SOCIAL ACTION, PRIVATE CHOICE, AND PHILANTHROPY: UNDERSTANDING THE SOURCES OF IMPROVEMENTS IN BLACK SCHOOLING IN GEORGIA, 1911-1960

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NBER WORKING PAPER SERIES

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ABSTRACT

Improvements in educational attainment and in educational quality are universally acknowledged to be major contributors to black economic progress in the twentieth century. The sources of these improvements are less well understood. Many scholars implicitly assume improvements in schooling reflect private choices. In fact, schooling is publicly provided and increases in the quality and availability of black schools in the South occurred at a time when blacks were excluded from the political process. This paper demonstrates the important roles of social action, especially NAACP litigation, and private philanthropy, in improving access and quality of public schooling in Georgia and in the rest of the South in the first half of the century. Analyses that pit rising schooling quality as an alternative to social action in explaining black progress miss the important role of social activism in promoting schooling quality and hence in elevating the economic status of black Americans.

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1 Introduction

Improvements in educational quality are often cited as a leading explanation for the narrowing of the Black/White wage differential after 1960 (Smith and Welch, 1989). For cohorts of workers educated in the early part of the century, there were stark differences in the quality of Black and White schools. For example, in 1911 Black teachers earned roughly half of a White teacher's salary. Relative to White schools, the ratio of pupils per teacher in Black schools was higher, with about 20 additional students per class, and term lengths were shorter by three to four weeks. Beginning in the late 1930s, significant improvements began in the quality of segregated Black schools in the South.

Understanding the sources of improvement in schooling quality is central to interpreting the causes of changes in Black/White relative wages, since schooling quality is one determinant of human capital. Persons with more human capital receive higher wages. Inferior quality schooling leads to lower levels of human capital accumulated for each year of school, resulting in lower wages. Wage differences for Black and White workers with the same levels of education would reflect, in part, educational quality differences. Such wage differentials could still be the product of discrimination, but the discrimination would arise from the provision of education and training rather than from discrimination in the labor market.

While most researchers acknowledge that improvements in the quality and quantity of schooling contributed to Black economic progress, there is disagreement over the importance of other factors. Two broad lines of argument have been advanced. One line, championed by Smith and Welch (1989), emphasizes the importance of secular factors like education, educational quality and the growth of markets in raising the relative earnings and wage rates of Black men. This view stresses the role of individual choices by firms and workers, including educational choices, in shaping Black economic destinies. It views affirmative action and civil rights activism as minor factors that "marginally altered Black wage gains..." (Smith and Welch, 1989).

The other line of argument assigns a much greater role to social activism and government in bringing about changes. This view argues that social interventions in the labor market account for the temporal pattern in Black earnings gains. For example, Donohue and Heckman (1991) find that the prices of Black skills relative to White skills rose across all cohorts of Black workers in the

time period immediately following the passage of the Civil Rights Act of 1964. This evidence is inconsistent with the claim by Smith and Welch (1989) that the rise in Black wages over this time period is attributable to secular increases in school quality. In a study of South Carolina, Heckman and Payner (1989) find that Blacks were excluded from working in certain industries and that this exclusion reflected discrimination and not lower qualification levels of excluded workers. Breaking long-standing racial employment barriers required major interventions in the labor market. The civil rights movement and the government activity that it stimulated - executive, legislative and judicial - was the impetus for change. These factors affected labor market outcomes directly, by prohibiting discriminatory labor market practices, and indirectly by improving educational opportunities. Heckman (1990) summarizes the evidence.

Both sides in this debate treat improvements in the quantity and quality of schooling as exogenously determined. Yet for most persons, Black or White, schooling and its quality are publically provided. This paper widens the scope of the debate by examining the role of social activism and private choice in explaining the improvement in the quality of Black schooling.

The explanation for the disparity in the quality of schooling by race around the turn of the century is well accepted. Jim Crow laws that disenfranchised Blacks removed them from the benefits of goods determined by the political system, including access to quality schools. What is remarkable is that after the initial period of disenfranchisment, the quality of publically-provided Black schools improved at a time when Blacks were excluded from Southern politics. Annual schooling inputs into segregated Southern Black schools improved steadily from 1911 through the 1960^s. We present evidence that social activism and private philanthropy play a major role in this improvement. Hence, recent studies that discount social activism and assign a major role to the "secular factors" of education and educational quality in accounting for Black economic progress understate the role of social activism in an earlier era in fostering the growth of Black human capital that produced gains in earnings across successive cohorts of Black workers.

Bond (1934) was the first to analyze the discriminatory educational funding practices in Southern segregated school systems, including the common practice of redistributing state funds allocated to Black students to White schools by local school boards.[1] Myrdal (1942) was the first to question

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[1] The state allocations were equitable due to a holdover from the Reconstruction: "The Reconstruction legislatures placed schools for the two races on an equal basis" (Bond, p. 203). Rather than overturn the law, Southern whites simply turned the funds allocated to Blacks by the state law into a source of revenue for White children at the local

why Black schools were funded at all given the direct connection between voting rights and the share of public services a group receives. Recent research in this area offers some explanations for this enigmatic combination of the loss of political power for Blacks and the improvement in the quality of Black schools. Harris (1985) takes the segregated school system of Birmingham from Reconstruction to the Great Depression as a case study in understanding the sources of improvements in schooling quality. He assigns a large role to the "professionalization" of the school system and to White businessmen interested in gaining access to educated labor. Margo (1990) adds to Harris' list of factors the threat of legal intervention (under *Plessy v. Ferguson*, 1896), the support of philanthropic foundations, and the threat of Black migration with the consequent loss of relatively inexpensive labor. He provides empirical support for Bond's school revenue redistribution theory. These studies point to the importance of several different factors in bringing about observed gains in educational quality, but they present only limited empirical evidence on the relative contribution of each.

Our study uses school-district-level data for the state of Georgia over a fifty-year period to document school quality and school financing trends and to relate these trends to demographic changes, shifts in industrial composition, philanthropic efforts, and legal activity. We attempt to quantify the impact of different factors whenever possible so as to determine which are primarily responsible for quality improvements in different time periods. While Georgia does not represent the entire segregated South, data from it provide insights into the discriminatory practices that existed in the provision of education and into the factors that led to improved educational opportunities for Southern Blacks. We also go across Southern states to perform an event-history analysis to examine the impact of NAACP litigation on Black schooling quality.

By a variety of measures, schooling quality for both races improved over the entire time period. However, the time series of the quality measures suggests two distinct periods of improvement. In the first period, from 1911 to the late 1930s, Black and White educational quality gained in absolute terms, but Black schooling quality did not improve in relative terms. In the second period, from the late 1930s to 1960, Black school quality improved substantially in relative as well as absolute terms, until quality measures for Black schools converged to those for White schools. Much of this

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level. Myrdal (1942), Pritchett (1986), and Margo (1990) further corroborate the practice of funding White schools at the expense of Black students.

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convergence occurs before the *Brown v. Topeka Board of Education* decision which overturned the separate but equal doctrine of *Plessy v. Ferguson.*

Some of the improvements in schooling quantity occurred gradually. The most significant gains, however, came in response to litigation or to the threat of litigation. In the early period, migration and philanthropic activity emerge as the most important factors in explaining improvements in Black schools. After 1930, significant gains appear to be driven by litigation in Southern states. Starting in the mid 1930s, the NAACP initiated lawsuits to equalize teacher salaries in a number of Southern states, including Georgia. These lawsuits focused national attention on Southern educational practices and appear to have encouraged preventative actions by Southern school authorities designed to fend off integration. This time period is marked by significant absolute and relative improvements in Black schooling quality in all states where suits were brought.

The paper develops in the following way. Section 2 describes trends in the schooling quality data and provides an overview of the industrial composition and demographic characteristics of Georgia over the period 1911-1960. This section also discusses the discriminatory educational funding practices that led to large discrepancies in the allocation of funds between Black and White schools. Sections 3 and 4 describe the roles that migration, industrialization, philanthropy, the Great Depression, World Wars I and II, and civil litigation played in bringing about improvements in education. We present empirical evidence on the importance of these different factors. We conclude that a substantial portion of the change in Black schooling quality is closely linked to legal and philanthropic activity. Section 5 summarizes the main findings.

2 Overview of Trends in Schooling Quality and School Financing Practices in Georgia: 1910 to 1960

2.1 The Quality Data

The district-level schooling quality data analyzed in this study are gathered from the annual reports of the Georgia Board of Education which kept separate records for White and Black schools up to 1960. We analyze total enrollment, average attendance, term length, number of teachers, teacher-certification and education levels, and total disbursements to teachers. From these six variables we calculate empirical measures of schooling quality for each school district by race: term length, average per-diem teacher-salary, percentage of teachers with advanced certification, percentage

of teachers with two or more years of teacher training, and pupil-teacher ratios (based on both pupils in attendance and pupils enrolled).We consider two measures of the pupil-teacher ratio since the average number of students actually in attendance diverges substantially from reported enrollments. We emphasize the attendance-based measure in our analysis, because enrollments were often inflated by school authorities to secure state funds apportioned on the basis of student head counts (Bond, 1934). The teacher-certification measures serve as a direct indicator of teacher quality, although the certification process was also subject to discrimination.[2]

We also analyze student attendance as a fraction of the school-age population as a measure of educational participation. In the early years of the century, this proportion is low and disparate across races, but it converges by 1960. Appendix A describes the data in detail.

2.2 Schooling Quality Trends Over Time

Measured school-quality in Georgia improved over most of the period 1911 to 1960. Table 1(a) shows that schooling quality measures improved for both races fairly steadily between 1911 and the mid 1930s. Even during the Great Depression of the 1930s, teacher salaries for both races gained in real terms. There was little change in *relative* quality over the first half of the fifty year period. Table 1(b) shows trends in teacher-certification levels. The gap in certification levels likewise did not start to close until after 1938.

The late 1930s and early 1940s witnessed dramatic relative improvement in Black schooling quality. Figure 1 illustrates the decisive increases in the Black to White ratios of different measures during this time period, particularly during the early 1940s. By 1960, the White and Black school systems were virtually identical in quality.[3] Term lengths and pupil-teacher ratios began to converge after the mid 30^s, and teacher salaries began a steep upward course toward equalization after 1944.[4]

Are the patterns observed for Georgia representative of the South as a whole? Figures 2(a)-(c) plot Black and White pupil-teacher ratios for various Southern states, including Georgia. The

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[2]Multiple certification types exist in each of the years examined and these types change over time. From 1911 to 1930, advanced teacher training consisted of attending a normal school. After 1930, the reports give the actual number of years of training attended. See Appendix A for an explanation of how the certificates were grouped to create a comparable time series over the 1911 to 1960 period.

[3]The segregated southern states stopped reporting separate measures by race around 1960, even though most schools were not integrated by that time.

[4]We consider three measures of teacher salary: raw per diem salary (not shown), per diem salary adjusted by the national Consumer Price Index, and the ratio of Georgia salaries to national means (not shown). All three measures show a sharp increase in salaries for black teachers in the period after 1944.

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figures show that in many states the pattern of convergence is similar to that in Georgia. In Maryland, Oklahoma and West Virginia there was never much of a racial gap in measured pupil-teacher ratios. In Louisiana, Florida, South Carolina, and Mississippi, the gap is larger than in Georgia. The racial gap in enrollment is generally wider. See Figure A.1 in Appendix A. In Section 4.3 we examine patterns of the convergence of teacher-salaries across different Southern states.

For Georgia, we have schooling quality data at the school district level.[5] Quality varied greatly in the state of Georgia, both across time and across geographic regions. Most economic studies that analyze the influence of schooling quality on labor market earnings use state average measures. These studies identify quality effects using variation across states and across time, while ignoring within-state variability.[6] In the early years of our sample, within-state variability is of the same magnitude as between-state variability. Figure 3 depicts the variability across the state in the pupil-teacher ratio based on attendance for 1911, 1930, 1940, and 1960. Variability decreases over time, with very small classes as well as very large ones tending to disappear. By 1960 most of Georgia's classes converge to a uniform size of 20 to 30 students for both Whites and African-Americans.[7]

Less-studied aspects of educational quality are availability of schooling - the proportion of children who get the opportunity to attend school at all - and schooling attendance among those who have access to it. Section 3 presents information on how access to schooling changed. Here we cite Anderson's (1988) study of schooling attendance. He calculates the percent of the school-age population that is enrolled in school for 1900 and 1940, using Decennial Census figures. In 1900, only 22% of Black children in Georgia age 5 to 9 and 46% age 10 to 14 were in school, as compared to 36% and 70% of White children. By 1940 the Black percentage had risen considerably. Sixty-seven percent of Black children age 5 to 9 in Georgia and 87% age 10 to 14 were in school in 1940, as compared to 70% and 92% of White children. Extending Anderson's calculation to 1960, we find that 76% of Black children age 5-9 were in school compared to 74% of White children. For children age 10-14, 96% of Blacks and 94% of Whites were in school. (See Table 2.)

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[5]For the 1911 to 1960 time period, school districts in Georgia roughly correspond to counties. The exceptions are urban school districts, which correspond to town centers. However, no county had more than three or four school districts.

[6]See Card and Krueger (1992) and Heckman, Layne-Farrar, and Todd (1995) for examples of this literature.

[7]By a standard errors in the variables argument, use of state averages to estimate the impact of schooling quality on earnings produces a downward bias in the estimated quality effects, especially for older cohorts. This bias should vanish for younger cohorts of workers.

Such increases in school attendance relative to the population are difficult to interpret though, because Black students were held back much more frequently than Whites (Thompson, 1939). A high proportion of teenage children in school did not necessarily mean attendance at a high school, but often meant that those children had not made it through the upper elementary grades. This caveat notwithstanding, Black enrollments and attendance rose markedly in the early part of the century. To understand the sources of these significant changes in the quality of schools and in Black schooling participation rates, we first examine how Black schools were funded.

2.3 School Financing Practices in Georgia and in the South

Georgia's financing of public schools at the turn of the century was the product of a complicated array of state and local reactions to court rulings and legislation. The *Plessy v. Ferguson* Supreme Court decision in 1896 established the "separate but equal" doctrine. In principle, the funding and administration of separate public school systems for Black and White children also followed this tenet. In practice, of course, the schools were separate and unequal.

The apportionment process by which state money reached the individual schools generated inequities. In a holdover from Reconstruction, the apportionment of most educational funds to school districts throughout the state and many other Deep South states was determined by per capita payments based on the district's total population in school, regardless of race.[8] Once in the hands of local school boards and county superintendents, however, the funds were not distributed on an equal basis. A large portion of the funds that were based on the headcount of Black school children was diverted to support schools for White children.[9] Monies received from local taxes, local assets (such as revenue from railroads in the district), state grants, and federal aid were reapportioned as well.

This policy of fund diversion had several consequences. First, it allowed for more rapid progress in the White schools than would otherwise have been possible. Second, it meant that the counties with the largest Black populations of school-age children had the largest amount of funds available for use by the White schools. As described by Myrdal (1944), if "... there are twice as many

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[8]Title VI, No. 53, Sec. 11 and Sec. 32 of Georgia's Public Laws pertaining to education, enacted in 1870, formalized both the "separate but equal" rule for schools and also the apportionment of state dollars based on total head-count.

[9]See Bond (1934) for a thorough argument of the "cash value" of African-American school children. See also Margo (1990).

Negroes as White children [in a given county], every dollar per pupil taken away from the Negro group means two dollars per pupil added to the White group".

As an example of what redistribution of funds meant for teacher salaries in 1930, counties with twice as many Blacks as Whites spent a minimum of $100 per White pupil on White teacher salaries, while none of the counties with 40% or fewer Black school children spent that much on White teacher salaries. Redistribution is one explanation why Black school-quality measures did not gain any ground relative to White measures over the 1911-1930 period, even though schooling expenditure increased.

This pattern of cross-subsidization soon aroused the criticism of majority White school districts. Lacking the political clout to overturn the apportionment laws, the White majority counties instead enacted the "equalization law" of 1926, which was meant to equalize money spent on White pupils across counties by distributing funds to district schools on the basis of the number of "White educables" (Bond, 1934).[10] To receive funds under the equalization law, counties were required to demonstrate a low ability to support public schools. Participating counties were then required to meet education guidelines related to the length of the school term and the proportion of school revenues paid to teacher salaries, which applied to both Black and White schools. Ironically, majority Black counties often qualified for funds under the eligibility criteria, but did not apply for funding because of the high cost of raising the standards in the Black schools. Predominantly White counties were the main beneficiaries of the equalization law.

2.3.1 Empirical Evidence on the Diversion of Funds

Our data provide support for the redistribution hypothesis and limited support for an effect of the 1926 equalization law. Table 3 shows that across Georgia counties, even after 1926, the percent of Blacks enrolled is strongly positively correlated with per pupil expenditure on White students. It is also correlated in the expected direction with other White quality measures, although in 1911 only the per pupil expenditure and pupil-teacher ratio correlations are statistically significant at conventional levels. The correlations are remarkably stable over time up through 1960, with the exception of the teacher-salary correlation which is no longer statistically significant after 1940.

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[10]The equalization law was enacted in an extra session of the Georgia General Assembly; see Part I, Title IV, No. 2.

Correlations between percentage of Black enrollment and Black quality measures show that counties with higher percentages of Black enrollment tend to have the lowest expenditure on Black pupils as well as lower indices of other quality variables. The correlation may be a consequence of Bond's redistribution hypothesis, but it may also result from the operation of the equalization law. As previously noted, counties that participated in the equalization fund, which improved the quality of both Black and White schools, tended to have lower percentages of Black residents. However, we observe a statistically-significant negative correlation in the years prior to the equalization law, so that is not the whole story.

For the years 1944 through 1960, the correlation declines into statistical insignificance. As discussed in Section 4, over the period 1938 through 1945 there was intense litigation over racial equity in teachers' pay, which accounts for the declining correlation with salaries.

2.4 Demographic Trends: Migration, Increasing Urbanization, and Changes in Industrial Composition

The period under investigation coincides with two well-known demographic trends in the South: outmigration to the North and migration from rural to urban areas within the South. The Censuses from 1910-1960 reveal outmigration rates from Georgia of up to 22% of the Black population each decade and a persistent, though smaller, outmigration of Whites.[11] Because the great Black migration was only partially counterbalanced by high birth rates, the White population in Georgia grew during this period while the Black population remained approximately constant. African-Americans fell from 45% of Georgia's total population in 1910 to 28% in 1960. The percentage of Blacks living in urban areas grew from 21% to 55%. The entire South exhibits similar trends: the Black population fell from 30% to 21% over the period 1910 to 1960 and the urban population rose from 23% to 59%.

Myrdal (1944) gives several reasons for the massive migration of Southern Blacks after 1915. The most significant of these are the decline of the cotton industry owing to drought and the boll weevil, dislocation during World War I, and an increased demand for workers in the industrialized North. He describes the atmosphere as a "push" in the South and a "pull" from the North. Presumably, these conditions also encouraged migration to urban areas within the South. In the

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[11]These figures are based on the "survival rate" method of calculating migration rates.

1930's, Blacks continued to migrate northward despite lower demand for their labor, which Myrdal attributes to a desire for less segregated social conditions and better public relief programs.

As a result of migration, the distribution of Blacks and Whites changed both within Georgia and the entire South. The period of greatest African-American outmigration from Georgia during the first half of the century occurred from 1920-1930, but for the South as a whole it peaked two decades later. (See Table 4).[12] The resulting changes in racial composition are summarized in Table 5.[13]

2.4.1 Comparison of Rural and Urban Schooling Quality Levels

Particularly in the early years of the sample, rural areas provided poorer public education than did urban areas. Many rural areas provided no secondary schools for Blacks. As families migrated away from farms, one-room school houses closed and schools were able to realize returns to scale. Table 5 shows the demographic shifts away from enrollment in rural areas and towards urban areas for Georgia and for the South. In results not presented in the tables, three quarters of both Black and White children attending school were in rural areas in 1910, whereas only a quarter of all school children were in rural areas by 1960. By that time, the proportion of Whites who live in rural areas is much higher than the corresponding proportion for Blacks.

