THE NEW PROMISED LAND: BLACK-WHITE
CONVERGENCE IN THE AMERICAN SOUTH, 1960-2000

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The New Promised Land: Black-White Convergence in the American South, 1960-2000
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ABSTRACT

The black-white earnings gap has historically been larger in the South than in other regions of the United States. Since 1970, however, the male annual earnings gap outside the South has increased – dramatically, when the analysis factors in non-participants – while the gap within the South has narrowed, to the point where 2000 Census figures indicate significantly lower racial inequality in the South. Three proposed explanations for this trend focus on changing patterns of selective migration, labor market trends including reduced discrimination and the decline of manufacturing employment, and reductions in school segregation and school resource disparities in the South relative to the North. Evidence suggests that selective migration can explain about 40% of the South's relative advance, and virtually all of the relative advance after 1980. Earlier declines can be attributed in large part to reduced industrial segregation and other labor market advances in the South. Relative improvements in school quality for Southern blacks explain at most 20% of the overall trend.

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1. Introduction

Over the past thirty years, labor economists have paid considerable attention to the persistent gap in earnings between American whites and blacks. Early papers in this literature focused on the significant reduction in racial inequality that took place in the 1960s and 1970s (Freeman 1973; Link and Ratledge 1975; Smith and Welch 1989; Donohue and Heckman 1991; Card and Krueger 1992, 1993). Later papers focused on the slowdown and reversal of this trend that began sometime in the late 1970s and continued through the 1980s (Juhn, Murphy and Pierce 1991; Bound and Freeman 1992; Grogger 1996). As new evidence, much of it indicating renewed progress in recent years, continues to amass, a number of interesting and important questions remain without consensual answers from the literature. How important are investments in primary and secondary schooling to the eradication of racial disparities in socioeconomic outcomes? Does significant labor market discrimination persist in the twenty-first century? Can we expect the cohorts reaching the labor market in the next decade or two to experience greater racial equality than their immediate predecessors?

This paper provides insight into these and other questions by focusing on a relatively understudied dimension of the black-white earnings gap: its regional variability.[1] In 1960, conditioning on a quadratic in age, the racial gap in annual earnings was about 75% larger in the South than in other regions (see Figure 1).[2] Over the subsequent forty years, this regional difference in the racial earnings gap has vanished – by this measure, inequality in both regions lies at a level

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[1] Bound and Freeman (1992) present the most noteworthy existing regional analysis of black-white earnings gaps.

[2] For sake of brevity, the three Census regions other than the South (Northeast, Midwest, and West) will occasionally be referred to as "the North" in this paper.

slightly below that exhibited in the North in 1960.[3] While this trend could be explained as a

consequence or manifestation of regional economic convergence, as described in Wright (1986) and

Margo (1995), evidence presented below suggests that these two trendlines have actually crossed,

rather than converged. Why has the South demonstrated more rapid progress? What does the

South's progress suggest about the likely future direction of racial inequality in America?

To answer these questions, the paper develops three hypotheses, which are then tested in a

number of empirical specifications. First, the apparent accelerated progress in the South could

reflect selective migration. The "Great Migration" of rural Southern blacks to Northern cities prior

to World War II involved a disproportionately educated segment of the population (Margo 1990).

In later years this selection pattern moderated, and return migration associated with economic growth

in the South occurred (Vigdor 2002). The second hypothesis focuses on regional variation in labor

market trends, including gradual or discrete reductions in discrimination, or the decline of

employment in geographically concentrated industries. Finally, the eradication and reversal of the

excess racial disparity in the South may be associated with the transformation of Southern schools

from legally segregated – and highly unequal – to the most integrated in the country (see Figure 2;

also see Orfield 1983; Clotfelter 2004). School segregation is a necessary prerequisite for resource

disparities between children of different races, and school segregation was significantly higher in the

North than in the South for much of the 1970s and 1980s.

Evidence culled primarily from US Census enumerations, but also from other sources,

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[3] The evidence in Figure 1 conflicts with some previous studies in inequality, primarily in the 1970s – this
figure shows widening inequality in the North over this period, while other studies have found narrowing black-white
gaps using similar data sources (e.g. Card and Krueger 1992). The primary explanation for this conflict is the use of
annual, rather than weekly, earnings as a measure of economic well-being. The disparity in weekly and annual
earnings trends is discussed more thoroughly in Vigdor (2006). Note also that Bound and Freeman (1992), using
CPS data, point to 1976 as a turning point in the time series on black-white inequality nationwide.

suggests that different explanations predominate at different points in time. About 40% of the net improvement in the South relative to the North – and all the relative improvement since 1980 – can be attributed to selective migration. The black-white gap among Southern *residents* closed over the last two decades of the twentieth century, but the gap among Southern-born individuals did not.

Prior to 1980, gains by Southern blacks relative to other groups can be explained by a decline in industrial segregation and other indicators of reduced discrimination in labor markets. While the overall contribution of improvements in Southern black education quality is modest, explaining at most 20% of the overall trend, convergence in education quality remains the best explanation for the tendency for Southern-born individuals to experience less inequality starting around 1980. Panel data analysis of the National Longitudinal Survey of Youth 1979 cohort shows that the narrowest black-white earnings gap for those educated just after the effective integration of Southern schools is among those individuals who lived in the South at age 14, controlling for region of birth and residence, further suggesting a strong role for schooling or other contextual factors specific to the late childhood and adolescent years.[4]

Section 2 presents basic evidence on the link between region, race and earnings. Section 3 discusses explanations for the observed patterns. Section 4 evaluates the importance of selective migration. Section 5 presents evidence regarding general changes in labor force conditions. Section 6 considers the potential role of education quality changes. Section 7 concludes.

2. Racial inequality in the South and elsewhere, 1960-2000

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[4] The finding of a "critical period" in earnings determination associated with the teenage years mirrors the findings of Persico, Postlewaite and Silverman (2004), who report a significant relationship between males' height as a teenager and earnings as an adult.

2.1 Age-adjusted differences

Figure 1 presents the most basic evidence on economic inequality in the South and in other

regions, based on decennial Census data from 1960 to 2000. The graph displays the age-adjusted

difference log earnings, defined as the sum of wage and salary income and self-employment income

from a business or farm, between native born black and white males age 21-60 by region in each

year.[5] The racial disparity is expressed as a positive number, with higher levels indicating greater

relative disadvantage for blacks and a value of zero indicating equality between races.

In 1960, the black-white log annual earnings gap was roughly 75% larger in the South than

in the North. During the 1960s, the gap closed in both regions. While progress toward equality was

moderately faster in the South, the earnings gap in 1970 is actually more than 75% larger in that

region relative to others. The two regions travel remarkably different paths between 1970 and 1980.

The Southern trend over this decade mirrors that of the previous decade: rapid progress, perhaps

attributable to the enactment and enforcement of Civil Rights laws clearly targeted at the labor

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[5] Age adjustment is accomplished using a quadratic in age. The regression also controls for the main effect
of residence in the South, which identifies the North-South gap for white workers. This graph, and regressions
reported later, use the log of annual earnings as an economic outcome measure. This departs somewhat from
existing literature, which tends to focus on weekly or hourly earnings (see, for example, Grogger 1996; Card and
Krueger 1992). There are two primary rationales for using the annual earnings measure. From a statistical
perspective, the use of earnings eliminates concerns regarding measurement error in hours or weeks worked.
Regression estimates based on annual earnings should therefore be more precise than those based on annual earnings
divided by the multiple of hours worked per week and weeks worked. From an economic perspective, the hours and
weeks worked decisions are potentially interesting in their own right: for example, discrimination against blacks
might take the form of being offered fewer opportunities to work overtime, rather than pure wage disparities. The use
of annual rather than weekly earnings explains why this paper shows a general broadening of the black-white gap in
the 1970s, whereas earlier papers (see, for example, Card and Krueger 1992) show a narrowing. For a further
analysis of the impact of using annual rather than weekly earnings to gauge black economic progress since 1960, see
Vigdor (2006).

It should also be noted that analysis of log earnings eliminates individuals with zero earned income.
Changes in labor force participation patterns over time may explain some portion of the trends observed here, but
past attempts to account for selective withdrawal from the labor market suggest that overall conclusions regarding
racial progress are not altered (Butler and Heckman, 1977; Brown 1984). Later analysis will employ a strategy
similar to that of Neal and Johnson (1996), imputing low earnings to labor force non-participants and estimating
wage gaps using median regression.

market discrimination practiced most vigorously in the South prior to 1964 (Donohue and Heckman 1991). The black-white gap outside the South increased over the same time period, possibly reflecting the decline of manufacturing activity in Northeastern and Midwestern cities (Bound and Freeman, 1992). The net result is substantial convergence across regions.

