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CONTINUOUS VERSUS EPISODIC CHANGE: THE IMPACT OF CIVIL
RIGHTS POLICY ON THE ECONOMIC STATUS OF BLACKS

John J. Donohue III

James Heckman

Working Paper No. 3894

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
November 1991

This research was supported by the American Bar Foundation and NSF 87-11845. The authors thank Henry Aaron, Ian Ayres, Gary Becker, David Card, Mark Killingsworth, Alan Krueger, Robert Margo, Dan Ortiz, John Pencavel, Len Rubinowitz, George Rutherglen, Stewart Schwab, Peter Siegelman, Rip Verkerke, James Walker, two anonymous referees, and participants in workshops at Princeton University, University of Virginia, and Yale University for their helpful comments on various drafts of this paper. The first draft of this paper was prepared in 1989. Sue Holmes and Kirsten Muth provided excellent research assistance. This paper is part of NBER's research program in Labor Studies. Any opinions expressed are those of the authors and not those of the National Bureau of Economic Research.

NBER Working Paper #3894
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ABSTRACT

This paper examines the available evidence on the causes of black economic advance in order to assess the contribution of federal policy. Over the period 1920-1990, there were only two periods of relative black economic improvement -- during the 1940s and in the decade following the passage of the Civil Rights Act of 1964, the Voting Rights Act of 1965, and the institution of the government contracts compliance program. Black migration from the South, a traditional source of economic gains for blacks, almost stopped at about this same time, and recent evidence on the impact of black schooling gains indicates that educational gains cannot explain the magnitude of black economic progress beginning in the mid-1960s.

Professor James Heckman
Department of Economics
University of Chicago
Room 403
1126 East 59th Street
Chicago, IL 60637
and NBER

Professor John Donohue
American Bar Foundation
4th Floor
750 North Lake Shore
Drive
Chicago, IL 60611
and
Northwestern University
School of Law
357 East Chicago Avenue
Chicago, IL 60611

credible the argument that federal policy was effective in the period 1965-1975 but also serve to counter the argument that the laws themselves were merely the manifestation of preexisting social change. Federal activity was imposed on the South and had its greatest apparent effect in the region that resisted it the most.

Our focus on labor market and social outcomes that occurred after 1964 should not be interpreted to mean that large scale civil rights activity began in the South in that year. Most scholars of Southern history (C. Vann Woodward 1968) consider 1954 to be the watershed year in which the South was confronted by a direct federal challenge to its racially discriminatory system. In the Brown v. Board of Education decision of that year, the Supreme Court invalidated the "separate but equal" schooling that existed throughout the South. Other Supreme Court rulings reflecting the Court's intolerance of publicly sanctioned segregation followed over the next five years.

This challenge to an entrenched segregationist system met with initial massive resistance in the South that impeded black progress (David Garrow 1987 and John Martin 1957). The period 1954-1964 was one of great turmoil in the South. The federal government was slow to enforce Brown and the related constitutional decisions of the Supreme Court. Private civil rights activity -- notably that of Martin Luther King and his movement -- was invigorated by the 1954 Supreme Court ruling. At the same time, white resistance stiffened and new segregation laws were enacted to make explicit certain rules of etiquette that social norms had previously implicitly enforced. The well documented acts of violence against private civil rights workers no doubt facilitated the final passage of the 1964 Civil Rights Act and the Voting Rights Acts of 1962 and 1965, but also had an immediate inhibitory effect on black economic progress.

Black progress was uneven in this period and the federal enforcement effort was neither coordinated nor vigorous. Schools and parks were shut down to avoid integration. As we document below, few schools in the Deep South were integrated in this period, although integration occurred rapidly in the border states. Nonetheless, there is evidence that some Southern leaders recognized racial change as inevitable and began the process of integration as early as the late 1950s (John Sproat 1986).

We focus on the post-1964 period because by then the constitutional prohibition of segregation had been clarified and widely endorsed outside of the South, and the willingness of the executive branch of the U.S. government to enforce the constitutional mandate ending government-sanctioned segregation in the South and of the legislative branch to extend its reach to private behavior had been demonstrated. Our evaluation of the 1964 Civil Rights Act and related legislative and executive acts is really an evaluation of those laws and the prior civil rights activity that stimulated them. We document below that there was some progress in black economic status in the South before the 1960s. However, the sustained improvement in black status in employment, voting, and schooling occurs after 1964.

Our paper develops in the following way. Section I presents the evidence for sustained improvement in the labor market status of black males beginning in the mid-1960s. Focussing on males because of the wealth of information on that demographic group, we establish the following facts. There is an upward

jump in the time series of black earnings and wages relative to white earnings and wages beginning in the mid-1960s. The South was the region of the greatest black economic advance in the period 1960-1970, accounting for at least two-thirds of the increase in black economic status over the decade. There is evidence of substantial desegregation of firms in the South during the crucial 1965-1970 period. This black economic progress following the passage of Title VII coincided with a sharp drop in the outflow of blacks from the South, and even led to black migration into that region between 1970 and 1980.

Section II of the paper documents that during the seventy-year period from 1920-1990, two periods of relative black progress stand out -- the period of rebound from the Great Depression brought on by World War II and the 1965-1975 period. The major studies advocating the continuity hypothesis are analyzed, and three conclusions emerge. First, black migration contributed little and relative increases in the quantity of black education contributed modestly to black progress after 1965. Second, the main cause of the observed black relative economic gains during this period are relative black increases in the returns to education. Such increases can be the product of either improvements in schooling quality or changes in the demand for black labor induced by declining racial discrimination, government civil rights policy, or tight labor markets. David Card and Alan Krueger (1991) estimate that roughly 15-20 percent of the black gains in the twenty-year period following 1960 were attributable to relative schooling quality improvements. They find that the narrowing racial gap in years of education completed played virtually no role in elevating black relative wages, while James Smith and Finis Welch (1980) would attribute 20-25 percent of the black relative wage gain to this source. Third, perhaps 10-20 percent of post-1964 black progress is attributable to the selective removal of low-wage blacks from the workforce (James Heckman 1989). Even if one accepts the set of estimates least favorable to the federal pressure hypothesis, fully 35 percent of the relative black wage gains cannot be explained by any suggested supply-side factor.

Finally, in Section III, we attempt to focus on the possible demand-side influences for the well-documented post-1964 advance in black relative status. There is general agreement in the literature that the Office of Federal Contract Compliance produced a large increase in the employment of blacks in firms required to implement affirmative action programs during the period 1966-1980. Such evidence on employment shifts, however, does not necessarily imply commensurate large-scale wage gains or even an overall boost to black employment. Missing are key parameters -- the elasticities of the demand and supply of labor by race to firms and to sectors. A high inter-sectoral supply elasticity could lead to a large shift of black workers into contractor firms without significantly elevating either U.S. aggregate black employment or black wages. The available econometric studies of Title VII and EEOC enforcement activity have reached conflicting conclusions and in general have not received widespread acceptance because of the methodological difficulties in estimating the impact of a law with near uniform applicability. Nonetheless, while the precise mechanism through which federal pressure was translated into black economic gains is not

yet clear, a richer conception of the multi-faceted federal pressure designed primarily to break the racial segregation of the South succeeds in aligning the intensity of government pressure with the period and location of greatest black progress.

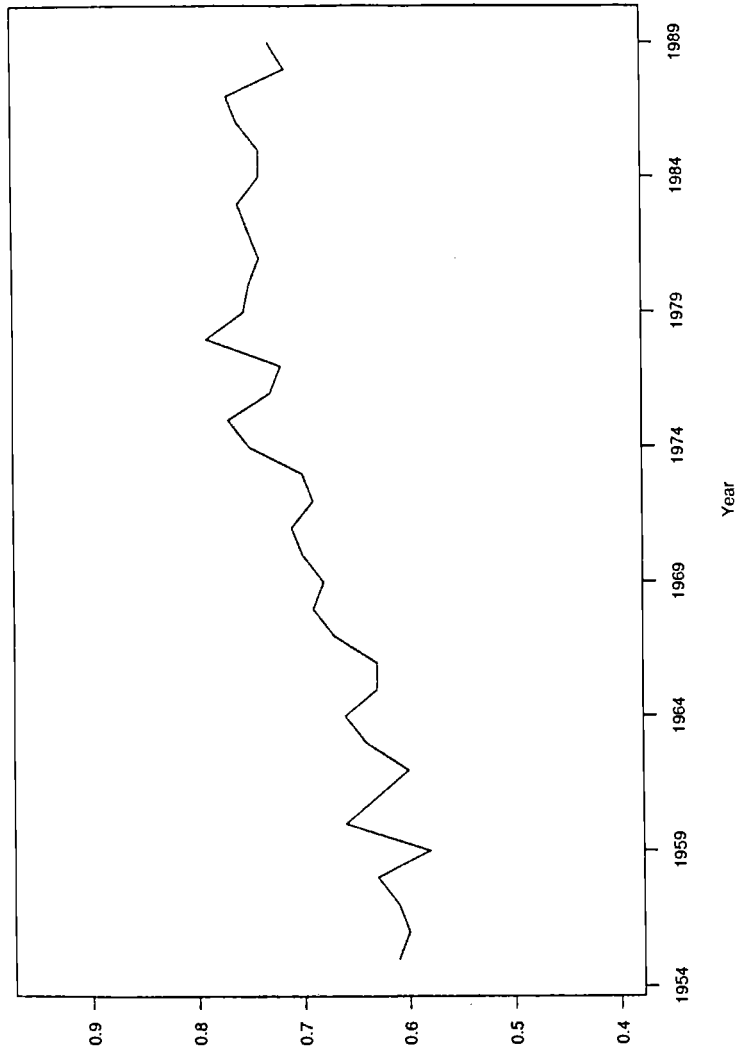
1. The Improvement in Black Relative Economic Status

The simplest depiction of the changes in black relative economic status since 1953 is provided in Figure 1, which presents the time series of the median earnings of full-time black male workers relative to the same measure for white males for the entire country. The graph reveals that significant black progress has occurred, but the early data are sufficiently noisy to obscure the precise starting point of the upward trend. It is clear, though, that a decade of unbroken black progress begins in 1965, followed by a period of decline. Thus, the aggregate black/white earnings ratio rose from .62 in 1964 to .72 by 1975, but then fell with the 1987 figure at .69.

While the existence of the sustained post-1964 growth of the black/white earnings ratio is revealing, its cause is uncertain. Conceivably, the booming economy during the second half of the 1960s or relative improvements in education might help to explain the black economic advance. Richard Freeman (1973) demonstrated, however, that the pattern of post-1964 acceleration in black male relative earnings persists in aggregate Current Population Survey (CPS) data time-series regressions that control for the state of aggregate demand (business cycle effects) and relative educational attainment going back to 1948.³ Three subsequent analyses that extend the time series forward have confirmed Freeman's original finding: Freeman (1981), Charles Brown (1984), and more recently Wayne Vroman (1989), who examines both the aggregate CPS data underlying Figure 1 and micro Social Security Administration earnings (SSA) data. In each succeeding study based on both micro and aggregate data, the length of the time series has been extended using the Freeman framework, and a post-1964 upward deviation from trend has been found in relative black status. Even after adjusting for serial correlation, Vroman finds clear evidence in both the CPS and SSA data of an upward shift in relative black male earnings over the period 1965-1974 that is not explained by relative improvements in black education (measured by years of schooling) or business cycle effects. This upward shift in black progress -- measured by a time trend dummy that is the dominant explanatory variable in all of Vroman's relative earnings regressions -- led to an increase in black relative earnings over the decade in question of from 10.1 to 16.0 percentage points.

³The controls for the educational attainments of blacks and whites are based on the number of years of school attended. As we discuss below, however, this measure does not capture any relative gains in the quality of black schooling.

Figure 1
Median Relative Non-White/White Total Money Income of Year-Round,
Full-time Male Workers, United States.



Source: Current Population Surveys

But while the evidence for discontinuity is clear using the standards of modern time-series analysis, the reliance on aggregate national data obscures some important features in the improvement of black relative economic status. Figures 2-5 disaggregate the same time series of relative median earnings of full-time black and white male workers into four Census regions. Underscoring a pattern first noticed in Richard Butler and James Heckman (1977), these figures reveal the importance of the South in accounting for aggregate black progress. The 1965-1975 growth in the aggregate wage data is a consequence of imposing a Southern upward trend that began in the early 1960s on top of a post-1964 progression in the North Central region that stagnated after 1975.⁴ The other regions show little trend in black relative status over much of the period 1953-1987. Given the substantial wage differentials across regions and the importance of black migration from the South, it should not be surprising that the complex story of black relative economic progress cannot be resolved by mere reliance on aggregate, national time-series regressions.

Additional micro evidence on this question is given in a recent paper by John Bound and Richard Freeman (1989). Using CPS annual March Demographic Files, they estimated wage equations for males age 20-64 for every year from 1963-1984 controlling for race, region, urban status, age (using separate dummy variables for each year of age), and years of education.⁵ Bound and Freeman then computed a time series of estimated racial differentials (the coefficient on a race dummy variable equal to one if a person is black) for both log annual and weekly earnings. While there is some danger in estimating wage equations under the assumption that the effect of factors such as education, age, and race will be the same across diverse sectors of the economy, the results are dramatic. In both cases, black relative economic status improves dramatically until the mid-1970s and then stagnates thereafter.⁶ Moreover, Bound and Freeman also disaggregate the CPS data into South and non-South, and demonstrate that the truly dramatic relative economic gain for blacks came in the South.