Table 6(a) compares average schooling quality levels of urban and rural districts.[14] With the exception of the pupil-teacher ratio, which tends to be higher in urban districts due to the small size of schools in the rural area, other empirical measures of quality indicate that urban schools are of slightly higher quality than rural schools. Teacher-salary and term length tend to be higher in urban districts. Table 6(b) shows that teacher-certification levels were also higher in urban district schools and that the racial gap in rural districts was substantially greater. Over time, however, the urban/rural discrepancy disappears.

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[12]See Hamilton (1959) for an analysis of migration trends in the South during this period.

[13]Much of Georgia's outmigration in the 1920's involved the reuniting of families separated by an earlier wave of migration before World War I (Weatherford, 1934). The character of this wave of migration was therefore often selective of women and school-age children. In fact, the population of African American school aged children in Georgia declined by 11.9% during the period 1920-1930 (Weatherford, 1934).

[14]See Appendix A for an explanation of the Census definitions of urban and rural and for how we classified districts as urban or rural.

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2.4.2 Changes in Industrial Composition

Accompanying the move away from rural areas towards towns and cities was a decline in agricultural employment. From 1910 to 1960, the percent of Georgia's working population employed in agriculture declined from 65% to 9%. The so-called "Great Migration" not only moved people out of rural areas but also moved them into more diversified employment. As shown in Table 7, manufacturing increased as agriculture fell - doubling from 12% of the workforce in 1910 to 26% in 1960. The increase in manufacturing mainly represents the rise of textiles and mill work in the South. However, in the later periods no single industry dominates employment as agriculture did in the early decades of the century.

In addition to encouraging migration to urban areas, changes in industrial composition might affect schooling quality by increasing the demand for more workers with primary education. By this argument, the owners of textile mills where workers were often required to operate machinery might have demanded a better educated work force than did plantation owners. If the necessary skills are more effectively provided in formal schooling than on the job, then White business owners would be supportive of improvements in schools. However, given the virtual exclusion of Blacks from textiles over the period 1910-1960 documented by Heckman and Payner (1989) and the sources they cite, the importance of textiles as a major industrial employer in Georgia, and the pattern of exclusion practiced in many other industries over this period, it is doubtful that the demand-induced improvements in schools by local firms play any substantial role in improving Black schools in the early decades of the Twentieth Century.

3 Factors Leading to Improvements in School-Quality: Absolute Quality Improvements, 1911 to the mid 1930's

The period of absolute gains in quality levels in Black schools, without any gains relative to White schools, covers approximately 1911 through the mid 1930s. During this quarter century, the nation experienced World War One, the Great Migration, a decline in agriculture, growth in manufacturing, and the Depression. Absolute school-quality improvements for both race groups were only mildly related to population redistribution due to migration.

Philanthropic contributions played a substantial role in improving the absolute quality of Black

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schools, allowing them to keep pace with White schools.

3.1 Migration and Schooling Quality

Migration has been cited as a primary reason for Black school-quality gains in the early part of the century. (See, *e.g.*, Myrdal, 1944, and Margo, 1990). For several reasons migration and schooling quality are closely linked. Relocation to urban areas typically moved students to better quality schools. However, as documented in Table 6a, an improvement in quality was experienced both by Blacks and Whites, and the *ratios* of quality measures for Blacks relative to Whites were very similar both in rural and urban areas.

Migration also affected how schooling funds were allocated across school districts, since state funds were awarded on the basis of student head-counts. Migration could have an additional effect on expenditure levels through tax revenues, particularly if migrants represent a significant loss or gain in tax revenue.

The quality-migration relationship is complicated by the fact that schooling quality levels can influence the decision to migrate. Parents may change location out of a desire to improve their children's prospects. Persons who themselves attended higher quality schools may face different gains from migrating and be more likely to migrate. Margo (1990) presents evidence that migration rates were higher for more educated Black and White workers in the early part of the century.

We examine various aspects of the migration-quality relationship. First, we investigate how much of the observed change in state level average measures of schooling quality can be accounted for simply by changes in the geographic location of the population. We decompose changes in state average schooling quality into changes due to within-county improvements and changes due to shifting enrollment weights. Second, we look at the indirect effects of migration on tax revenues and school expenditure levels. Finally, we summarize the evidence from an attempt to establish causal relationships with migration causing an improvement in schooling quality and schooling quality preventing migration flows.

Quality Decompositions

We begin by decomposing changes in each quality measure into (a) change due to migration and participation in schooling across counties (changing enrollment weights) and (b) change due

to within-county improvements. Let q_{ir}^t denote the mean quality in county i, in year t, for race r, and p_{ir}^t the percentage of pupils in the county district out of total Georgia enrollment for race r at time t. The change in mean quality over two time periods is decomposed as:

$$\bar{q}_r^{t+1} - \bar{q}_r^t = \sum_{i=1}^{I} p_{ir}^{t+1} \cdot \left(q_{ir}^{t+1} - q_{ir}^t \right) + \sum_{i=1}^{I} \left(p_{ir}^{t+1} - p_{ir}^t \right) \cdot q_{ir}^t,$$

where I is the total number of counties and the "$-$" over a variable denotes its mean. The first term on the right-hand side is the change in the quality measure over time (within county) and the second term is the change in the weights over time due to migration and due to changes in enrollment rates. We lack annual data on the Black school age population and cannot further decompose the second term into population shifts across counties and enrollment changes within a county for a given population.

The upper panel of Table 8a shows that when the White pupil-teacher ratio (attendance based) is decomposed in the suggested manner, improvements within county consistently account for most of the changes in the pupil-teacher ratio. Decompositions of the Black pupil-teacher ratio, shown in Table 8b, give the same result. For teacher salary and term length, the decomposition results for Whites also indicate that the improvements in state means can be attributed mostly to within-county improvements. For Black term length and teacher salary most of the improvements are also within county (see especially the large improvements in teacher salary in the last three time periods). These decompositions suggest that migration and changes in enrollment patterns across counties were not a key factor in generating improvements in Black schools, since the bulk of changes in the quality measures came from within county gains.[15] In results available from the authors on request, we reach a similar conclusion when we decompose the state into rural and urban school districts. Most of the growth in the quality of schooling in the state arises from within-geographical unit growth and not from population redistribution.

The pupil-teacher ratio may fall either because a school district hires more teachers, or because the number of pupils drops and schooling budgets and faculty sizes are rigid, at least in the short-run. Figure 4 plots the state average pupil-teacher ratio along with the numbers of teachers and

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[15]Using data for the selected census years 1910, 1920, 1930, 1940 and 1960, the only years for which county level population Census data are available, we compute the change in enrollment proportions across counties due to (a) differential change in enrollment rates across counties and (b) changes in the distribution of the population across counties. We find overall, counting both rural and urban counties, the growth in enrollment offsets decline in the population over most periods. These results are available on request from the authors.

students. Reductions in the state average pupil-teacher ratio reflect growing numbers of teachers rather than falling numbers of students. When the ratio is calculated separately by rural/urban status, we find that in rural schools the number of teachers and students enrolled declined. However, students decline faster than teachers. Reductions in the pupil-teacher ratio in rural areas are largely due to migration.[16]

This analysis provides mild support for a direct effect of migration on Southern school-quality in rural areas. Migrating students lowered rural pupil/teacher ratios in rural areas and moved children to higher quality urban school areas where the Black/White quality ratio was also slightly more favorable. However, the schools in each geographical area themselves showed real improvement as well and this is the major source of change. Some of this within-county improvement in rural areas may be due to outmigration of poor Blacks which eased the financial burden on schools without having much effect on their resources.

This analysis does not address the effect of migration out of the South on the nationwide average quality of Black education. Given the enormous disparity between Southern and Northern school quality for persons of all races, such migration contributed substantially to an increase in the quality of schools available to children of the emigrants. Our analysis raises doubts about the primacy of migration's impact on school-quality improvements *within* Georgia. We next examine the evidence for an effect of migration on tax revenues and school expenditures.

Effects of Migration on Tax Revenues and School Expenditure Levels

To quantify the effect that migration had on county tax revenues and school expenditure levels, we estimate the elasticity of tax revenues and expenditure levels with respect to the number of Blacks and Whites living in the school district. According to the Bond hypothesis, fewer Black students in a school district would translate into fewer dollars from state funds that would be available for redistribution to White schools. Local tax revenue collections might also fall as families left the district.

We estimate the following model for tax revenue, where each observation for school district i

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[16]Detailed calculations on this point are available on request from the authors. We assume that enrollment rates do not decline over time in reaching the conclusion stated in the text.

in year t :

$$\log tax_{it} = \alpha_{rt} + \{\beta_{1t}^{U} \ln N_{it}^{B} + \beta_{2t}^{U} \ln N_{it}^{W}\} \cdot 1(urban_{it}) + \{\beta_{1t}^{R} \ln N_{it}^{B} + \beta_{2t}^{R} \ln N_{it}^{W}\} \cdot 1(rural_{it}) + u_{it}.$$

$1(urban_{it})$ and $1(rural_{it})$ are indicator variables for whether i is a rural or urban district. Elasticities are allowed to vary by urban status and over time. N_{it}^{B} and N_{it}^{W} correspond to the numbers of White and Black residents in the county. Estimated coefficients, tabulated in Table 9a, show that tax revenue is more elastic with respect to the number of White residents than the number of Black residents, especially in later years. In 1956 the White elasticity is about three times greater. The difference in elasticities by race tends to be greater in rural districts. This is not surprising in light of the low income and wealth status of Blacks at that time.

A potential problem with this specification is that it does not control for the wealth of the county. If counties with wealthier White residents collect more tax revenue and also have more Black residents, then β_{1t}^{U} and β_{1t}^{R} would overstate the effect that changes in the numbers of Black residents have on tax revenues. Our data show that on average counties that collect more tax revenue have a higher percentage of African-Americans. Since we have four years of tax data, we estimate a pooled regression that includes county fixed effects to proxy for unobserved White wealth levels.[17] These coefficients, presented in the last column of the table, show that a decrease in the number of Black residents has a modest effect on tax revenue.

Because the state allocated schooling funds to local districts without regard to race, African-American outmigration may have had its greatest impact on school expenditure levels. In results available on request from the authors, we regress school expenditure on the size of the Black and White population.[18] Over all time periods, White disbursements are elastic with respect to the numbers of Black residents only for urban districts. They are elastic for rural districts only in the earliest time period. In rural districts, Black outmigration would have had little effect on White schooling expenditure (see Table 9(b)-(c)). Yet it is rural districts where the redistribution effect is claimed to be the strongest, since majority Black counties were predominently rural.

The Economic Impact of Migration on Agricultural Output

Even if Black outmigration did not have a strong direct effect on school revenues for Whites,

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[17] The years included in the regression are 1911, 1930, 1942, and 1952 (years chosen due to data availability).

[18] Expenditures are measured by the disbursements to teachers, which comprise the bulk of expenditures.

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the threat of losing relatively inexpensive labor may have prompted local farmers and businessmen to improve quality levels to prevent outmigration. One way to determine whether the potential loss in production from migration was a credible threat to these farmers and businessmen is to estimate the value of lost agricultural output due to migration. This is a difficult task because there are no estimates of production functions in the economic literature on Southern agriculture in the early 1900s that use an appropriate measure of labor, such as the total agricultural workforce. Thus DeCanio (1974) estimates production functions for Southern agriculture in 1910, using as his measure of labor input the total rural population, not the workforce, due to the lack of availability of the appropriate data. Between 1910 and 1920, the Black rural population declined by about two percent. Black migration rates, as opposed to population changes, stood at three percent in this decade according to Census Bureau estimates (see Table 4), but were compensated for by high rural birth rates. Given DeCanio's low estimated elasticity of labor (0.164), this two percent decline in population translates into less than one percent decline in output.[19]

Since DeCanio shows that the elasticity of labor input changed greatly even between 1900 and 1910, it is probably not safe to extrapolate his 1910 estimate to the 1920-1930 decade during which the greatest level of Black migration took place. The second highest decade of migration was the 1940's (see Table 3). Heady and Dillon (1961) estimate an agricultural production function for Southern agriculture for 1950 using micro survey data on individual firms. Their estimate of the elasticity on labor, 0.32, is considerably higher than DeCanio's for 1910. The average of Black male workers per farm declines by 29% over the period 1940-1950.[20] Using the Heady and Dillon estimates, this translates into a substantial 9.2% loss in agricultural output. For a number of reasons, this estimate is crude: the declining workforce is not due solely to migration but also to job displacement, and the labor output elasticity probably changed between 1940 and 1950 because of the invention of the cotton reaper and other technological innovations.

The threat of a reduction in output may well have triggered increases in schooling quality to avoid migration. However, given the advent of the cotton reaper, and acreage restriction programs in agriculture in the 1940s, Black labor became redundant. Thus it seems unlikely to us that mitigation or the threat of migration was an important source of improvement in Black schooling

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[19]See Appendix A for the details of this calculation.

[20]Table 5, dividing by the number of farms in each year produces the average number of black workers per farm. For a detailed justification of this estimate see Appendix A.

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quality after that period.[21]

We have established that migration contributed to some improvement in rural schooling quality by removing the burden of a large number of students on underfunded schools. Migration improved state average quality levels by moving students to better urban schools but this effect is overshadowed by improvement within districts. Migration's effects on tax revenues and school expenditures, measued by their elasticity with respect to the number of Blacks in the district, were also confined to the early years. Our estimates of lost agricultural output indicate that outmigration by African-Americans might have had a significant impact on the agricultural output of the state and might be viewed as a credible threat to White-owned farm yields. But it is likely that the mechanization of Southern agriculture and the rise of acreage restriction programs muted these effects after the early 1940[s].

Migration can improve schooling quality through the various mechanisms described above, but schooling quality levels can also influence the decision to migrate. In results available on request, we investigate whether migration and schooling quality are jointly determined by performing "Granger" causality tests. No statistical test can uncover whether a relationship is causal, so evidence from these tests must be viewed with caution. In our application of these methods, we find joint determination. Migration changes and schooling quality changes are not ordered in any particular temporal fashion.

Relative quality improvements began in the late 1930's, during a time when migration from Georgia had slowed somewhat. Migration was a continuous phenomenon that spanned several decades whereas relative quality gains occurred over a few years. Hence migration is likely not the primary factor in explaining relative gains in Black quality measures.

3.2 Philanthropy and Measured School-Quality

A significant portion of the funding for Black schools in the South in the early part of the century came from philanthropic contributions. Three northern philanthropic foundations had a significant influence on the funding of Black schools: the Rosenwald Fund, the Jeanes Fund, and the Slater Fund. The activities of the latter two foundations were coordinated by the General Education

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[21] Acreage restrictions and mechanization operate to raise labor productivity per acre as the new technology is used on the best land. Labor productivity is rising as labor input is decreasing.

Board (GEB), a private organization begun in 1895 and funded by J. D. Rockefeller.[22] The Slater Fund's main contribution was funding high schools for Black children in counties that had none. Active from the late 1800s through the 1930s, this Fund encouraged a more equitable geographic distribution of existing revenue. The Jeanes Fund, operating from 1908 through approximately 1928, supported the salaries of so-called "Jeanes supervising teachers." Georgia never had more than 30 of these senior African American teachers, even at the height of the activity of the program around 1920-21 (Liston, 1928). However, Jeanes "supervisors" apparently improved quality in less quantifiable ways by training other teachers and by working with the Rosenwald Fund to facilitate establishment of new schools (Embree and Waxman, 1949).

The most important of the philanthropies specifically targeting Black public elementary schools was the Rosenwald Fund. It disbursed $1.6 million (nominal) in direct expenditures for the building of almost five thousand Black schools from 1917 to 1932 , which was 21% of the $6 million total cost of building these schools (Embree, 1936). The funds were mainly allocated to primary schools. From 1932 to 1947, the Rosenwald Fund shifted its focus to teacher training, improving school libraries, and providing transportation for public school students.

Table 10(a) summarizes, by year, the number of Rosenwald school buildings, their cost and value. Of the 4907 buildings constructed with Rosenwald money in the segregated Southern states by 1936, 261 were in Georgia.[23] In monetary terms, $1.37 million of the nominal total spent by the Fund for its school building program was spent in Georgia. Table 10(b) reports Rosenwald contributions as a percent of state totals, both in number of schools for Black children and in the value of those schools. Rosenwald schools represented 20% of all school buildings for Black children in the segregated South and 32% of the value of Black school property. (Rosenwald schools were of substantially higher quality.) The Fund estimated that more than one-third of Black students attended Rosenwald financed schools in the South in 1932 (Rosenwald Fund, 1932).

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[22]The GEB provided funding both for Black and White education in the South and administered the Jeanes Fund and the Slater Fund (but not the Rosenwald Fund). Its balance statement from 1902-1930 shows $1.2 million spent on Black medical schools, $1.3 million on Black high schools, $1 million on teacher salaries, and an additional $11 million on Black "colleges and schools". It appears that most of the $11 million went towards a few so-called industrial institutes (Hampton, Tuskegee and Spelman). There is no mention of grants for public elementary schools. The GEB also contributed towards White education in the South and in fact spent nearly ten times the amount spent on White education ($153 million) as on Black education, especially on White Southern colleges and medical schools.

[23]By 1944, after the conclusion of the Rosenwald Building program, the Fund had built a total of 5357 schools for black children (Embree, 1949).

The Rosenwald Fund may also have had an indirect effect on school quality measures through its efforts to improve teacher education and to set certain minimum standards for its schools. A term length pilot project funded by Rosewald contributed small amounts of money ($89,000 in total) for teacher salaries, which was matched in equal amounts from the school, to extend school terms by one or two months.[24] Moreover, the Fund stipulated a five-month term for Rosenwald schools and a minimum salary of at least $60/month ($2.80/day). This program contributed to a rise in the term length in Black schools that is evident in Table 1.

The philanthropic funds structured their programs to operate within the social constraints of the South so as to maximize their influence on improving Black schooling. For example, they did not challenge the "separate but equal" mandate but went along with it by building and supporting separate schools for Black children in the South. This approach made their activity less controversial, although it also attracted some criticism for being supportive of the segregated school system.

The Rosenwald Fund made its contributions more effective in two additional ways: (a) by providing its contributions under terms designed to ensure state, county, and community commitment to the new schools and (b) by targeting funds towards projects in which they could not easily be diverted to other uses. The effectiveness of philanthropic contributions aimed at improving Black schools could be undermined if state and local authorities, maximizing their objectives, could simply cut existing funding of Black schools and divert it to other uses as philanthropic money increased. To prevent such substitution, Rosenwald building contributions were made under several provisions (Embree and Waxman, 1949, p. 39):

1. *That there be common effort by state and county officials and local Whites and Blacks.*

2. *That the state and county contribute money to the building and agree to maintain it as a regular part of the school system.*

3. *That monetary contributions and/or land for the school site be provided by local White citizens.*

4. *That there existed a "desire for education," evidenced by a volunteer labor and/or money*

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[24]None of this money was spent in Georgia, however.

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provided by local Blacks.

5. *That school plans be developed by the Fund and school authorities together.*

6. *That payments from the Fund be provided to the county school superintendent only after all state and local contributing funds were collected.*

7. *That school term lengths be set at a minimum of five months. If the school authorities guaranteed an eight month term, the Fund agreed to help build teachers' homes.*

Hence, the Rosenwald Fund encouraged the states to pick up the cost of programs it initiated. Like the Marshal Plan, it created incentives that promoted local participation. The Fund's contribution to the total cost of the building program fell steadily over time, from a high of 20% in 1917 to 11% by 1928.[25]

The types of donations philanthropists made also contributed to their success. Physical capital, in the form of school buildings built in large part by volunteer local labor, is difficult to divert to other uses. Money given directly to the state or to local school superintendents could easily be redistributed to White schools; not so with school houses. Similarly, the supervisory teachers trained by the Jeanes Fund were African-Americans who were solely employed in Black schools.[26]

Another factor that maximized the effect of these philanthropies was their careful choice of which states received aid. The Rosenwald Fund appears to have targeted states that provided the least amount of state funding for Black school districts. The column in Table 10(a) labeled "inequity index" lists the percent of per capita apportioned state educational funds that Black students actually received. For example, if the state apportioned $1 for each pupil (regardless of race), then the typical Georgia county spent only 28 cents of that amount on the average Black student; the other 72 cents was diverted to White students. Comparing the last column to the preceding column shows that the Rosenwald Fund generally contributed the most to those states providing the smallest percentage of potential expenditures on Black students. The Kendall-tau rank correlation is 0.44. For reasons that are not clear, Georgia ranked near the bottom in aid from the Fund, and only eight percent of its schools were Rosenwald schools in 1932. In 1927, around

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[25]Table A-1 in Appendix A presents the time series of the fraction of total building costs picked up by the Fund.