Changes in black-white earnings inequality during the 1980s and 1990s were on the whole more subtle than in the preceding decades, but convergence across regions continues to be evident in Figure 1. Inequality widened in both regions in the 1980s, but more rapidly in the North. Convergence resumed in the 1990s, but more rapidly in the South. As of 2000, the black-white earnings gap was for all purposes identical in both regions. It is also interesting to note that there has been no net progress in closing the black-white earnings gap outside the South since 1960. Any such progress has taken place within that subset of individuals who reside in the South at the time of a Census enumeration.

Figure 1 presents a dramatic picture of differences in inequality across regions, but the accuracy and importance of this simple picture can easily be questioned. Convergence of the black-white gap across regions might be a straightforward manifestation of general convergence in regional labor markets over this time period, as described in Wright (1985) and Margo (1995). Selective attrition from the labor force could also easily skew these statistics. Earnings gap convergence might also simply reflect convergence in other characteristics, such as educational attainment. The following subsection presents more detailed regression-based evidence indicating that the narrowing of the black-white gap in the South goes beyond mere regional convergence, becomes a more striking pattern when labor force participation trends are incorporated, and persists in models that control for educational attainment.

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2.2 Regression evidence

Table 1 presents the results of ordinary least squares regressions that identify the black-white gap in the South and elsewhere, controlling for a quadratic in age and categorically for educational attainment.[6] The coefficient on the black indicator variable, reported in the first row, identifies the proportional black-white earnings gap outside the South. The coefficient on the South indicator in the second row shows the gap in earnings between Northern and Southern whites. The interaction between the black and South indicators, in the third row, shows the difference in racial earnings gaps across regions.

Comparison of the coefficients in Table 1 with Figure 1, or with the coefficients used to produce that figure reprinted at the bottom of the table, shows that between one-fourth and one-third of the black-white gap outside the South, and a portion of the difference between Southern and Northern gaps, can be attributed to differences in educational attainment across races and across regions. While controls for education narrow the estimated gap, the overall portrait of faster convergence in the South relative to the North is unchanged. The black-south interaction term begins in 1960 at a level three-quarters the magnitude of the analogous coefficient taken from a

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[6] The sample in each regression is limited to black and white males born in the 48 contiguous states, age 21-60 with positive earnings in the year prior to the Census enumeration. These sample selection criteria follow those employed by Card and Krueger (1992) with two noteworthy exceptions: individuals with imputed data for any covariates are included in the sample, and individuals with implied weekly earnings above or below certain thresholds are not excluded from the sample. See Vigdor (2006) for a more complete discussion of the impact of sample selection criteria on estimates of black-white earnings gaps.

Controls for educational attainment may be suspect here, as education is a potentially endogenous choice variable (Johnson and Neal, 1996). The median regression estimates in Table 2 below omit controls for education. Ordinary least squares specifications omitting educational attainment produce the black and black*south coefficients printed at the bottom of Table 1; these coefficients were used to construct Figure 1.

Similar regressions estimated using a sample of black and white females show a similar pattern of more rapid convergence in the South relative to the North. Convergence across regions is less complete than in the sample of males, possibly because patterns of selection into the labor force differ importantly by race and region (see Neal 2004 for an analysis of racial differences in female selection into the labor force).

specification without education controls, printed at the bottom of the table. By the end of the time period, the coefficients from the two specifications are essentially identical. This suggests that about one-quarter of the "excess" convergence witnessed in the South between 1960 and 2000 can be attributed to a combination of increases in educational attainment and changes in the returns to education. As in Figure 1, there is no net progress in closing the black-white gap outside the South between 1960 and 2000 – progress in the 1960s is followed by a remarkable widening between 1970 and 1990, and a return to convergence afterwards.

Perusal of the educational attainment coefficients in the table show that the return to junior high school and high school levels of education declined over this period, while the premium for college education relative to high school expanded considerably.[7] It is also apparent in this table that the period between 1960 and 2000 was marked by broader convergence between the Northern and Southern labor markets. The gap between similarly educated and aged white Northerners and Southerners declined from 0.189 to 0.034 during this time period.

By focusing on the logarithm of earned income, the analysis in Table 1 necessarily omits individuals reporting zero earnings in the year prior to the Census. Differential rates of labor market non-participation by race and region could conceivably skew this analysis (Butler and Heckman 1977; Brown 1984; Neal and Johnson 1996). For example, apparent progress by Southern blacks relative to whites and Northern blacks could result from an increasing tendency for low-potential earnings members of this group to exit the labor force. The analysis in Table 2 tests this interpretation using the relatively straightforward methodology put forward by Neal and Johnson

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[7] This evidence is consistent with previous research on changes in the returns to education over time (Juhn, Murphy and Pierce, 1991).

(1996). Individuals with zero reported earnings are assigned a log earnings of zero, corresponding to annual earnings of $1. Coefficients are then estimated by median regression. The assumption made in this analysis is that labor market non-participants would have posted earnings below the median among individuals with identical covariate values. It is important to emphasize that, as in Neal and Johnson (1996), these specifications omit controls for educational attainment.[8]

This procedure strengthens the conclusion that black-white earnings gaps have converged more rapidly in the South. Relative to equivalent OLS specifications, the black*south coefficient is more negative in 1960 and more positive – statistically significantly greater than zero – in 2000. The failure to account for labor force non-participants leads to an understatement of inequality in the South in 1960; by 2000 there is evidence of a bias in both regions but the bias is clearly stronger outside the South. On net, the median regressions indicate that there has been a remarkable, even catastrophic, erosion of the potential earnings of Northern blacks since 1970. Southern blacks posted sizable gains between 1960 and 1980, but since then the gap in median annual age-adjusted earnings has held steady. Thus the relative progress of Southern blacks is best understood as a period of rapid convergence followed by a period of stagnation while conditions worsened elsewhere. The regression estimates in Table 2 provide a basic measure of the "excess convergence" in the South relative to the North: the difference between black-south interaction terms in 1960 and 2000, roughly 0.450, will serve as a denominator for purposes of decomposing the relative gains of Southern blacks.

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[8] The rationale behind this omission is that the assumption of below-median earnings conditional on covariates is less credible when the set of covariates includes endogenous indicators of labor market productivity such as education. Coefficients from OLS specifications that omit educational attainment appear at the bottom of Table 1, and were used to construct Figure 1.

By the measures shown in Table 2, the black-white earnings gap is now significantly narrower in the South, and represents the smallest such gap in the post-Civil Rights era. Regional convergence is definitely in evidence here, but a simple story of convergence alone cannot explain the reversal of regional patterns that appears to have occurred during the 1990s.

3. Why has the South surpassed the North?

Existing literature and basic economic theory point towards three explanations for the relative erosion of Southern racial wage gaps. First, all or part of the apparent gains by Southern blacks in the period since 1960 may be illusory, an artifact of changes in location decisions by whites and blacks of varying ability levels. These gains may also reflect broad labor market trends, including the decline in "rust belt" manufacturing and reduced racial discrimination in labor markets associated with Civil Rights era legislation, which probably had a disproportionate impact in the South. Finally, the transformation of Southern public schools from wholly segregated to the nation's most integrated may have brought, or accompanied, a reduction in racial discrepancies in the quality of human capital investment. These relative increases in education quality may have spurred high quantities of human capital investment among Southern blacks. This section discusses each hypothesis in turn, and proposes simple empirical tests for their evaluation.

3.1 Selective Migration

Millions of Southern-born blacks relocated to different regions of the country between 1910 and 1970. Figure 2 illustrates the impact of this migration, by decomposing the population of native-born working-age black males by region of birth and residence in each Census year since 1940. In

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1940, the majority of blacks residing in the North had been born in the South. While the number of Northern-born blacks increases steadily over time, the share of blacks born in the South and residing in the North remains steady through at least 1970.

In the first major wave of migration, which took place before 1940, highly educated blacks were disproportionately likely to migrate (Bowles 1970; Margo 1990; Vigdor 2002). Thus, in 1940 the population of blacks residing in the South would have occupied the lower ranks of the observed human capital distribution. This fact would explain the discrepancy between the raw regional differentials shown in Figure 1 and the considerably smaller gap estimated in regressions controlling for education.

