	-0.0385	-0.0103	-0.109***
	(0.059)	(0.014)	(0.037)
FL	0.00686	-0.0232	-0.0176
	(0.066)	(0.015)	(0.039)
GA	-0.0919*	-0.0535*	-0.0170
	(0.053)	(0.028)	(0.033)
LA	0.387***	-0.0555*	-0.0239
	(0.072)	(0.033)	(0.027)
NC	-0.0909	-0.0287	-0.0617
	(0.064)	(0.022)	(0.042)
SC	-0.102**	-0.0120	-0.0557**
	(0.050)	(0.0099)	(0.026)
TN	0.0967	-0.0182	-0.267***
	(0.072)	(0.016)	(0.044)
VA	0.0223	-0.0279	-0.199***
	(0.069)	(0.019)	(0.042)
Constant	-0.0366	1.002***	0.214***
	(0.075)	(0.029)	(0.056)
N	942	845	797
R^2	0.35	0.06	0.63

Notes: Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Appendix Table C3 - Predictors of Court Involvement and School Segregation, 1968

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	FRACALLBLACK	DISSIM
Mean of dependent variable	0.286	0.588	0.688
s.d. of dependent variable	0.452	0.374	0.290
URBAN	0.0542**	0.0135	0.0200
	(0.026)	(0.022)	(0.016)
FRACPOOR	-0.0922	0.188**	0.135*
	(0.098)	(0.088)	(0.071)
FRACBLACK: 2nd decile	0.0241	0.122***	0.00867
	(0.046)	(0.035)	(0.028)
FRACBLACK: 3rd decile	0.0905*	0.289***	0.111***
	(0.050)	(0.034)	(0.028)
FRACBLACK: 4th decile	0.177***	0.370***	0.178***
	(0.050)	(0.037)	(0.029)
FRACBLACK: 5th decile	0.0798	0.475***	0.272***
	(0.049)	(0.036)	(0.028)
FRACBLACK: 6th decile	0.127***	0.517***	0.331***
	(0.047)	(0.038)	(0.030)
FRACBLACK: 7th decile	0.106**	0.574***	0.388***
	(0.052)	(0.036)	(0.029)
FRACBLACK: 8th decile	0.134**	0.596***	0.414***
	(0.052)	(0.042)	(0.032)
FRACBLACK: 9th decile	0.173***	0.684***	0.486***
	(0.051)	(0.040)	(0.034)
FRACBLACK: 10th decile	0.247***	0.682***	0.483***
	(0.061)	(0.048)	(0.039)
ENROLL: 2nd decile	0.0245	0.156***	0.213***
	(0.051)	(0.052)	(0.044)
ENROLL: 3rd decile	0.000384	0.203***	0.216***
	(0.050)	(0.049)	(0.044)
ENROLL: 4th decile	0.0547	0.228***	0.257***
	(0.055)	(0.046)	(0.041)
ENROLL: 5th decile	0.0359	0.238***	0.266***
	(0.052)	(0.049)	(0.044)
ENROLL: 6th decile	0.144**	0.222***	0.260***
	(0.057)	(0.046)	(0.041)
ENROLL: 7th decile	0.0678	0.197***	0.257***
	(0.058)	(0.048)	(0.041)
ENROLL: 8th decile	0.175***	0.264***	0.322***
	(0.060)	(0.047)	(0.042)
ENROLL: 9th decile	0.127**	0.298***	0.350***
	(0.059)	(0.048)	(0.042)
ENROLL: 10th decile	0.390***	0.310***	0.417***
	(0.068)	(0.051)	(0.044)
FRACTHURMOND: 2nd quintile	-0.000492	0.0550*	0.0484**
	(0.039)	(0.030)	(0.025)
FRACTHURMOND: 3rd quintile	0.0319	0.0984***	0.0622**
	(0.045)	(0.030)	(0.026)
FRACTHURMOND: 4th quintile	0.0708	0.136***	0.0909***
	(0.053)	(0.036)	(0.029)
FRACTHURMOND: 5th quintile	0.176***	0.101**	0.0711**
	(0.060)	(0.044)	(0.035)