[26]With few exceptions, black schools were fully staffed by black teachers and white schools were fully staffed by white teachers. (See Pierce, et al, 1955.)

14% of Black rural schoolchildren in Georgia were attending Rosenwald schools as compared to the Southern average of 23% (Smith, Report on Negro Rural Schools, unpublished 1928). Hence Georgia represents a lower bound on the impact of Rosenwald funding on Black schooling quality.

The way the Rosenwald Fund approached the established school funding network also raised its influence. By providing money from outside the state, relying on volunteer labor and local contributions, and requiring (initially) only minimal money from the state, the Fund made it easier for reluctant school officials to agree to the improvements. "The success of the Rosenwald Fund in stimulating public tax bodies to assume the responsibility of building schools for Negroes is found in the fact that in the first year of the plan, only 17 percent of the money expended came from public sources, while in 1931, public funds amounted to 72 per cent of the total expenditures" (Bond, 1934). If philanthropy functioned mainly as a catalyst for local and state efforts, then the value of philanthropic dollars in school budgets does not give a complete picture of their impact. Philanthropy could have had this catalytic function in improving education by requiring matching funds from state and local sources, raising awareness in the Black and White communities, providing an outlet for community members willing to help Black schools, and providing concrete examples of how education could be improved.[27]

The Rosenwald Fund's primary aim was to increase educational opportunity by creating new schools. The sheer number of new schools built for Black children by the fund is one explanation for a trend in our data: rising Black enrollments relative to the school age population. In Section 2 we discussed Anderson's (1988) estimates of the convergence of Black and White attendance rates between 1900 and 1940. Many eligible Black children were not in school at the beginning of the century, partly due to the inaccessibility of public schools.

One major inequality in school availability was the provision of high schools for Blacks. For White children, new high schools were being built throughout the South in the early part of the century, reflecting a national movement for universal high school education. The number of high schools for Whites in Georgia grew from four in 1904 to 122 in 1916, but by 1916 there still did not exist a single public high school in Georgia which Blacks could attend. Northern philanthropy did not focus on developing high schools for Blacks until relatively late. Anderson reports that no

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[27]The Fund's internal studies of its effectiveness focused on the way the Fund increased the value of school property. The overall value of school property increased by 140% between 1920-1930; the Fund estimated that its schools represented 40% of that increase ("Decade of Increase in Schoolhouse Property for Negroes", 1930).

northern philanthropic agency gave money for a public Black high school in the South until 1926, well after most Southern cities had opened at least one Black high school on their own. By 1932, however, the Rosenwald Fund reported that one tenth of its schools "had high school work ranging from two to four years (Rosenwald Fund, 1932)". Anderson suggests that these urban schools were founded because of White concerns about delinquency in the growing urban Black population. Those northern philanthropies that became involved in building and funding secondary education, such as the Slater Fund, emphasized the Tuskegee model of industrial education. However, Pierce, et al. (1955) maintain that few schools ever provided the type of vocational training that would have prepared Blacks for highly skilled jobs, both because such training was more expensive than a traditional education and because there was opposition by White workers who did not want to face Black competition for skilled jobs.

4 Relative Quality Improvements, mid 1930's - 1960

The second phase of quality improvement, beginning in the mid 1930s, is marked by substantial improvements in Black schools relative to White schools. In this section we explore the possible causes for relative gains, as well as some factors that may have hindered progress, like the Depression. The philanthropies discussed earlier had largely ceased operations by the mid 1930s, so they are clearly not responsible for the rapid convergence in educational quality between the races that occured in later periods. While Black outmigration continued through the 1960s, it declined in magnitude (see Table 4). The factors that are the most likely determinants of relative schooling quality improvements include World War Two, civil litigation, and, for teacher salaries, increasing levels of teacher qualification.

4.1 Effects of The Depression and World War II

The Depression generally lowered schooling quality everywhere, but it did not decrease Black relative schooling quality. Between 1930 and 1934 Black schools in the South improved slightly relative to White schools in terms of term length and teacher-salary (Wilkerson, 1939). The biennial reports for Southern schools show that this was due to a steep drop in White schooling inputs rather than any improvement in Black schooling quality. The Depression might, therefore help to explain the convergence of Black and White schooling quality measures that began in the 1930s, although

it cannot explain subsequent improvements.

Even as school revenues were falling during the Depression, the school population was increasing as children who no longer worked were sent to class. The South adopted two primary strategies to combat the problem of declining local revenues: increased state aid and school consolidation.[28] As figure 5(a) shows, from 1930 to 1938 K-12 educational revenues received from the state rose by over twenty percentage points among the 17 segregated Southern states. In the Deep South, the shift in the structure or school finance was even more dramatic, with the state's share of educational funding rising by almost thirty percentage points over the first eight years of the 1930s (see figure 5(b)). The move to state-funded education increased further after 1940 and remains the predominant funding source today. It is linked to the introduction of state sales taxes which were efficient fund-raising devices.

Some authors suggest that World War II lowered the quality of education for both races by drawing the best teachers away from schools and into private industry.(See *e.g.* Margo, 1990) As young men joined the army in the early 1940s, employers competed for workers from a shrinking pool of trained labor. Higher paying industry jobs may have attracted teachers into the private sector, leading to a decline in the supply of teachers. This would be supported in the data by fewer teachers and higher teacher salaries. A change in teacher-certification levels is informative about whether the departure from the teaching sector is selective of the best teachers.

Our data provide only mild support for such a supply effect. The number of White teachers in rural Georgia declined slightly over the span of the war (see Table 6b), but the number of teachers in urban areas increased sharply for both races. The drop in the number of rural teachers of both races began in 1938, before the US joined the war, so it is probably best attributed to urban migration. However, certification levels drop from 1942 to 1944. If we look at teacher educational attainment levels, 93% of White teachers had college education in 1942 while only 87% did in 1944; among Black teachers the decline is from 66% to 60%.

The Second World War does not emerge as a significant explanatory factor for Black relative salary gains. Black relative teacher salaries began to make rapid gains as early as 1938-1942, well before possible effects from WWII. Over the 1942-1944 period, overall relative wages were flat as the urban Black to White ratio fell while the rural ratio rose. The next period of rapid salary

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[28]See Pierce, et al (1955).

advancement was 1944-1950. Thus there is no clear evidence in our data of a direct effect of WWII either on supplies of teachers or on teacher salaries, although there is some evidence of a decrease in teacher quality as indicated by the drop in teacher-certification levels.

4.2 The Impact of Legal Action

The data presented thus far do not offer a decisive determinant of Black relative schooling quality improvements in the post-Rosenwald era. We turn now to the remaining candidate in our proposed list: legal action. For term lengths the argument is straightforward: the Georgia legislature passed a law in 1937 mandating that all schools, for both Black and White children, hold class for a minimum of 7 months. The law did not merely formalize a practice already adopted by most schools, as many argue the mandatory attendance laws did. Rather, Figure 1 illustrates a dramatic increase in the ratio of Black to White term lengths after 1937. For teacher-salary measures, the argument is more complicated. While WWII may have had some effect on salaries through its effect on the supply of teachers, we find the timing of relative teacher-salary improvements corresponds more closely to legal activity directed at racial discrimination.

The century opened with very little encouragement for those looking to the federal judiciary to assist Southern Blacks in their effort to secure adequate education. The Supreme Court (1896) decision in *Plessy v. Ferguson* upheld as constitutionally permissible a state law requiring railroads to provide "separate but equal accommodations for the White and colored races." While the precise holding ultimately proved to be highly adverse to Blacks, as Justice Harlan had predicted in his lone dissent, the doctrine of separate but equal at least held out the possibility of ensuring equality of resources for Blacks. Three years after *Plessy*, however, Justice Harlan himself undercut this promise, when Black parents in Georgia complained about the closing of a Black high school at a time when a White high school for girls (though not for White boys) was supported by public taxation. In *Cumming v. Richmond County Board of Education*, Justice Harlan, now writing for a unanimous Supreme Court, noted that the particular decision of the school board was not rooted in hostility toward Blacks, as evidenced by the fact that the closing of the Black high school that would have served 60 students was implemented to provide primary education to about 300 Black schoolchildren, and three church-affiliated high schools accepted Black students for the same fee as had been required to be paid for attending the closed Black public high school. Despite Harlan's

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statement that "the education of the people in schools maintained by state taxation is a matter belonging to the respective states, and any interference on the part of Federal authority with the management of such schools can not be justified, except in the case of a clear and unmistakable disregard of rights secured by the supreme law of the land," the peculiar circumstances of the case and the mishandling of the litigation by the plaintiffs should have rendered *Cumming* a narrow decision. Instead, it came to stand for the proposition that segregated schools were constitutional and that federal courts should not interfere, absent extraordinary circumstances, in the choice of the state and local school authorities.

Starting in the late 1920s, the NAACP planned an organized attack on the discriminatory practices followed by Southern school boards.[29] Like the philanthropists active a decade earlier, the NAACP used *Plessy v. Ferguson* as leverage for change. The NAACP, under the so-called "Margold Plan," targeted seven Southern states whose school allocations for Blacks clearly violated the separate but equal standard: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina. The NAACP found that the states with the worst records in terms of unequal school allocations had school segregation laws that did not mandate equal funds for Blacks. In his 1930 report, Margold recommended that NAACP lawsuits be brought in those states where school officials were under no statutory obligation to provide separate but equal schools for Blacks.

The NAACP adopted a strategy of seeking to require school districts to pay equally qualified White and Black teachers the same salary. Finding a Black teacher willing to file a lawsuit proved difficult, though. Black teachers naturally were reluctant to speak out, fearing job loss and violence. Compounding the problem was the paucity of funds during the Depression. Nevertheless, the NAACP finally filed its first case in 1936 in Maryland.[30]

While this case and several other of the early suits ended in favorable rulings, they did not generate a published opinion with precedential value. To achieve this end, in 1939 the NAACP filed *Mills v. Board of Education of Anne Arundel County* (Maryland) in federal court.[31] As before, the charge involved unequal teacher pay. In this case, the court granted an injunction against discrimination based on race. However, the victory was not absolute. The court stated

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[29] A $100,000 grant from Charles Garland initiated the legal plan. See Beezer (1986).

[30] See Tushnet (1987) for details. Maryland was chosen, in part, because of teacher-tenure laws, which would inhibit school boards from firing teachers who filed suit.

[31] 30 F. Supp. 245.

"it does not follow that because the positions are equivalent the particular persons filling them are necessarily equal in all respects." This ruling enabled school boards to use subjective merit standards to disguise continued racial discrimination. Black teachers would receive the White salary minimum, while White teachers would earn more based on "merit."

If Southern school districts did not discriminate against African-American teachers, but merely paid all teachers according to merit, then discrepancies in average salaries would be influenced by differences in certification and training levels. For 1930 through 1950, Figure 6 graphs Black - White relative teacher salaries against the average ratio by district of Black to White percentage of teachers, who had advanced certificates. As the figure illustrates, certification levels began to converge well before salaries did. This evidence supports Margo's (1990) conclusion that discrimination and not teacher qualification was largely responsible for salary discrepancies.

Nonetheless, "merit" based wages made discrimination more difficult to prove. Despite this limitation, the *Mills* decision provided an important precedent to Black teachers for use in subsequent litigation and for use as a bargaining tool in negotiating settlements. For example, in January of 1940, the NAACP sent copies of the *Mills* decision to the Prince Georges County School Board (Maryland), which was then embroiled in a similar case. The school board quickly responded, voluntarily equalizing salaries in exchange for dismissal of the lawsuit.[32] In 1941, Maryland passed an act equalizing all salaries and repealing earlier statutes setting separate minimums for White and Black teachers.[33]

In response to successes in Maryland cases and other Southern states, the NAACP in 1941 filed the first petition to equalize salaries in Georgia. This case, *Davis v. Cook*, was to be the most important teacher salary case in Georgia.[34] For many years Atlanta had maintained a two-tiered system of paying teachers by race. The system was abolished in 1942 after a lawsuit was filed by one of the teachers, but a new system was then adopted that supposedly judged teachers individually. In 1943, the NAACP filed the suit challenging the operation of this new system.

The plaintiff claimed that the system adopted by the school board, though providing a wage increase for Black teachers, still resulted in stratification by race. The issue, as framed by the court, was whether discrimination entered in the use of the new subjective criteria. To determine

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[32] 1940 NAACP Annual Report.

[33] Maryland Act of 1941, Chapter 515.

[34] Davis v. Cook 80 F. Supp. 443 (N.D. Ga. 1948).

this, the court reviewed voluminous statistical data and concluded that the wide salary differences between Black and White teachers could be attributed only to discrimination. The court cited the then numerous precedents in finding that the school board was in violation of the law. As in other decisions, the court held in its 1948 decision that it was not enough that the statutes were not discriminatory on their face. The critical issue was that in practice salary schedules were applied in an unequal way, to the detriment of Black teachers.

The *Davis v. Cook* decision was later overturned on appeal as the circuit court ruled that the plaintiff had to first exhaust his administrative remedies before bringing suit.[35] The decision, though unfavorable in its administrative specifics, nonetheless supported the drive for equalization in general. The appellate court stated that while the classification system was the same for Blacks and Whites, it was applied in a way that appeared to be based "on color only." The broader importance of the decision was thus in support of salary equalization.

To determine how teacher-salary increases in Georgia correspond to the timing of the court cases, reconsider Figure 1. From 1911 through the mid 1930's, Black teachers in Georgia received a low and roughly constant fraction of the amount paid to White teachers. Starting in the late 1930s, corresponding with the beginning of the NAACP's civil litigation campaign, the Black-White ratio jumped sharply. Relative teacher salaries decreased in 1942, but grew again dramatically beginning around 1943-44, concurrent with the filing of *Davis v. Cook*. This relative salary improvement continued until, by 1956, after the famous *Brown v. Board of Education* ruling, Black teachers and White teachers received almost identical pay on average.[36]

Assessing the importance of events like civil litigation on a time series of wages is extremely difficult and frequently boils down to before and after comparisons. The before and after comparison here favors a strong impact for civil suits on relative schooling quality, especially since the competing theories of increased teacher training and WWII labor shortages do not closely match the timing of increases in teacher salaries. But since we have statewide teacher-salary data for a number of Southern states that experienced equalization litigation, we can strengthen our conclusion if Black relative salary gains respond in a similar fashion to litigation filed at different points

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[35]The appeal was filed by Cook against Davis (see *Cook v. Davis*, 178 F. 2d 595 (5th Circuit, 1949))

[36]The NAACP changed its tactics in the late 1940s, moving to a direct attack on segregation. The new approach culminated in the *Brown* case, which was filed in 1951. In part, the shift in strategies was due to decreasing marginal returns to additional salary cases. It was also due to increased support from the black community and the federal government for a more aggressive assault on discrimination. See Tushnet (1987).

in time. Consequently, we next consider whether other Southern states exhibit similar patterns in the timing of relative teacher-salary increases and civil litigation.

4.3 Teacher Salary Increases Throughout the South

Examining teacher salaries over the period 1910-1960 for all seven states initially targeted by the NAACP in the Margold plan (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, and South Carolina), we find an identical pattern. Figure 7 plots Black-White relative teacher salaries over time and indicates the initial filing dates of key NAACP civil cases. Virtually no progress occurs in closing the substantial earnings deficits of Black teachers relative to White teachers occurs until litigation is initiated within the state. Some states, such as Texas, North Carolina, and Virginia, were not targeted in the initial salary equalization plan, but did have other NAACP discrimination cases.[37] Although Mississippi was initially targeted, the NAACP did not file litigation suits there and salary equalization took place slowly. By 1952 Black teachers were still paid a mere 60% of White teacher salaries in this state, whereas teacher salaries for Blacks and Whites were roughly equal by that year in Georgia.

For a further assessment of the impact of these civil rights cases, we compared the Black-White teacher-salary ratio for selected Southern states before and after each state's first salary equalization case was filed. (The Biennial reports do not provide a full time series, but we have teacher salaries for every other year from 1910 through 1954, with a few gaps). Table 11(a) gives the mean percent change in the teacher wage ratio for states with equalization cases and, for comparison, the mean percent change in the wage ratio before and after a fixed reference year (1943) for states without equalization cases. Obviously, part of the reason why border states like Kentucky were not subject to equalization litigation was that salaries were already roughly equal there. The table suggests a sharper improvement in states with cases than in those without during the same time period. Table 11(b) shows the divergence of wage ratios from 1.0. The evidence here indicates how states

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[37]In Texas, the NAACP filed salary equalization, facility equalization, and higher education access cases. While no equal salary cases were filed in North Carolina, the NAACP did file successful school facility equalization cases in the state. This state is somewhat unusual in that in the midst of the Depression, the North Carolina General Assembly adopted a number of measures designed to improve education. They established a state-wide eight-month school term minimum, for Whites and Blacks, as well as a salary reduction, designed to bring the two races' salaries into line. With the threat of civil litigation in 1934, the State Superintendent of Public Instruction persuaded the General Assembly to raise the pay of Black teachers. Beginning in 1938, the legislature responded by appropriating increasing sums each year to fully equalize salaries by 1945. The effect of this legislation is clearly discerned in Figure 7. See Tushnet (1987).

with salary equalization cases showed more rapid salary convergence than those without.

Even though the civil suits were successful in increasing Black teachers' pay, higher salaries would not necessarily generate immediate increases in actual teaching quality. Paying existing teachers more money does not immediately improve teaching practices. Nonetheless, salary increases matched pay to training and would, over time, attract and retain higher quality teachers.

The heightened outside focus on teacher pay likely stimulated increases in other schooling quality inputs for Black children. Southern states were clearly concerned with maintaining separate school systems; improving the relative quality of Black schools was a proactive measure intended to stave off integration.

5 Conclusions

This paper explores the sources of improvements in schooling quality for Southern Blacks at a time when they had little political power and there was substantial discrimination in the distribution of schooling funds. Using district-level data for one Southern state, we first document trends in schooling quality and then consider alternative sources of absolute and relative improvements. These include migration, industrialization, philanthropic activity, the Depression, World War II, and civil rights activity led by the NAACP. Figure 10 shows a timeline of each of the factors discussed in this paper as they occurred during the 1911 to 1960.

Measured school-quality inputs improved in absolute terms for both Black and White students over the years 1911 to 1960. We distinguish between two distinct periods of improvement: 1910 to the late 1930's and the late 1930's to 1960. During the first period, Black measured quality improved in absolute terms but not in relative terms. During the second period it improved in relative terms and ultimately converged to White quality levels.

Migration is an important factor in explaining quality changes. Students of both races moving to urban areas benefited from higher quality schools there. However, its effect on relative schooling quality is much weaker. Moreover, we have found that much of the improvement in schooling quality per pupil within the state of Georgia comes from within county improvement and not in geographical redistribution of the Black population within the state. Estimates of lost agricultural output due to migration indicate that it might have had a substantial impact on the economy of the state, especially during the second wave of migration in the 1940's. However, substantial changes

in technology that reduced the demand for labor, as well as acreage restrictions, likely mitigate this effect. But given depressed economic conditions in the 1930^s in agriculture and elsewhere this explanation does not explain improvements in that period.