In later years, the flow of black migrants from the South contained a higher proportion of less-educated individuals. Highly educated Southern black migrants were actually more likely to choose a Southern destination city, controlling for other destination characteristics, in the postwar era (Vigdor 2002). After 1970, the stock of Southern-born, Northern-residing blacks begins to decline as a share of the population. At the same time, the share of Northern-born but Southern-residing blacks increases, to the point where the sizes of the two cross-regional migrant groups are nearly equal in 2000, as shown in Figure 2. If sufficently selective, these migrant flows are certainly of a magnitude large enough to skew measures of inequality by region.

There are two basic strategies for testing the selective migration. One has already been employed in Table 1 – controlling for the factors on which selection is occurring. This is an imperfect strategy for two reasons: first, it confounds changes in educational attainment attributable to selective migration with pre-existing differences attributable to region-specific factors such as variation in education quality. Second, the educational attainment variables employed are

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undoubtedly imperfect measures of skill.

The second basic strategy, also admittedly imperfect, is to "undo" the net impacts of migration by re-assigning individuals to their region of birth, rather than region of residence. This would provide an accurate picture of inequality in each region if an individuals' earnings were fully independent of region of residence. Under the more economically reasonable hypothesis that individuals choose the region where they expect the highest earnings, the picture may be inaccurate. Suppose, for example, that the Southern wage gap reflects the decision of highly skilled blacks to leave that region. Re-allocating the migrants to their origin region will have the effect of closing the gap, but using their post-migration earnings as an estimate of what they would have earned in the South leads to an overestimate of the change. Nonetheless, this procedure should provide some insight into the relative importance of selection in driving variation in regional trends.

3.2 Labor Market Trends

Previous literature has found evidence supporting the notion that black economic fortunes experienced a discrete jump following the passage of the Civil Rights Act in 1964 (Freeman 1973; Donohue and Heckman 1991; Card and Krueger 1993). It is reasonable to expect that this legislation would have had a disproportionate impact in the South, where racial discrimination was more firmly ingrained in all aspects of society. Chay and Honore (1996) find evidence confirming a link between the passage of Civil Rights laws and black-white convergence in the South. Consistent with this view, the results presented above suggest that convergence between regions began in the 1960s and accelerated in the 1970s.

The timing of the great leap towards regional convergence also supports the hypothesis that

the decline of Northern manufacturing employment harmed the economic fortunes of blacks in that region (Bound and Freeman, 1992). Census of Manufactures data suggest that the peak of manufacturing employment in the United States was around 1967.

These labor market-oriented hypotheses imply that the relative progress for Southern blacks observed in Table 1 should primarily reflect a period, rather than cohort effect (Card and Krueger 1992). Cohort effects may ensue, however, to the extent that the reduction in discrimination impacts the human capital accumulation decisions of younger cohorts. If the relative decline of Northern black earnings reflects the concentration of those individuals in manufacturing or other layoff-prone industries, then within-industry estimates should show less regional variation.

3.3 Disparities in Human Capital Investment

The hypothesis that changes in black educational attainment and the relative quality of black education explain the convergence of black earnings has been subjected to empirical test for at least three decades (Welch, 1973; Link and Ratledge 1975; Akin and Garfinkel 1980; Juhn, Murphy and Pierce 1991; Card and Krueger 1992; Boozer, Krueger and Wolkon, 1992; Grogger 1996; Ashenfelter, Collins and Yoon 2005). These empirical tests do not arrive at any consensus, particularly regarding the importance of education quality, which is by its nature a difficult variable to measure.[9] Betts (1995) and Grogger (1996), for example, find significant high school fixed effects in earnings regressions controlling for a wide array of individual background characteristics, suggesting that some factor common to all students attending the same school correlates strongly with later earnings. These high school fixed effects are not highly correlated, however, with

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[9] The broader literature on the link between school resources and student or graduate outcomes has generally found mixed results. See Hanushek (1997) for a recent review of this literature.

variables traditionally used as indicators of school quality, such as pupil/teacher ratios or the length

of the school year. Card and Krueger (1992), using data on older cohorts derived from Census

microdata, find significant relationships between exactly these variables and adult earnings.[10]

Ashenfelter, Collins and Yoon (2005) report significant differences in earnings for Southern-born

blacks who attended school before and after widespread desegregation took root in the late 1960s.

While the empirical importance of school quality differentials, especially within recent age

cohorts, is a subject of some debate, an intriguing circumstantial case links changes in school quality

to the reversal of regional variation in the black-white earnings gap. Within a single generation, the

South transitioned from a regime of institutionalized school segregation to the region with the

nation's most integrated schools (Orfield 1983; Clotfelter 2004). The relative success of school

integration in the South can be attributed at least in part to the region's relatively low residential

segregation and its comparatively large school districts (Cutler, Glaeser and Vigdor 1999; Clotfelter,

Ladd and Vigdor 2003).

Figure 3 presents basic evidence on the degree of school and neighborhood segregation in

the South and in other regions of the country. School segregation is measured as the fraction of

black public school students attending majority nonwhite schools.[11] The transition from fully

segregated to reasonably integrated schools in the South occurred between 1960 and 1972. School

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[10] Betts (1996) discusses the methodological differences between studies that might explain the disparate results. In particular, evidence of links between school quality and earnings tend to use state-level average measures of school quality, rather than school-level measures.

[11] School segregation data are taken from Clotfelter (2004). Following the existing literature on school segregation, regional divisions for these series deviate from standard Census Bureau definitions. Clotfelter's definition of the Southern region excludes Delaware, Maryland, Kentucky, West Virginia, and the District of Columbia. Clotfelter's definition of the Midwest region excludes Missouri. Midwestern school segregation figures are plotted instead of national figures because they are the only data available prior to 1968.

segregation in the Midwest decreased somewhat over this time period, but the decrease is quite insubstantial relative to that witnessed in the South. The South's status as most integrated region has been eroding over time; by 2000 overall measures of school segregation are quite comparable in the two regions.[12] Residential segregation, as measured by the black population-weighted mean dissimilarity index (Cutler, Glaeser and Vigdor 1999), is consistently lower in the South relative to other regions. In contrast to the school segregation measure, the regional disparity in residential segregation has actually widened over the past two decades.

Although school segregation need not imply the existence of racial disparities in school resources, contemporary empirical evidence suggests that it does (Clotfelter, Ladd and Vigdor forthcoming).[13] Guryan (2004) finds significant reductions in black high school dropout rates associated with desegregation plans, consistent with the notion that blacks enjoyed greater benefits of staying in school post-desegregation. Card and Rothstein (2005) report that racial disparities in standardized test scores are narrower in less segregated areas. Hanushek, Kain and Rivkin (2004) find that black students, particularly higher-ability black students, perform more poorly in schools where a higher share of their classmates are black. The modern trend towards greater racial equality in the South might therefore be attributable to smaller school resource disparities in that region associated with the rapid integration of Southern public schools in the 1960s and early 1970s. If so,

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[12] Some portion of the observed rise in school segregation in the South can be attributed to changing racial composition in that region, primarily associated with Hispanic immigration. Segregation measures that emphasize black exposure to blacks, or to whites, rather than nonwhites, show less of an increase in segregation (Clotfelter, Ladd and Vigdor 2005).

[13] School segregation is not a necessary condition for disparities in school input quality because school inputs such as teacher quality may vary in quality within a school (Clotfelter, Ladd and Vigdor 2004). School and neighborhood segregation are not sufficient conditions for disparities because it is at least theoretically possible to have "separate but equal" schools or neighborhoods.

the gradual erosion of integration in the South may imply stalled progress toward racial equality in that region in future cohorts. Section 5 below returns to these specific conjectures regarding region, segregation and school quality.

The human capital investment hypothesis implies that the link between region, race and earnings operates at least to some extent through the region in which individuals were educated. If variation in school quality were the only factor influencing racial gaps across regions, then region of residence should be an insignificant predictor of earnings after controlling for region of education. This hypothesis also implies that cohorts educated before the effective integration of Southern schools should not exhibit the same degree of convergence as younger cohorts.

4. Estimating the importance of selective migration

To reiterate, the evidence presented in Table 1 above provided at least some evidence that selective migration has played a role in the more rapid racial convergence in the South. Introducing controls for educational attainment lessens the magnitude of estimated "excess convergence." As stated above, this pattern could reflect either the impact of selective migration or of changes in educational attainment by region and race, as documented by Guryan (2004). Table 3 provides a further look at the impact of selective migration, replicating the median regressions of Table 2 but replacing region of residence, which is influenced by migration decisions, with region of residence which is not.