AR	-0.773***	-0.153***	-0.151***
	(0.050)	(0.041)	(0.031)
FL	-0.684***	-0.109**	-0.0738**
	(0.062)	(0.047)	(0.034)
GA	-0.785***	-0.0322	-0.0261
	(0.048)	(0.037)	(0.028)
LA	-0.152***	-0.0110	-0.0267
	(0.042)	(0.038)	(0.027)
NC	-0.765***	-0.185***	-0.161***
	(0.056)	(0.043)	(0.033)
SC	-0.921***	-0.103***	-0.0778***
	(0.041)	(0.038)	(0.028)
TN	-0.593***	-0.219***	-0.135***
	(0.069)	(0.045)	(0.033)
VA	-0.669***	-0.216***	-0.158***
	(0.063)	(0.044)	(0.034)
Constant	0.646***	-0.0819	0.152***
	(0.073)	(0.062)	(0.051)
N	846	877	877
R^2	0.58	0.61	0.63

Notes: Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Appendix Table C4 - Predictors of Court Involvement and School Segregation, 1970

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	FRACALLBLACK	DISSIM
Mean of dependent variable	0.310	0.0495	0.247
s.d. of dependent variable	0.463	0.150	0.210
URBAN	0.0348	0.00464	0.00709
	(0.027)	(0.013)	(0.014)
FRACPOOR	0.0637	-0.0304	-0.0957*
	(0.11)	(0.052)	(0.050)
FRACBLACK: 2nd decile	0.0598	0.0154	-0.0559***
	(0.048)	(0.011)	(0.021)
FRACBLACK: 3rd decile	0.134**	0.0128	-0.103***
	(0.054)	(0.013)	(0.022)
FRACBLACK: 4th decile	0.175***	0.0338**	-0.102***
	(0.052)	(0.014)	(0.022)
FRACBLACK: 5th decile	0.0995*	0.0355**	-0.0975***
	(0.051)	(0.014)	(0.022)
FRACBLACK: 6th decile	0.148***	0.0490***	-0.0913***
	(0.051)	(0.017)	(0.024)
FRACBLACK: 7th decile	0.172***	0.0737***	-0.0499*
	(0.060)	(0.021)	(0.026)
FRACBLACK: 8th decile	0.158***	0.0566***	-0.0526**
	(0.057)	(0.018)	(0.025)
FRACBLACK: 9th decile	0.236***	0.0764***	-0.0532**
	(0.061)	(0.020)	(0.024)
FRACBLACK: 10th decile	0.201***	0.177***	0.0714**
	(0.060)	(0.032)	(0.034)
ENROLL: 2nd decile	-0.00116	0.0152	0.0568***
	(0.050)	(0.018)	(0.020)
ENROLL: 3rd decile	0.0217	0.0371	0.0823***
	(0.054)	(0.023)	(0.024)
ENROLL: 4th decile	0.0243	0.0531**	0.134***
	(0.053)	(0.024)	(0.024)
ENROLL: 5th decile	0.0263	0.0642**	0.153***
	(0.053)	(0.029)	(0.026)
ENROLL: 6th decile	0.0993*	0.0715***	0.182***
	(0.056)	(0.025)	(0.026)
ENROLL: 7th decile	0.0632	0.0726***	0.216***
	(0.058)	(0.024)	(0.025)
ENROLL: 8th decile	0.184***	0.0624***	0.259***
	(0.063)	(0.024)	(0.025)
ENROLL: 9th decile	0.113*	0.0679***	0.286***
	(0.059)	(0.020)	(0.024)
ENROLL: 10th decile	0.389***	0.137***	0.458***
	(0.068)	(0.026)	(0.030)
FRACTHURMOND: 2nd quintile	-0.0127	-0.00985	-0.0139
	(0.041)	(0.011)	(0.015)
FRACTHURMOND: 3rd quintile	0.00980	-0.00569	-0.0173
	(0.046)	(0.012)	(0.019)
FRACTHURMOND: 4th quintile	0.0594	-0.0199	-0.0248
	(0.053)	(0.019)	(0.022)
FRACTHURMOND: 5th quintile	0.187***	0.0125	-0.00292
	(0.062)	(0.026)	(0.028)