Philanthropic activity was a major force in improving Black schools. We present evidence that the activities of the Rosenwald Fund, the Jeanes Fund and the Slater Fund were substantial in magnitude and that the foundations structured the incentives of their programs to maximize their influence by stimulating local participation in improving Black schools. They focused on providing resources that were not easy to divert to other uses, such as physical capital and teacher training, and targeted resources to states needing them most. Their activity is one explanation for why access to Black schools improved and why schooling quality improved at a time when Blacks had little political power. However, philanthropy cannot explain convergence in quality measures that occured in the 30^s and 40^s.

Black schools did not improve in relative terms until the late 1930s. By this time, the larger educational philanthropic organizations had largely ceased their activities. Migration does not appear to be the driving force behind changes in the quality measures. Nor does the advent of WWII match the timing of relative increase in teacher salaries.

What remains as the most attractive explanation for the rapid gains in relative Black-White educational quality is legal activism. Legal action, in the form of a minimum term length law and civil suits regarding teacher pay equity, is closely synchronized with relative improvements in quality. This is true in Georgia and in other Southern states. The civil litigation campaign launched by the NAACP emerges as the dominant factor behind relative gains in teacher salaries.[38]

The results of this analysis show that interventions that were external to the Southern economy were important in changing the quantity and quality of schools available to African-Americans. General economic forces, such as migration to urban areas and Northern states and changes in industrial composition, had some influence on schooling quality levels but do not explain the particular timing of relative gains in schooling quality in Georgia.

The human capital explanation for Black-White wage convergence, emphasizes an important

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[38]Studies downplaying the importance of *Brown v. Board of Education* on Black school reform, such as *Hollow Hope* by Rosenberg (1993), overlook the twenty years of legal activity, and the progress it generated, that preceded *Brown*. Indeed, it is difficult to portray the *Brown* decision as a single case. Rather, the entire period starting with the 1930 NAACP report on teacher wage inequalities and culminating with the Civil Rights Act of 1964 may be viewed as an interrelated process with the same goal: the end of legalized racial discrimination.

role for schooling quality in bringing about wage gains and downplays the importance of civil rights activity. A key finding of this study is that even if schooling quality improvements account for much of the closing of the racial wage gap, such evidence does not rule out social activism as a primary contributing factor to Black economic progress.

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Appendix A: Data Appendix

Our school-quality data are based on district-level data for White and Black schools reported in the *Annual Reports of the Georgia Department of Education*. For each school district in existence in a given year, the annual reports give enrollment figures, students in daily attendance, term lengths and teacher-salary disbursement data separately by race.

Urban/Rural Classification

Since one of our aims is to examine differences between urban and rural schooling, each school district was assigned a code based on its Census definition. Each school district was placed in one of two categories:

1. Urban districts, congruent with the borders of incorporated towns or cities with populations sufficient to meet the prevailing Federal census definition of "urban" (i.e., more than 2500 inhabitants);

2. Rural districts, congruent with rural census tracts which may or may not be county level.

Treatment of Missing Data

The study makes use of two levels of aggregation of Georgia school-quality data: the school district and the county. School district divisions, despite the finer grain analysis afforded by their use, do not remain stable during the period under study which leads to an apparent problem of missing data. As cities grew in the early 1920s, school districts were added to the rosters. When school districts were then consolidated in the 1930s, they appear as missing in later periods. A 1945 revision of the Georgia state constitution eliminated still more districts (Joiner, 1979). In all, 181 school districts were in existence after 1960, including 159 counties and 22 independent city systems. Of these 181, nine are missing all data before 1916, twelve are missing all data before 1924, and five are missing all data before 1928. In most of these cases, it is probable that the missing school district data is due to the district's abolishment in the 1930's or 1940's, or to its creation after 1916. In most cases, data on a district that was not available in the reports was coded as missing. However, in a few cases (11 districts), Black student data were not reported for a district that previous and subsequent reports indicated had no Black students. These missing data were imputed to zero.

Despite these gaps, we are able to use district level data for point estimates of the quality measures and for our investigation of urban/rural differences. We take a mean of the quality measures from whatever units were reported that year, weighted by their enrollment and the number of teachers for that year. For our time series analysis of Georgia as a whole (the decompositions and maps) we use the more stable county units. For county measures, we took a weighted mean of the district level data for each county (recoding two counties which were absorbed into Fulton County in the 1930's).

Teacher-certification data

Certification data were collected from the Annual Reports of the Georgia Department of Education for 1911, 1930, 1938, 1942, 1944 and 1950. Particular attention was paid to collecting data just before and during the upswing in teacher salaries in the late 1930's. There were three basic systems of certification and reporting during this period: the 1911 system, the 1930 system and the post-1936 system. Since these systems cannot be directly compared across time, we converted them into years of post-secondary training, using descriptions of the teacher training required for licensure found in the reports.

From 1911 until 1930, certification levels were reported as permanent or temporary licenses, with permanent licenses further subdivided into 1st, 2nd and 3rd grade licenses. In addition, reports give the number of "normal trained teacher" who may hold any type of license. Normal school training was relatively advanced and as such we consider it to be equivalent to two or more years of college training in later years. By 1930

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school boards adopted a more complex certification scheme, with two kinds of certificates, professional and provisional, and several levels within each kind of certificate. For both professional and provisional types, we group together the College, Normal, and High School certificates as advanced; Elementary certificates are included in a separate category. Beginning in 1938, those who held state licenses–the great majority of teachers–were broken down by years of educational attainment, from five years to less than one year of college.

To compare these differing systems across years, we constructed two variables, the fraction of certified teachers in each district and the fraction of teachers with two or more years of post-secondary education. Normal trained teachers in 1911, "advanced" certified teachers in the 1930s, and teachers with 2 or more years of post-secondary education reported from 1938 on are included in the second variable. This measure turned out to be more meaningful because by the 1940's nearly all teachers were state certified.

Agricultural Output Estimates

Following DeCanio (1974), we obtained the Black rural population in Georgia for 1910 and 1920 from the Decennial Census of Population as a measure of total labor in the state's agricultural production. (We ignore the contribution of White workers, given DeCanio's finding that the productivity of each race is about the same). The Black rural population declined in this decade by 18,832 persons, or 2.0%. If the elasticity of labor is α, then a one percent change in the labor supply produces an α percent change in output. DeCanio estimates α to be 0.164 for in 1910 (in fact this is an estimate for cotton production, but cotton constitutes a majority of the state's agriculture in 1910). Hence a two percent decline in the rural population predicts a 0.32 % decline in output over the ten year period. Given Georgia's total agricultural output of $227 million in 1910 (source: 1925 Census of Agriculture), this decline translates into an average decline of $473 per year per rural school district. And since an average Black teacher earned just under $100 per year, the lost output could have paid for an additional 4.7 teacher salaries in each school district, beyond the average of 19 Black teachers actually employed per district in 1910.

Heady and Dillon's (1961) estimate for 1950 is based on a survey of cotton farms in Alabama (a state whose agricultural industry is similar to Georgia's). Their unit of labor input is man-months per farm. We assume that the average months worked was constant between 1940 and 1950, and estimate workers per farm by dividing male agricultural workers (from the occupation tables in the Decennial Census of those years, reproduced in Table 6) by the number of farms(from the Census of Agriculture), which yields a 29.3% decline in workers per farm. Heady and Dillon's estimate of α then predicts a nine percent decline in production over the ten-year period from this decline in labor. Given an agricultural output of $122 million in nominal dollars in 1940 (source: 1945 Census of Agriculture), this translates into an average decline of $140,000 per year per rural school district. (There were only 87 rural school districts in 1940 as opposed to 147 in 1910). Since the mean Black teacher wage in those districts was $1,440 per year and each district had on average 26 teachers,this lost output could have paid for salaries for 97 new teachers in each rural school district, almost four times as many as actually existed.

Tax Data

Revenue and tax data for each Georgia county were collected from the US Census reports carried out irregularly, but approximately every decade. Reports giving county revenue and tax revenue were issued in 1913 and 1922 under the title *Wealth, Public Debt and Taxation*; in 1931 as *Financial Statistics of State and Local Governments*; and in 1942 and 1957 as the *Census of Governments*. From each report we obtained the overall revenue from all sources for each county (except in 1922 when the reports show tax revenue only), and property tax revenue collected by that county. These data were matched to our school-quality data for the years 1911, 1920, 1930, 1942 and 1956 respectively, and converted into constant dollars in our regressions.

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Industrial Composition Data

The Decennial Censuses provide the number of persons employed in agriculture and other industries, as well as the total number of employed persons for various geographic units. From this data we calculate the percentage of agricultural employment out of total employment as a measure of the level of industrialization. In 1930 through 1960 this information was collected for each county in Georgia. However, prior to 1930 only the state level of industrialization may be calculated from Census reports. Given the state level of increase in industrialization (about 10% between 1910 and 1920 and again between 1920 and 1930) and the county levels in 1930, it is possible to estimate industrialization levels by county for 1920 by subtracting the statewide increase evenly from the proportion of agricultural workers in each county in 1930. A similar operation yields an estimate for 1910. .

Migration Estimates

The Census provides population counts for each Georgia county for each decade. Before 1950, the population is broken down into "White," "Negro," and "other races"; in 1950 and 1960 the census division is consolidated to "White and "non-White." However, the impact of this discrepancy is small, given the very small reported number of nonWhite, non-Negro persons living in Georgia before 1960. Similarly, we group together the native and foreign-born White population due to the small number of immigrants to Georgia in this period relative to the non-Southern states.

To estimate a decennial migration rate for each Georgia county, we first estimate a population growth rate for each county. The estimated number of migrants from each county is then given by the population size expected in each county from the growth rate (birth minus death rate) minus the population size actually observed at the end of each decade. We thus calculate a population growth rate per year, g, given by the birth rates for each race minus their death rates. This information was available specifically for Georgia from 1930 onward. In 1920 Georgia did not register deaths, so we used the birth and death rates of South Carolina, a neighboring state very similar to Georgia in later years in terms of population growth rates. In 1910 no Southern state collected death statistics. We therefore used the national birth and death rates for that year. We estimate the 1910 Black population growth rate from the reported White and total rates and the ratio of Blacks to Whites in the population.

Given this yearly population growth rate, g, and the size of the population at year 0 (1910), then the population at year 1, p_1, is given by: $p_1 = p_0(1 + g - m)$, where m is the rate of migration. At year ten the population size is $p_{10} = p_0(1 + g - m)^{10}$. Since we know the actual population at year 10, m is estimated by $m = 1 + g - \left[\frac{p_{10}}{p_0}\right]^{1/10}$.

Rosenwald School Data

For one year, 1941, we obtained a county specific estimate of the impact of the Rosenwald school building program. Johnson (1944) provides the number of Rosenwald schools and classrooms in each county in the South in 1941. Because the Rosenwald school building program was completed before 1941, the numbers printed in Johnson represent totals. We used the figures for Georgia as a rough estimate of the differential impact of the Rosenwald program across counties.

State School Expenditure Data

The biennial *US Office of Education Reports* give a total dollar expenditure on education in Georgia for most years as well as a breakdown of the sources of school revenue, into State, Local (including county), and Other (including federal and philanthropic) sources. This information was available on the state level for all the years for which we have school-quality data, except 1911 and 1942. It is expressed in constant (1960) dollars in our regressions.

TABLE 1a
Trends in Mean of District Level School Quality Measures
from 1911 to 1960 for selected years[a]
Standard Deviations in parentheses

Year	Pupil/Teacher Ratio, Enrollment-based			Pupil/Teacher Ratio, Attendance Based			Term Length (days)			Per Diem Teacher Salary (1960 dollars)[b]		
	black	white	ratio	black	white	ratio	black	white	ratio	black	white	ratio
1911	60 (15)	40 (9)	1.51	37 (16)	26 (7)	1.46	119 (29)	134 (30)	0.90	3.11 (1.35)	6.90 (2.30)	0.46
1920	59 (13)	41 (9)	1.44	40 (11)	31 (7)	1.31	129 (30)	143 (30)	0.80	2.36 (1.53)	5.49 (2.38)	0.42
1930	48 (12)	35 (6)	1.39	36 (11)	27 (7)	1.33	131 (32)	153 (25)	0.86	3.80 (2.82)	9.08 (4.17)	0.42
1938	43 (10)	30 (5)	1.43	33 (9)	24 (4)	1.33	153 (18)	170 (10)	0.90	4.81 (2.78)	10.42 (4.56)	0.46
1950	36 (5)	32 (4)	1.14	29 (5)	25 (3)	1.14	177 (7)	180 (0.85)	0.98	11.33 (2.11)	14.40 (2.47)	0.79
1960	31 (3)	29 (3)	1.04	29 (2)	24 (2)	1.01	180 (0.00)	180 (0.00)	1.00	20.00 (2.83)	20.48 (2.84)	0.98

(a) For enrollment-based pupil teacher ratio and term length, the table shows the mean for each quality measure given by the average of all the district means weighted by enrollment for that district. For attendance-based pupil teacher ratio the district mean is weighted by the average daily attendance for each district, and for per diem teacher salary by the number of teachers in each district.

(b)The deflator used to adjust for inflation was the national Consumer Price Index for each year. (U.S. Bureau of the Census. Historical Statistics of the United States, Part I Consumer Price Indexes, All Items Series E 135-166).

Table 1b
Trends in Teacher Certification Levels, 1911-1960

Year	Number of teachers		Proportion of teachers with 2+ yrs post-secondary education			Proportion of teachers with state certification[a]		
	Black Total	White Total	Black county mean	White county mean	Within County Difference	Black county mean	White county mean	Within County Difference
1911	4,852	11,161	.16	.35	.19	na	na	na
1930	5,332	13,857	.14	.52	.38	.49	.92	.43
1938	6,528	15,819	.35	.83	.48	.56	.97	.41
1942	6,829	15,084	.64	.93	.29	.82	.98	.16
1944	7,561	15,129	.63	.87	.24	.75	.94	.19
1950	7,249	16,456	.91	.95	.04	.97	.98	.01

(a) The state certification system was established in 1915 and revised in 1930. The amount of post-secondary education required for each level of certification was reconstructed from descriptions in the Georgia Board of Education reports (See Appendix).

Table 2a
Availability of Schooling in Georgia
1900, 1940 and 1960

		Fraction of School-Age Population in School[a]		Teachers per Thousand in Population[b]	
Year	Age	White	Black	White	Black
1900	5 to 9	0.36	0.22	6.2[c]	3.4[c]
	10 to 14	0.70	0.46		
1940	5 to 9	0.70	0.67	7.7	6.0
	10 to 14	0.92	0.87		
1960	5 to 9	0.74	0.76	8.2	8.8
	10 to 14	0.94	0.96		

a. Sources: Anderson (1988) for 1900 and 1940; our tabulation for 1960 from the US Census Public Micro-sample (1960).
b. Source: Georgia State Board of Education reports for numbers of teachers; Census of Population for total state population (irrespective of age).
c. Data for 1910.

Table 2b
Availability of High Schools in Georgia

Fraction of 15 to 19 year olds in school[a]			Fraction of districts offering "high school grades"[b]		
Year	White	Black	Year	White	Black
1890	9.1	0.3			
1910	15.2	1.7	1918	.98	.67
1933	55.0	10.0	1928	.99	.83
1940	47.4	32.3			
1960	65.4	64.8			

a. Source: Anderson (1988) for 1890-1930. Our tabulation for 1940 and 1960 from the US Census Public Micro-sample (1960), representing all schooling attended by 15 to 19 year olds. (Anderson reports 16% of black children were enrolled in high school proper in 1940).
b. Source: Georgia State Board of Education Reports, 1918 and 1928. "High school grades" could mean as little as a single ninth grade class at an elementary school.

Table 3
Evidence for Bond's Redistribution Hypothesis
Pearson Correlations between Percentage of Black Enrollment
and Quality Measures over districts in Georgia (approx. 211 obs.)
p-values shown in parentheses

	1911	1930	1938	1944	1960
white quality measures					
per pupil exp.	0.26	0.37	0.55	0.39	0.58
	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
term length	0.02	0.23	0.43	0.23	***
	(0.7384)	(0.0003)	(0.0001)	(0.0007)	
teacher salary	0.09	0.13	0.13	-0.06	0.05
	(0.2056)	(0.0475)	(0.0532)	(0.4011)	(0.4753)
pupil-teacher	-0.34	-0.13	-0.39	-0.47	-0.64
ratio	(0.0001)	(0.0417)	(0.0001)	(0.0001)	(0.0001)
black quality measures					
per pupil exp.	-0.43	-0.40	-0.40	-0.19	-0.41
	(0.0001)	(0.0001)	(0.0001)	(0.0056)	(0.0001)
term length	-0.05	-0.18	-0.13	-0.38	***
	(0.0529)	(0.0074)	(0.0541)	(0.0001)	
teacher salary	-0.24	-0.24	-0.18	-0.06	-0.10
	(0.0011)	(0.0002)	(0.0066)	(0.4011)	(0.19)
pupil-teacher	0.32	0.29	0.23	0.18	0.33
ratio	(0.0001)	(0.0001)	(0.0004)	(0.0093)	(0.0001)

*** not available in this year because black and white quality measures converged to 180 days term length.

Table 4
Intercensal Migration in Georgia and the South (in 1000s), By Race

Georgia

Year	Black	Black % of pop	White	White % of pop
1910-20	-75	6.4	-27	1.8
1920-30	-260	21.4	-155	9.2
1930-40	-90	8.4	-44	5.0
1940-50	-191	25.69	-38	1.9
1950-60	-165	15.5	-11	0.5

South

Year	Black	Black % of pop	White	White % of pop
1910-20	-454	5.1	-389	1.9
1920-30	-749	8.4	-546	2.2
1930-40	-348	3.7	-295	1.0
1940-50	-1,245	12.5	-503	1.6
1950-60	-1,202	11.6	-234	6.3

Table 5
Breakdown of Georgia and Southern Population
By Race and Rural/Urban Residence

Year	Total (in 1000's)	prop. Black	prop. White	prop. Rural	prop. Urban
Georgia					
1910	2,609	0.45	0.55	0.79	0.21
1920	2,896	0.42	0.58	0.75	0.25
1930	2,909	0.37	0.63	0.69	0.31
1940	3,124	0.35	0.65	0.66	0.34
1950	3,445	0.31	0.69	0.55	0.45
1960	3,943	0.28	0.71	0.45	0.55
South					
1910	29,389	0.30	0.70	0.77	0.23
1920	33,126	0.27	0.73	0.72	0.28
1930	37,858	0.25	0.75	0.66	0.34
1940	41,666	0.24	0.76	0.63	0.37
1950	47,197	0.22	0.78	0.51	0.49
1960	54,973	0.21	0.79	0.41	0.59

(Source: Historical Statistics of the United States, Part 1 Table Series A 195-209 (population), Series C 25-75 (intercensal migration).)

Table 6a
Trends in Mean Quality Measures for Urban and Rural Districts in Georgia
from 1911 to 1960 for selected years

Year	Pupil-Teacher Ratio, Enrollment-based			Pupil-Teacher Ratio, Attendance Based			Term-Length (days)			Per Diem Teacher-Salary (1960 dollars)[b]		
	black	white	B/W ratio	black	white	B/W ratio	black	white	ratio	black	white	B/W ratio
					Urban Districts[a]							
1911	65	41	1.50	44	31	1.42	143	161	0.91	3.8	9.0	0.44
1920	58	39	1.48	43	31	1.37	148	164	0.88	3.3	7.4	0.43
1930	53	37	1.45	42	30	1.40	157	173	0.91	6.2	13.1	0.47
1938	48	32	1.50	38	28	1.39	170	177	0.96	7.1	14.5	0.49
1950	36	32	1.14	30	26	1.15	178	180	0.99	11.9	15.0	0.79
1960	31	30	1.05	25	25	1.02	180	180	1.00	20.4	20.9	0.98
					Rural Districts[a]							
1911	58	39	1.52	35	25	1.50	111	124	0.90	2.9	6.31	0.47
1920	59	42	1.42	39	31	1.27	120	134	0.90	1.9	4.53	0.42
1930	46	34	1.36	33	26	1.29	117	141	0.83	2.7	7.01	0.39
1938	39	28	1.39	29	22	1.31	144	166	0.86	3.7	8.05	0.46
1950	35	31	1.14	27	24	1.11	174	180	0.97	10.1	13.03	0.78
1960	31	28	1.10	24	24	1.01	180	180	1.00	18.6	19.04	0.98

(a) For enrollment-based pupil-teacher ratio and term-length, the table shows the mean for each quality measure for each demographic type (urban or rural) given by the average of all the district means of each demographic type weighted by enrollment for that district. For attendance-based pupil-teacher ratio, the district mean is weighted by the average daily attendance for each district, and for per diem teacher salary by the number of teachers in each district.