Sorting individuals into region of birth rather than residence drastically reduces the absolute value of black-south interaction terms in 1960 and 1970, and reverses the sign of the estimated coefficient in 1980 and 1990. Interestingly, there is no impact on the estimated coefficient in 2000.

Altogether, these coefficients suggest that the impact of selective migration was sizable in 1960; a large number of high-earning Southern-born blacks had located in the North. By the end of this time period, that selective migration had effectively undone itself, as the decision to sort individuals by region of birth or residence no longer makes any difference in the estimates.

These estimates imply that the excess convergence among Southerners, defined by region of birth, is only 60% of the magnitude of the original estimate provided in Table 2. Moreover, the estimated black-south interaction terms are now statistically indistinguishable in 1980 and 2000, suggesting that all of the apparent excess convergence observed during this time period can be attributed to selective migration. Racial inequality had become least severe among the Southern-born by 1980, but trends in all regions have been roughly parallel to one another since that time.

As discussed in the preceding section, under the assumption that individuals would have earned the same amount in either region, these estimates imply that selective migration explains 40% of the overall relative improvement in the Southern black-white gap, and all of the improvement since 1980. This general conclusion is consistent with the general patterns of regional migration illustrated in Figure 2. Between 1960 and 1980, interregional migrants formed a relatively steady share of the black population. After 1980, the share of South-to-North migrants shrinks steadily, while the share of North-to-South migrants grows.

Under the more economically reasonable assumption that individuals' potential earnings are lower in the region where they choose not to live, this analysis will overstate the importance of selective migration. The degree of overstatement may be somewhat minor, however, since the estimates in Tables 2 and 3 are derived from median regressions. If, for example, all South-to-North migrants with above-median income in their destination region would have had above-median

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incomes in their origin region as well, the degree of overstatement will be minimal. While the exact magnitude of the selective migration "effect" may be disputable, it is clear that the erosion of pre-1940 selective migration patterns contributed to the observed excess convergence in the South.

5. Estimating the importance of broad changes in regional labor markets

Selective migration may explain most or all of the excess Southern convergence since 1980, but what about the earlier period, particularly the 1970s, when regional trends in inequality diverged dramatically? Table 4 begins the process of evaluating the hypothesis that broad changes in the labor market, whether introduced by anti-discrimination legislation or brought about by more general economic forces, led to decline for Northern blacks but not their Southern counterparts. The regression specifications reported in this table, based on the original OLS specifications reported in Table 1, add a set of industry fixed effects to the model, to determine whether industrial segregation, or more specifically the concentration of black workers in low-paying industries in certain regions, can explain some portion of the patterns observed earlier.[14] These specifications necessarily omit those individuals who did not work in the preceding year; although some of these individuals report an industry, the central assumption enabling the quantile regression specifications of Tables 2 and 3, namely that individuals with zero earnings would have earned below the median conditional on all covariates, is inherently less tenable when industry fixed effects are included in the model.

Comparison with the baseline estimates in Table 1 reveals an intriguing pattern. The main black effects, which identify the black-white gap among Northern workers, are virtually unchanged. Only in 2000 does the difference in coefficients appear higher than the third decimal place.

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[14]The industry fixed effects are based on consistent industry codes derived from the 1950 Census. Depending on the year, there are between 120 and 147 separate coded industries.

Industrial composition thus appears to have very little impact on estimated trends in black-white inequality in the North.[15]   Coefficients on the South main effect, which identify the earnings gap between Northern and Southern whites, are somewhat smaller than their Table 1 counterparts in 1960 and 1970, and nearly identical thereafter.

By contrast, the coefficients on the black-south interaction terms are considerably smaller in magnitude in the early years, fully converging to Table 1 levels only in 2000. Perhaps even more notably, the estimated coefficient actually increases slightly between 1960 and 1970, whereas the Table 1 analogue showed a significant decrease. The concentration of Southern blacks in low-paying industries thus explains a large portion – roughly 40% – of the significant black-south interaction term in 1960. The impact of this industrial segregation, measured by the difference between interaction terms in Tables 4 and 1, declined significantly over the next twenty years. All of the apparent relative progress of Southern blacks in the 1960s can be attributed to a decline in industrial segregation: there is no decrease in within-industry earnings gaps in the South relative to the North. Within-industry gaps fall in the South relative to the North in the 1970s, however. Comparison of Tables 1 and 4 suggests that roughly 20% of the excess convergence during this period can be attributed to declines in industrial segregation.

To this point, then, simple investigations provide explanations for the excess convergence witnessed prior to 1970 and after 1980. The period of greatest divergence in regional inequality trends, the 1970s, remains largely unexplained. There are two candidate explanations yet to be

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[15] Vigdor (2006) shows that the absence of between-industry effects in OLS specifications between 1970 and 1980, which suggests that the decline of manufacturing did not impact the black-white earnings gap, is somewhat misleading. There are significant between-industry impacts on the black-white gap in weeks worked per year, which suggest that manufacturing layoffs led many black employees to remain out of work for a calendar year or more, which implies zero earnings and omission from the sample.

evaluated, within-industry reductions in labor market discrimination and improvements in the educational attainment and education quality of Southern black workers. Tables 5 and 6 provide evidence with the potential to distinguish between these two explanations. The first of these two tables tracks a single cohort over time, while the second compares the experiences of successive cohorts.

The median regressions in Table 5 follow a synthetic cohort, the group of males born between 1940 and 1949, from 1970 until 2000, as they progress from 21-30 years of age to 51-60 years of age. Presumably, this group had completed the vast majority of its formal education by 1970. Southern-born members of this age cohort would have also progressed through primary and secondary school just before widespread integration occurred in the late 1960s and early 1970s. This cohort stands to benefit from overall improvements in labor market conditions during the 1970s, but not from improvements in educational attainment or education quality.

Comparison of the black-south interaction terms in Tables 3 and 5 reveals that the degree of excess convergence experienced by the 1940s birth cohort is almost identical to the overall trend for Southern-born workers. In 1970, Southern-born members of this cohort exhibited a significantly larger black-white gap; by 1980 this pattern had actually reversed. It thus appears that general improvments in labor market conditions, rather than across-cohort improvements in educational attainment and quality, explain the dramatic relative narrowing of the black-white earnings gap in the South during the 1970s.

Interestingly, this birth cohort's fate over the next twenty years diverges in some respects from the overall patterns shown in Table 3. The black-white earnings gap for the Northern born increases much faster over time; the gap between Northern- and Southern-born whites also increases.

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The black-south interaction term becomes less positive between 1980 and 1990, a pattern exactly opposite to that displayed in the overall sample. This interaction term reaches its highest point in the 2000 specification. In a time period marked by a general worsening of labor market outcomes for blacks and Southerners in this cohort, Southern-born blacks fared better than other groups.

Table 6 presents results of median regression specifications that track the experiences of successive cohorts of 25-35 year old males over time, beginning in 1960. Interestingly, the 1960 specification indicates that black-white gaps for young workers in the North and South were nearly identical to those for the general population, shown in Table 3. As in the earlier table, the estimated black-white gap in the South is roughly half again as large as that in the North.

For the next cohort, which overlaps to some degree with the synthetic cohort followed in Table 5, the estimated black-white gap among the Northern born is identical to that estimated for the overall population. Among Southern born individuals, however, the black-white gap is slightly smaller, by roughly 3%. This "excess improvement" of Southern-born young adult blacks between 1960 and 1970 may reflect improvements in the school quality (Card and Krueger 1992). Note that members of this cohort, if educated in their state of birth, would have received education almost exclusively in segregated schools.

The next cohort of Southern-born black males, those between 25 and 35 years old in 1980, fared much better than their predecessors. The degree of cross-cohort progress between 1970 and 1980, however, is only slightly greater than the degree of within-cohort progress, shown in Table 5. Point estimates suggest that the younger cohort gained on the order of 1% relative to their older counterparts. Many members of this cohort would have been educated in segregated schools, though at least a few witnessed the true integration of Southern school districts beginning in the late 1960s

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and early 1970s.