AR	-0.777***	-0.0454	-0.118***
	(0.049)	(0.028)	(0.030)
FL	-0.634***	-0.0654**	-0.104***
	(0.062)	(0.026)	(0.032)
GA	-0.751***	-0.0484*	-0.128***
	(0.046)	(0.028)	(0.028)
LA	-0.210***	0.0186	0.0115
	(0.047)	(0.042)	(0.036)
NC	-0.752***	-0.0770***	-0.149***
	(0.056)	(0.028)	(0.030)
SC	-0.890***	-0.0993***	-0.160***
	(0.051)	(0.030)	(0.028)
TN	-0.589***	-0.0494*	-0.0333
	(0.064)	(0.025)	(0.031)
VA	-0.580***	-0.0536*	-0.106***
	(0.062)	(0.028)	(0.030)
Constant	0.608***	-0.00182	0.252***
	(0.074)	(0.031)	(0.036)
N	917	912	912
R^2	0.51	0.17	0.49

Notes: Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level,* significant at 10% level

Appendix Table C5 - Predictors of Court Involvement and School Segregation, 1976

	(1)	(2)	(3)
Dependent variable	COURTORDER (=1)	FRACALLBLACK	DISSIM
Mean of dependent variable	0.493	0.0212	0.201
s.d. of dependent variable	0.500	0.0903	0.173
URBAN	0.0387	0.00589	-0.0366***
	(0.032)	(0.0050)	(0.0096)
FRACPOOR	0.205*	0.0283	-0.0130
	(0.12)	(0.028)	(0.035)
FRACBLACK: 2nd decile	0.0608	-0.00296	-0.0868***
	(0.048)	(0.0055)	(0.028)
FRACBLACK: 3rd decile	0.186***	0.000428	-0.139***
	(0.057)	(0.0060)	(0.026)
FRACBLACK: 4th decile	0.231***	0.00971	-0.148***
	(0.056)	(0.0079)	(0.026)
FRACBLACK: 5th decile	0.200***	0.0107	-0.151***
	(0.056)	(0.0068)	(0.026)
FRACBLACK: 6th decile	0.283***	0.0137*	-0.147***
	(0.055)	(0.0082)	(0.026)
FRACBLACK: 7th decile	0.348***	0.0143*	-0.126***
	(0.061)	(0.0078)	(0.027)
FRACBLACK: 8th decile	0.283***	0.0286**	-0.118***
	(0.059)	(0.013)	(0.029)
FRACBLACK: 9th decile	0.430***	0.0445***	-0.104***
	(0.062)	(0.014)	(0.029)
FRACBLACK: 10th decile	0.478***	0.0962***	-0.0349
	(0.069)	(0.018)	(0.032)
ENROLL: 2nd decile	0.0496	-0.00413	0.0510***
	(0.062)	(0.0072)	(0.014)
ENROLL: 3rd decile	0.135**	-0.00493	0.0324**
	(0.066)	(0.0077)	(0.015)
ENROLL: 4th decile	0.102	0.0104	0.107***
	(0.066)	(0.0096)	(0.017)
ENROLL: 5th decile	0.0577	0.00563	0.118***
	(0.065)	(0.0081)	(0.016)
ENROLL: 6th decile	0.138**	0.0378**	0.166***
	(0.069)	(0.017)	(0.021)
ENROLL: 7th decile	0.123*	0.0331**	0.194***
	(0.069)	(0.014)	(0.018)
ENROLL: 8th decile	0.276***	0.0154	0.205***
	(0.072)	(0.014)	(0.019)
ENROLL: 9th decile	0.216***	0.0277***	0.236***
	(0.077)	(0.0099)	(0.018)
ENROLL: 10th decile	0.405***	0.0550***	0.353***
	(0.079)	(0.013)	(0.023)
FRACTHURMOND: 2nd quintile	0.00684	0.00428	0.00138
	(0.049)	(0.0051)	(0.015)
FRACTHURMOND: 3rd quintile	0.0215	-0.00305	-0.0155
	(0.051)	(0.0053)	(0.015)
FRACTHURMOND: 4th quintile	0.0905	-0.0157	-0.0166
	(0.058)	(0.0098)	(0.018)
FRACTHURMOND: 5th quintile	0.0951	0.00535	-0.00943
	(0.064)	(0.015)	(0.023)