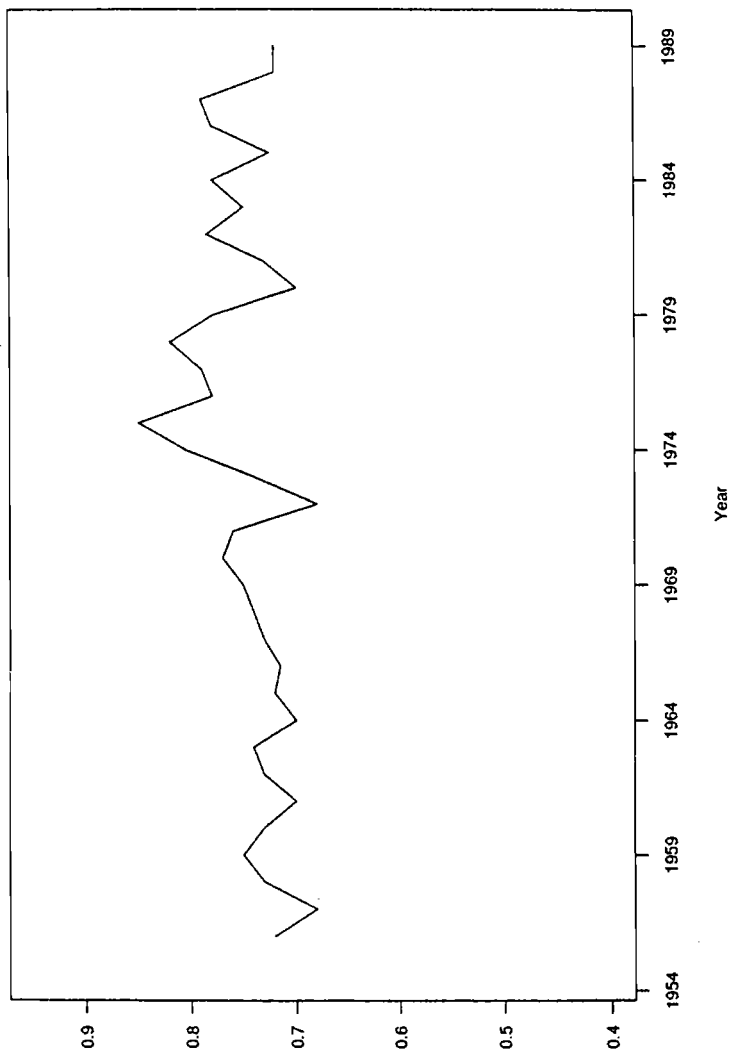
⁴These graphs employ the Census regional definitions. Most critical for our purposes is the expansive definition of the South: Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Alabama, Tennessee, Kentucky, Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Maryland, Delaware, and the District of Columbia. Owing to noise in the data, it is difficult to assign a precise starting date to the Southern upward trend: 1959 and 1962 are both plausible.

⁵While aggregate CPS data are available beginning in 1948, micro CP data did not become available until 1963.

⁶Bound and Freeman also explore whether the general state of the economy explains the periods of relative black improvement before 1975 and stagnation thereafter. They regress the log of the annual earnings differentials from the regressions described above on the log of real GNP and some trend variables, and find that GNP had no statistically significant impact.

Figure 2

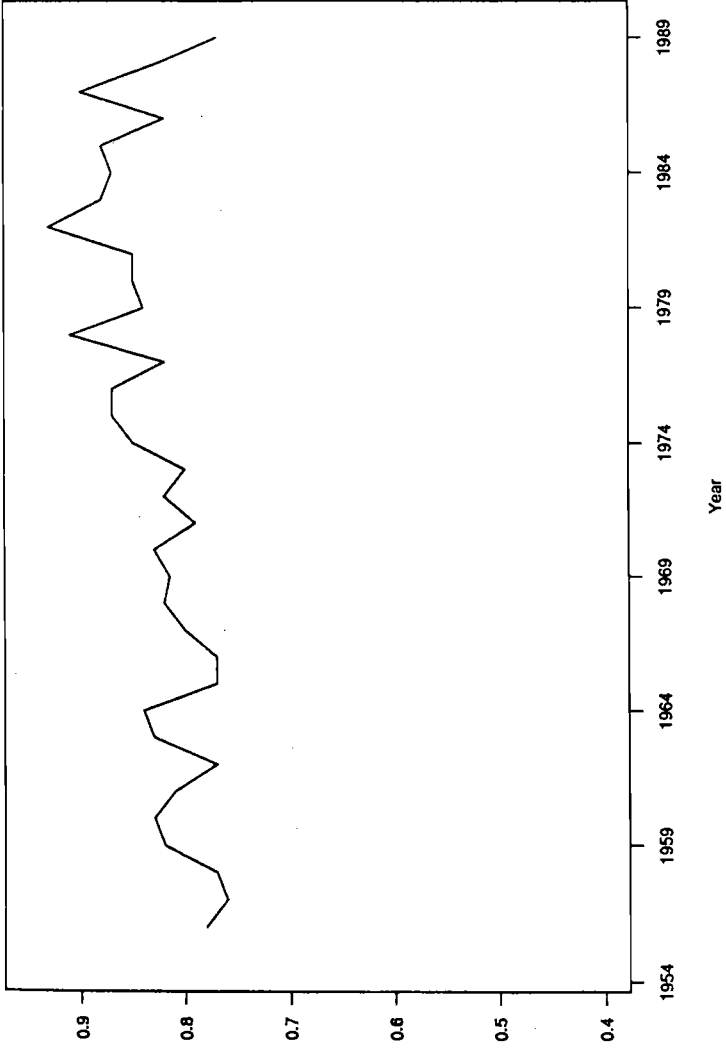
Median Relative Non-White/White Total Money Income of Year-Round,
Full-time Male Workers, Northeastern Region.



Source: Current Population Surveys

Figure 3

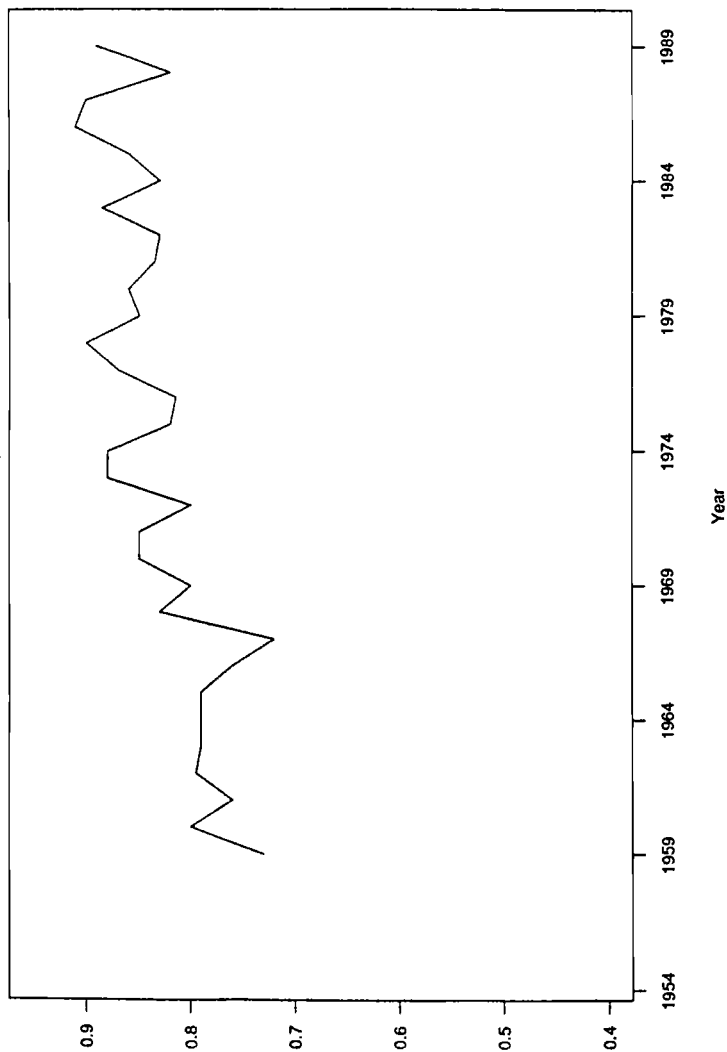
Median Relative Non-White/White Total Money Income of Year-Round, Full-time Male Workers, Midwestern Region.



Source: Current Population Surveys

Figure 4

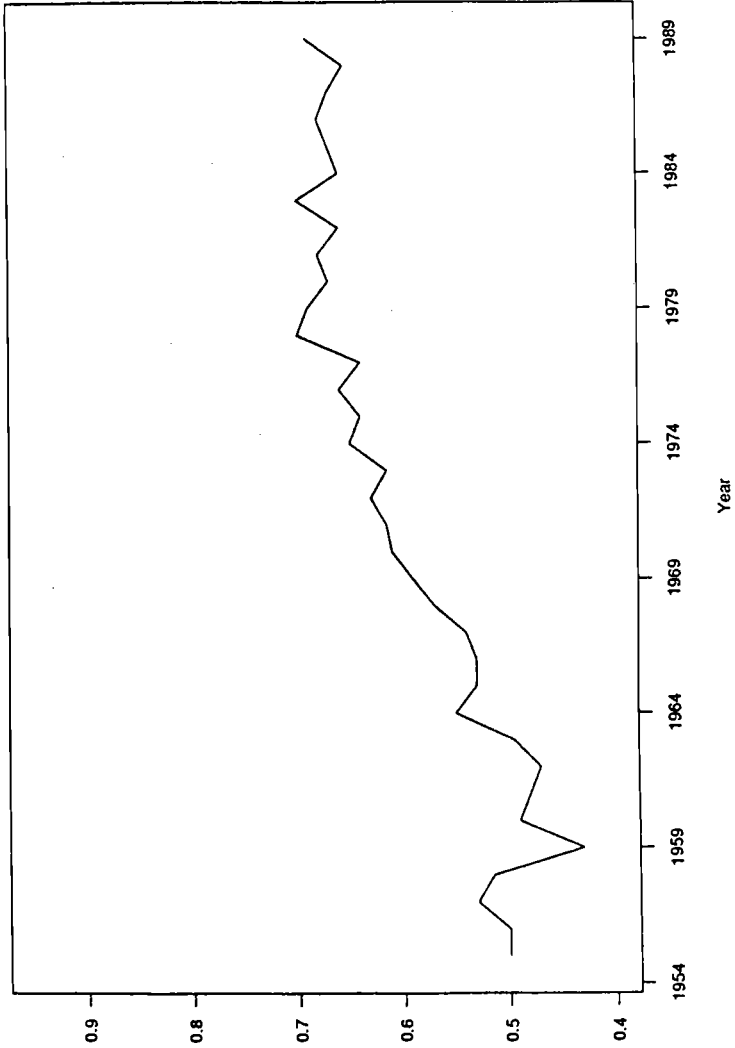
Median Relative Non-White/White Total Money Income of Year-Round,
Full-time Male Workers, Western Region.



Source: Current Population Surveys

Figure 5

Median Relative Non-White/White Total Money Income of Year-Round,
Full-time Male Workers, Southern Region.



Source: Current Population Surveys

In Figure 6, we graph our estimates of the racial differentials in hourly earnings for male workers for every other year over the period 1963-1987.⁷ This graph once again underscores the importance of regional disaggregation. For the non-South, there is virtually no improvement in the earnings deficit of black men over the twenty-four year period. In contrast, Southern blacks experienced sharp relative wage gains over the decade 1965-1975, with virtual stagnation thereafter. Note that in 1987 the adjusted black earnings shortfall, which had historically been far greater in the South, for the first time became equal at about 19 percent in both regions.

Further evidence of post-1964 sustained improvement in the time series of black economic status is found in Table 1 taken from Smith and Welch (1984, Table 13). This table compares the average weekly wages of black men relative to white men classified by years of work experience and education. Relative black wages of all male workers (the "A" rows) increase from 1967 through 1976, but then recede somewhat for the youngest and oldest experience groups. For college-educated blacks (the "B" rows), the rise in status is particularly striking during the period 1967-1972. The black/white wage ratio for this education category recedes somewhat after 1972, but the 1979-1980 levels are clearly much higher than the 1967-68 levels in all experience groups: college-educated blacks made substantial gains over the thirteen-year period. For high school graduates (the "C" rows), there is a dramatic rise for most experience groups during the period 1967-1972, with subsequent substantial erosion of gains for the younger experience groups. These data suggest

⁷David Card pointed out to us that the Bound and Freeman finding of near complete convergence in the black/white adjusted earnings differential in the decade from 1965-1975 contrasts sharply with figures he and Alan Krueger derived from Census data. This admonition prompted us to do our own analysis of the CPS, which is depicted in Figure 6. The general pattern of significant black relative progress found by Bound and Freeman is accurate, although their actual figures exaggerate the extent of the progress.

The regression equation underlying Figure 6 was similar to Bound and Freeman's except that we measured schooling by years of education and two dummies reflecting graduation from high school and college, while Bound and Freeman used a spline function. We also limited our sample to workers that earned at least \$500 per year (in 1980 dollars), at least \$20 per week but not more than \$4000, and at least \$1 per hour but not more than \$500.

Prior to 1976, the Current Population Survey reports weeks per year in bracketed intervals. We use the midpoints of these bracketed intervals to derive a measure of annual labor supply, which is then divided into annual earnings to produce an hourly wage rate. Post-1975, the CPS reports labor supply data more finely and imputation of bracketed intervals is unnecessary. In addition, prior to 1976 hours per week were reported on a different basis than post-1975. This disjunction in the method used to derive the wage series accounts, in part, for the 1976 spike in the series. Note, however, the spike occurs only in Northern data. This divergence by region and evidence of divergence in labor supply behavior by race (see Figure 9) led us to eschew the consensus "solution" to the imputation problem and impute post-1975 labor supply means within brackets (computed across all race groups and regions). We obtain similar results when weekly wages are used. Additional calculations using alternative imputation procedures are available on request from the authors.