Table 5 indicated that the 1940-1949 Southern-born cohort witnessed a widening of the black-white earnings gap relative to their Northern counterparts between 1980 and 1990. Such a trend is not visible in the across-cohort analysis in Table 6. In both years, the black-white gap among Southern black males was roughly 10% lower among the Southern-born. The relative improvement in the black-white gap among the Southern born evident in Table 3 thus masks two countervailing trends. Aging cohorts of Southern-born blacks experienced something of a setback in the 1980s, while their younger counterparts maintained the advantages held by their immediate predecessors. A similar statement can be made on the basis of the 2000 results. Overall, these results suggest that Southern-born cohorts educated either in the late stages of the segregation era or immediately after its demise experienced modestly narrower black-white earnings gaps than members of earlier cohorts.

6. Estimating the importance of changes in education quality.

Evidence presented to this point admits at least some potential role for education quality in closing the Southern black-white gap. Consistent with the notion that the quality of education afforded to Southern blacks increased over time, cross-cohort relative gains for Southern-born blacks are at least modestly greater than estimated within-cohort gains. Narrower differences in human capital investments might also plausibly explain why the black-south interaction term switches sign, instead of merely converging to zero. The education explanation is also supported by previous research, which suggests that improvements in the quality of Southern black education mattered for labor force outcomes (Card and Krueger 1992) and that Southern blacks responded to these quality

changes by increasing their investment in human capital (Guryan 2004). Of course, these findings do not represent a consensus view (see, for example, Betts 1995).

This section presents additional evidence based on analysis of the National Longitudinal Surevy of Youth 1979 cohort (NLSY '79). The NLSY '79 offers several advantages over Census microdata. It permits controls for a wider array of individual and family background characteristics. It also allows observation of geographic location and labor market outcomes at multiple points in time, enabling a study of the relative importance of region of birth, region of education, and region of residence in racial earnings disparities.

Table 7 presents the results of regression specifications that employ an unbalanced panel of individual/year observations, with each individual's earnings observed as many as 11 times, at biannual intervals between 1980 and 2000.[16] Each specification includes controls for age and educational attainment, region of residence effects and year fixed effects. The first four specifications control for additional variables not available in Census microdata: the educational attainment of the respondent's biological father and mother, and the respondent's own Armed Forces Qualifying Test (AFQT) score. The final specification controls for individual fixed effects. As in earlier analysis, the sample here is restricted to males.[17]

The first regression in Table 7 comes closest to matching the specifications presented in Table 1. The results bear a strong resemblance to those derived from Census microdata. The black-white gap in log earnings among individuals residing outside the South is estimated at -0.265. This

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[16]The dependent variable in this case is the logarithm of the sum of earnings, farm or self-employment income, and military income. This definition of earnings comes closest to that employed in the Census samples. Omitting military income from the definition of earnings does not influence the basic pattern of results.

[17]Each regression specification in Table 7 is weighted, using NLSY cross-sectional weights.

value is somewhat smaller than those reported in Table 1 for 1980, 1990 and 2000, which may reflect the importance of covariates included in this analysis that are not available in Census microdata. The main effect of residing in the South is negative and significant. The greater magnitude may be explained in part by the inclusion of other region effects in this regression, which reveal that earnings in the Midwest and West also tend to be significantly lower than in the omitted Northeast region. The Black-South interaction term is positive and insignificant, suggesting that racial disparities in wages are effectively independent of region of residence after controlling for individual characteristics.

The individual characteristics themselves are generally significant predictors of earnings. The returns to age are stronger in this sample than in any Census microdata sample, likely because they are identified in part from longitudinal rather than cross-sectional variation. Respondents with more educated fathers earn more, as do those with higher AFQT scores. Educational attainment, included as a set of categorical variables in the regression but excluded from the table, also significantly predicts higher earnings.

The link between region of residence and earnings appears even weaker after controlling for region of birth. As the second regression in Table 7 indicates, the impact of Southern residence is essentially transferred in its entirety to the control for region of birth.[18] This specification identifies the black-white earnings gap for individuals born in the South and elsewhere. In this respect, it is more comparable to specifications reported in Table 3, although the method of estimation here is OLS rather than median regression. Among Northern-born males, the earnings gap is comparable

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[18] The sample size is smaller in this specification because some respondents lack information on region of birth. Similar missing data issues explain variation in sample size in later regressions. Restricting the sample to those individuals with valid data on all variables used in the table does not seriously affect the results.

to that estimated for Northern residents in the preceding regression. The earnings gap among Southern-born males is roughly one-quarter smaller according to the point estimate associated with the Black-Born in South interaction; this interaction term is statistically significant. The point estimate of 0.067 is also very similar to those found in the 1980, 1990 and 2000 specifications in Table 3, in spite of the differences in age group examined and method of estimation. These results confirm the finding that the black-white gap is now narrowest among the Southern-born, other things equal.

An even stronger association between region, race and earnings appears in the third regression, which shifts attention to a respondent's region of residence at age 14. The black-white earnings gap among individuals who lived in the South at age 14 is estimated to be roughly one-third smaller than the gap among those who lived elsewhere. The Black-lived in South at age 14 interaction is statistically significant. Similar to the previous specification, controlling for region of residence at age 14 reduces the magnitude of the estimated difference in wages between individuals living in the South and Northeast. Instead, there is a significant negative effect associated with living in the South at age 14. Interestingly, point estimates suggest that whites living in the South at age 14 earn less than whites who lived in other regions, but the opposite pattern holds for blacks.

The overall pattern revealed in the first three specifications points strongly towards education quality as a key determinant of the narrower black-white earnings gap among the Southern born. The narrowest gap is not necessarily among those born in the region, but among those who lived in the region at the time they would have been attending school.[19]

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[19] The magnitude of the black-lived in South at age 14 interaction term is reduced upon introduction of controls for two school quality measures available for a subset of respondents in the NLSY '79: the percent of teachers in the respondent's high school who had advanced degrees, and the logarithm of the starting teacher's salary

The fourth regression controls for region of birth, residence at age 14, and current residence simultaneously, incorporating interactions with race for each variable. This regression confirms the notion that it is region of residence at age 14, rather than region of birth, that most significantly determines the magnitude of the black-white earnings gap. In fact, region of birth has no significant impact on the black-white gap controlling for region at age 14 and region of residence. Both region of residence and region at age 14 predict significant differences in the black-white earnings gap. Together, the results imply that the greatest racial earnings disparity is between those individuals who resided in the North at age 14 but subsequently moved to the South. The point estimate for the earnings gap for these individuals, -0.433, is more than ten times the magnitude of the estimated gap among blacks and whites who resided in the South at age 14 and subsequently moved to the North.

The result that Southbound black migrants fare worse than their Northbound counterparts seems at odds with earlier evidence, which indicated that much of the apparent progress towards racial equality in the South can be attributed to selective migration of higher-earning blacks into that region. Recall, however, that the NLSY '79 represents a relatively young age cohort, whereas the seemingly contradictory evidence, shown in Tables 2 and 3, is drawn from the entire population. The evidence in Table 7 is also based on OLS regressions which do not explicitly incorporate individuals without labor market earnings. Finally, recall that the black-reside in South coefficient is based almost entirely on within-individual variation in residence. Northern-born blacks who elect

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in that high school. The point estimate is reduced by 0.012. Further addition of controls for whether the respondent lived in a rural area, on a farm, or with both parents, plus indicators for whether the respondent's household had magazine subscriptions, newspaper subscriptions, or a library card at age 14, reduce the coefficient by an additional 0.03. This suggests, albeit weakly, that school quality is the main factor driving this result. The results of this exercise echo those of Betts (1995), who finds that school quality measures observed in the NLSY explain very little of the across-school variation in earnings. Analyses using this dataset are hampered by the fact that school quality information is available only for a self-selected subsample of respondents.

to move South may be drawn from the high portion of the earnings distribution, but evidence suggests that these individuals experience a setback upon migrating.

As an additional check into this result pattern, the final regression specification in Table 7 adopts a more aggressive strategy for controlling for unobserved individual characteristics. Individual fixed-effects absorb all time-invariant personal traits. This model by necessity omits controls for region of birth and region of residence at age 14 since those are time-invariant characteristics. This model will determine whether individuals who move from North to South or vice-versa in their working years experience any significant change in their earnings, and whether these changes vary significantly by race.

The results confirm earlier findings that the black-white earnings gap for males in this age cohort are effectively independent of region of residence. The point estimate suggests a slightly larger black-white gap in the South, but is not statistically significant. Thus, controlling as effectively as possible for permanent indicators of labor productivity, the anomaly of Northbound black migrants faring well and Southbound migrants poorly proves to be a fragile result.