AR	-0.669***	-0.0794***	-0.135***
	(0.065)	(0.019)	(0.023)
FL	-0.413***	-0.0712***	-0.0897***
	(0.069)	(0.018)	(0.030)
GA	-0.222***	-0.0698***	-0.141***
	(0.049)	(0.019)	(0.023)
LA	-0.157***	-0.0290	0.0196
	(0.043)	(0.028)	(0.028)
NC	-0.610***	-0.0838***	-0.164***
	(0.064)	(0.020)	(0.028)
SC	-0.677***	-0.0724***	-0.132***
	(0.063)	(0.024)	(0.022)
TN	-0.508***	-0.0662***	-0.0465*
	(0.062)	(0.018)	(0.026)
VA	-0.577***	-0.0824***	-0.168***
	(0.063)	(0.019)	(0.026)
Constant	0.409***	0.0332*	0.293***
	(0.082)	(0.019)	(0.033)
N	939	838	838
R^2	0.43	0.23	0.56

Notes: Heteroskedasticity-robust standard errors are in parentheses. *** significant at 1% level, ** significant at 5% level, * significant at 10% level

Data Appendix

I. Sources and Key Variables

Complete citations of all documents referenced below are provided under Data References.

A. Desegregation and Plan Type Data by School District, 1956-1964

For 1956 through 1964, we have hand-entered data on desegregation and plan type from print publications of the Southern Education Reporting Service (SERS), entitled *A Statistical Summary, State By State, of School Segregation-Desegregation in the Southern and Border Area from 1954 to the Present*.[1] These publications give, for all districts desegregated in policy or in practice,[2] the number of blacks attending public school with whites, the total number of black children enrolled in public schools, and whether desegregation was court-ordered or undertaken voluntarily by the local school board. Using these data, we are able to construct three outcome variables: an indicator set to one if the district has a court-ordered plan (*COURTORDER*), an indicator set to one if the district had any blacks enrolled in public schools with whites (*DESEG*), and the fraction of blacks attending all black schools (*FRACALLBLACK*).

For districts not listed in these publications, we assume that *COURTORDER* and *DESEG* are equal to zero and *FRACALLBLACK* is equal to one.[3] It is difficult to assess the credibility of this assumption, since no other agencies collected data on desegregation over the period of interest. SERS data collection strategy is also unclear: according to the 1964 publication, data "were supplied by agencies of the respective states," but the exact procedure is not described. However, since there were such low rates of desegregation during the period, it was most likely not very onerous to collect the data.[4] Two previous uses of SERS data also suggest the credibility of our assumption and the data collected by SERS more generally. First, SERS supplied desegregation data to the U.S. Commission on Civil Rights by contractual agreement (U.S. Commission on Civil Rights, 1966; p. 30). Second, the state-level summaries of desegregation activity are considered the best available data by social scientists and have been previously cited in academic research (e.g., Rosenberg, 1991; Orfield, 2000).

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[1] We use the data presented in the following versions of this publication: April 15, 1957 (for fall 1956), November 1957 (for fall 1957), October 1958 (for fall 1958), May 1960 (for fall 1959), November 1960 (for fall 1960), November 1961 (for fall 1961), November 1962 (for fall 1962), 1963-64 (for fall 1963), and November 1964 (for fall 1964). Prior to 1963-64, the relevant publication is entitled *A Statistical Summary, State-by-State, of Segregation-Desegregation Activity Affecting Southern Schools from 1954 to Present*.

[2] Districts desegregated in policy but not in practice had freedom of choice plans, where blacks' option to apply to white schools was not exercised, or court orders that had not yet taken effect.