Figure 6

Estimated Percentage Black Male Deficit in In(hourly wage) Relative to White Male

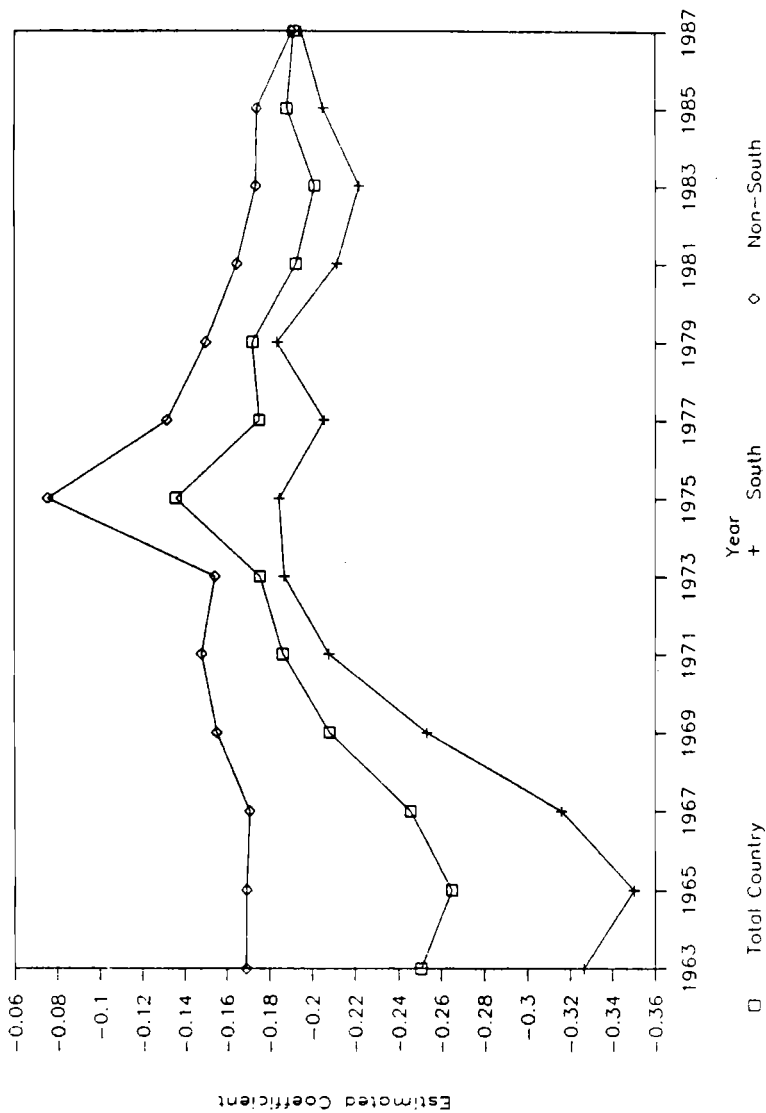


Table 1

Average Weekly Wages of Black Men as a Percentage of Average Weekly Wages of White Men, Stratified by Schooling and Experience

	Years of Experience				
	1-5	6-10	11-20	21-30	31-40
A. All schooling classes:					
1967-68	69.5	66.1	61.9	59.7	57.7
1971-72	82.1	72.0	66.1	62.5	64.0
1975-76	81.4	74.0	70.2	67.8	68.8
1979-80	78.9	75.3	72.0	69.3	64.1
B. Sixteen years of schooling:					
1967-68	75.7	66.5	59.8	55.3	53.7
1971-72	101.1	84.6	65.3	62.0	69.5
1975-76	89.1	84.1	72.7	67.2	70.9
1979-80	92.3	86.1	77.9	69.9	64.5
C. Twelve years of schooling:					
1967-68	81.8	76.8	71.2	68.4	68.4
1971-72	90.7	82.3	76.2	71.0	73.8
1975-76	83.1	81.8	77.2	76.7	73.6
1979-80	79.5	78.1	78.4	77.8	76.2

Source: Yearly CPS public use tapes. See Smith and Welch (1984).

that the period 1967-1972 is one of significant black relative wage growth, and that the relative stagnation in black progress after 1975 was the product of declines for the youngest and oldest college-educated blacks and the youngest group of black high school graduates.

One can examine the earnings disadvantage of black workers in the South estimating separate earnings equations for whites and blacks and comparing the wage penalties associated with living in the South for each race. Table 2, taken from Smith and Welch (1986, Tables 21 and 22), presents their estimate of the Southern differential in wages for blacks and whites in different work experience intervals in all the Census years between 1940 and 1980 controlling for education, experience within the interval, and Standard Metropolitan Statistical Area (SMSA). Three points should be noted. First, there is no sign of any improvement in Southern economic status relative to the rest of the country between 1940 and 1960: Southern whites consistently earned about 10 percent less than non-Southern whites and Southern blacks earned about 30 percent less than blacks living outside the South.⁸ Second, during the period 1960-1970, there is a dramatic decline in the Southern differential for blacks in the youngest experience class. Finally, during the 1970s, there is across-the-board improvement in Southern black absolute and relative status, establishing that the wage penalty for residing in the South was shrinking for blacks.

Further evidence on the importance of developments in the South in accounting for black economic progress is presented in Table 3, taken from Richard Butler, James Heckman and Brook Payner (1989). The table documents a real relative wage gain for black vis-a-vis white males of 17.8 percent during the sixties, and decomposes this improvement into five components: wage growth and occupational advance in both the South and non-South, and migration out of the South. In that decade, by this accounting nearly three-quarters of the growth in relative mean wage income is due to changes in wages within occupations in the South and to black relative occupational advance in the South. Migration is the least important of the five factors, accounting for only a tiny portion of the measured gains during the decade. Moreover, when the black relative wage gain is broken down by occupation, the greatest gains were registered in operative and craftsmen categories -- i.e., in blue collar manufacturing jobs.⁹ A major explanation for the black improvement of the sixties, then, is the movement of blacks into relatively higher-paying "production" jobs.

⁸Stability in these numbers implies that in the period 1940-1960 the gains of Southern blacks relative to Southern whites are similar to those achieved by non-Southern blacks relative to non-Southern whites.

⁹William Wilson (1987), John Kasarda (1985), and Bound and Freeman (1989) speculate that the decline of American manufacturing and the general shift in demand away from unskilled labor in the late 1970s and 1980s led to an erosion in relative black progress. (See also Chinhui Juhn, Kevin Murphy, and Brooks Pierce 1989).

Table 2

ESTIMATED REGRESSION COEFFICIENTS FOR SOUTHERN RESIDENCE

Sample	Experience Interval							
	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40
Blacks								
1940	-24.6	-25.8	-27.5	-30.0	-28.8	-33.3	-31.0	-32.1
1950	-26.2	-27.7	-27.3	-26.9	-37.7	-37.8	-34.6	-29.0
1960	-33.7	-31.7	-28.4	-29.6	-29.8	-31.2	-37.5	-35.3
1970	-20.9	-27.3	-28.4	-27.7	-27.1	-30.7	-29.3	-29.3
1980	-9.1	-11.8	-10.3	-17.5	-17.3	-16.1	-18.8	-22.9
Whites								
1940	-1.8	-9.3	-10.7	-10.6	-10.8	-11.5	-10.4	-9.5
1950	-8.0	-12.0	-7.9	-12.6	-13.9	-13.7	-11.8	-18.7
1960	-9.9	-12.1	-11.3	-9.4	-9.2	-10.8	-12.8	-14.3
1970	-5.7	-9.0	-10.0	-10.0	-9.6	-8.6	-8.0	-9.4
1980	-1.8	-5.1	-6.0	-6.0	-7.9	-9.4	-7.6	-7.8
Black-White								
1940	-22.8	-16.5	-16.9	-19.5	-18.0	-21.8	-20.6	-22.5
1950	-18.8	-15.6	-20.4	-14.3	-23.9	-24.1	-22.9	-10.3
1960	-23.8	-19.7	-17.1	-20.2	-20.6	-20.5	-24.6	-21.0
1970	-15.2	-18.3	-18.3	-17.9	-17.6	-22.1	-21.3	-19.9
1980	-7.3	-6.8	-4.4	-11.5	-9.5	-6.7	-11.2	-15.1

Source: Tables A.1 and A.2 from Smith and Welch (1986).

Table 3
REAL RELATIVE WAGE GAINS OF BLACK VIS-A-VIS
WHITE MALES IN THE SIXTIES

	Percentage Growth in Relative Mean Wage Income Due to				
	Northern Wage Changes	Northern Occupational Changes	Southern Wage Changes	Southern Occupational Changes	North-South Migration
TOTAL	0.82	3.36	8.97	4.13	0.55
By Occupation					
Professional	-0.97	-2.99	0.39	-0.43	--
Managers	-0.73	-0.83	0.07	0.55	--
Sales	-1.01	0.05	-0.34	0.10	--
Clerical	0.15	1.29	0.29	1.34	--
Craftsmen	-0.76	2.88	1.24	2.55	--
Operatives	2.03	4.91	3.18	2.46	--
Laborers	1.54	-1.76	2.14	-1.79	--
Farmers	-0.95	0.65	0.09	-0.36	--
Farm Laborers	-0.08	-0.41	0.55	-0.45	--
Serv.	1.59	-0.23	1.37	0.17	--

Sources: The data are for males in the experienced labor force, 25 to 64 years old, who reported earnings. The 1960 data is for nonwhites and comes from the U.S. Census of Population, 1960, Subject Report Occupation by Earnings and Education, Table 2 and 3. The 1970 data is for black and white males and comes from the 1970 Subject Report Earnings by Education, Table 3 and 4. We could not find similar data for females. "North" refers to "non-South". From Butler, Payne and Heckman (1989).

¹For a given race, mean earnings (E) is simply

$$E = P_N (\sum_i P_{i1}^N E_{i1}^N) + P_S (\sum_i P_{i1}^S E_{i1}^S)$$

where P_j = Proportion in region "j"

P_{i1}^j = Proportion of that race group in region j that have earnings in occupation i

E_{i1}^j = Average earnings in region j and occupation i.

The percentage change in earnings can be approximated by

$$\begin{aligned} d \ln E = & \left(\frac{P_N \sum_i P_{i1}^N E_{i1}^N}{E} d \ln P_N + \frac{P_S \sum_i P_{i1}^S E_{i1}^S}{E} d \ln P_S \right) && \text{Regional Migration} \\ & + \left(\sum_i \frac{P_{i1}^N E_{i1}^N P_{i1}^N}{E} d \ln P_{i1}^N \right) && \text{Occupational shift in the North} \\ & + \left(\sum_i \frac{P_{i1}^S E_{i1}^S P_{i1}^S}{E} d \ln P_{i1}^S \right) && \text{Occupational shift in the South} \\ & + \left(\sum_i \frac{P_{i1}^N E_{i1}^N P_{i1}^N}{E} d \ln E_{i1}^N \right) && \text{Wage changes in the North} \\ & + \left(\sum_i \frac{P_{i1}^S E_{i1}^S P_{i1}^S}{E} d \ln E_{i1}^S \right) && \text{Wage changes in the South} \end{aligned}$$

Since $d \ln \left(\frac{E_{\text{Black}}}{E_{\text{White}}} \right) = d \ln E_{\text{Black}} - d \ln E_{\text{White}}$ we can decompose relative wage growth into the above component part by subtracting the white change from the respective black change. This is how we arrive at the calculations in Table 1. Note that all the weights for the changes (i.e., the P_{i1}^j) were averaged over the 1960 and 1970 Censuses. All pecuniary variables are in 1967 dollars.

In a study using Equal Employment Opportunity Commission data, Orley Ashenfelter and James Heckman (1976) also emphasized the extent of black progress in the South. They found that among firms that employed no black males in 1966, firms in the South were 14 percent more likely to integrate (have at least one black male worker) by 1970 than were firms in other regions of the country. Integration effects were especially strong in the semiskilled occupations. Moreover, among firms that employed blacks in 1966, the relative employment of black workers increased over the same four-year period by roughly 20 percent more in the South than in other regions of the country (Ashenfelter and Heckman, 1976, Table 4). In addition, black employment gains were especially strong in the operatives occupation. This evidence corroborates the evidence of Table 3 that large-scale changes favoring blacks were concentrated in the South, and attests to the movement into production jobs by blacks in the sixties noted by Butler, Heckman, and Payner.

II. Do Migration and Increased Education Explain Post-1964 Black Gains?

The evidence of episodic as opposed to continuous black economic progress is in apparent conflict with the story of secular black improvement summarized in the following quotation from Smith and Welch:

"The racial wage gap narrowed as rapidly in the 20 years prior to 1960 (and before affirmative action) as during the 20 years afterward. This suggests that the slowly evolving historical forces we have emphasized . . . -- education and migration -- were the primary determinants of the long-term black economic improvement. At best, affirmative action has marginally altered black wage gains around this long-term trend" (Smith and Welch, 1989).

This statement raises two questions: (1) was the post-1964 relative black improvement simply part of a longer historical trend of black progress? and (2) do migration and increased education explain post-1964 black gains?

Section (A) demonstrates that the evidence of sustained economic advance for blacks over the period 1965-1975 is not inconsistent with the fact that the racial wage gap declined by similar amounts in the two decades following 1940 as in the two decades following 1960. The long-term picture from at least 1920-1990 has been one of black relative stagnation with the exception of two periods -- that around World War II and that following the passage of the 1964 Civil Rights Act.¹⁰

¹⁰Note that periods of equal percentage real economic gains for blacks and whites represent relative stagnation for blacks. It is useful to keep in mind, though, that large black economic gains have occurred during periods of relative stagnation. For example, the 3.4 percent annual growth rate in real earnings for blacks during the 1950s, although lower than the black earnings growth rates in the 1940s and 1960s, was quite robust. Since the white earnings growth rate in the 1950s was 3.8 percent, blacks gained absolutely but fell further behind whites. In the 1970s, though, black absolute progress was only half as fast as in the 1950s -- 1.7 percent earnings growth per year -- but relative gains were sizable because white annual earnings growth was only .6 percent (U.S. Civil Rights Commission 1986, Table 1.1, p. 11).

Nonetheless, if migration and black relative educational advances fully explain relative black economic progress after 1960, then Smith and Welch are correct that the impact of federal civil rights policy must be minimal. But, in fact, as we demonstrate in Section (B), the pattern of black migration from the South buttresses the view of episodic black progress, and, at least by 1965, migration ceased to be an important contributory factor to relative black economic progress. Section (C) then shows that, while black relative educational gains do contribute significantly to increased black earnings, they explain only a small portion of the post-1964 relative black advance. Together, the combined effect of migration and educational improvements on post-1964 black relative gains is small. We will discuss these issues in turn.

A. Was the Post-1964 Relative Black Improvement Simply Part of a Longer Historical Trend of Black Progress?

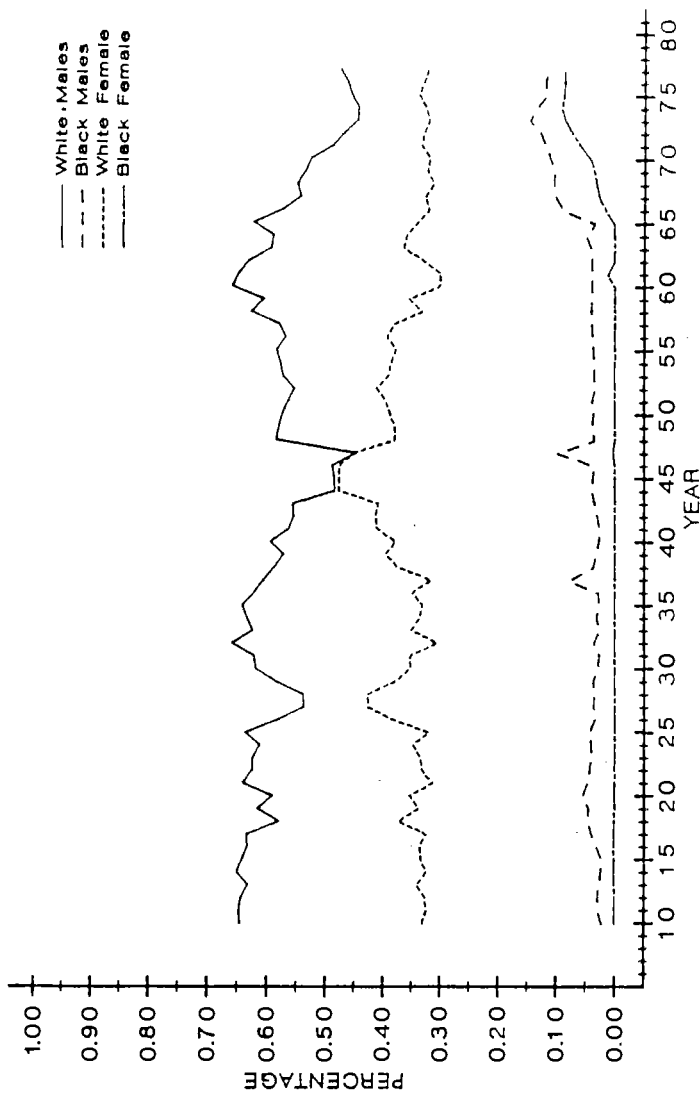
Donald Dewey (1952) notes that in the South:

"In the fifty years before World War II the relative position of Negro workers in Southern industry actually deteriorated; they did not share proportionately in the expansion of urban employment and they were not upgraded as individuals into jobs previously held by whites" (Dewey 1952, p. 282).