6. Conclusions

Between 1960 and 2000, the American South underwent a remarkable transition from the epicenter of racial inequality to the region with lowest earnings differentials. To the extent that any net progress toward racial earnings equality has occurred during this time period, it has occurred in the South. While previous research had hinted that this might be the case, this analysis, which employs a simple correction for changes in labor force participation patterns and focuses on annual rather than weekly earnings, demonstrates the trend definitively. The black-white gap amongst

Southern born males, incorporating labor force non-participants, became smaller than its Northern counterpart sometime between 1970 and 1980 and has remained narrower ever since. The fact that the time series cross, rather than converge, indicates that economic processes more complex than mere regional convergence are at play.

The analyses presented in this paper suggest that most of the relative progress witnessed in the South prior to 1980 can be attributed to broad changes in the labor market, brought about at least in part by Civil Rights-era legislation. Relative progress in the 1960s is associated with a decline in industrial segregation; relative progress in the 1970s appears to be more of a period than a cohort effect.

Differences in inequality across regions after 1980 have been heavily influenced by a reversal of historic selective migration patterns. The growth of North to South black migration since 1980 has had the effect of narrowing the black-white gap in the South and raising it in the North. Reassigning individuals to their region of birth, rather than residence, makes trends in racial inequality look parallel in the two regions over the past two decades.

The compelling evidence in favor of these two explanations leaves relatively little to be explained by other factors: selective migration can explain perhaps 40% of the "excess convergence" in the South since 1960, period effects and industrial desegregation explain an additional 40% or more. While this leaves only a minor portion of the total effect for alternative explanations, including improvements in the relative education quality for blacks entering the labor market after 1960, there is clear evidence to support this explanation. Southern-born cohorts educated after the de facto integration of public schools, including those surveyed in the NLSY '79, experience significantly lower racial inequality relative to both their Northern-born counterparts and to earlier

cohorts measured at the same point in time. Evidence from the NLSY effect shows that it is more strongly associated with living in the South during the school-age years, rather than being born there.

In the end, the results in this paper paint a decidedly pessimistic picture of racial inequality in the latter part of the twentieth century. Over the 40-year time period examined here, there has been a substantial widening of the black-white male earnings gap outside the South, particularly when the fortunes of labor market non-participants are factored into the analysis. While by some measures there has been improvement in the South over this time period, much of this apparent progress reflects changes in historical patterns of selective migration – reassignment of migrants to their region of birth moderates trends in the North and worsens them in the South. Among the Southern-born, there has been net progress since 1960, but all of this progress can be attributed to the time period before 1970. The factors discussed in this paper have helped the South advance relative to the North, but absolute trends in both regions underscore the erosion of the economic well-being of African-American males in the post-Civil Rights era.

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Figure 1: The age-adjusted black-white annual earnings gap by region, 1960-2000
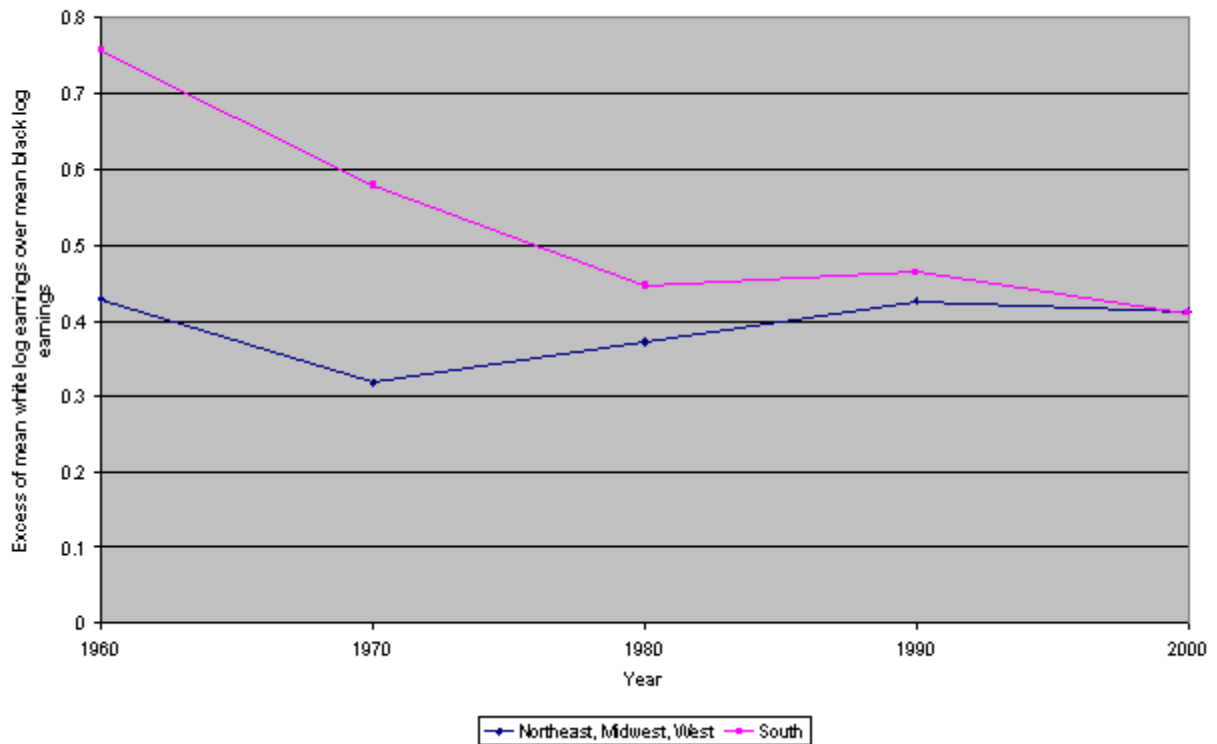
Note: Figure represents the in mean annual log earnings between white and black males born in the 48 contiguous states, age 21-60. Means have been adjusted using a quadratic in age. Data source: IPUMS.

Figure 2: Distribution of the working-age black male population by region of birth and residence, 1940-2000

Legend: □ Born in south, live in south □ Born in south, live elsewhere □ Born elsewhere, live in south □ Born elsewhere, live elsewhere
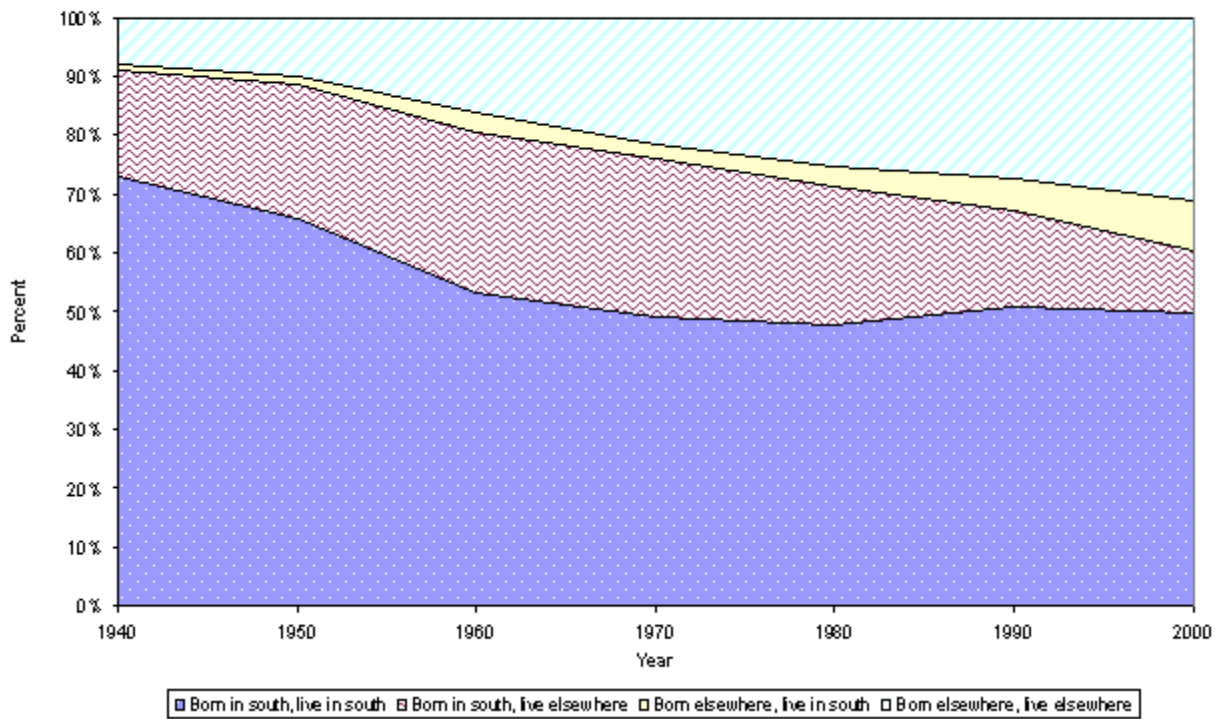
Figure 3: School and Residential Segregation By Region