[3] We compiled lists of districts by state and year from reports of district finances, enrollment, and other activities published by state departments of education (see Part D of Section I of this Appendix).

[4] High rates of desegregation may be why data collected by SERS for the Border region are less complete. It may also be the reason why SERS relied on a U.S. Office of Education Survey in 1966 (see Section I.B).

B. Plan Type Data by School District, 1966-1976

For December 1966 and September 1967, we have hand-entered information on school districts' compliance with Title VI of the Civil Rights Act from print publications of HEW entitled *Status of Compliance: Public School Districts, Seventeen Southern and Border States*.[5] These publications provide the type of plan submitted and whether the plan was approved by HEW for all school districts. We set *COURTORDER*=1 for districts with approved court-ordered plans and *COURTORDER*=0 for all other districts. For districts where plans were not approved as of the date of publication, information is provided on whether federal funds to the district have been deferred or terminated. We use this information to impute desegregation variables where missing in 1966 through 1968 (see Section III of this Appendix).

After 1968, compliance status is provided simultaneously with computer-coded microdata on enrollment by race in each of a district's schools, described below.[6]

C. Desegregation Data by School District, 1966-1976

For fall 1966, we have hand-entered information on the number of blacks attending public school with any whites from a print publication of SERS entitled *Statistical Summary of School Segregation-Desegregation in the Southern and Border States 1966-1967*.[7] Most of the data reported were from computer printouts provided to SERS by the Office of Education (OE) from its first survey of school desegregation in the South. The universe of the OE survey is not clear from published documents, but presumably included all districts in the South; SERS reports the response rate at 80 percent.[8] SERS correspondents were able to fill in data for some districts where data in the OE survey were missing. For all districts listed in this publication, we set *DESEG*=1 if any blacks are reported to be in school with whites. We also calculate *FRACALLBLACK* by estimating the total number of blacks in the district with fall 1966 district enrollment times fraction black in the district in the early 1960s (see section D for sources); the total number of blacks in the district is not reported in the SERS publication.

For fall 1967, we have hand-entered information on enrollment by race at the school level from a print publication of the Office for Civil Rights (OCR) entitled *Directory, Public Elementary and Secondary Schools in Large School Districts With Enrollment and Instructional Staff, by Race: Fall 1967*. This survey included all districts "in 11 Southern states (AL, AR, FL, GA, LA, MS, NC, SC, TN, TX, VA) … that were in the process of desegregating their schools by voluntary plans or under court order to do so" and all districts with at least 3000 enrollment. The survey also included all districts in Tennessee and Texas, regardless of size or compliance status. We do not use the 1967 data directly in our analysis, but do use it to

[5] We have located no published data on plans submitted to HEW by school district for the 1965-66 year.
[6] For districts included in these samples, we identify districts under court order as those where the "assurance code" is equal to 3 (1968, 1970, and 1972) or where the "sample code" is equal to 6 (1976).
[7] We have located published data on desegregation for the 1965-66 year only for school districts in South Carolina and Tennessee.
[8] Twenty-six percent of districts in the states in our sample, and fourteen percent of districts in our sample, were not listed in the 1966 SERS publication. For some of these districts, we have been able to impute DESEG using data from adjacent years; see Section III.

impute desegregation variables where missing in a few cases in 1966 and 1968. We also use the 1967 data to calculate district fraction black where missing in some cases.

For fall 1968, fall 1970, fall 1972, and fall 1976, we use computer-coded microdata on enrollment by race at the school level from surveys conducted by OCR. These data were housed at UCLA and converted from binary to ASCII format by Ben Denckla and Sarah Reber. Like the 1967 survey, the 1968, 1970, and 1972 surveys included all districts "eliminating racially dual school systems under terms of voluntary plan agreements with [HEW] or under Federal court order regardless of school district enrollment size" and all districts with at least 3000 enrollment. Unlike the 1967 survey, these surveys *did not* include all districts in Tennessee and Texas, regardless of size or compliance status. However, these surveys *did* include smaller districts with the following probabilities: 75% for districts with 1200 to 2999 students, 50% for districts with 600 to 1199 students, 25% for districts with 300-599 students, and 0% for districts with less than 300 students. In addition, the 1968 survey explicitly states that it omitted "ninety-five school districts with Federal funds terminated (as of August 1968) because of non-compliance with Title VI." We use the 1967 compliance data described above to identify districts likely to have been omitted from the survey on this basis. We then impute segregation variables for these districts; the imputation and its consequences for our estimation sample are described in Section III of this Appendix. The 1976 survey included districts of "high interest" to OCR, but otherwise sampled districts to permit estimates representative at the state level. Most districts in the South were sampled, and characteristics of districts are quite similar to those in previous years (see Section III of this Appendix).