Stability in the racial status quo in the South is the conclusion of Dewey's work. Both Dewey and Gunnar Myrdal (1944) document that blacks were excluded from new industries and occupations in the South over the period 1890-1940. To the extent there was any black advance, it occurred because of migration to the North. Secular trends of improving relative education and advancing industrialization in the South coincided with the stagnant economic status of Southern blacks in the pre-World War II period.

Recent studies of the economic history of South Carolina blacks support the pre-World War II stagnation hypothesis of Dewey and Myrdal as well as the hypothesis of post-1964 sustained advance. Figure 7 presents the share of black employment by sex in the textile industry of the state over the period 1910-1974 taken from the study by James Heckman and Brook Payner (1989). Textiles has long been the major manufacturing employer in the state, accounting for 80 percent of all manufacturing employment in 1940 and more than 50 percent in 1970. Through two World Wars, the Great Depression and the Korean War, the share of blacks remained low and stable, despite the fact that the industry was expanding in employment throughout this period. Even when young white men left their manufacturing jobs to fight in World War II, they were replaced not by older black men but by white women. The breakthrough in black employment occurred only after 1964. Black male and female wages (relative to those of white males)

Employment in The South Carolina Textiles Industry



accelerated in the industry after that date. The breakthrough in textiles occurred primarily in the non-urban South Atlantic region which is documented by Smith and Welch (1978) to have been the region of the greatest black relative wage gains over the period 1968-1974.

Gavin Wright (1986, 1988) similarly corroborates Myrdal (1944) by documenting the long-term stability in the Southern industrial division of labor by race. The pre-World War II position of blacks was rigidly maintained in the South despite increases in their relative educational levels and the quality of their schooling. Blacks were systematically excluded from new industries during this period. Heckman and Payner (1989) demonstrate that black progress in South Carolina after World War II occurred in new firms and new sectors of the economy that were not bound by the rigid racial practices of the pre-war South.

Robert Margo (1990) charts black occupational advance in the South over the period 1890-1950. Both black and white occupational levels rose over this period, but the progress was more rapid for whites than for blacks, especially into white collar and professional occupations. Although rising educational levels raised black relative status, Margo's counterfactual simulations show that equalizing black and white educational levels would have eliminated little of the growth in occupational disparity by race in the South through 1950.¹¹ Margo's analysis provides convincing evidence of the persistence of racial disparity in the South. His work demonstrates that the rising occupational status of blacks over the period 1890-1950 came as a consequence of migration to the North and the growth of black occupational status in that region, and not as a consequence of black penetration into the higher level occupations in the South.

While the important study of James Smith (1984) analyzing data from every Census since 1890 appears to conflict with the other studies in suggesting that the period of 1890-1920 was one of black advance, one must remember that Smith focuses on black progress for the nation as a whole. Such progress may simply be the product of Southern outmigration and need not conflict with the customary finding of black relative stagnation in the South. Moreover, Smith's findings conform perfectly with the conclusion of the previous studies that the period from 1920-1940 was one of black relative stagnation.¹²

In summary, it is universally acknowledged that blacks failed to gain relative to whites in the 1920s (Smith 1984). In the 1930s, the Great Depression and New Deal acreage restriction policies which encouraged capital intensive agricultural methods in the South had a disproportionately adverse impact on

¹¹This is true even adjusting for the quality of black schooling.

¹²Smith attributes the constancy of black relative status in the 1920-1940 period to the relative educational retrogression experienced by blacks born in the period 1886-1910, which witnessed the institution of racial exclusion in schooling ("Jim Crow" laws). Margo (1986) disputes the claim that there was a relative decline in black years of education between 1886 and 1910, although Smith's assertion of black educational decline could still be correct if sufficient decreases occurred in relative black schooling quality.

blacks (Myrdal 1944). Blacks rebounded economically in the 1940s with the tight labor markets induced by World War II. Relative stagnation for blacks characterized the 1950s and 1980s, leaving the periods around World War II and following the passage of the 1964 Civil Rights Act as the only significant spells of relative black progress over the seventy year span from 1920 through 1990. Even though black relative gains were of comparable size in the periods from 1940-1960 and from 1960-1980, this equality does not imply a forty-year trend of unbroken progress. It is questionable whether the 1940 Census provides an appropriate benchmark from which to measure black progress given the extraordinarily poor state of the economy during the 1930s and the immense stimulus to aggregate demand provided by the War. Clearly, black progress in this period was generated far more by demand forces than by schooling effects. Focussing purely on the five Census years of 1939, 1949, 1959, 1969, and 1979 can create the illusion of a stable pattern when a more encompassing effort to correlate periods of improvement with specific causal factors would suggest far more episodic change.

If migration and black relative educational advances fully explain relative black economic progress after 1960, then Smith and Welch are correct that the impact of federal civil rights policy must be minimal. But, in fact, the pattern of black migration from the South buttresses the view of episodic black progress, and, at least by 1965, migration ceased to be an important contributory factor to relative black economic progress. Moreover, while black relative educational gains do contribute significantly to increased black earnings, they represent only a small portion of the post-1964 relative black advance. We will discuss these issues in turn.

B. The Unimportance of Migration After 1965

The story of black migration between 1940 and 1980 is both dramatic and revealing. 14.6 percent of the black population of the South left during the 1940s, 13.7 percent more departed during the 1950s, and an additional 11.9 percent exited during the 1960s (Reynolds Farley and Walter Allen, 1986, Table 5.1). Such immense population shifts -- close to a quarter of young black men left the South each decade between 1940 and 1970¹³ -- are readily explained by the substantial wage disparities across regions. For example, in 1960 Southern black men age 30-40 earned 57 percent less than their white Southern counterparts, while the comparable earnings disadvantage for non-Southern black men was 32 percent.¹⁴

¹³The precise rates of net migration from the South for black men aged 20-24 were 26.3 percent in the 1940s, 24.5 percent in the 1950s, and 19.3 percent in the 1960s (U.S. Civil Rights Commission, 1986, Table 5.2).

¹⁴For the cohort aged 40-50 in 1960, the earnings disadvantage of Southern blacks (vis-a-vis Southern whites) was 60 percent, while for non-Southern blacks it was 31 percent. The earnings disadvantage is measured as the difference in the mean of log weekly wages between black and white men. We thank David Card and Alan Krueger for supplying these figures.

Inter-regional differentials of this magnitude existed across all cohorts for much of the period from 1940-1965, prompting an immense number of blacks to flee the South. This Southern outmigration provided a powerful stimulus for black relative economic gain.

The 1970s experienced a reversal of this flow since there was actually net black migration to the South during that decade. But an important fact to note is that the abrupt shift in the pace of migration began in the mid-1960s. Of the net-outmigration of 1.4 million blacks from the South during the 1960s, only 15.7 percent left after 1965 (Farley and Allen 1986, Tables 5.1 and 5.2). In other words, the period of 1960-1965 was one of black migration from the South at a pace considerably higher than the average rates of the 1940s and 1950s, while in the period 1965-1970 migration slowed to a near trickle.¹⁵ This sharp curtailment of black migration further buttresses the thesis of sustained economic advance concentrated in the South because it is quite likely that perceived improvements in economic opportunities would stanch the outflow of Southern blacks.¹⁶

There is uniform agreement that prior to 1960 black migration out of the low-wage South significantly elevated black relative economic status (Smith and Welch, 1986; Farley and Allen, 1986). But the timing of the drop in black migration also demonstrates that black migration cannot explain the improvements in black economic status beginning in 1965. The vast bulk of any benefits occurring from migration during the 1960s had already been achieved by 1965. If the long-term historical factors emphasized by Smith and Welch are to explain the sustained improvement in black relative earnings beginning in 1965, the story must rest with relative black educational advance.

C. The Relative Improvement of Black Education

Smith and Welch (1986) have examined the growth of the years of education for blacks and whites, and changes in the labor market returns to this education, in order to determine the contribution of educational advance to increasing black relative earnings. It is useful, in considering their analysis, to note three factors that would tend to elevate relative black earnings: (1) greater relative increases in the number of years of education accumulated by blacks; (2) greater relative improvements in the quality of schools attended by blacks; and (3) greater relative increases in the labor market valuation of black education.

¹⁵If the pace of migration from 1960-1965 had continued throughout the decade, 20.1 percent of all Southern blacks would have departed during the 1960s.

¹⁶An effective federal effort to restrain discrimination against Southern blacks could provide the basis for the perception of greater economic opportunity. Conversely, long-term improvements in black schooling quality in the South -- whatever their contribution to black progress -- cannot explain the abrupt termination of black outmigration in the mid-1960s. If the events most responsible for black economic improvement in the 1960s and 1970s had been schooling gains for Southern blacks in the 1940s and 1950s, why would so many blacks have fled the South during the period 1940-1965, and so few thereafter?

Although, as we shall see, the analysis presented by Smith and Welch cannot distinguish the individual effects of factors (2) and (3), new evidence by Card and Krueger (1990) does attempt to quantify the relative contributions of these two factors.

1. The Modest Impact of Relative Increases in the Quantity of Schooling

Smith and Welch reveal that black relative earnings rose from 18 to 35 percent across experience categories in the period from 1960 through 1980. Particularly for younger cohorts, Smith and Welch contend that education is the overwhelmingly dominant factor in explaining this relative advance.¹⁷ Table 4, taken from Smith and Welch (1986, Table 28), documents how much of this education effect is caused by the greater quantities of black education (measured in years of schooling) and how much results from greater returns to this schooling. In general, the table decomposes the contribution of education to the change in the relative earnings of blacks and whites within work experience categories (experience = age minus schooling minus six) for each census decade between 1940 and 1980 and for the period as a whole.

¹⁷Indeed, for the younger experience categories, Smith and Welch estimate that the contribution of education to relative black economic advance is substantially greater than the actual economic advance.

Table 4

The Contribution of Schooling to Black Relative Wage Growth
by Decade and Overall For Workers Classified by Work Experience

Period	1980-70	1970-80	1960-50	1950-40	1980-40	1980-70	1970-80	1960-50	1950-40	1980-40
Experience = 1-5 Years						Experience = 6-10 Years				
Direct	10.04	6.81	6.14	12.60	35.58	4.20	6.37	5.10	6.78	22.46
Race	-2.34	-4.84	-4.05	-9.57	-20.80	-1.12	-2.33	-4.50	-4.50	-12.45
Year	0.77	-1.82	-6.52	12.18	4.81	1.17	-0.73	-3.40	11.28	8.32
Race-Year	38.88	12.53	-10.36	23.61	64.67	24.29	9.73	5.98	11.78	51.79
Total	47.35	12.89	-14.79	38.81	84.26	28.55	13.05	3.18	25.35	70.12
Race-Year/Total x 100	82.11	97.21	70.04	60.63	76.75	85.08	74.56	188.05	46.46	73.65
Experience = 11-15 Years						Experience = 16-20 Years				
Direct	2.30	5.69	4.40	5.94	18.34	4.41	4.67	2.81	4.42	16.31
Race	-1.40	-3.01	-3.44	-5.86	-13.71	-2.16	-3.24	-3.53	-6.05	-14.99
Year	0.44	-0.75	-0.97	7.80	6.52	0.55	-1.53	-1.27	7.96	5.70
Race-Year	16.81	11.98	2.00	14.53	45.11	7.07	4.37	8.84	14.26	34.54
Total	17.95	13.91	1.98	22.42	58.26	9.86	4.27	6.85	20.58	41.56
Race-Year/Total x 100	92.53	86.12	101.01	64.81	80.16	71.70	102.34	129.05	69.29	83.11
Experience = 21-25 Years						Experience = 26-30 Years				
Direct	4.24	5.03	4.08	0.50	13.85	3.75	-5.65	2.34	-0.26	11.47
Race	-2.80	-4.58	-8.93	-3.31	-17.62	-4.88	-4.81	-4.09	-1.96	-15.54
Year	0.18	-0.82	-1.55	8.44	6.25	0.52	-0.25	-1.50	8.63	7.40
Race-Year	4.85	8.78	13.71	5.00	32.15	12.67	-1.21	2.93	10.83	27.64
Total	6.27	8.41	9.31	10.63	34.63	12.25	1.79	-0.31	17.24	30.97
Race-Year/Total x 100	74.16	104.40	147.26	47.04	92.84	103.43	-67.59	-945.16	62.82	89.25
Experience = 31-35 Years						Experience = 36-40 Years				
Direct	4.25	3.80	0.95	1.27	10.37	4.08	1.82	2.81	-2.45	6.05
Race	-5.95	-8.01	-3.24	-2.85	-17.85	-4.51	-5.20	-3.50	-0.88	-13.89
Year	0.93	-0.09	-2.57	7.19	5.45	2.03	-0.57	-0.80	7.80	8.66
Race-Year	13.92	2.88	-0.36	7.44	24.59	5.39	5.28	1.52	4.41	16.60
Total	13.15	0.67	-4.50	13.28	22.58	6.99	1.13	0.24	9.07	17.42
Race-Year/Total x 100	105.86	428.87	-8.00	56.10	108.90	77.11	488.14	833.33	48.62	95.29

Source: Smith and Welch (1986, Tables A.3-A.6). Smith and Welch include age, region, location in SMSA^a and location in central cities of SMSA^a as regressors in addition to schooling.