(b) The deflator used to adjust for inflation was the national Consumer Price index for each year (U.S. Bureau of the Census. *Historical Statistics of the United States, Part I Consumer Price Indexes*, All Items Series E 135-166)

Table 6b
Trends in Teacher Certification by Urban and Rural Districts in Georgia[a]

Year	Number of teachers		Proportion of teachers with 2+ yrs post-secondary education			Proportion of teachers with state certification		
	Black Total	White Total	Black county mean	White county mean	Within County Difference	Black county mean	White county mean	Within County Difference
Urban Schools								
1911	1,269	2,943	.21	.41	.20	NA	NA	NA
1930	1,702	5,082	.37	.69	.32	.83	.92	.09
1938	2,134	5,892	.57	.89	.32	.83	.99	.16
1942	2,961	6,806	.77	.96	.19	.92	.99	.07
1944	3,679	7,140	.77	.92	.15	.87	.97	.10
1950	4,928	11,253	.94	.96	.02	.98	.98	.00
Rural Schools								
1911	3,583	8,218	.15	.33	.20	NA	NA	NA
1930	3,630	8,775	.04	.43	.40	.35	.92	.57
1938	4,394	9,927	.23	.80	.58	.43	.96	.53
1942	3,868	8,278	.54	.91	.36	.75	.98	.23
1944	3,882	7,989	.50	.82	.34	.65	.91	.26
1950	2,321	5,203	.86	.93	.08	.96	.98	.02

(a) Note that the state certification system was established in 1915 and revised in 1930. The amount of post-secondary education required for each level of certification was reconstructed from descriptions in the Georgia Board of Education reports (See Appendix for details).

Table 7
Employment of Men in Selected Industries in Georgia, 1910-1960

Year	1910				1940			
	Total	%Agric.	%Manuf	%Other	Total	%Agric	%Manuf	%Other
All Males	807,185	65%	12%	23%	806,694	43%	18%	39%
White	423,532	62%	13%	25%	543,215	38%	20%	42%
Black	366,612	70%	11%	19%	263,292	54%	15%	31%
Year	1920				1950			
	Total	%Agric.	%Manuf	%Other	Total	% Agric	%Manuf	%Other
All Males	840,412	58%	18%	24%	876,746	28%	23%	49%
White	469,354	54%	19%	27%	627,378	24%	24%	52%
Black	351,626	65%	17%	18%	249,122	37%	22%	41%
Year	1930				1960			
	Total	%Agric.	%Manuf	%Other	Total	% Agric	%Manuf	%Other
All Males	850,219	48%	22%	30%	1385047	9%	26%	65%
White	531,529	46%	22%	32%	1023076	7%	30%	63%
Black	311,550	53%	22%	25%	361,971	13%	17%	70%

Source: U.S. Census Part I: Characteristics of the Population

Table 8a

Decomposition of Change in the White Quality Measure into Within County and Between County Changes
Quality Measure: Pupil-Teacher Ratio (Attendance Based Measure)

Year	Total Change	Contribution to Total	
		Between County	Within County
1911-1912	-0.2	-0.0	-0.2
1912-1916	4.0	-0.0	4.0
1916-1920	0.6	0.1	0.5
1920-1924	-1.1	-0.2	-0.9
1924-1928	-2.2	0.1	-2.3
1928-1930	0.2	-0.0	0.2
1930-1934	-0.5	0.1	-0.6
1934-1936	-2.3	-0.1	-2.1
1936-1938	0.9	0.2	0.8
1938-1942	-1.0	0.2	-1.2
1942-1944	1.2	-0.1	1.3
1944-1950	-0.1	0.4	-0.4
1950-1956	-0.9	0.1	-1.0

Quality Measure: Term Length

Year	Total Change	Contribution to Total	
		Between County	Within County
1911-1912	-0.6	0.2	-0.8
1912-1916	3.4	0.5	2.9
1916-1920	6.8	0.5	6.2
1920-1924	8.3	1.8	6.5
1924-1928	2.3	1.1	1.2
1928-1930	5.7	-0.1	5.8
1930-1934	2.8	0.2	2.6
1934-1936	8.2	-0.5	8.7
1936-1938	8.8	0.2	8.6
1938-1942	-0.8	0.0	-0.8
1942-1944	1.5	0.0	1.4
1944-1950	0.1	0.0	0.1
1950-1956	0.0	0.0	0.0

Quality Measure: Teacher Salary

Year	Total Change	Contribution to Total	
		Between County	Within County
1911-1912	0.2	0.0	0.1
1912-1916	-0.3	0.1	-0.4
1916-1920	-1.5	0.0	-1.5
1920-1924	2.7	0.2	2.5
1924-1928	1.6	0.4	1.1
1928-1930	-0.4	-0.0	-0.4
1930-1934	1.0	0.1	0.9
1934-1936	0.4	-0.1	0.6
1936-1938	-1.1	-0.0	-1.1
1938-1942	1.5	0.2	1.3
1942-1944	3.4	0.0	3.4
1944-1950	4.4	0.2	4.2
1950-1956	1.7	-0.0	1.7

Table 8b

**Decomposition of Change in the Black Quality Measure
into Within County and Between County Changes
Quality Measure: Pupil-Teacher Ratio (Attendance Based Measure)**

| Year | Total Change | Contribution to Total | |
		Between County	Within County
1911-1912	-2.7	-0.0	-2.6
1912-1916	4.4	-0.1	4.4
1916-1920	2.1	-0.3	2.4
1920-1924	0.8	0.6	0.2
1924-1928	-4.6	-0.8	-3.8
1928-1930	2.6	-0.3	2.8
1930-1934	-2.7	0.0	-2.7
1934-1936	-3.4	-0.7	-2.7
1936-1938	-1.0	0.2	-1.1
1938-1942	-2.6	0.1	-2.7
1942-1944	0.3	0.2	0.0
1944-1950	-2.9	0.3	-3.2
1950-1956	-1.2	0.2	-1.4

Quality Measure: Term Length

| Year | Total Change | Contribution to Total | |
		Between County	Within County
1911-1912	-1.5	0.5	-2.0
1912-1916	1.4	0.6	0.8
1916-1920	9.6	0.2	9.4
1920-1924	5.9	3.2	2.7
1924-1928	-1.5	0.0	-1.5
1928-1930	5.9	-0.4	6.3
1930-1934	1.2	0.5	0.6
1934-1936	13.8	-1.0	14.8
1936-1938	8.8	0.7	8.2
1938-1942	3.1	0.2	2.9
1942-1944	11.6	0.8	10.7
1944-1950	3.3	0.4	3.0
1950-1956	0.0	0.0	0.0

Quality Measure: Teacher Salary (in 1960 dollars)

| Year | Total Change | Contribution to Total | |
		Between County	Within County
1911-1912	0.0	0.0	0.0
1912-1916	-0.4	0.1	-0.4
1916-1920	-0.6	-0.0	-0.6
1920-1924	0.6	0.3	0.4
1924-1928	1.1	0.0	1.1
1928-1930	0.3	-0.0	0.3
1930-1934	0.5	0.1	0.5
1934-1936	0.3	-0.1	0.4
1936-1938	0.0	0.1	-0.1
1938-1942	0.3	0.0	0.3
1942-1944	5.9	0.1	5.8
1944-1950	6.6	0.2	6.3
1950-1956	2.0	0.1	1.9

Table 9a
Elasticity of CountyTax Revenue with Respect to Population by Race in Georgia
Dependent Variable: Log of District Tax Revenue

Variable	Estimated Coefficients (Regressions Estimated Separately by Year and Pooled Across Years, standard errors shown in parentheses)				
	1911	1930	1942	1956	pooled†
urban intercept	1.46	0.45	0.79	3.43	4.58
	(0.69)	(0.55)	(0.60)	(0.42)	(0.56)
rural intercept	2.69	1.95	4.33	6.35	4.78
	(0.28)	(0.25)	(0.51)	(0.43)	(0.58)
Log number of whites in district * urban district	0.63	0.85	0.83	0.79	0.59
	(0.07)	(0.06)	(0.07)	(0.05)	(0.06)
Log number of black in district * urban district	0.44	0.48	0.34	0.25	0.12
	(0.07)	(0.05)	(0.07)	(0.05)	(0.07)
Log number of whites in district * rural district	0.55	0.87	0.63	0.60	0.52
	(0.03)	(0.03)	(0.05)	(0.04)	(0.06)
Log number of black in district * rural district	0.37	0.28	0.16	0.11	0.18
	(0.02)	(0.02)	(0.04)	(0.03)	(0.06)

†The pooled regression also contains county fixed effects and year effects. The number of whites and blacks in each district were only available in decennial census years. Year-specific estimates were obtained assuming a constant population growth rate in each decade.

Table 9b
Elasticity of White Disbursements with Respect to Population by Race in Georgia
Dependent Variable: Log of White Disbursements

Variable	Estimated Coefficients				
	(Regressions Estimated Separately by Year and Pooled standard errors in parentheses)				
	1911	1930	1942	1956	pooled†
urban intercept	-1.91	-2.12	0.47	5.03	-1.67
	(2.63)	(1.53)	(1.25)	(10.53)	(1.39)
rural intercept	6.01	8.64	4.88	6.96	4.42
	(0.75)	(0.64)	(1.13)	(0.56)	(1.50)
Log number of whites in district * urban district	0.72	0.81	0.83	0.56	0.81
	(0.22)	(0.15)	(0.15)	(0.06)	(0.16)
Log number of blacks in district * urban district	0.52	0.56	0.24	0.24	0.44
	(0.18)	(0.12)	(0.14)	(0.06)	(0.19)
Log number of whites in district * rural district	0.21	0.15	0.69	0.60	0.38
	(0.08)	(0.07)	(0.11)	(0.06)	(0.16)
Log number of blacks in district * rural district	0.13	-0.01	-0.09	-0.04	0.19
	(0.06)	(0.06)	(0.09)	(0.04)	(0.19)

†The pooled regression includes county fixed effects and year effects. The number of whites and blacks in each district were only available in decennial census years. Year-specific estimates were obtained assuming a constant population growth rate in each decade.

Table 9c
Elasticity of Black Disbursements with Respect to Population by Race in Georgia
Dependent Variable: Log of Black Disbursements

Variable	Estimated Coefficients				
	(Regressions Estimated Separately by Year and Pooled standard errors in parentheses)				
	1911	1930	1942	1956	pooled†
urban intercept	-5.33	-6.93	0.83	5.19	-0.77
	(2.74)	(1.79)	(1.05)	(0.52)	(1.44)
rural intercept	5.48	7.47	3.73	7.06	5.89
	(0.79)	(0.75)	(0.95)	(0.56)	(1.60)
Log number of whites in district * urban district	0.54	0.62	-0.05	-0.20	-0.18
	(0.23)	(0.18)	(0.13)	(0.06)	(0.16)
Log number of blacks in district * urban district	0.88	1.06	0.99	0.96	1.15
	(0.19)	(0.14)	(0.12)	(0.06)	(0.20)
Log number of whites in district * rural district	-0.40	-0.44	-0.17	-0.33	-0.76
	(0.08)	(0.08)	(0.10)	(0.06)	(0.17)
Log number of blacks in district * rural district	0.62	0.51	0.82	0.87	0.99
	(0.06)	(0.07)	(0.07)	(0.04)	(0.20)

†The pooled regression includes county fixed effects and year effects. The number of whites and blacks in each district were only available in decennial census years. Year-specific estimates were obtained assuming a constant population growth rate in each decade.

Table 10(a)

Rosenwald Contributions to Black School Buildings and School Property

In 12 States, 1936.

State	Number of Black school buildings			Value of Black School Property (in millions)			
	Total Number	Number Rosenwald	Fraction Rosenwald	Total Value	Rosenwald Contribution	Fraction Rosenwald	Inequity Index*
Total reporting	24,454	4,907	.20	68.9	22.2	.32	
Alabama	2,603	407	.16	4.7	1.3	.27	.36
Arkansas	1,438	389	.27	2.6	2.0	.74	.40
Florida	1,014	125	.12	4.9	1.4	.29	.31
Georgia	3,111	261	.08	5.7	1.4	.24	.28
Louisiana	1,675	435	.26	na	na	--	.33
Maryland	536	153	.29	8.8	0.9	.10	.71
Mississippi	3,339	633	.19	3.2	2.9	.89	
North Carolina	2,456	813	.33	12.5	5.2	.41	.21
South Carolina	2,466	500	.20	5.2	2.9	.55	.48
Tennessee	1,208	373	.31	na	na	--	.22
Texas	2,810	527	.19	14.1	2.5	.18	--
Virginia	1,798	381	.21	7.0	1.9	.27	.45

Source: Wilkerson, Doxey A., 1939, p. 33.

*Source: Bond, 1934. This number represents the actual school expenditures per black pupil divided by the total state dollars apportioned per pupil. For example, if the state apportioned $1.00 to each student, regardless of race, but at the school district level only $0.50 of each dollar was spent on black pupils, with the rest going to white pupils instead, then the fraction would be 0.5.

Table 10(b)
Julius Rosenwald Fund Expenditures 1917-1936

Expenditure Type	Dollar Value	Percent of Total
School Building Program	$5,165,281	39.0%
Other Black Education	$2,098,591	15.9%
Other Activities and Administration	$5,972,211	45.1%
Total*	$13,236,083	100.00%

*"Of this total, $4,039,051 was expended during the early period, 1917-1927, almost exclusively on the Negro school building program, and $9,197032 was expended during the second period, 1928-1936, on the enlarged activities." (Source: Embree and Waxman, Investment in People, p. 1.)

Table 11(a)
Percent Change in Black-White Mean Teacher Salary Ratio Before and After Litigation

States with Litigation Cases			
State	Biennium of Litigation	% Change Before Litigation	% Change After Litigation
Alabama	1945–46	4.7	4.5
Arkansas	1945–46	0.7	5.0
Florida	1941–42	1.3	8.5
Georgia	1943–44	2.0	8.0
Louisiana	1941–42	-0.3	5.5
Maryland	1937-38	1.7	3.0
S. Carol.	1945–46	6.7	5.0
Texas	1943–44	3.0	6.5
Virginia	1939–40	0.7	10.3

Segregated States without Litigation		
State	% Change Before 1943	% Change After 1943
Delaware	1.7	14.0
Mississippi	-1.0	8.5
Missouri	11.0	2.0
North Carolina	7.7	4.0
Oklahoma	5.0	-8.0

Each percent change shown is the average biennial change in the wage ratio for the six years before and the six years after the litigation case (or 1943 for non-litigation states. Number of litigation states with 5% or more biennial change in wage ratio after litigation: 7 out of 9. Number of non-litigation states with 5% or more biennial change in wage ratio after reference year 1943: 2 out of 5. Results for Tennessee (a litigation state) and Kentucky (a non-litigation state) are not available.

Table 11(b)
Mean Deviation in Black-White of Teacher Salary Ratio from One Before and After Litigation

Litigation States			
State	**Biennium of Litigation**	**Deviation Before Litigation**	**Deviation After Litigation**
Alabama	1945–46	.48	.18
Arkansas	1945–46	.40	.28
Florida	1941–42	.51	.39
Georgia	1943–44	.56	.41
Louisiana	1941–42	.57	.52
Maryland	1937-38	.24	.11
S. Car.	1945–46	.54	.31
Texas	1943–44	.38	.20
Virginia	1939–40	.43	.24

Segregated States without Litigation		
State	**Deviation Before 1943**	**Deviation After 1943**
Delaware	.15	-.01
Mississippi	.68	.64
Missouri	-.09	-.15
North Carolina	.26	.02
Oklahoma	.07	.03

Results for Tennessee and Kentucky not available.

Table A.1
Enrollment in Urban and Rural School Districts

Type of School District	Number of Districts	Black Enrollment	White Enrollment	Total Enrollment
1910				
Urban	42	57,118	89,215	146,333
Rural	176	165,273	248,182	413,455
Total	218	222,391	337,397	559,788
% rural		74.3	73.6	73.8
1960				
Urban	108	240,309	525,454	465,763
Rural	88	72,794	144,297	217,091
Total	196	313,103	669,751	982,854
% rural		23.2	21.5	22.1

Source: Annual Reports of the Georgia State Board of Education; see Appendix for how districts are classified as urban or rural.

Table A.2
Julius Rosenwald Fund School Building Program Contributions
As of 1928

Fiscal Year	Number of bldgs	Total cost (millions)	Fund Contrib. (millions)	Fund Contrib. (% of total)
1917-1919	640	1.343	0.263	19.6
1920-1921	429	2.086	0.356	17.1
1921-1922	434	1.797	0.383	21.3
1922-1923	465	1.966	0.388	19.7
1923-1924	485	2.566	0.414	16.1
1924-1925	487	2.602	0.414	15.9
1925-1926	493	2.467	0.401	16.3
1926-1927	479	2.812	0.411	14.6
1927-4/1/28	248	1.499	0.170	11.3
Total	4160	19.141	3.202	16.7

(Source: Minutes of Board of Trustees of Rosenwald Fund., 4/30/1928)