Using these school level data collected by OCR, we are able to construct *DESEG*, *FRACALLBLACK*, and the dissimilarity index, *DISSIM*. The formula for the dissimilarity index is

$$DISSIM \equiv \frac{\sum_s TOT_s \left| \%BL_s - \%BL \right|}{2 \times TOT \times \%BL \times (1 - \%BL)}$$

where TOT_s represents total enrollment in school s, TOT is total enrollment in the district, $\%BL_s$ represents percent black in school s, and $\%BL$ is percent black in the district.

D. Data on Public School Enrollment, Urban Share, and Child Poverty by School District

We have gathered data on total enrollment and enrollment by race at the school district level prior to 1964 from annual reports of state departments or superintendents of education. Data were entered from print publications.[9] We define *ENROLL* as average fall enrollment in the district between 1960 and 1963.[10] The years in which enrollment by race are available

[9] Alabama Department of Education (various years), Arkansas Department of Education (various years), Florida State Superintendent of Public Instruction (various years), Georgia State Department of Education (various years), North Carolina Education Association (various years), South Carolina State Department of Education (various years), State Department of Education of Louisiana (various years), Tennessee Department of Education (various years), Virginia State Board of Education (various years).

[10] States report slightly different enrollment concepts in their annual reports, usually fall enrollment or registration, average daily membership or average daily attendance. We use the measure that is most consistently reported within the state over time.

differ by state, so we average district fraction black across all available years between 1960 and 1963 to arrive at *FRACBLACK*. For states where enrollment by race is not provided in these annual reports, we instead use the 1964 and 1966 SERS *Statistical Summaries* (North Carolina), 1960 county-level Census data on the racial breakdown of the population of 5 to 17 year olds (Florida, where district boundaries correspond to counties), or the 1967 OCR *Directory* data (Arkansas).

District-level poverty rates (*FRACPOOR*) are calculated in two steps. First, we estimate the number of Title I eligibles at the school district level as county-level Title I eligibles in 1965-66, times the fraction of the county Title I entitlement for which the district was eligible in 1965-66. County and school district figures were drawn from Congressional reports entitled *Maximum Basic Grants – Elementary and Secondary Education Act of 1965* (published September 1965) and *Notes and Working Papers Concerning the Administration of Programs Authorized Under Title I of Public Law 89-10, The Elementary and Secondary Education Act of 1965 As Amended By Public Law 89-750* (published May 1967), respectively. Because Title I eligibles were primarily determined by the number of 5 to 17 year olds living in families with incomes under $2000 as of the 1960 Census, we normalize this district-level figure with *ENROLL* to arrive at the district-level poverty rate employed in the analysis.[11]

Information on the share of the population residing in urban areas of each school district was primarily taken from the *1970 Census Fourth Count School District Data Tapes*, which we obtained from the National Archives. For all but a handful of districts, this file reports the share of the population living within the approximate boundaries of the school district which is urban according to the 1970 Census of Population. We set *URBAN*=1 for districts with urban population shares of at least 0.5; *URBAN*=0 otherwise. For the districts whose urban share was not reported in these data, we used a second source, the *City and County Data Book Consolidated File, County Data 1947-1977*, which reports urban share in each county (ICPSR Study No. 7736). With the combination of these two sources, it was possible to compute the urban share in each of the missing districts.[12] Urban share at the school district level is not available prior to the 1970 Census.