Legend:
- Percent of Black Students attending majority nonwhite schools: South
- Percent of Black Students attending majority nonwhite schools: Midwest
- Black-nonblack dissimilarity index, MSA-level mean weighted by black population: South
- Black-nonblack dissimilarity index, MSA-level mean weighted by black population: Other regions
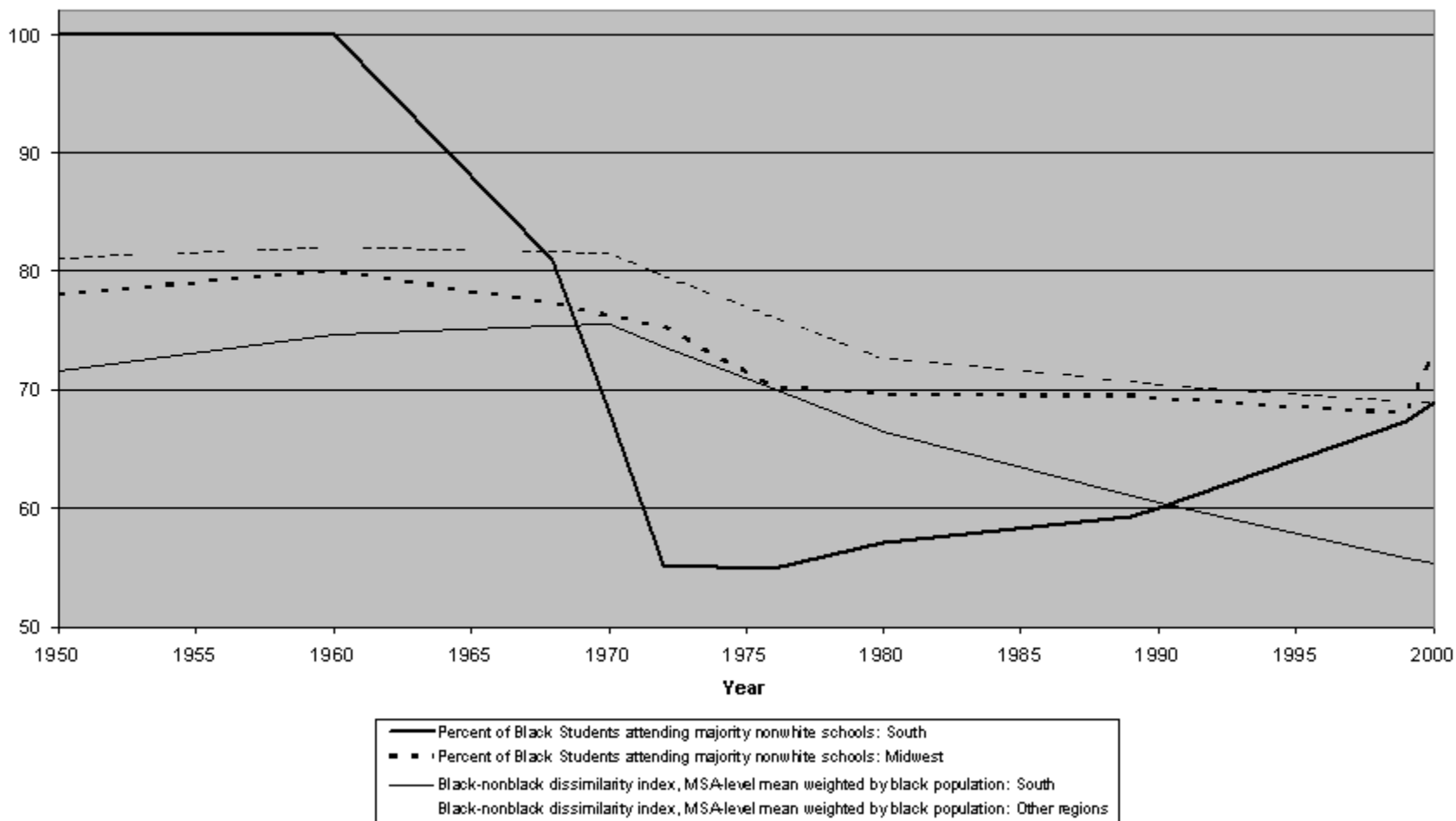
Note: Sources are Clotfelter (2004, Table 2.1), Cutler Glaeser and Vigdor (1999) and Glaeser and Vigdor (2003). The school segregation measure for the Southern region omits the states of Delaware, Kentucky, Maryland, Oklahoma, West Virginia, and the District of Columbia. The school segregation measure for the Midwest region omits Missouri. All other regional definitions follow Census Bureau delineations.

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Table 1: Education-corrected black-white annual earnings gaps by region

Independent Variable	1960	1970	1980	1990	2000
Black	-0.283	-0.208	-0.292	-0.342	-0.309
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
South	-0.189	-0.120	-0.061	-0.071	-0.034
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Black*South	-0.242	-0.206	-0.054	-0.015	-0.001
	(0.009)	(0.008)	(0.008)	(0.008)	(0.008)
Age	0.136	0.161	0.153	0.162	0.152
	$(8.7*10^{-4})$	$(7.9*10^{-4})$	$(8.2*10^{-4})$	$(8.5*10^{-4})$	$(8.5*10^{-4})$
Age squared	-0.002	-0.002	-0.002	-0.002	-0.002
	$(1.1*10^{-5})$	$(9.9*10^{-6})$	$(1.0*10^{-5})$	$(1.1*10^{-5})$	$(1.1*10^{-5})$
1-4 grades completed	0.216	-0.063	0.319	0.036	0.063
	(0.016)	(0.018)	(0.028)	(0.033)	(0.047)
5-8 grades completed	0.593	0.289	0.525	0.204	0.277
	(0.015)	(0.016)	(0.025)	(0.023)	(0.024)
9th grade completed	0.797	0.455	0.676	0.339	0.360
	(0.016)	(0.016)	(0.026)	(0.024)	(0.024)
10th grade completed	0.855	0.513	0.737	0.401	0.420
	(0.016)	(0.016)	(0.026)	(0.023)	(0.023)
11th grade completed	0.906	0.557	0.812	0.449	0.453
	(0.016)	(0.016)	(0.026)	(0.023)	(0.023)
12th grade completed	0.990	0.683	0.986	0.729	0.696
	(0.016)	(0.016)	(0.025)	(0.022)	(0.022)
Some college	1.013	0.650	0.974	0.821	0.846
	(0.016)	(0.016)	(0.025)	(0.022)	(0.022)
College graduate	1.312	0.977	1.240	1.194	1.281
	(0.016)	(0.016)	(0.025)	(0.022)	(0.022)
R^2	0.235	0.234	0.198	0.232	0.218
N	358,771	387,748	471,154	516,842	529,522
Implied BW gap in South	-0.525	-0.414	-0.346	-0.357	-0.310
Black coef. w/o educ.	-0.429	-0.318	-0.371	-0.426	-0.412
Black*south coef. w/o educ.	-0.327	-0.261	-0.075	-0.038	0.003

Note: Standard errors in parentheses. Sample derived from IPUMS data on white and black males age 21-60 born in the 48 contiguous states. Samples are weighted using IPUMS weights where appropriate.

Table 2: Median regression results with imputed earnings for non-working males

Independent Variable	1960	1970	1980	1990	2000
Black	-0.386	-0.319	-0.452	-0.518	-0.585
	(0.005)	(0.003)	(0.002)	(0.007)	(0.006)
South	-0.225	-0.176	-0.127	-0.116	-0.096
	(0.002)	(0.001)	(0.001)	(0.003)	(0.003)
Black*South	-0.378	-0.258	-0.063	-0.013	0.070
	(0.006)	(0.004)	(0.003)	(0.010)	(0.008)
Age	0.124	0.142	0.163	0.185	0.166
	$(6.5*10^{-4})$	$(3.6*10^{-4})$	$(2.9*10^{-4})$	$(9.7*10^{-4})$	$(9.4*10^{-4})$
Age squared	-0.001	-0.002	-0.002	-0.002	-0.002
	$(8.0*10^{-6})$	$(4.6*10^{-6})$	$(3.7*10^{-6})$	$(1.2*10^{-5})$	$(1.2*10^{-5})$
Pseudo-R^2	0.055	0.055	0.049	0.049	0.034
N	380,921	410,978	513,212	566,543	595,187
Implied black-white gap in the South	-0.764	-0.577	-0.515	-0.531	-0.515

Note: Standard errors in parentheses. Sample derived from IPUMS data on white and black males age 21-60 born in the 48 contiguous states. Individuals with zero earnings are assumed to have potential earnings below the median for their region/race cell and age. Samples are weighted using IPUMS weights where appropriate.