To understand this table, suppose that the logarithm of the wage of blacks in year t is written as

$$(1) \quad \ln E_t^B = X_t^B \beta_t^B + U_t^B$$

where X_t^B is a vector of explanatory variables including schooling, β_t^B is the vector of associated coefficients mapping black endowments into black wages, and U_t^B is the unexplained residual. The comparable equation for white wages is

$$(2) \quad \ln E_t^W = X_t^W \beta_t^W + U_t^W$$

The log of the wage ratio for blacks and whites with characteristics X_t^B and X_t^W respectively in year t equals:

$$(3) \quad \ln(E_t^B/E_t^W) = X_t^B \beta_t^B - X_t^W \beta_t^W + U_t^B - U_t^W$$

The change from period t to period t+1 in the percentage earnings gap between blacks and whites with endowments $X_t^B, X_t^W, X_{t+1}^B, X_{t+1}^W$, respectively can be decomposed into the following five terms:

"Direct Effect"

$$(4) \quad \Delta \ln(E_t^B/E_t^W) = [(X_{t+1}^B - X_{t+1}^W) - (X_t^B - X_t^W)] \beta_t^W$$

"Race Interaction"

$$+ (X_{t+1}^B - X_t^B) (\beta_t^B - \beta_t^W)$$

"Year Interaction"

$$+ (X_{t+1}^B - X_{t+1}^W) (\beta_{t+1}^W - \beta_t^W)$$

"Race-Year Interaction"

$$+ (X_{t+1}^B)(\beta_{t+1}^B - \beta_{t+1}^W) - (\beta_t^B - \beta_t^W)$$

"Residual Change"

$$+ (U_{t+1}^B - U_t^B) - (U_{t+1}^W - U_t^W)$$

The "Direct Effect" measures the change in relative wages due to changes in endowments (i.e., years of schooling and other characteristics) priced at the initial white rate of return (β_t^W). The "Race Interaction" measures the change in the wage gap due to the interaction of the change in black endowments

with the racial gap in rewards per endowment. The "Year Interaction" measures the change in wages due to the change in white characteristics prices multiplied by the remaining racial gap in endowments. The "Race-Year Interaction" measures the change in the wage gap due to changes in the difference between the prices accorded black and white characteristics. The sum of the four categories evaluated at mean characteristics would be the change in the mean log wage differential between blacks and whites so $U_{t+1}^B = U_t^B = U_{t+1}^W = U_t^W = 0$, thereby eliminating the residual term.

These components of the change in earnings can be computed individually for each of the explanatory variables used in the regression model estimating \ln earnings. Table 4 provides the decomposition for only one such explanatory variable -- years of education. According to Smith and Welch, the "Direct Effect" represents the effect on relative black earnings of the decline in the racial gap in the number of years of education. The "Race-Year" statistics represent the effect on earnings of the decline in the racial gap in the returns to education, which as noted above combines the effects of schooling quality improvement and declining discrimination against blacks.

The most striking feature of Table 4 is the large proportion of the total accounted for by the "Race-Year Interaction."¹⁸ For most experience groups, more than 80 percent of the total predicted change over the period 1960-1980 is from this source. (See "Race-Year/Total"). The contribution of measured changes in years of schooling is small in comparison.¹⁹ Smith and Welch interpret the "Race-Year Interaction" as a measure of improvements in the quality of black schooling relative to that of white schooling, and indeed any such relative quality improvements will be reflected in this term. But black gains captured in the "Race-Year Interaction" effect may also be caused by reductions in market discrimination against black schooling (i.e., differences in prices paid to schooling by race). Table 4 demonstrates that black economic progress through education has come more from changes in the rewards to black education (compared to that of white education) than from increases in the relative quantity of education.²⁰ The question left unresolved

¹⁸Although we employ the decomposition used by Smith and Welch, we should again emphasize that the precise formulation is arbitrary. For example, the Race-Year Interaction calibrates the relative black increase in returns to education by multiplying by the final level of black education. If we had instead multiplied by the final level of white education, the size of the Race-Year Interaction would have been greater (because the number of years of education of whites is higher than that for blacks). Conversely, weighting by the initial level of black education would have diminished the Race-Year Interaction.

¹⁹During the period 1960-1980, the "Race-Year" figures are uniformly greater than the "Direct Effect" by wide margins.

²⁰Greg Duncan and Saul Hoffman (1983) report similar findings in their longitudinal study of black male progress. We also discuss in greater detail below Card and Krueger's (1991) finding that the relative black increase in years of education contributed little to black economic advance.

by Table 4, though, is the relative importance of increases in the relative quality of black education (the supply side) and of lessening labor market discrimination (the demand side) in generating these changing returns to education.²¹

Before turning to explore this question more fully, it is useful to consider several additional points about the decomposition in Table 4. For example, consider the case in which, over a decade, mean years of education rose by one for blacks and held steady for whites, while the returns to white and black education remained unchanged. The "Direct Effect" values the additional year of black education at the initial marginal return to white schooling (β_t^W). An alternative measure -- employed by Card and Krueger (1991) -- values the additional year of black education at the initial marginal return to black schooling (β_t^B). This measure is obtained by adding the "Direct Effect" to the "Race Interaction" figure.²² While there is a certain arbitrariness in either choice,²³ by weighting with the initial white return to education, Smith and Welch obtain a higher value for the contribution of increased years of schooling to the closing of the racial gap in wages than do Card and Krueger in weighting with the initial black return.²⁴

2. Improving Relative Schooling Quality or Reduced Discrimination?

²¹Note that discrimination against blacks could manifest itself in lower returns to any human capital trait. The Table 4 decomposition only examines the contribution of changes in the number of years of education and the returns to education to increases in the black/white weekly wage ratio. Discrimination might also be reflected in the returns to experience. Declining discrimination -- resulting from either changing tastes or government enforcement efforts -- could conceivably still produce large black relative gains even if all of the "Race-Year" effect of Table 4 were explained by the relative improvement in the quality of black schooling. Since Smith and Welch run separate regressions on each five-year experience class the changes in returns to experience are partly absorbed in the change in regression coefficients and partly in the change in intercepts which, as we note below, are sizable.

²²The "Race Interaction" term in Table 4 is always negative. This reflects the fact that, when the returns to education are lower for blacks than whites, the black level of education must rise faster than the white level just to keep relative earnings even. The "Race Interaction" term captures the effect of the initial relatively poorer black return on additional increments of education. If the black return initially equalled the white return, the "Race Interaction" term would be zero.

²³Another choice might be to use the average of the black and white returns as the weight.

²⁴The identical point can be raised in assessing the contribution of increases in returns to education to the narrowing of the black/white wage gap: Smith and Welch focus only on the "Race-Year" term, while Card and Krueger add the "Year Interaction" to the "Race-Year" term. The effect of the Card and Krueger approach is to weight the increases in black returns to education by the final black level of education and increases in white returns to education by the final white level of education. Since the "Year Interaction" is small during the 1960-1980 period, the consequence of the different modes of decomposition are less significant with respect to the returns to education than with respect to the levels of education.

To explore whether the results of Table 4 are better explained by improving relative schooling quality for blacks or by reductions in racial discrimination, it may help to focus more closely on how Smith and Welch prepared this table. Their decomposition of the contribution of education to black progress involves the comparison across a ten-year interval of the regression coefficients from earnings functions estimated on Census data for each decade. For example, consider the following two groups: workers who finished their education in 1960 (cohort A) and workers who finished their education in 1970 (cohort B). If, during the decade separating the labor market entry of these two cohorts, the quality of black education had improved relative to white education, then, presumably, the racial gap in the rewards for each additional year of education would be smaller for cohort B in 1970 than it had been for cohort A in 1960. Accordingly, the "Race-Year Interaction" for 1960-1970 would reveal a positive contribution to the narrowing of the wage gap between blacks and whites for those in the 1-5 year experience category. (Table 4 shows a figure of 12.53 percent for this particular comparison.)

The Smith and Welch comparison of workers with 11-15 years experience for the period 1970-1980 would again consider the same two cohorts -- cohort A having 11-15 years of experience in 1970 versus cohort B having 11-15 years experience in 1980. It seems likely that there would be no further narrowing in the earnings gap attributable to the superior schooling enjoyed by cohort B blacks beyond that already observed ten years earlier.²⁵ In this event, the "Race-Year" term for the cohort A/cohort B comparison over the period 1970 to 1980 would be the same as the "Race-Year" term for 1960-1970. But an examination of Table 5, which presents the "Race-Year Interaction" figures from Table 4 for specific cohorts in order to facilitate this precise comparison, reveals that the "Race-Year" figure is actually considerably higher for the 1970-1980 period than in the 1960-1970 period (16.6 versus 12.5). Indeed, for four of the six cohorts the "Race-Year" effects for the 1970s are greater than the "Race-Year" effects for the 1960s, which may provide some modest support for the federal pressure story. In general, the considerable volatility in "Race-Year" effects across most experience groups seems inconsistent with the simple quality improvement hypothesis advanced by Smith and Welch.²⁶

²⁵If more education puts one on a higher trajectory of future earnings, then it is conceivable that better schooling could cause a narrowing in the earnings differential over the entire lifetime. Additional research would be necessary to resolve this issue.

²⁶In fact, we could have computed Table 5 by using black weights instead of white weights to weight black schooling. This alternative procedure used by Card and Krueger measures the percentage change in black relative wages owing to increased returns to schooling by adding the "Year Interaction" to the "Race-year" term, instead of simply presenting Smith and Welch's measure of the "Race-year" term alone. The primary effect of such a computation would be to vastly increase the estimated effect of the increasing returns to education during the 1940s in reducing the wage gap. Such a change would further exaggerate the lack of constancy of this effect within cohorts across time. Indeed, the fact that the "Year interaction" terms are so large during the 1940s -- implying that the white return to education fell during this decade -- is powerful evidence against the singular reliance on the school quality hypothesis. The tight labor markets

Table 5

Estimated "Vintage Effects":

Percentage Change in Black Relative Wages Owing
To Increase Returns To Years of Schooling

	1940-1950	1950-1960	1960-1970	1970-1980
Cohort by Experience Class				
1-5 in 1980	-	-	-	38.88
6-10 in 1980	-	-	-	24.29
1-5 in 1970	-	-	12.53	16.61
6-0 in 1970	-	-	9.73	7.07
1-5 in 1960	-	-10.36	11.98	4.65
6-0 in 1960	-	5.98	4.37	12.67
1-5 in 1950	23.61	2.00	8.78	13.92
6-0 in 1950	11.78	8.84	-1.21	5.39
11-15 in 1940	14.53	13.71	2.86	-
16-20 in 1940	14.26	2.93	5.29	-
11-15 in 1940	5.00	- .36	-	-
16-20 in 1940	10.83	1.52	-	-
21-25 in 1940	7.44	-	-	-
26-30 in 1940	4.41	-	-	-

Source: The interest in this table are the Race-Year Interaction for schooling
persented in Table 4.

Moreover, the previously noted decline in black/white earnings differentials over time for cohorts of workers who have completed their schooling is inconsistent with a pure vintage model. First, in their analysis of 1967-1974 CPS data, Smith and Welch (1978, p. 51, Table 1) acknowledge that within education cohorts there is secular improvement in black/white wage ratios by age -- in later years black/white wage ratios rise. In other words, over time labor markets priced black skills more favorably, presumably reflecting demand-side changes favoring blacks.

Second, as we mentioned earlier in our discussion of Table 2, Smith and Welch (1986) document the sharp decline in the penalty that blacks incurred by living in the South. In a subsequent paper in 1989, they state that two explanations are possible for the rapid movement toward the national norm in the Southern racial wage gap during the 1970s:

First, black-white skill differences may have converged in the South as the post-World War II cohorts entered the labor market. To illustrate this point, assume that Southern schools were effectively desegregated in 1960, six years after the Brown decision. The first class of Southern black children who had attended entirely desegregated schools would have first entered the labor market in the early to mid-1970s. Some of the improvement in black incomes during the 1970s may have been due to the skills acquired through this improved schooling. However, that is unlikely to be the whole story because there was a substantial erosion in racial wage disparities even among older workers in the 1970s....A more plausible explanation may well be that racial discrimination is waning in the South (p.543, emphasis supplied).

As Smith and Welch observe, an explanation for black relative progress based on improvement in the quality of black schooling relative to white schooling must contend with the dramatic black economic advance across all experience groups. Moreover, one ordinarily thinks of changes in schooling quality as occurring at a continuous, slowly-evolving pace, with wage gains being experienced only by each graduating cohort. Yet the relative wage improvement that we have documented throughout this paper occurs abruptly and across all age groups.

The potentially attractive feature of the desegregation story, though, is that it appears to offer a basis for a discontinuous advance in schooling quality that could translate into a discontinuous improvement in black economic welfare. It is to this issue that we now turn.

D. The Schooling Quality Hypothesis

(cont'd)

induced by World War II increased the return on low-skilled labor, which disproportionately aided blacks. This underscores that demand-side influences can be important in reducing the black/white earnings differential.

Thus far, we have demonstrated that there is ample evidence of substantial change in black relative status over the period 1965-1975, that this change is concentrated in the South, and that it cannot be explained by migration or the relative black increases in the number of years of education. In addition, we noted that the schooling quality argument could not explain across-the-board increases in black relative earnings for cohorts that had previously finished their education. But it is clear, as Smith and Welch have stressed, that for much of this century there have been substantial relative improvements in the quality of education that blacks have received.²⁷ Figure 8 is a reproduction of a figure produced by Card and Krueger (1991) showing the rather dramatic black relative improvements in the quality of education as measured by three variables: the student-teacher ratio, the length of the school term, and teacher salaries. The trend is in the direction required to support the increase in the estimated schooling coefficients for successive cohorts (or "vintage" effect) reported by Smith and Welch (1986, 1989). Although not discussing the impact of schooling quality in accounting for racial wage differentials, studies by George Johnson and Frank Stafford (1973), Charles Link and Edward Ratledge (1974), Paul Wachtel (1976), and Card and Krueger (1990) demonstrate important impacts of schooling expenditure on earnings (controlling for schooling and work experience). Finis Welch (1967) documents the impact of educational expenditure on farm productivity and racial wage differentials. Collectively, these studies suggest that the quality improvement hypothesis must be directly investigated.

By linking schooling quality data by race to microdata on earnings, Card and Krueger (1991) have been able to extend the pioneering work of Smith and Welch. Their ultimate conclusion is that schooling quality improvements do contribute significantly to future earnings growth, and that between 15 and 20 percent of the overall growth in black-white relative earnings between 1960 and 1980 was attributable to these relative schooling quality gains.