E. County-Level Variables

County-level covariates come mostly from the *City and County Data Book* (U.S. Department of Commerce, Bureau of the Census, 1978). This is the source for the 1960 unemployment rate, the 1960 population share with at least a high school education, the 1960 employment shares in manufacturing and in agriculture, and the 1965 employment share in the Federal

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[11] This poverty measure is distinct from and predates the federal definition of poverty today.

[12] There are 19 districts in our sample whose urban population share could not be determined from the school district data book alone. Two of these districts' counties were entirely rural according the city and county data book, so it was inferred that these were rural school districts. For the other 17 districts, we imputed the urban share of the district from the "residual" urban share in the district's county (that is, the urban share in the district's county but outside any other observed districts in the county). In 11 cases, this residual area was entirely taken up by one district, so the imputed value should represent the actual urban share in that district. That leaves six other cases in which two districts were assigned the same urban share imputed from county-level information. These are Plum Bayou and Linwood in Jefferson County, Arkansas (urban share = 0.709); Willisville and Emmet in Nevada County, Arkansas (urban share = 0.383); Fountain Hill and Parkdale in Ashley County, Arkansas (urban share = 0.001).

government. The last variable is more accurately 1965 Federal government employment divided by total employment in 1960, the closest year with employment by county.[13]

In the case of four Virginia independent cities, the *City and County Data* book statistics were more geographically disaggregated than our school district data, because they include old counties which later merged to form an independent city.[14] In these cases, we aggregated the data to the larger new unit, weighted by the appropriate denominator (employment or population).

Information on the share voting for Strom Thurmond in the 1948 presidential election comes from the *Electoral Data for Counties in the United States* (Clubb et al., 2006). Again, changes in the geographic definition of Virginia cities had to be dealt with. In the case of Chesapeake City, this involved aggregating two counties, weighted by their total number of votes.[15] In the rest of cases, the problem was either that the area did not exist as of 1948 as an independent city, or perhaps its report was simply missing. In these cases we assigned the vote share for the county that the independent city was in before it split off, or else the vote share from the surrounding county.[16]

F. 1960 Census Microdata

The 1960 Census microdata used in Table 1 was obtained from the Integrated Public Use Microdata Samples (Ruggles et al, 2004).

II. School District Reorganization Activities

School districts both consolidate and, less commonly, split apart during our sample period. We use the state records referenced above to establish a history of these reorganizations. For each year, we construct a crosswalk between the district (id) and the largest unit to which the district is party between 1961 and 1976 (agg_id). We then merge this crosswalk to each data set and collapse key variables (as described below) to the agg_id-year level. Thus, if districts A and B merge in 1970 to form district C, we will observe A and B jointly as one observation, geographically identical to district C, prior to 1970. And if district X splits into districts Y and Z in 1968, we will observe Y and Z jointly as one observation comparable to X beginning in 1968.

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[13] In two Florida counties – Chattahoochee and Houston – this ratio far exceeded 1, so it was assumed that there was data entry error in the numerator or denominator. For these two counties, the public sector (all levels – Federal, state, and local) share of employment in 1960 is substituted in.

[14] The four cases are: (1) Norfolk County and South Norfolk City merged into Chesapeake City; (2) Princess Anne County joined Virginia Beach; (3) Nansemond joined Suffolk City; and (4) Williamsburg combined with James City.

[15] Formed from Norfolk County and South Norfolk City.

[16] Colonial Heights City split from Chesterfield County; Covington City split from Alleghany County; Falls Church split from Fairfax County; South Boston split from Halifax County. There are two other independent cities not in the dataset: Norton, which was assigned the vote share of Carroll County, and Galax which was assigned the vote share of Wise County. Finally, there are two cases in which a city was coded as the county it grew out of, and we used the newer city code. Virginia Beach was originally coded as Princess Anne County, and Suffolk City was originally coded as Nansemond County.