Table 3: Median regression results by region of birth

Independent Variable	1960	1970	1980	1990	2000
Black	-0.399	-0.344	-0.507	-0.562	-0.576
	(0.011)	(0.005)	(0.007)	(0.011)	(0.008)
Born in South	-0.195	-0.163	-0.125	-0.142	-0.117
	(0.003)	(0.002)	(0.002)	(0.004)	(0.004)
Black*Born in South	-0.192	-0.096	0.065	0.089	0.070
	(0.013)	(0.006)	(0.008)	(0.013)	(0.010)
Age	0.126	0.143	0.164	0.187	0.166
	(0.001)	$(4.6*10^{-4})$	$(7.5*10^{-4})$	(0.001)	(0.001)
Age squared	-0.002	-0.002	-0.002	-0.002	-0.002
	$(1.1*10^{-5})$	$(5.7*10^{-6})$	$(9.3*10^{-6})$	$(1.5*10^{-5})$	$(1.4*10^{-5})$
Pseudo-R^2	0.050	0.053	0.049	0.049	0.034
N	380,921	410,978	513,212	566,543	595,187
Implied black-white gap among Southern-born	-0.591	-0.440	-0.442	-0.473	-0.506

Note: Standard errors in parentheses. Sample derived from IPUMS data on white and black males age 21-60 born in the 48 contiguous states. Individuals with zero earnings are assumed to have potential earnings below the median for their region/race cell and age. Samples are weighted using IPUMS weights where appropriate.

Table 4: Within-industry estimates of the black-white earnings gap by region, 1960-2000

Indpendent Variable	1960	1970	1980	1990	2000
Black	-0.287	-0.206	-0.291	-0.335	-0.295
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
South	-0.160	-0.108	-0.059	-0.073	-0.036
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Black*South	-0.148	-0.158	-0.023	$-2.9*10^{-4}$	0.005
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)
Table 1 controls	Yes	Yes	Yes	Yes	Yes
1950 industry code fixed effects	Yes	Yes	Yes	Yes	Yes
R^2	0.318	0.281	0.250	0.280	0.262
N	358,771	387,748	471,154	516,842	529,522
Implied black-white gap in the South	-0.435	-0.364	-0.314	-0.335	-0.290

Note: Standard errors in parentheses. Sample derived from IPUMS data on white and black males. Beginning in 1970, the sample is restricted to the non-hispanic population. Samples are weighted using IPUMS weights where appropriate.

Table 5: Analyzing the black-white gap by region of birth for the 1940-1949 birth cohort

Indpendent Variable	Age 21-30 1970	Age 31-40 1980	Age 41-50 1990	Age 51-60 2000
Black	-0.251 (0.002)	-0.463 (0.013)	-0.470 (0.015)	-0.638 (0.017)
Born in South	-0.096 (0.001)	-0.127 (0.004)	-0.148 (0.004)	-0.164 (0.005)
Black*Born in South	-0.105 (0.003)	0.050 (0.015)	0.026 (0.018)	0.080 (0.020)
Age	1.228 (0.003)	0.212 (0.019)	0.206 (0.026)	0.732 (0.036)
Age squared	-0.022 ($5.1*10^{-5}$)	-0.003 ($2.7*10^{-4}$)	-0.002 ($2.8*10^{-4}$)	-0.007 ($3.3*10^{-4}$)
Pseudo-R^2	0.092	0.017	0.010	0.009
N	123,347	134,262	132,153	126,040
Implied black-white gap among Southern born	-0.356	-0.413	-0.444	-.0.558

Note: Standard errors in parentheses. Sample derived from IPUMS data on non-hispanic white and black males. Individuals with zero reported earnings are assumed to have potential earnings below the median for their region, race and age. Samples are weighted using IPUMS weights where appropriate.

Table 6: Median regressions for young males by region of birth 1960-2000

Indpendent Variable	1960	1970	1980	1990	2000
Black	-0.383	-0.343	-0.494	-0.609	-0.535
	(0.008)	(0.002)	(0.008)	$(4.3*10^{-4})$	(0.008)
Born in South	-0.151	-0.145	-0.097	-0.133	-0.100
	(0.002)	(0.001)	(0.003)	$(1.8*10^{-4})$	(0.004)
Black*Born in South	-0.192	-0.067	0.099	0.105	0.119
	(0.009)	(0.003)	(0.010)	$(5.4*10^{-4})$	(0.010)
Age	0.250	0.236	0.212	0.264	0.256
	(0.007)	(0.002)	(0.010)	$(5.3*10^{-4})$	(0.011)
Age squared	-0.004	-0.003	-0.003	-0.004	-0.004
	$(1.1*10^{-4})$	$(3.8*10^{-5})$	$(1.6*10^{-4})$	$(8.8*10^{-6})$	$(1.8*10^{-4})$
Pseudo-R^2	0.046	0.033	0.027	0.027	0.021
N	113,960	117,112	178,001	194,715	158,326
Implied black-white gap among Southern-born	-0.575	-0.410	-0.395	-0.504	-0.416

Note: Standard errors in parentheses. Sample derived from IPUMS data on white and black males born in the contiguous 48 states and between 25 and 35 years old. Individuals with zero reported earnings are assumed to have potential earnings below the median for their region, race and age. Samples are weighted using IPUMS weights where appropriate.

Table 7: Black-White earnings gaps in the NLSY '79

Independent Variable	Dependent variable: ln(earnings + self empl. income + military income)				
Black	-0.265 (0.023)	-0.275 (0.025)	-0.305 (0.023)	-0.267 (0.026)	—
Reside in South	-0.090 (0.014)	-0.018 (0.018)	-0.035 (0.019)	-0.007 (0.021)	-0.023 (0.028)
Black*Reside in South	0.016 (0.031)	—	—	-0.166 (0.050)	-0.077 (0.051)
Born in South	—	-0.106 (0.017)	—	-0.107 (0.023)	—
Black*Born in South	—	0.067 (0.032)	—	-0.017 (0.056)	—
Lived in South at age 14	—	—	-0.079 (0.018)	-0.016 (0.026)	—
Black*Lived in South at age 14	—	—	0.102 (0.031)	0.233 (0.064)	—
Age	0.283 (0.011)	0.284 (0.012)	0.283 (0.011)	0.284 (0.012)	0.308 (0.005)
Age squared	-0.004 ($1.82*10^{-4}$)	-0.004 ($1.89*10^{-4}$)	-0.004 ($1.85*10^{-4}$)	-0.004 ($1.90*10^{-4}$)	-0.004 ($8.76*10^{-5}$)
Mother's years of education	0.004 (0.002)	0.005 (0.003)	0.005 (0.002)	0.005 (0.003)	—
Father's years of education	0.011 (0.002)	0.012 (0.002)	0.011 (0.002)	0.011 (0.002)	—
AFQT score (/100)	0.469 (0.024)	0.474 (0.025)	0.470 (0.024)	0.476 (0.025)	—
Midwest region	-0.147 (0.013)	-0.146 (0.014)	-0.142 (0.014)	-0.140 (0.014)	-0.146 (0.031)
West region	-0.106 (0.015)	-0.112 (0.016)	-0.113 (0.016)	-0.109 (0.016)	-0.022 (0.030)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Categorical educ. attainment controls	Yes	Yes	Yes	Yes	Yes
Indiv. fixed effects	No	No	No	No	Yes
R^2	0.403	0.406	0.405	0.405	0.693
N	31,671	29,254	30,687	28,916	40,361

Note: Sample consists of black and white males in the NLSY not currently enrolled in school with positive earnings, self-employment income, or military income. There are up to 11 observations for each individual; specifications utilize unbalanced panels. Standard errors, in parentheses, have been adjusted to reflect potential clustering at the person level in the first four specifications. Regressions are weighted using NLSY cross-sectional weights.