Figure 1. Trends in Black to White Schooling Quality Ratios over Time

1(a) Ratio of Black to White Pupils in Attendance Per Teacher

1(b) Ratio of Black to White Teacher Training Levels

Figure 1 cont. Trends in Black to White Schooling Quality Ratios over Time

1(c) Ratio of Black to White Term Length

year

1(d) Ratio of Black to White Per Diem Teacher Salary

year

Figure 2(a): Trend in Pupil-Teacher Ratio (attendance-based) For Southern States
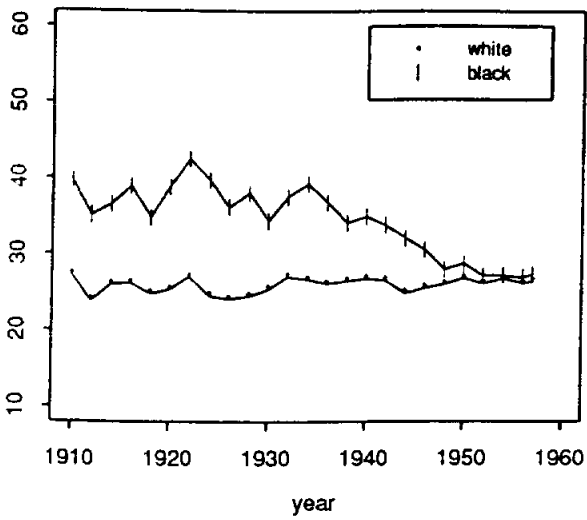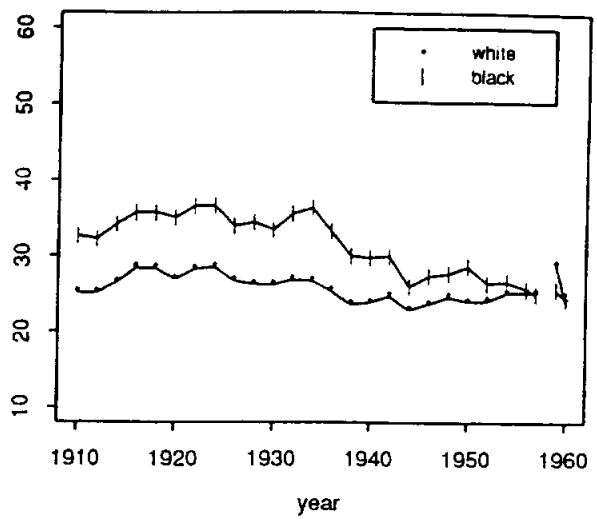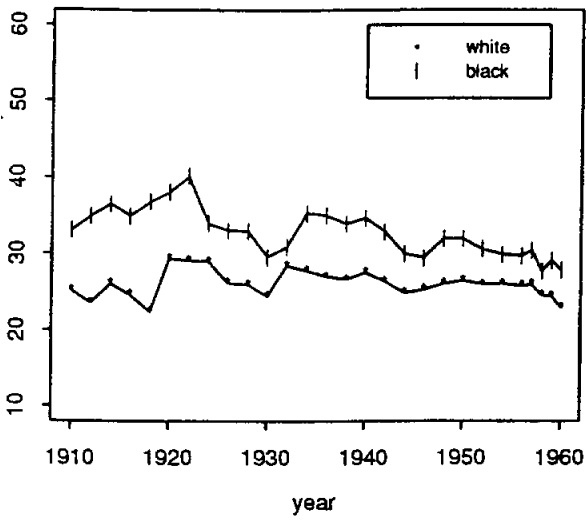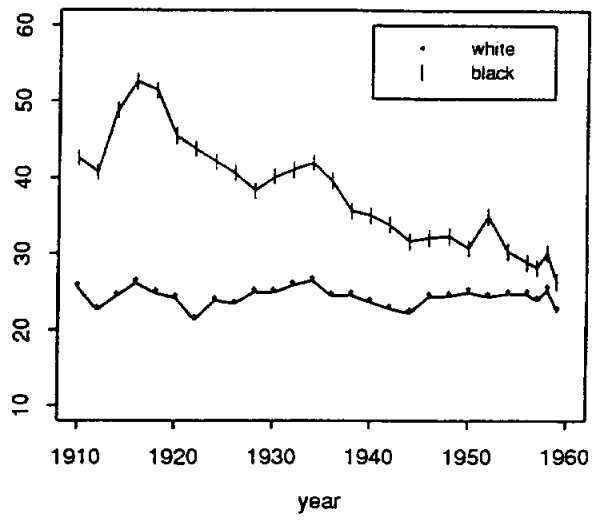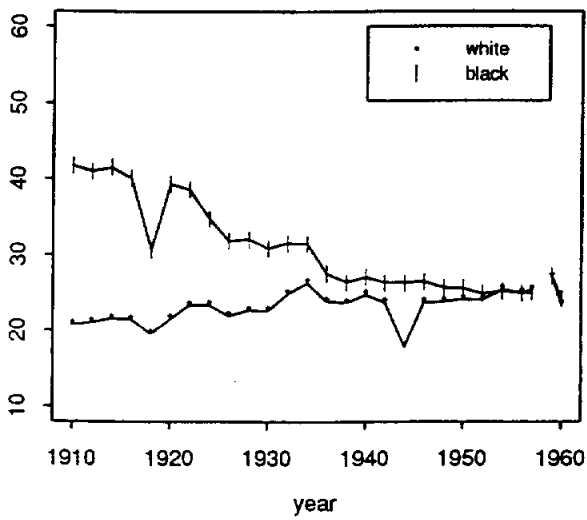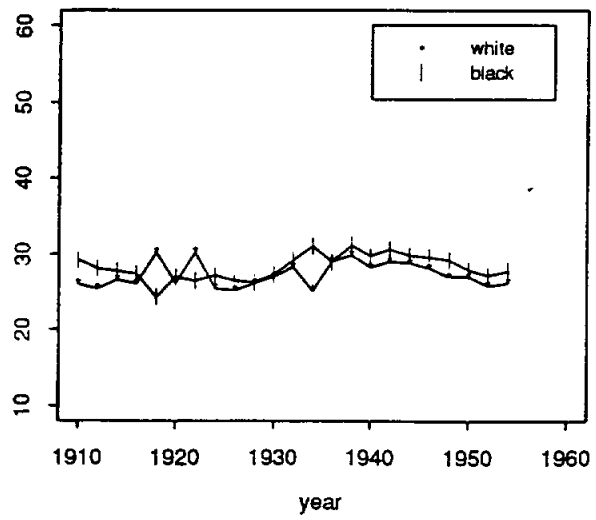
Figure 2(b): Trend in Pupil-Teacher Ratio (attendance-based) For Southern States
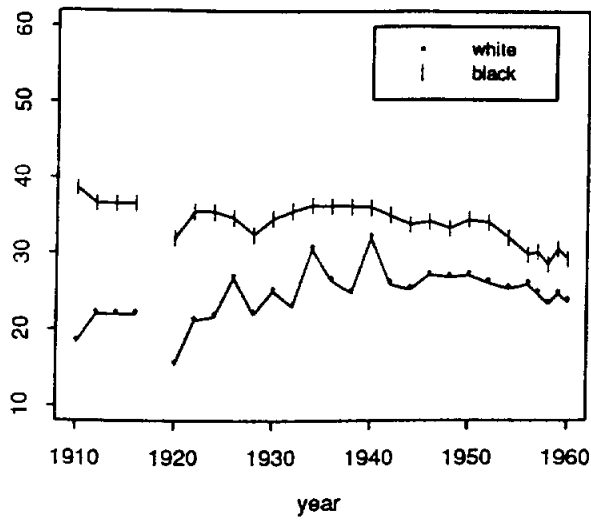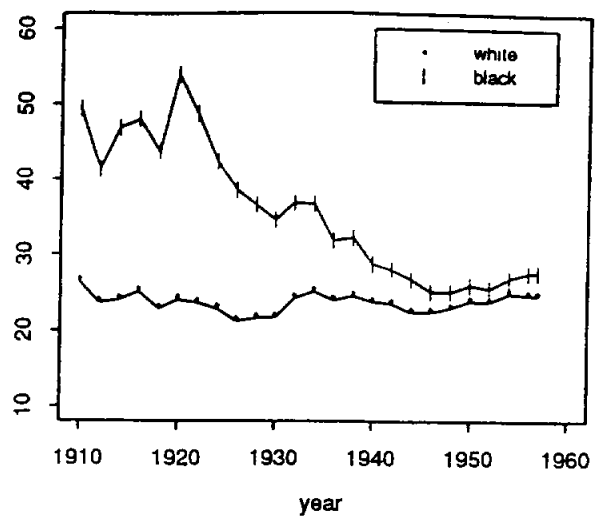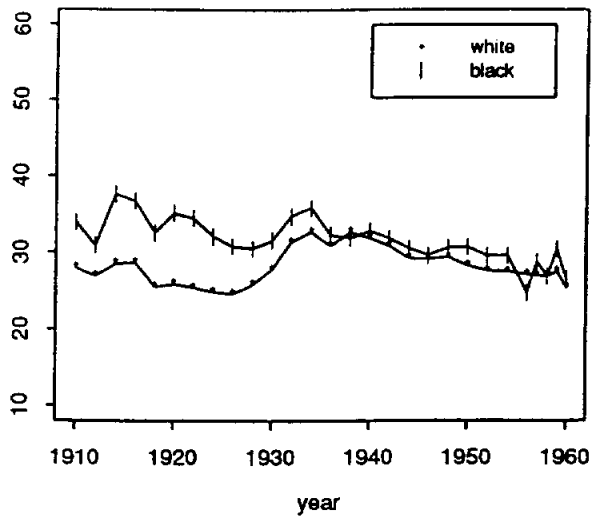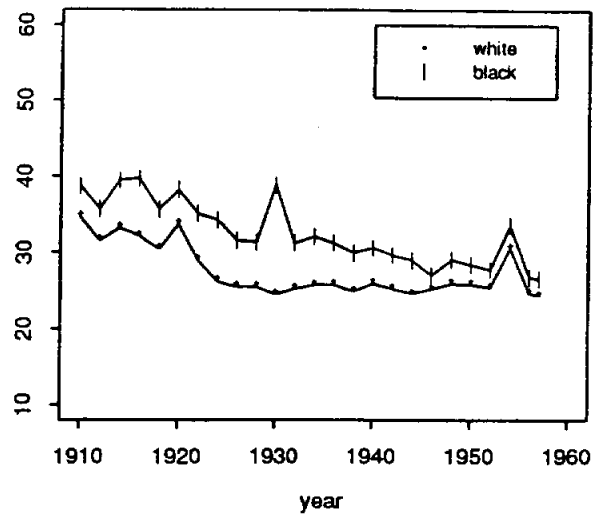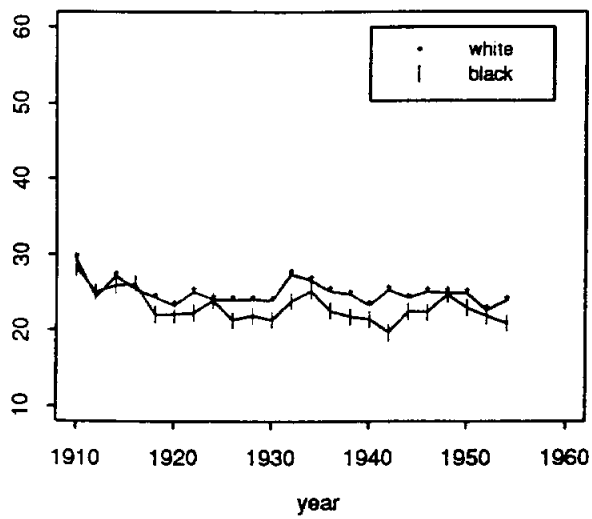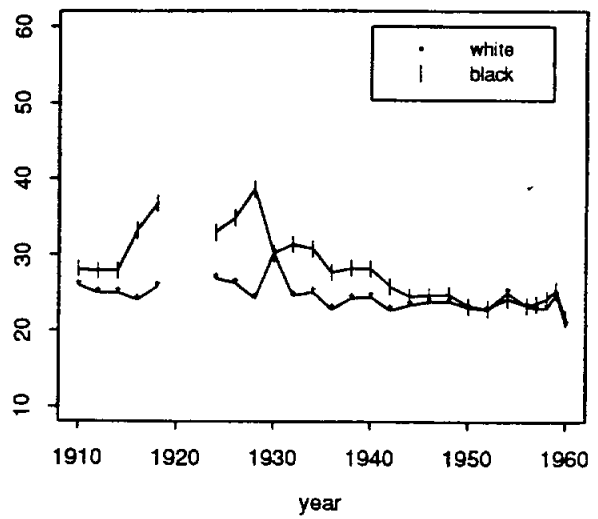
Figure 2(c): Trend in Pupil-Teacher Ratio (attendance-based) For Southern States

Virginia

West Virginia

Figure 3. Pupil-Teacher Ratios in Black Georgia Schools, 1911-1960

Black Pupil Teacher Ratios, 1911

missing
more than 50 pupils/teacher
30-50
20-30
less than 20

Black Pupil Teacher Ratios, 1930

missing
more than 50 pupils/teacher
30-50
20-30
less than 20

Black Pupil Teacher Ratios, 1942

missing
more than 50 pupils/teacher
30-50
20-30
less than 20

Black Pupil Teacher Ratios, 1960
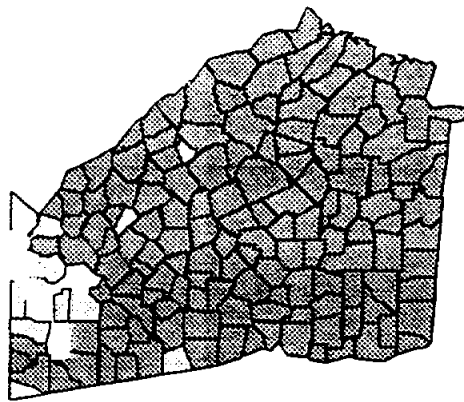
missing
more than 50 pupils/teacher
30-50
20-30
less than 20

Figure 4. Pupil-Teacher Ratios, Georgia Schools

Number of Teachers and Students, Black Schools

# of teachers (in 100s)
avg. daily attendance (in 10000s)

year

no. of black teachers and students

Number of Teachers and Students, White Schools

# of teachers (in 100s)
avg. daily attendance (in 10000s)

year

number of white teachers and students

Avg. Students in Attendance Per Teacher, Black Schools

year

avg. ptr-attend black schools

Avg. Students in Attendance Per Teacher, White Schools

year

avg. ptr-attend white schools

Figure 5a. Percentage of School Revenue from Federal, State, and Local Sources, 1920-1970
All Southern States

Legend: % Federal, % State, % Sub-State
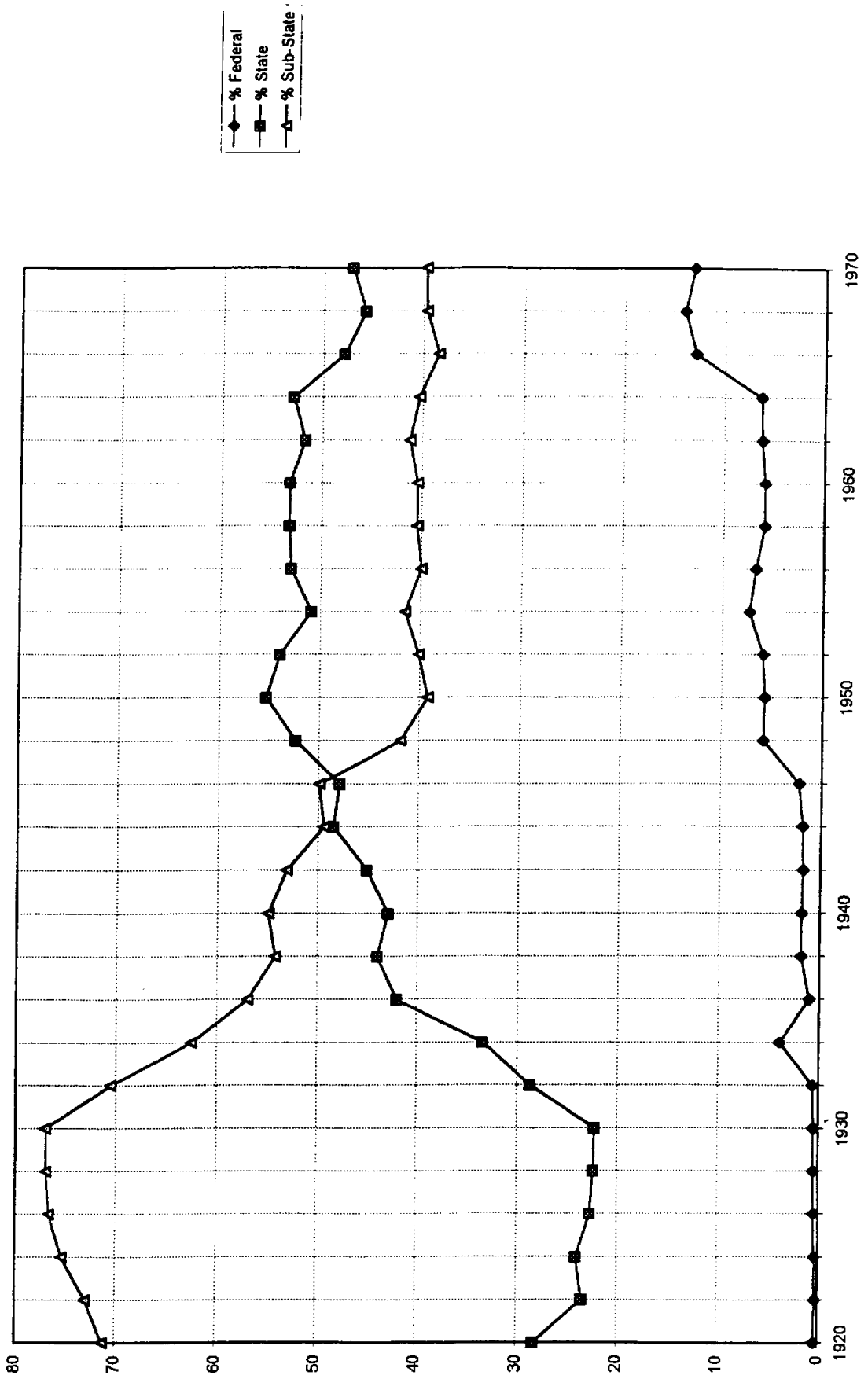
Figure 5b. Percentage of School Revenue from Federal, State, and Local Sources, 1920-1970
Deep South

Legend:
— ◆ — % Federal
— ■ — % State
— △ — % Sub-State
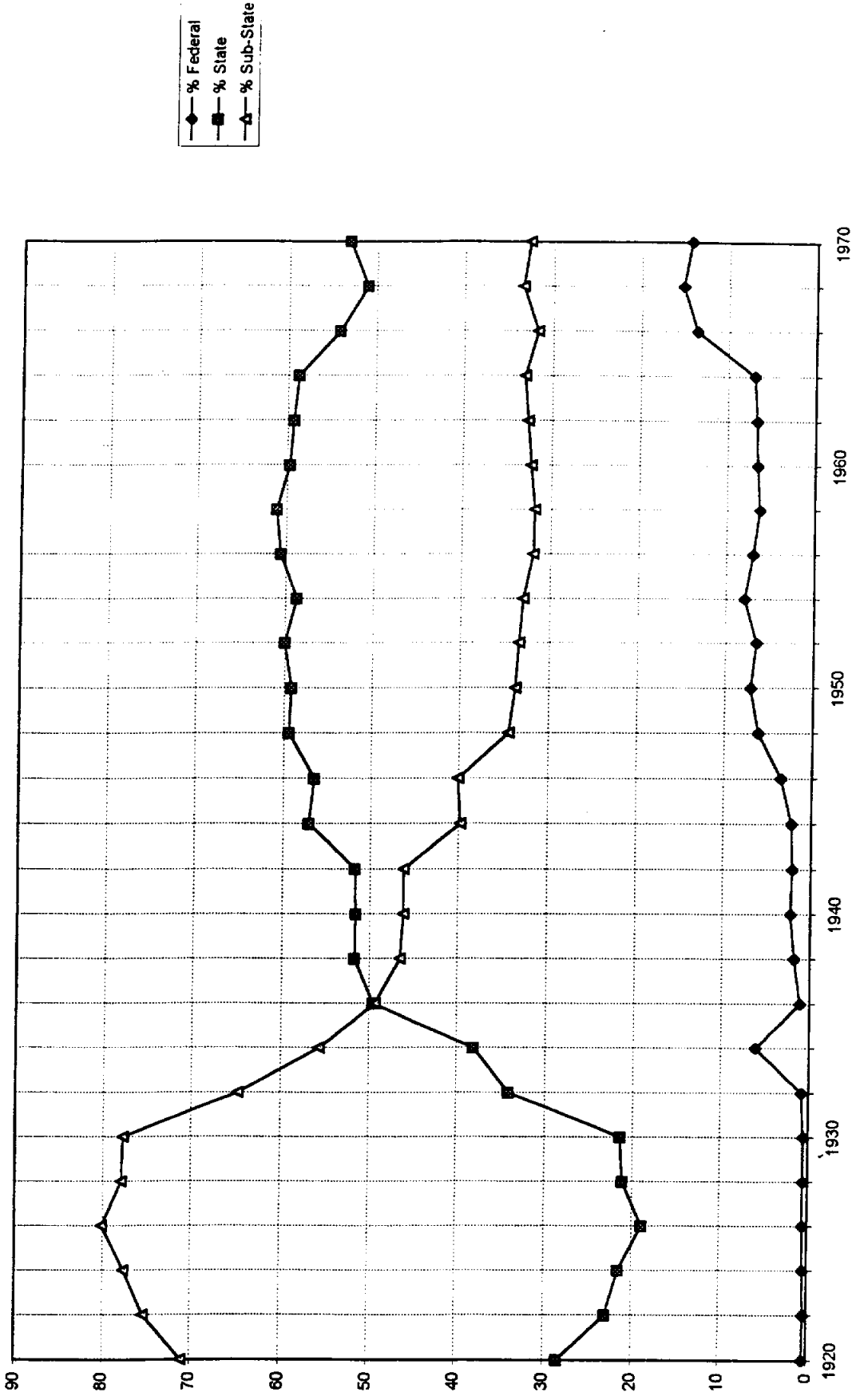
Figure 6. Ratios of Black to White Teacher Salary and Certification