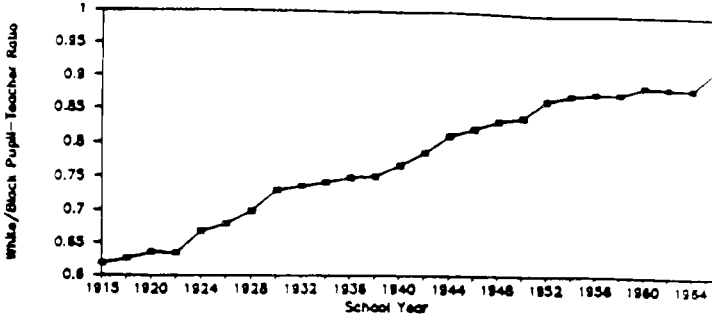
Note that we have already alluded to one difference in the studies of Smith and Welch versus that of Card and Krueger: the former select the weight for the effect of relative increases in years of education in a way that enlarges the impact of this factor, which explains why Smith and Welch find that this factor did play a small but significant role in narrowing the black/white wage gap while Card and Krueger find no role. A number of other points about these two studies should be noted. First, the regressions are specified differently in the two studies and estimated on different populations. Smith and Welch control for location within a central city while Card and Krueger do not, and Card and Krueger employ a quadratic term for experience, and a marital status dummy while Smith and Welch do not. Smith and Welch control for Southern residence while Card and Krueger additionally control for residence in three other Census regions.

²⁷See, for example, Welch (1973), which documents the growth in various measures of black/white relative schooling quality.

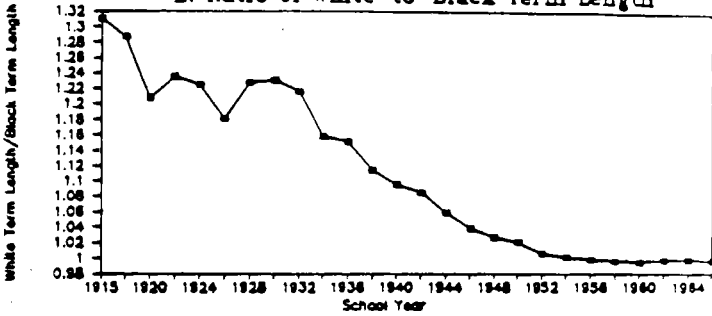
Figure 8

Relative School Quality in 18 Segregated States, 1915-1966

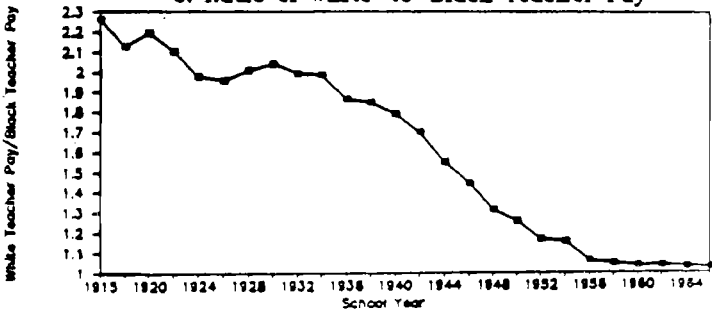
A: Ratio of White-to-Black Pupils/Teachers



B: Ratio of White-to-Black Term Length



C: Ratio of White-to-Black Teacher Pay



Source: Card and Krueger (1991), Figure 1.

Smith and Welch segment their regressions into separate intervals based on years of potential experience (1 to 5 years, 6 to 10 years, etc.). Card and Krueger estimate their regressions on broader ten-year birth cohorts, and such pooling may be problematic given the different results found across experience intervals by Smith and Welch. These differences in specification and population interval undoubtedly explain the rather large differences in the educational coefficients obtained in the two studies. Second, neither the Smith and Welch nor the Card and Krueger regressions generate accurate predictions of the actual relative wage changes across each ten-year interval. For example, for the youngest experience category, Smith and Welch predict relative black wage gains of 63 percent between 1970 and 1980 when the actual wage gain was 8 percent and they predict relative wage gains of 15 percent between 1960 and 1970 when the actual wage gain was 27 percent. Similarly, for the 21-30 age group, Card and Krueger report that the actual change in the wage gap was 12 percent during the 1960s and .7 percent during the 1970s, but the predicted effect attributable to education were 19 percent and 35.7 percent for these two periods (Card and Krueger, Table 4, 1991). Since all explanatory variables are being evaluated at their means, such discrepancies can only occur if the differences in intercepts of the fit regressions are shifting sharply. Such shifts undermine confidence in the functional forms of the earnings functions employed in both studies and suggest the possibility of potentially serious problems of misspecification.²⁸

One might wonder why the rather dramatic relative improvement in measures of schooling quality documented in Figure 8 would play such a modest role in explaining black gains in the period from 1960-1980. Three factors should be noted. First, the dramatic growth in the ratio of black/white teacher salaries in the 1940s was a consequence of successful teacher salary equalization cases brought by the NAACP that substantially eliminated teacher pay inequities (Henry Bullock 1967).²⁹ Prior to this NAACP campaign, the disparities in expenditure partly reflected discrimination in salaries, and the rapid elimination of such discrimination may create the illusion of rapidly growing schooling quality. But rather than reflecting a higher average level of black school teachers, the evidence indicates that the existing stock of black school teachers received higher salaries. Any improvement in real teacher quality was likely to have taken

²⁸The large shifts in estimated differences in intercepts across census years that characterizes both the Card and Krueger and Smith and Welch studies may be due to misspecification of the earnings function or to differential changes in the returns to (or proxied content of) labor market experience, or the distribution of or return to the base set of endowments that define the intercept, or some combination of these factors. In Donohue and Heckman (1991) we note that relaxing the standard assumption that log wages are a linear function of years of schooling greatly reduces the extent of the overprediction of the Smith-Welch equations.

²⁹In the early 1930s, the NAACP charted a long-term federal litigation strategy designed to shatter the state and local system of discrimination and segregation in Southern schools. It began by seeking equal resources for black students and teachers under the doctrine of separate but equal, and ultimately succeeded in challenging the constitutionality of the doctrine itself.

considerably more time and been far more gradual in its effects. As late as 1965, the Coleman report (1966) found substantial racial disparity between the quality of teachers in Southern black schools and the quality of teachers in Southern white schools. John Owen (1974, p. 145) concludes his analysis of the Coleman data with the remark that the data:

demonstrate the rather dismal prospects for the gains in teacher quality that could have been expected for blacks within a segregated system in spite of salary equalization. The racial gap in verbal competence [was] larger for newer than for older teachers and still larger among high school and college students planning to enter teaching.

Second, the long-term continuous improvement in the relative educational quality enjoyed by blacks is an unlikely source of the secular improvement in black economic welfare that occurred in the decade from 1965-1975.³⁰ Any claim of improved schooling quality based on the effective desegregation of Southern schools by 1960 is demonstrably false. Despite the Brown decision in 1954, virtually no desegregation of schools in the deep South had occurred by 1960. In 1963, when President Kennedy asked Congress to pass a civil rights bill that would grant greater federal powers to attack segregation, 99 percent of black students in 11 Southern states attended all black schools (U.S. Commission on Civil Rights, 1964, Table 2A).³¹ Real desegregation began to occur only after the passage of Titles IV and VI of the 1964 Civil Rights Act, which threatened segregated school districts with cutoffs of federal funds and enforcement actions by the Department of Justice. Still, the proportion of blacks in segregated schools had only fallen to 78 percent by 1968. (See Table 6). In the landmark decisions of Green and Alexander in 1968 and 1969, however, the Supreme Court forcefully declared that the command of Brown that states must desegregate "with all deliberate speed" finally meant "Now!"³² The results were dramatic: the number of black students attending

³⁰Since rural-urban differentials in these indicators of schooling quality were especially pronounced, part of the improvement in these measures of educational inputs may be a consequence of the well-documented migration of blacks from the rural South. This migration reduced the numbers of blacks attending school in rural areas without increasing the schooling inputs available to any rural black student. This may help to explain, in part, the apparent enigma of measured improvements in black schooling quality at a time when blacks were excluded from the political process.

³¹If one broadens the focus to include six Border states and the District of Columbia in addition to the 11 Southern states, then the proportion of black children attending segregated schools falls to 91 percent (U.S. Commission on Civil Rights, 1964, Table 2). Far more school desegregation had occurred in the Border states than in the 11 Southern states, but the number of blacks living in these Border states was relatively small.

³²Green v. Board of Education of New Kent County, Virginia, 391 U.S. 430 (1968) ended the use of "freedom of choice" plans that were commonly used to forestall desegregation. In Alexander v. Holmes County, 396 U.S. 1218 (1969), the Supreme Court held that "continued operation of segregated schools under a standard of allowing 'all deliberate speed' for desegregation is no longer constitutionally permissible." In successive federal litigation, court orders were issued requiring the relocation of hundreds of thousands of school children in the middle of on-going school years (Stephen Wasby, Anthony D'Amato, Rosemary Metrailler, 1977, p. 406).

Table 6
 Percentage of Black Students in 90-100%
 Minority Enrollment Schools

Region	Year			
	1968	1972	1976	1980
South	77.8	24.7	22.4	23.0
Border	60.2	54.7	42.5	37.0
Northeast	42.7	46.9	51.4	48.7
Midwest	58.0	57.4	51.1	43.6
West	50.8	42.7	36.3	33.7
U.S. Average	64.3	38.7	35.9	33.2

Source: Orfield (1983, Table 2)

segregated schools dropped from 78 percent in 1968 to 25 percent in 1972 (Gary Orfield, 1983, Table 2; U.S. Civil Rights Commission, 1969, Table 1). Since desegregation in the 11 Southern states occurred roughly ten years after Smith and Welch claimed, any benefits from this desegregation would occur in the early 1980s rather than the early 1970s, as they asserted. Desegregation simply comes too late to explain black economic progress over the decade from 1965-1975.

Finally, it is well documented that the post-Brown era (1954-1972) was a period of turmoil in Southern education. Opposition to desegregation led to bombings in Tennessee and riots throughout the South (Patrick McCauley and Edward Ball 1959). In perhaps the most extreme case, black children in Prince Edward County, Virginia were left without formal education for years following the closure of the county's public schools in 1959 (U.S. Commission on Civil Rights, 1964, p.250-52). Whites were able to afford private schools while blacks were not (Raymond Wolters 1977). While there is evidence of greater increases in expenditures for black Southern schools than for white Southern schools between 1953 and 1957,⁵³ the disruptive effects of Southern opposition to forced desegregation may have been serious enough to offset at least some of the relative schooling quality gains for blacks in the post-1954 era until integration was completed in the late 1960s or early 1970s.

Where does this leave us in our effort to account for black relative advance in the decade following the effective date of Title VII in 1965? We have noted that migration had no effect and increases in the years of education had small effects on black relative progress after 1965. Given Card and Krueger's estimate for the period 1960-1980 of 15-20 percent as the contribution of relative black schooling gains to black relative earnings advances, it would seem that a considerable portion of the black economic progress enjoyed in the post-1964 era cannot be explained by the long-term forces of migration and educational

⁵³In seven of 10 Southern states for which data are available, black teacher salaries rose faster than white teacher salaries from 1953 to 1957. In addition, in six of seven Southern states the quality of the physical plant rose more for black schools than for white schools over this period, and in all seven states library expenses per student rose faster for black students (McCauley and Ball, 1959, Tables 52, 58, and 70). In the one state for which we have data beyond 1957 -- Alabama -- the improvement in black relative schooling inputs began to deteriorate beginning in roughly 1957. For example, the black/white ratio of students per teacher fell from 1.071 in 1950 to 1.031 in 1956, before rising to 1.075 in 1963. (McCauley and Ball, 1959, Table 38; State of Alabama Department of Education). The ratios of black/white capital outlays, total current expenditures, and total maintenance expenditures all followed the same pattern of substantial improvement between 1950 and 1956 with subsequent decline or stagnation between 1957 and 1963.

improvement.³⁴

We should also note that attachment to the labor force has been dropping faster for blacks than for whites over much of the last three decades. If labor force drop-outs tend to be relatively low earners, this selection effect would bias upward the measured growth in black relative earnings.³⁵ The studies reviewed in Heckman (1989) suggest that the selective attrition of low wage blacks from the labor force likely accounts for 10-20 percent of the black measured wage gains. Conceivably, selective attrition of low-wage blacks could have been concentrated in the South accounting for some of the improvements in the relative wages of Southern blacks over the decade beginning in 1965 and creating the impression of greater economic gains for blacks in the South than in the North. This view receives little support. Figure 9 documents that the pattern of declining relative labor force participation rates is similar in both the South and non-South over the period in question. The relative drop-out rates in the non-South are actually greater than in the South. We found a similar pattern when we disaggregated by age group and also when we analyzed employment rates (as opposed to labor force participation rates). In addition, the same regional and racial pattern is found in the sample inclusion rates for CPS observations used to compute the wage regressions underlying Figure 6.

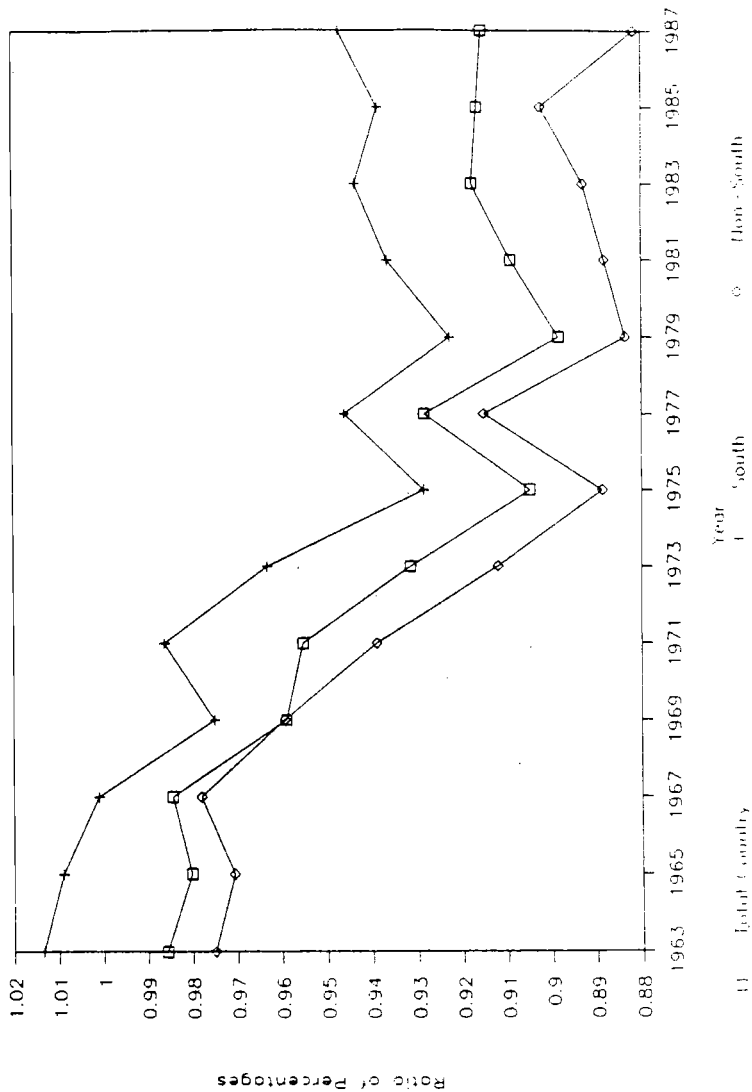
If one accepts the Card and Krueger estimates of 15-20 percent as the contribution of relative black schooling gains and the virtually zero role of migration after the mid-1960s, we have perhaps explained between 25 and 40 percent of the measured black gains. Even granting a 25 percent contribution from relative black gains in years of education leaves a sizable unexplained residual. Combining this evidence with the evidence aligning black gains in the South with the focus of the multi-pronged federal assault on racial discrimination in that region lends considerable credence to the argument that government played a considerable role in elevating black economic welfare.