For indicator variables (*DESEG*, *COURTORDER*, *URBAN*), we aggregate to the agg_id-year level as follows. First, we set the value of the indicator for the agg_id equal to one if *any* districts associated with the agg_id are observed to have the indicator set to one. Second, if all districts associated with the agg_id are observed, and none have the indicator set to one, the indicator for the agg_id set to zero. Third, if not all districts associated with the agg_id are observed (as is sometimes the case in the 1966 SERS or OCR desegregation data), and all observed districts have the indicator set to zero, we code the indicator for the agg_id as missing. For example, in the 1966 SERS, we code an agg_id as desegregated (*DESEG*=1) if at least one of its ids is observed with any blacks in school with whites, not desegregated (*DESEG*=0) if all districts are observed and none are desegregated, and missing (*DESEG*=.) if no observed districts are desegregated, but not all districts are observed.

Numerical variables (*FRACALLBLACK*, *DISSIM, ENROLL, FRACBLACK, FRACPOOR*) are coded as missing if not all ids associated with an agg_id are observed in the raw data. Where all districts are observed, we sum up all components of the variables (e.g., number of blacks attending desegregated schools, total enrollment, etc.), and calculate values for the agg_id accordingly. For example, in the 1966 SERS, we first calculate *FRACALLBLACK* by first calculating the number of blacks attending all black schools and the total number of blacks across all districts in the agg_id. We then take the ratio of these sums.

Roughly 7.9 percent of our agg_id-year observations represent multiple districts at some point during the sample (74 aggregated districts out of a maximum of 942 aggregated districts under observation). Our findings are robust to omitting these observations. Tables and graphs limited to districts not re-organized between 1961 and 1976 are available from the authors on request.

III. Sample and Imputation

Our estimation sample consists of all districts for which key the explanatory variables are observed, black share in enrollment is at least 3 percent, and enrollment by race at each of the district's schools is observed in at least one year after 1965. Most districts lost from the sample must be omitted because they are not observed after 1965, not because we lack information on district characteristics.[17]

The first panel of Appendix Table A1 shows characteristics of (aggregated) districts observed in each survey year and with non-missing data on all explanatory variables (*ENROLL*, *FRACBLACK*, *FRACPOOR*, *URBAN*). The second panel of the table shows characteristics for the sub-sample of these districts which are observed in at least one year after 1965 and are at least 3 percent black. Not surprisingly, districts that satisfy these sample criteria have higher black shares on average. They also have a slightly higher

[17] As noted in the text, we lose 208 observations because pre-existing characteristics are not observed. One hundred eighty-five of these districts are in Arkansas, for which data constraints force us to impute fraction black from the 1967 OCR survey described above. The omission of these districts is unlikely to impart serious biases on our analysis, since the 1967 OCR survey covered all districts that were in the process of desegregating.

probability of being classified as urban (34.2 percent versus 31.2 percent in 1961) and have slightly higher enrollment (7,714 versus 6,961 in 1961).

Looking across each panel of Appendix Table A1, one sees that the size of our sample changes from year to year. The districts under observation also become slightly larger, blacker, and more urban; applying the OCR sampling weights to the full sample yields roughly the same pattern. We do not limit attention to a balanced panel because given the OCR sampling methodology, doing so would weight our entire sample toward districts more resistant to desegregation.

As also noted above, we have imputed desegregation variables where missing in some cases for 1966, 1967, and 1968 to minimize changes in sample composition. For districts not observed in the 1966 SERS, we imputed *DESEG*=0 if the district was observed in the 1967 OCR as fully segregated and *DESEG*=1 if the district was observed in the 1964 SERS as desegregated. For 1967 and 1968, we imputed key segregation measures (*FRACALLBLACK*, *DISSIM*) with previous year values if missing and had federal funds terminated in 1966 and/or 1967, had federal funds deferred in both 1966 and 1967, or had federal funds deferred in 1967. The primary consequence of this imputation is to increase the number of observations on *DESEG* in 1966.[18] Indeed, there is no change in the number of observations of desegregation on the intensive margin, suggesting that many of the same districts are consistently not observed over these years.

Appendix Table A2 shows the number of observations, by state, year, and dependent variable, with non-missing dependent variable values and data on all pre-existing characteristics used in our analysis.

[18] We gain 33 observations on DESEG in 1966 and three observations on DESEG in 1968 as a result of this imputation.

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