Black/White Teacher Salary and Certification, Georgia

Black/White Teacher Salary and Certification, Urban Georgia
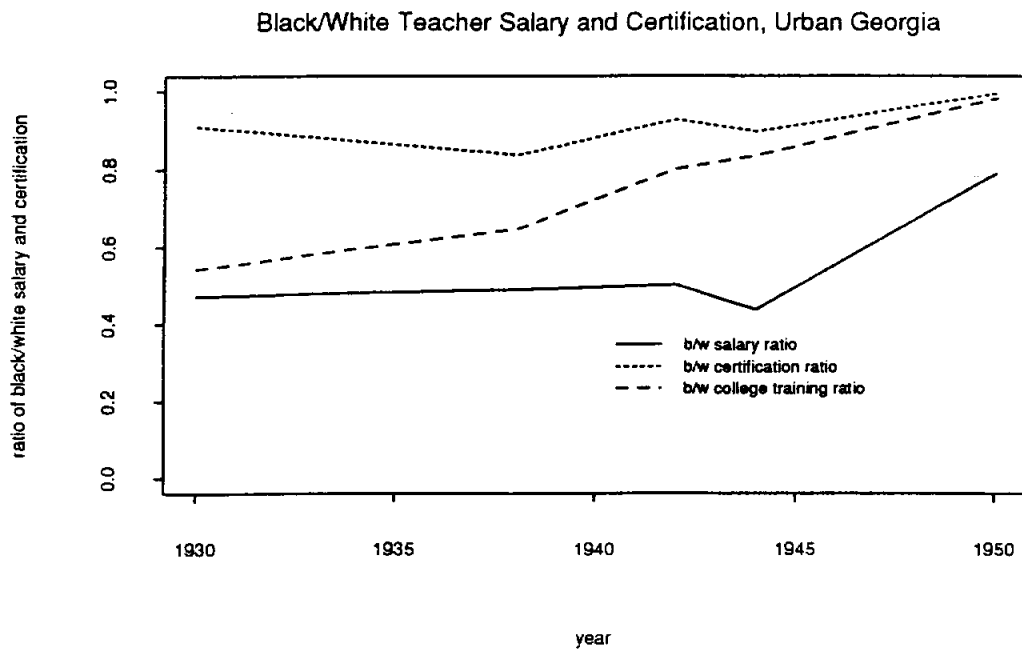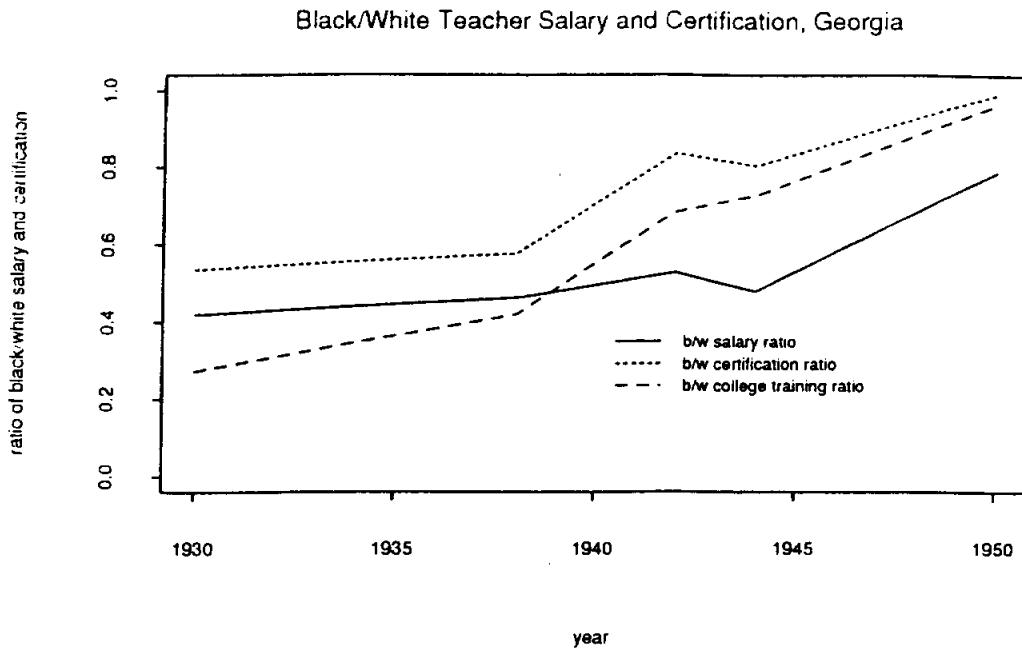
Figure 6 cont. Ratios of Black to White Teacher Salary and Certification
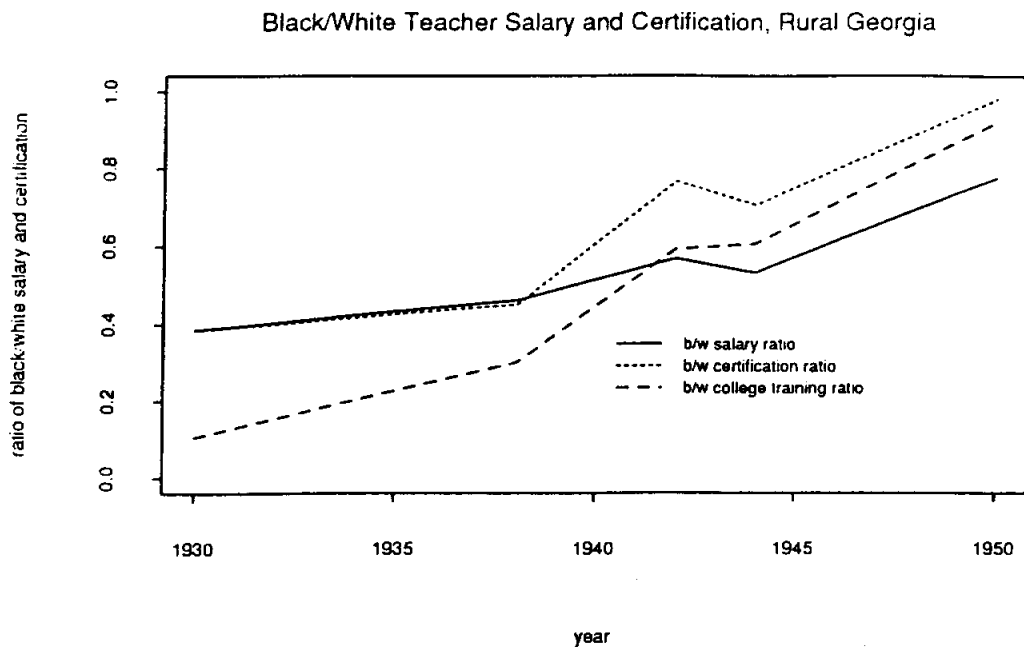
Black/White Teacher Salary and Certification, Rural Georgia

Figure 7. Black/White Teacher Salary Ratios, Selected Southern States

Arkansas

Ark

Morris v.
Williams, 1942

Years

Georgia

Davis v. Cook
1943

Years

Alabama

Gainer v.
School Board
of Jefferson
City, 1942

Years

Florida

Reynolds v. Board of
Public Instruction of
Dade County, 1941

Years

Figure 7. Black/White Teacher Salary Ratios, Selected Southern States

Louisiana

McKelpin v.
School Board
of New
Orleans, 1942

Maryland

Gibbs v Montgomery
County, 1936

North Carolina

Mississippi

Figure 7. Black/White Teacher Salary Ratios, Selected Southern States

Texas

Page v. School
Board of Dallas,
1943

South Carolina

Black Teachers'
Association
Petition, 1941

Virginia

Alston v. School
Board of City of
Norfolk, decision
in 1940
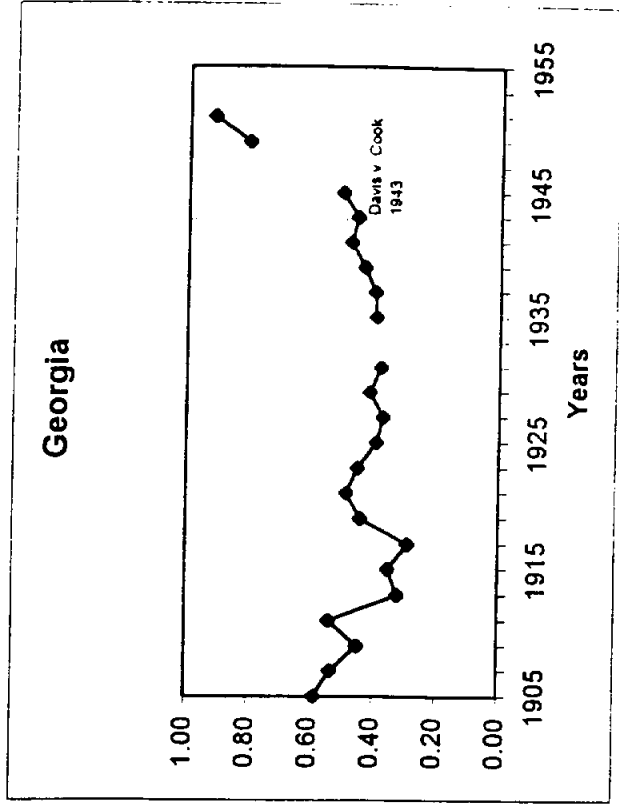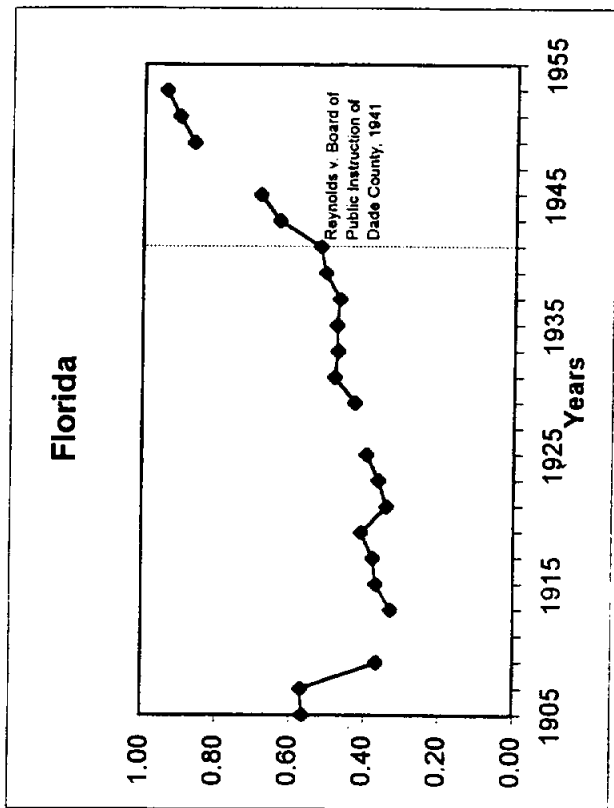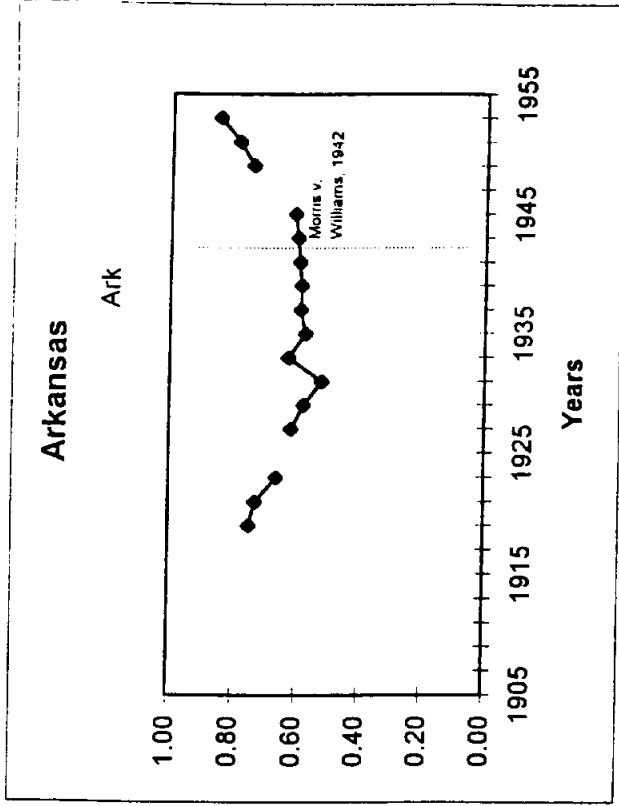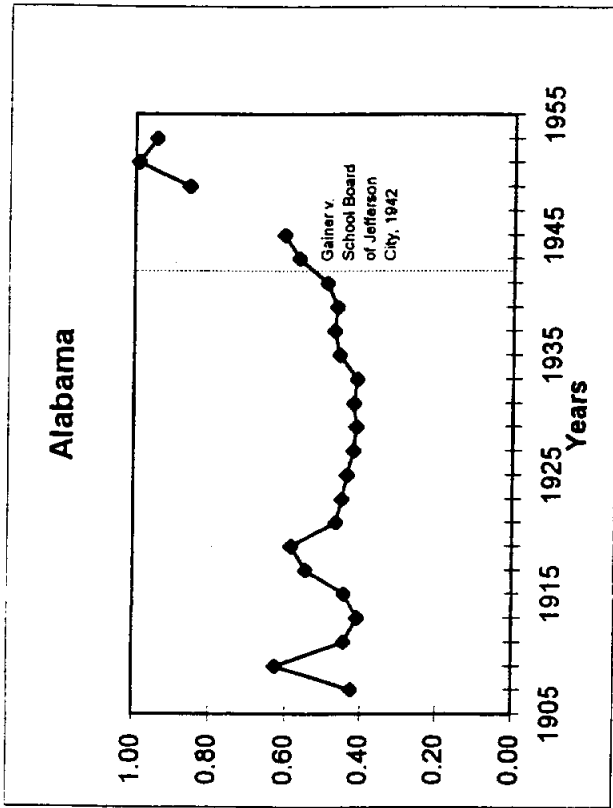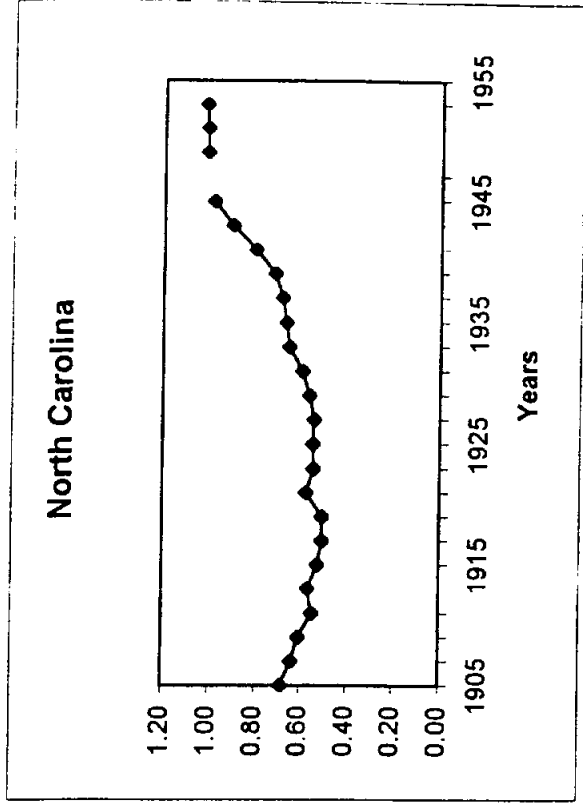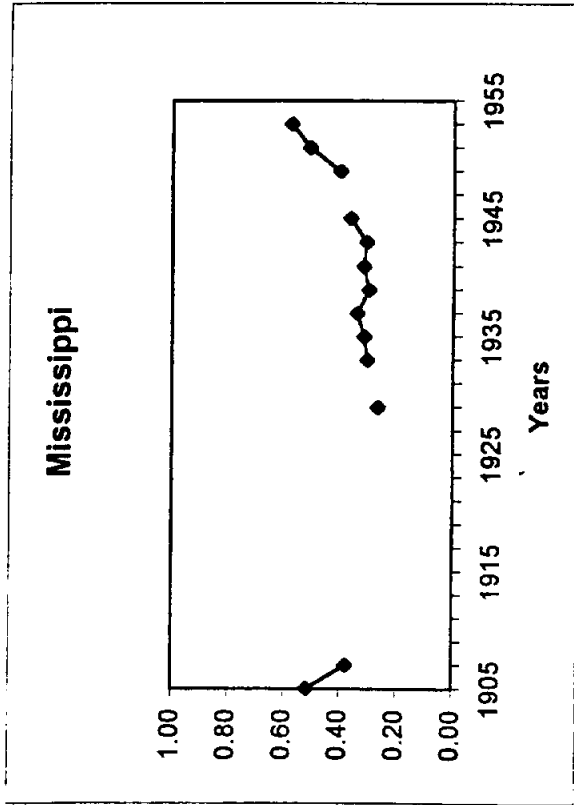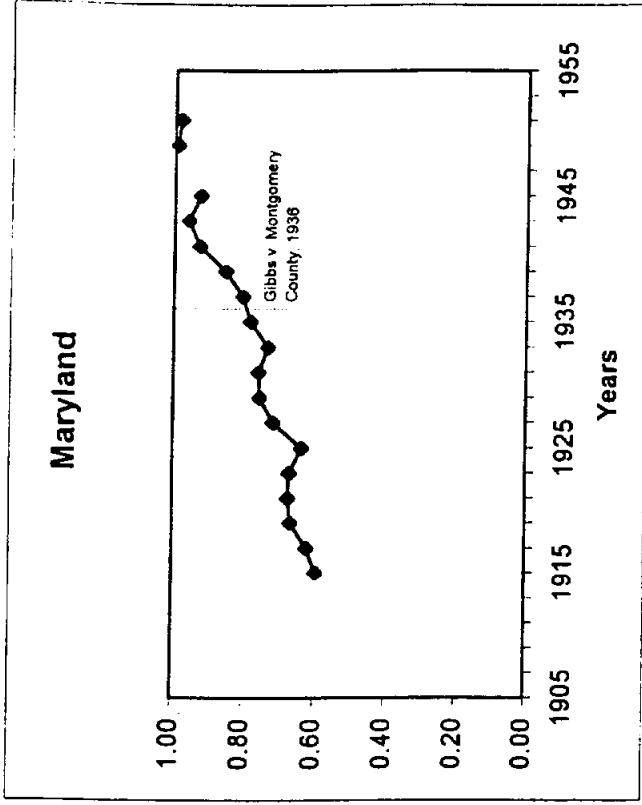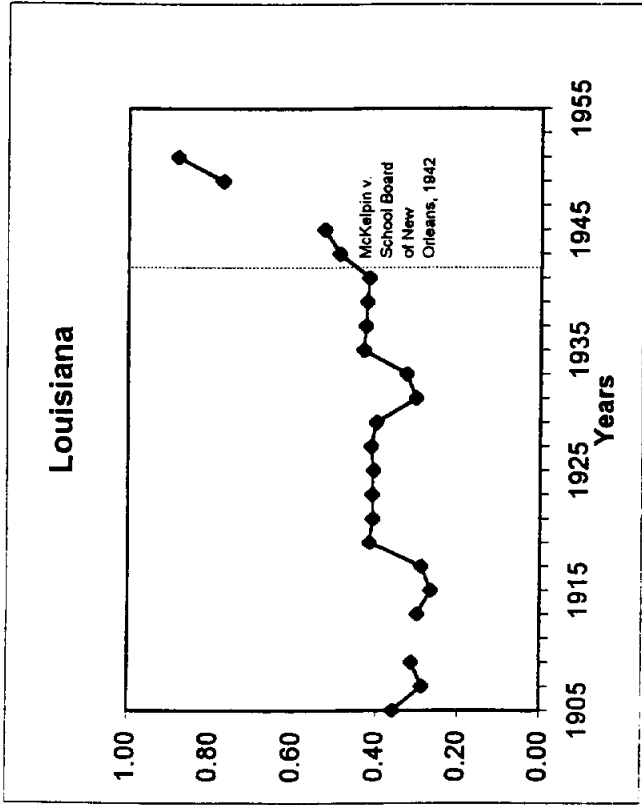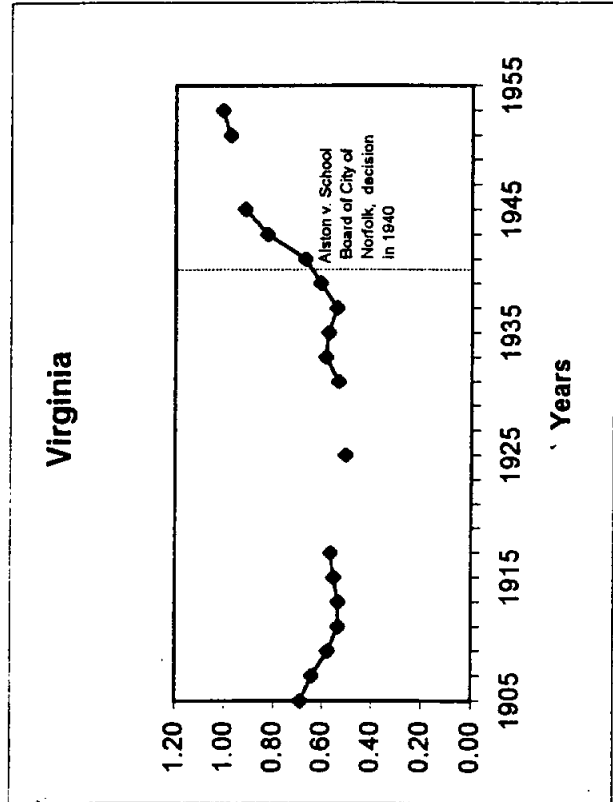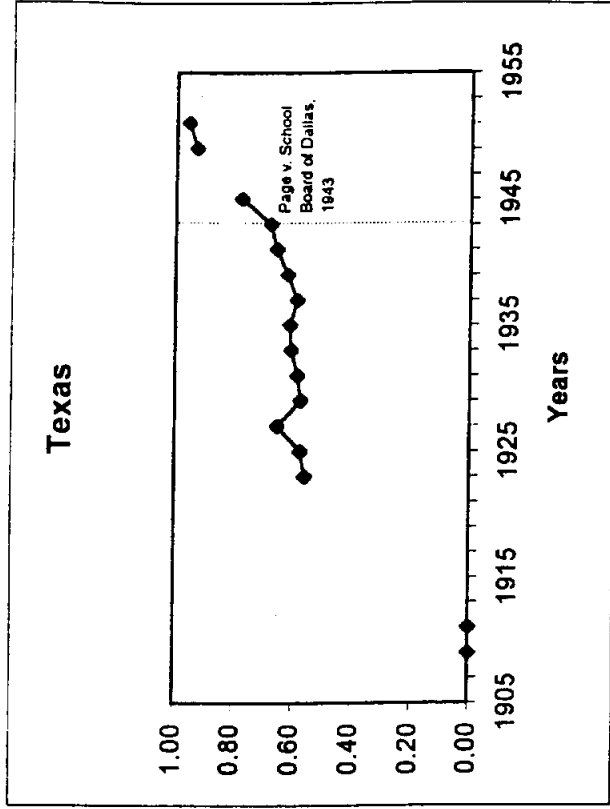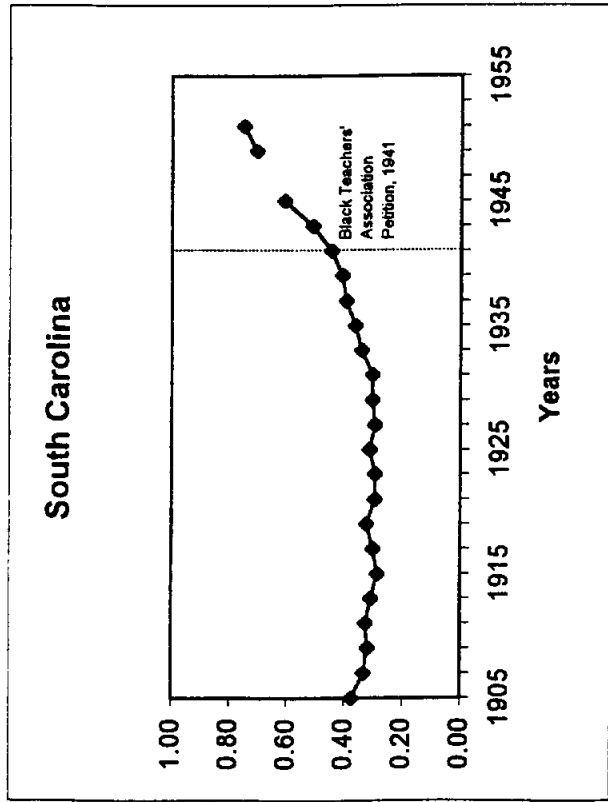
Figure 8
Timeline of Events Affecting School Quality in Georgia
1910 - 1960