³⁴Card and Krueger (1991) base most of their analysis of the effect of schooling quality on an examination of the earnings of whites and blacks who were born and presumably educated in the South, but who were living in the North at the time their earnings were measured. But this raises the problem of selective migration: did the quality of Southern outmigrants differ systematically from those that remained behind? Leonard Weiss and Jeffrey Williamson (1972) note that blacks living in the North who were originally from rural areas and small towns in the South earned more than Northern born blacks. They use this finding to claim that inferior educational quality plays no role in the lower wages of blacks but acknowledge that selective migration may bias their results. A changing temporal pattern of selectivity in Southern migration could bias the Card-Krueger time-series analysis.

³⁵Low wage earners may be attracted out of the labor force by social welfare programs. On the other hand, if the inducement to exit the labor force were to come from governmental programs -- such as social security disability -- that require an extended employment history, then the workers exiting would come more from the middle of the earnings distribution.

Figure 9

Relative Labor Force Participation Rate:
Ratio for Black to White Male Age 20-64



11 Total Country

12 South

13 Non-South

A more expansive conception of federal action would commensurately increase the proportion of black relative gains attributable to governmental action. For example, at least some of the relative black school quality gains documented in Figure 8 were the product of federal court action in response to NAACP lawsuits seeking to enforce the constitutional mandate of separate but equal in the pre-Brown era. Moreover, when educational benefits for black students did come in the form of forced desegregation of Southern schools in the late 1960s and early 1970s, they were the direct product of a massive effort of the legislative, executive, and judicial branches of the federal government. To a significant degree, the "schooling quality" argument relies on schooling quality engineered by federal action.

III. Demand-Side Influences on Black Economic Progress

A. Federal Policy Impacts

Most analyses of the impact of federal civil rights policy on the economic status of black Americans focus on the activities of two federal agencies: the Equal Employment Opportunity Commission (EEOC) and the Office of Federal Contract Compliance (OFCC). The EEOC was established to monitor compliance with Title VII of the 1964 Civil Rights Act. The law prohibited discrimination in pay, promotion, hiring, termination and training. Until 1972, the EEOC was limited to merely a passive role: processing complaints, serving as a conciliator, and entering cases as a "friend of the court" only after their initiation by other parties. When the Civil Rights Act was strengthened in 1972, the EEOC was given the authority to initiate litigation on its own.

The OFCC was established in 1965 by Executive Order 11246, which prohibited discrimination by race among federal contractors above a certain size (with contracts greater than \$50,000 and more than 50 employees). Employment in all of a firm's operations were covered, even those unrelated to the production of output for the government. The order was amended to include sex in 1967 (Executive Order 11375). In 1968, the OFCC required federal government contractors to prepare affirmative action plans that would eliminate any "underutilization" of black workers. Failure to conform with the Executive Order could potentially result in sanctions ranging from disbarment from federal contracts to fines, backpay awards, and injunctive relief. In 1978, the Office of Federal Contract Compliance Programs (OFCCP) was established to incorporate the OFCC and eleven other compliance agencies into a unified enforcement agency within the Department of Labor.³⁶

³⁶For simplicity, we will not distinguish further between the OFCC and the OFCCP.

1. The Contract Compliance Program

Micro studies of the OFCC are summarized in Butler and Heckman (1977), Brown (1984), Jonathan Leonard (1984c), and U.S. Civil Rights Commission (1986). Table 7 shows the major results of four such micro studies by Ashenfelter and Heckman (1976), Morris Goldstein and Robert Smith (1976), and Leonard, (1984b, 1984c), all of which are based on the following framework. An index of relative black status I (relative employment or relative occupational status) is regressed on control variables X and a dummy variable ($d = 1$ if a firm or establishment has a government contract):

$$(5) \quad I = X\beta + d\alpha + \epsilon$$

where ϵ is a mean zero disturbance assumed to be uncorrelated with X and d . All four studies use micro data on employment by occupation by race that is reported annually to the EEOC by all significant government contractors with 50 or more employees and all noncontractors with 100 or more employees. The major limitation of these data is that they contain no information on wages.

Lists of control variables used in these studies are given in the second column of Table 7. All studies control for the initial level of I by working with first differences of I with respect to a benchmark year (Leonard, 1984b, 1984c; Goldstein and Smith, 1976) or by using lagged values of I as regressors (Ashenfelter and Heckman, 1976). The estimated annual growth rates in relative employment and relative occupational advance for the different models are presented in columns three and six. (The model with lagged dependent variables can be solved to estimate a long-run effect on steady-state demographic proportions or occupational status. These are the "L.R." results in the table.)

The evidence from these four studies using large national samples reveals the following pattern. Ashenfelter and Heckman (1976) and Leonard (1984c) find that, over the periods 1966-1970 and 1974-1980, the annual rate of relative growth of black male employment in contractor firms was .82 percentage points higher than in noncontractor firms.³⁷ Using a slightly different specification with the same data set, Leonard (1984b) found that the relative growth of black male employment in contractor firms from 1974-

³⁷For example, Leonard (1984c) finds that black male employment grew .62 percentage points per year faster in contractor than noncontractor firms, while white male employment grew .2 percentage points per year more slowly in contractor firms than in noncontractor firms. Accordingly, Table 8 indicates that the annual growth rate of black male employment was .82 (= .62 - (-.2)) percentage points higher than the annual growth rate of white male employment in contractor firms (relative to noncontractor firms).

Table 7

Estimated Employment and Occupational Status Effects:
Percentage Point Differences in Annual Growth Rates Between Blacks and Whites

Study	Independent Variables	Relative Employment Position			
		Effect of Contractor Status	Effect of Review	Effect of Contractor Status	Effect of Review
Ashenfelter-Heckman (1976) National Sample of 40,445 establishments from EEO-1; data, 1966-1970 males only	Presence of contract plus region dummy, size of establishment, log employment changes, log SWS, total firm employment, lagged size of dependent variable	.82 SR black males 12.9 LR		.05 SR black males .4 LR	
Goldstein-Smith (1976) National Sample of 74,563 establishments in 1970-1972 from EEO-1 data	Presence of govt. contract plus region dummy, size of establishment, log employment changes, SWS, total firm empl., compliance review	-.10 black males 1.77 black females	.77 black males 1.21 black females	-.21 black males 1.92 black females	.65 black males 1.23 black females
Leonard (1984b) National Sample of 68,690 establishments sampled over the period 1974-1980	Gov't contract, presence of contract dummy, size growth rate, white collar, region, corporate structure	.42 black males .43 black females	.83 black males .83 black females	.15 black males .09 black females	.09 black males -.05 black females
Leonard (1984c) National Sample of 68,690 establishments sampled over the period 1974-1980. Dependent variable = $\log\left(\frac{emp_i, 1980}{emp_i, 1974}\right)$	Gov't contract, presence of contract review, industry, log (size), log (growth rate), white collar, region, corporate structure	.82 black males 1.49 black females	1.29 black males 1.49 black females		

$$\begin{pmatrix} \sum P_j B_j & \sum P_j W_j \\ \sum P_j (B_j + W_j) & \sum P_j (B_j + W_j) \end{pmatrix}$$

$$\sum_i \left(\frac{a_i}{b_i} \right) \left(\frac{a_i}{b_i} \right)$$

Key: P_j = wage in occupation j ; B_j = blacks in occupation j ; W_j = whites in occupation j ; B = blacks; W = whites; Emp_i = Employment of race i .

SR = Annual effect estimated with lagged dependent variable in regression

LR = Total effect estimated for long run solving out the lagged dependent variable

1980 was only .42 percent per year higher than in noncontractor firms.³⁸ Goldstein and Smith estimate a slight decline in black male relative employment in contractor firms in the period 1970-1972. All the studies agree that the added effect of an OFCC compliance review on black male employment is positive and greater in magnitude than the effect of merely being a government contractor.³⁹

The effect of contractor status and compliance reviews on the relative occupational position of blacks is in general positive but somewhat less than the impact of these factors on the relative employment of blacks. Ashenfelter and Heckman as well as Goldstein and Smith found that prior to 1974 black occupational advance came in the less-well-paid blue collar jobs (consistent with the evidence in Table 3). Leonard (1984b) reports that in contractor firms over the period 1974-1980 the increase in employment in higher-paying professional, technical and managerial occupations was significantly higher for blacks than for whites. In an important insight, however, Smith and Welch (1984) document that a substantial part of the growth in occupational status may be due to job title relabelling in response to affirmative action requirements. Because of the absence of wage data in the reports filed with the EEOC, there are no direct estimates of the contribution of the OFCC to black relative wage gains.

In addition to these four studies using EEOC data, a second set of studies has used wage data from the CPS to assess the impact of the contract compliance program. For the period 1967-1974, Smith and Welch (1977) regress black and white male wages on the standard set of CPS variables already discussed in Section I plus dummy variables for government employment (state, local, and federal) and the percent of industry output sold to the government for private firms. They find that over their sample period the rate of improvement in black male wages relative to white male wages was most rapid in the noncontracting private sector. They conclude that government contract compliance programs had a negligible impact on aggregate black male wages. Conversely, Leonard (1985) concludes on the basis of cross-section earnings regressions of CPS data for 1973 and 1978 that black males earn higher wages in sectors where affirmative action is prevalent (measured as the proportion of employment in an individual's SMSA and industry that is in federal contractor establishments). But since Leonard notes that adding industry dummies to his

³⁸The dependent variable in Leonard (1984c) is the natural log of the ratio of the number of workers of a given race-sex group in 1980 to the number of such workers in 1974. The dependent variable in Leonard (1984b) is the proportionate change in the employment share of the given race-sex group over the same six-year period. The two papers use the identical set of explanatory variables, except that the latter paper takes the natural logs of firm size and growth rate instead of using the actual values. Leonard does not comment on the different results in the two papers or on which specification seems preferable. Information from Leonard (1982, Tables 4.3 and 4.4) was needed to compute the figures presented in Table 8 showing the effects of contractor status and compliance reviews on relative black employment from Leonard (1984b).

³⁹Ashenfelter and Heckman do not explicitly include a compliance review variable.

regression equation often eliminates the impact of the "proportion contractor" variable on relative racial wages, it is uncertain whether his results are explained by affirmative action or by some unspecified industry effect.

Neither set of studies provides convincing estimates of the aggregate impact of the OFCC on the relative wages or employment level of black males. Missing is knowledge of key parameters of factor demand and sectoral labor supply elasticities. (Smith and Welch implicitly assume perfectly inelastic sectoral labor supply, and Leonard explicitly assumes somewhat inelastic sectoral labor supply.)

To illustrate the importance of knowing these parameters, suppose that there are two sectors producing different products. Some of the firms in sector one sell their output to the government, while none of sector two output is sold to the government. If the supply of blacks within sector one is highly elastic and the contractor portion of industry employment is relatively small, then OFCC efforts to encourage hiring of blacks will cause blacks to shift to contractor firms for only negligible increase in wages. In this event, significant movements of black workers to contractor firms of the sort recorded in Table 7 can occur without any commensurate wage gain (Butler and Heckman, 1977).

On the other hand, suppose that government contracting is lucrative and is at least partly a matter of chance (as in competitive bidding). In this case, a substantial number of sector one firms may be contractors or potential contractors. OFCC pressure may generate effective increases in the demand for black workers in sector one if the elasticity of inter-sectoral labor supply is low.

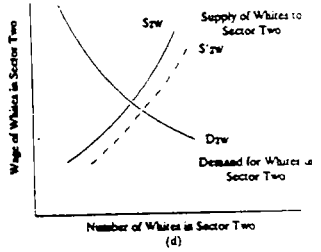
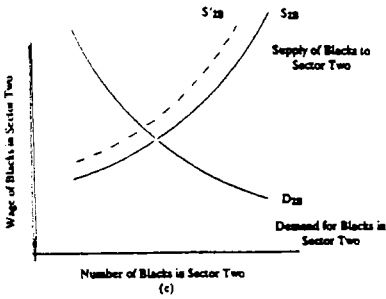
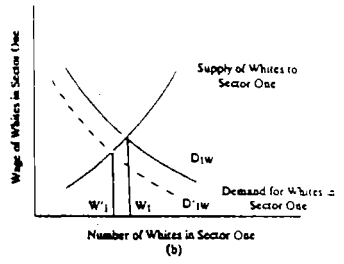
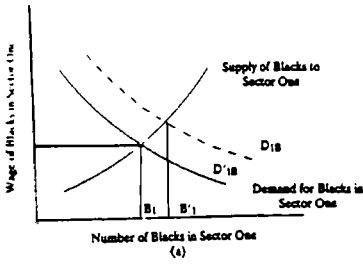
To illustrate the main issues in this two-sector framework, [Figure 10](#) presents a graphical analysis of the general equilibrium effects within the labor market of affirmative action programs.⁴⁰ We ignore feedback effects on the product market that may alter the composition of demand for workers in either sector. Little is known about these effects. We assume that the supply of workers to firms within each sector is perfectly elastic, but that there is less than perfect elasticity of supply of workers across sectors, and that supplies to each sector will depend on their relative wages as well as on nonmarket opportunities.

Both blacks and whites have three choices: (a) to work in sector one; (b) to work in sector two; (c) to participate in nonmarket activity. Sectoral choice decisions by demographic groups are governed by comparative advantage including transportation costs, skill endowments, and psychic costs. Blacks and whites may be imperfect substitutes in sectoral production as a consequence of discrimination by employers, uncertainty about quality levels, or differences in skill endowments (James Heckman and Kenneth Wolpin, 1976).