Local Events

National Events

1910 1912 1914 1916 1918 1920 1922 1924 1926 1928 1930 1932 1934 1936 1938 1940 1942 1944 1946 1948 1950 1952 1954 1956 1958

First Rosenwald School built

Beginning of large scale Rosenwald building program

End of Jeanes Supervising Teachers program

Height of Rosenwald program (money spent on buildings)

End of the Rosenwald building program

NAACP files first teacher pay equity case (Maryland)

Davis v. Cook case filed

Georgia's Seven-Month Term Law enacted

NAACP files first case in Georgia for teacher pay equity

New merit pay system in Georgia

Georgia's constitutional school system reorganization

Favorable Davis v. Cook decision rendered

Davis v. Cook decision reversed

Start of US involvement in WWI

End of WWI

Start of US involvement in WWII

End of WWII

Brown v. Board of Education filed

Brown v. Board of Education rendered

▨ = years included in our data sample

Figure A.1(a): Trend in Pupil-Teacher Ratio (enrollment-based) For Southern States

Alabama
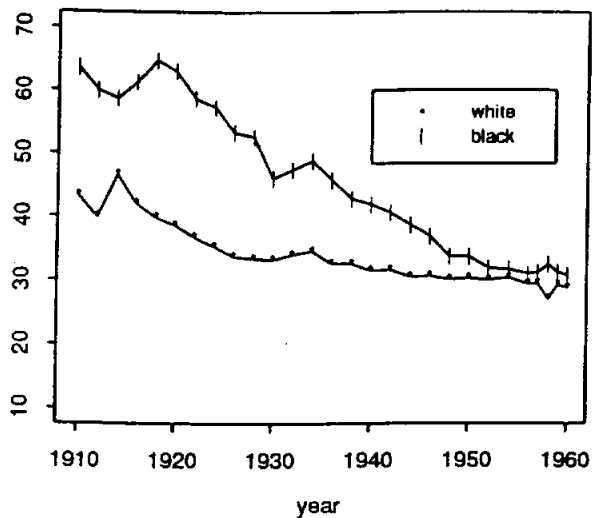
Georgia
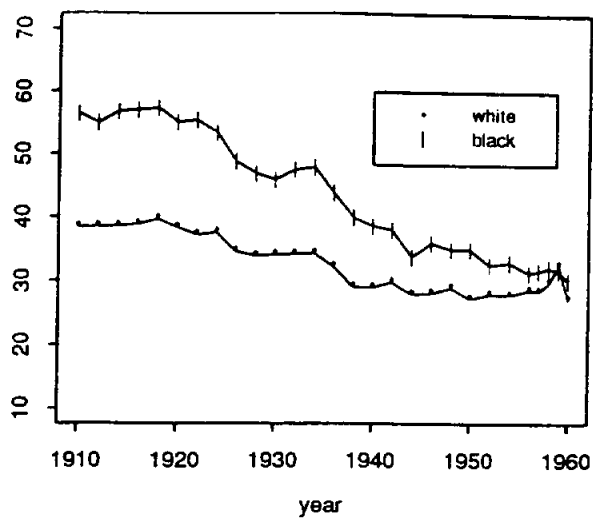
Arkansas
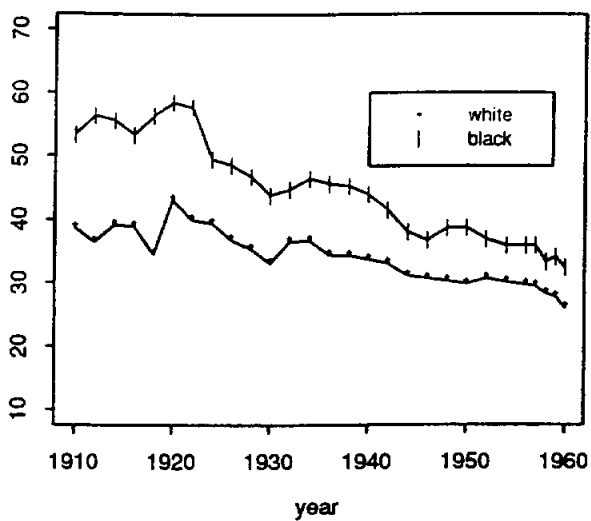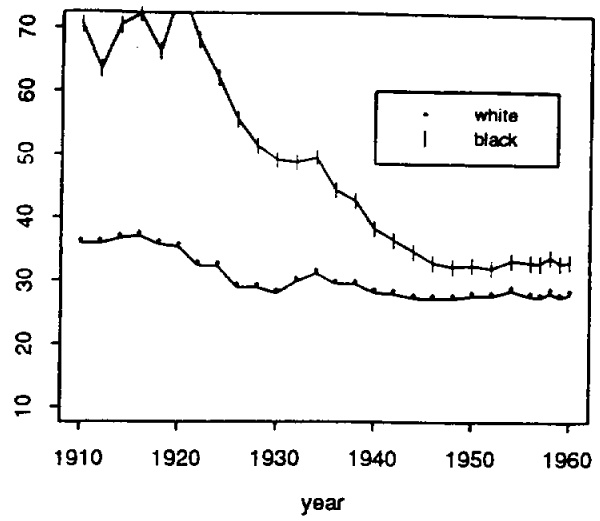

Louisiana
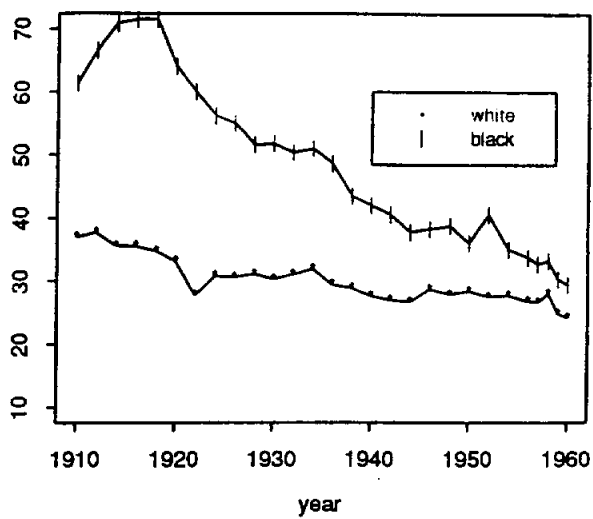
Florida
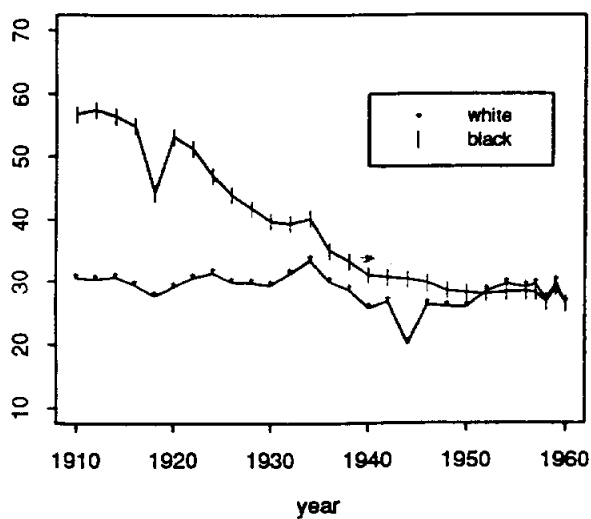
Maryland
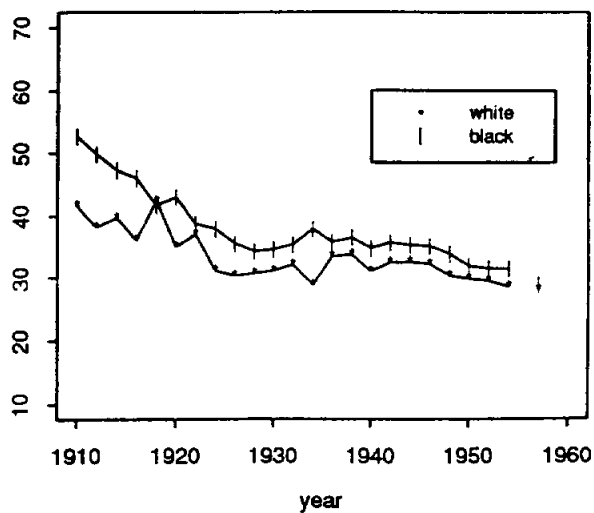
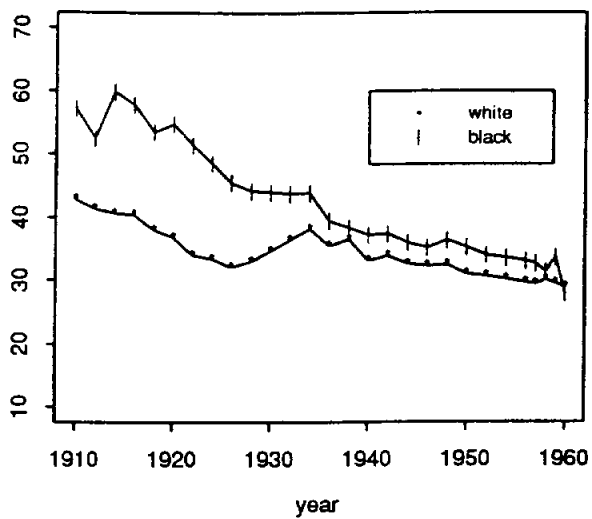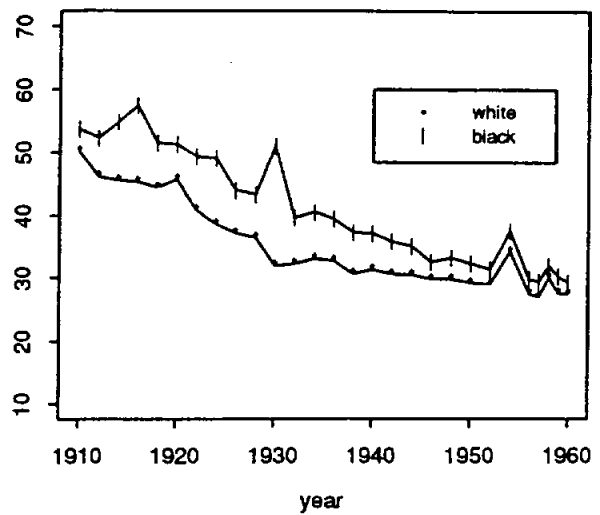# Figure A.1(b): Trend in Pupil-Teacher Ratio (enrollment-based) For Southern States
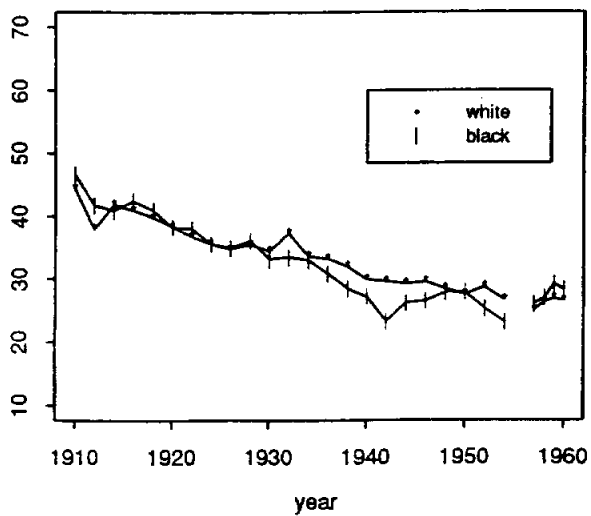

Mississippi
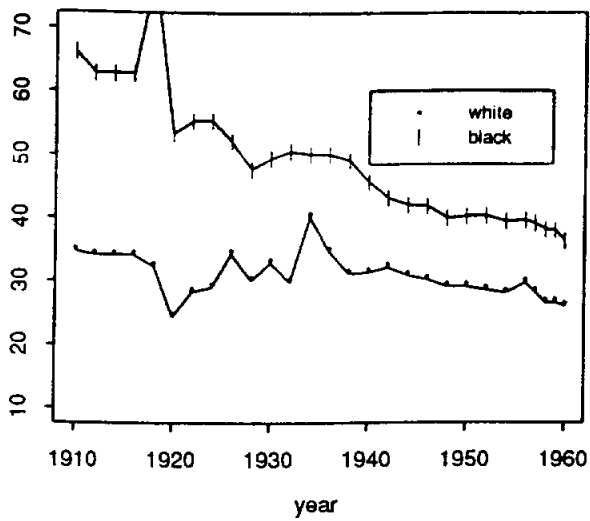
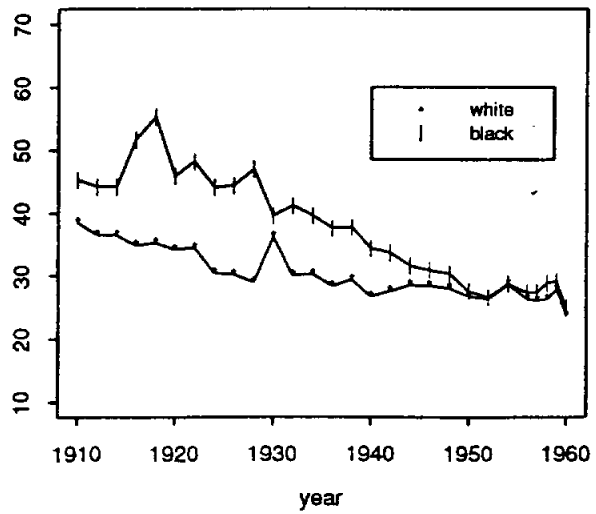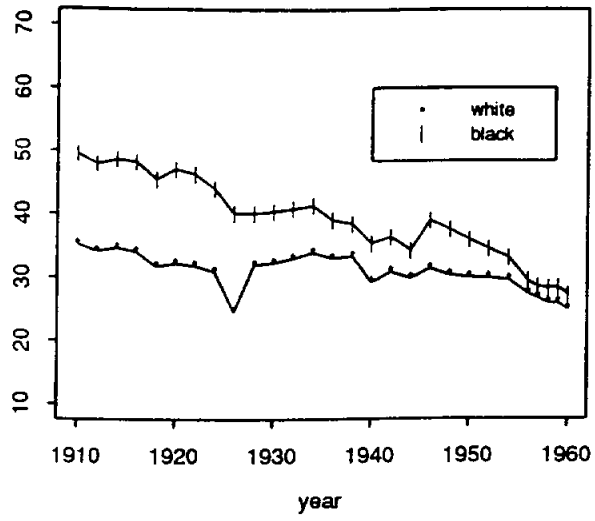South Carolina

North Carolina

Tennessee

Oklahoma

Texas

Figure A.1(c): Trend in Pupil-Teacher Ratio (enrollment-based) For Southern States

Virginia

West Virginia