⁴⁰The issues raised here are analogous to those posed in the literature on the general equilibrium effects of corporate income taxes (Arnold Harberger 1962) and unionism (Harry Johnson and Peter Miezkowski 1970).

Figure 10

The Effect of an Outward Demand Shift for Black Labor in Sector One



We assume that contracts are let on a "cost-plus" basis, which implies that the government subsidizes the costs of affirmative action programs. Contractors within sector one are therefore encouraged to employ more blacks, thereby shifting out the demand for blacks among contractors.⁴¹ Although expansion of black employment in contractor firms does not necessarily imply expansion of total black employment in sector one, Figures 10(a) and 10(b) are drawn on the premise that the sector one demand for blacks increases while that for whites decreases. Consequently, relative wages for blacks increase in sector one. Blacks are attracted into sector one from sector two and from the nonmarket sector. The supply of blacks shifts up in sector two while that for whites shifts down. (See Figures 10(c) and 10(d)). These figures illustrate that many factors could cause black wages to rise more rapidly, relative to white wages, in the uncovered sector than in the covered sector. Three factors that could contribute to this result are (1) if the demand for blacks in sector two is relatively more inelastic than the demand for whites in that sector, (2) if the shift in the sector two white supply curve is small relative to the shift in sector two black labor supply, or (3) if the downward shift in the demand for whites in sector one is small and black and white sector one supply elasticities are large. In other words, even if the OFCC induces a substantial increase in black wages, this rise may not appear in a comparison of black relative wage gains between the covered and uncovered sectors.

Recall that the studies of the OFCC surveyed in Table 7 generate estimates of α in equation (5) controlling for sector. These estimates of the effect of the OFCC represent only the difference in the average change in relative black employment for contractor firms on the one hand as opposed to noncontractor firms in both sectors one and two on the other. They do not measure sectoral changes such as the relative percent increase in the black employment in sector one, or capture any declines in black employment in sector two. It is a long jump with many missing intermediate steps to infer that a positive value of α in equation (5) implies a large effect of the OFCC on black relative wages or employment levels. It is an equally long jump to infer that a larger relative wage effect in sector two than in sector one implies no role for the OFCC in elevating black status. The studies summarized in Table 7 have made the valuable contribution of demonstrating a positive correlation between black employment growth and contractor status, when a negative finding on this point would have revealed the impotence of the contract compliance program. Because the presence of a governmental effect has been confirmed, although its precise nature is

⁴¹Conceivably, blacks and whites could possess complementary skills so that an upward shift in the demand for black labor would also result in an expansion of white labor in contractor firms, but this is not guaranteed and indeed is not found in the data analyzed by Ashenfelter and Heckman (1976) and Heckman and Wolpin (1976).

still uncertain, further investigation using better data is now warranted. To obtain a more refined estimate of the impact of the contract compliance program, it will be necessary to employ a general equilibrium model that includes the key ingredients of sectoral supply and demand parameters by race.

2. Title VII Litigation and the EEOC

The available evidence on the impact of Title VII and EEOC enforcement activities is even more meager than that examining the OFCC. Because the entire country is covered by the law (except for firms with fewer than fifteen employees), there is no natural comparison group against which to measure the impact of the law. One is forced to use notoriously fragile aggregate time-series methods to ferret out EEOC effects from numerous other changes that affected the post-1964 American economy. Freeman (1973, 1981) uses cumulative EEOC expenditure -- basically a post-1964 time trend -- to estimate the impact of this agency using aggregate time-series data. His variable reproduces the aggregate shift already discussed in Section I. Freeman's measure is essentially a reparameterization of the shift in the trend that remains to be explained (Ashenfelter, 1976).

Beller (1978) explores the effect of discrimination charges filed with the EEOC on both the relative employment and relative wages of black males. She finds that Title VII had only weak effects in the late 1960s, but her study has not been widely accepted because of serious interpretative questions arising from potential reverse causality (Butler and Heckman, 1977). The problem is that the frequency of suits in a jurisdiction may be high relative to other jurisdictions either because discrimination is pervasive or because its citizens are more litigious. While Beller recognizes the problem of mutual causation between charges and outcomes and tries to correct for the simultaneous equation bias, her solution -- assuming that the presence of a regional EEOC office in a state affects the volume of charges filed in the state and is unrelated to the extent of discrimination -- is questionable. The causal link between the number of suits and the presence of an EEOC office may run more strongly in the other direction -- the EEOC may locate regional offices where the expected number of claims is high.

Leonard (1984a) offers a more favorable assessment of the impact of Title VII. On the basis of a cross-section study, he reports that the number of Title VII class action lawsuits per corporation is correlated with significantly greater increases in the percentage of black workers over the period from 1966 to 1978.

An indirect argument against strong government policy effects has been advanced by Butler and Heckman (1977) and Smith and Welch (1984). These authors point to data of the sort summarized in Table 8. During the crucial period 1965-1975, enforcement budgets were low during the time black advance was so rapid. Few federal contractors lost their contracts because of OFCC actions. Knowledgeable observers such as Wallace (1975), Jones (1976) and Ahart (1976) write about understaffed EEOC and OFCC offices. Ahart (1976) notes that EEOC and OFCC did not coordinate their enforcement efforts. See Adams (1972) for detailed study of EEOC policies.

Table 8

Summary Statistics for the Equal Employment
Opportunity Commission (EEOC) and Office
of Federal Contract Compliance (OFCC)

A. EEOC

Year	Budget (1,000s of 1982\$)	Resolved Cases (1,000s)	Employment Discrimination Cases Filed in Federal Courts
1966	9,680	6.4	NA
1970	32,954	8.5	336
1975	98,796	62.3	3,772
1979	148,100	81.7	5,032
1981	149,899	61.8	5,714
1982	144,739	57.2	7,015

B. OFCC

Year	Budget (1,000s of 1982\$)	Positions
1970	1,418	34
1975	8,072	201
1978	10,642	216
1979*	57,440	1,021
1981*	51,158	1,232
1982*	43,150	979

Sources: Smith and Welch (1984); Donohue and Siegelman (1990).

*Beginning in 1979 these figures reflect consolidation of 11 agency offices with OFCC to form OFCCP

From these accounts, the federal effort appears weak during the period in which black breakthroughs in employment and wages took place. As enforcement budgets grew, black relative gains fell off and actually receded in some sectors. These well documented features of the federal enforcement effort pose an apparently enigmatic pattern for proponents of the view that federal policy mattered.

B. A More Refined View of Federal Policy

But the enigma is resolved if one adopts a more refined view of federal policy that is at once broader in its conception of the federal tools that were brought to bear in attacking racial discrimination and narrower in its geographic focus concerning the targeting of this federal action. We have stressed throughout that much of the black improvement in the decade following enactment of Title VII of the 1964 Civil Rights Act came in the South, and it strengthens the case for the importance of the governmental effort to note that most of the federal activity was directed toward that region. First, Title VII was primarily intended to combat discrimination against blacks in the South -- virtually the only area of the country where state laws forbidding racial discrimination had not yet been enacted (Gold, 1985). Although the law did prohibit sex discrimination in employment, women were covered by the Act only as a result of an unsuccessful ploy by Southern congressmen to defeat the law by widening its mandate (Donohue, 1989). Second, a substantial portion of the complaints filed with the EEOC and federal employment discrimination litigation occurred in the South. Table 9 reveals that roughly half of all charges filed with the Equal Employment Opportunity Commission over the period 1966-1972 originated in the South.⁴² Over this same period, more than half of all employment discrimination cases filed in federal court were brought in the South (Siegelman, 1990; Culp, 1985, Table 1).⁴³

Furthermore, the view that initially enforcement was weak and that it became strong much later is exaggerated. Although Table 8 indicates that the number of employment discrimination cases filed in federal court is very low during the period of considerable black progress and very high during the period of black stagnation, these raw figures create an inaccurate impression of the intensity of civil rights activity for a number of reasons. First, almost all of the growth in employment discrimination cases since the early 1970s has come from cases alleging wrongful discharge, yet it is cases of hiring and wage discrimination, which predominated in the early days of Title VII, that are more likely to generate positive employment and

⁴²The jump in total charges filed in 1972 is a consequence of the expansion of coverage of the law to include firms with between 15 and 25 employees as well as the employees of state and local governments and educational institutions.

⁴³These figures (as well as those presented in Table 8 and 9) refer to all employment discrimination cases, including those unrelated to race. Since proportionally more non-race complaints come from outside the South, a comparison of the complaints of race discrimination by region would show an even higher proportion originating in the South (Donohue and Siegelman, 1991).

Table 9
Charges Filed with The EEOC By Year

	1966	1967	1968	1969	1970	1971	1972
South	3,011	4,058	5,103	8,188	10,044	12,571	42,975
Total	6,133	8,512	11,172	14,471	17,780	28,609	86,677
% in South	.491	.476	.456	.565	.564	.439	.496

Source: Annual Reports of The U.S. Equal Employment Opportunity Commission

Table 10

Black Registration in Southern States, 1940-1984

Year	Registration Rate (percent)
1940	3.1
1946	12.2
1952	20.0
1956	25.0
1958	26.1
1960	28.7
1962	28.8
1964	41.9
1966	51.6
1968	58.7
1970	66.9
1972	55.8
1974	58.6
1976	59.9
1978	-
1980	55.1
1982	53.3
1984	66.9
1986	64.7
1988	63.7

Source: Jaynes and Williams (1989), Table 5-7.

wage effects for blacks (Donohue and Siegelman, 1991). Second, the dramatic decline in the number of class action lawsuits at the same time that the number of individual suits rose exponentially once again indicates that the degree of federal pressure was greater at a time when the number of cases brought was far smaller than the current level.⁴⁴ Third, case filings and resolutions probably lag effective enforcement, and in general are noisy indicators of enforcement efforts. Employers (even those who are entirely innocent) commonly respond to the threat of litigation or the filing of a lawsuit with some remedial action, thereby obscuring the causal link between the onset or resolution of litigation and favorable employment outcomes for minority workers.

Moreover, the South was the target of federal civil rights policy in many areas in addition to employment, and it severely understates the magnitude of the federal effort to focus purely on discrimination in the workplace. The 1954 Brown v. Board of Education decision was an attack on de jure school segregation -- a practice that was most prevalent in Southern states and the District of Columbia. The 1962 and 1965 Voting Rights Acts were also focused on the South where blacks had been excluded from political life for over 70 years. In other words, federal employment discrimination policies were imposed on a pre-existing larger federal agenda designed to undermine the rigid racial segregation of the South.

There is ample evidence that federal voting rights and school desegregation policies were effective in the South, especially during the crucial years 1965-1975. Table 10 presents the percentage of voting age Southern blacks registered to vote by year. There is a sharp jump in black voter registration during the period 1962-1970. The preceding rise in registration between 1952 and 1962 can be attributed in part to both the private and federal civil rights activism that is documented by Steven Lawson (1976) and Garrow (1987). Similarly, as we discussed above, the period of greatest desegregation of Southern schools came between 1968 and 1972 as the federal courts strictly interpreted the mandate of the Constitution and federal law to call for affirmative integration of Southern schools. Over this short period of time, Southern schools went from being the most segregated to the least segregated in the country (See Table 6). Federal desegregation efforts were directed toward the North only after 1973 (Wolters, 1984).

⁴⁴More than 1000 class action lawsuits were filed each year in 1975 and 1976, while by the late 1980s the number had fallen to near zero. Note, too, that the Table 9 figures include all employment discrimination cases, and roughly 1500 of the 7689 cases brought in 1982 are age discrimination cases (Donohue and Siegelman, 1991).

This evidence indicates the magnitude of the federal activity on behalf of blacks in the South and reveals its success, at least in the area of school desegregation and voting rights. Even if the South had not been the intended target of federal legislation and administrative decrees, any rational enforcement strategy would initially have concentrated attention on the South. The wholesale exclusion or segregation of blacks in employment, accommodations, schooling, and voting was easy to document and prove in court cases.

Moreover, in certain ways the South was ripe for change. There is evidence that some Southern employers were eager to employ blacks if given the proper excuse. In their study of the dramatic breakthrough in the employment of blacks in the South Carolina textile industry that began in 1965, Butler, Heckman and Payner (1989) document that employment of blacks slowed down the growth of labor costs and kept the industry competitive in the period 1965-1975 in the face of rising foreign competition. Integration of geographically isolated textile mills was aided by integration of housing, schooling, and employment, and therefore the results of the multipronged federal effort in all of these areas were mutually reinforcing. Integration in employment occurred rapidly and without major incidents. After 55 years of near total exclusion, blacks became a significant fraction of total industry employment, and black wages rose relative to white wages.

The rapid progress of blacks in the South in the crucial period 1965-1975 is consistent with the multiple equilibria explicit in the tipping models of Schelling (1971) and Akerlof (1980). Specifically, Akerlof's model of social custom provides a coherent interpretive framework for the experience of the South in the late 1960s and early 1970s, as an example from the history of Southern school desegregation shows. Southern school districts frequently responded to the 1954 decision in Brown by enacting "freedom of choice" plans that enabled white and black children to elect to attend either of the historically racially segregated schools in their area. The customary response to these plans was that 15-20 percent of the black students would select the formerly all-white school and none of the whites would select the black school. The effect, then, was to keep 80-85 percent of the black students in completely segregated schools. The firmly entrenched custom of segregation, enforced through pressures from neighbors and employers, made further integration impossible even as the attitudes that gave rise to the custom began to change (Wasby, D'Amato, and Metrailler, 1977). Enforcement of the law in the wake of the previously discussed Supreme Court decisions in 1968 and 1969 may have been necessary to break the log jam even when a substantial majority was no longer opposed to desegregation.

Similarly, community norms may have made marginal experimentation in hiring black workers privately costly. (Wright (1988) reports six such failed attempts in the early history of the textile industry). Unlike the school desegregation situation, there were monetary benefits to be obtained by employers if they could tap the black workforce without incurring the wrath of their communities. Federal pressure may have tipped the balance and led to a new equilibrium that employers collectively embraced but were individually

unable to initiate. In the particular case of the textile industry -- where integration of employment mutually reinforced integration of housing and schooling -- the multipronged nature of the federal effort may have been particularly effective.

In sum, the "enigma" of rapid black advance during a period of low federal enforcement budgets may not be enigmatic at all. The early success of federal policy occurred because it was targeted toward the South where racial exclusion was blatant. A multipronged federal effort enlisted willing employers who needed an excuse for doing what they wanted to do anyway. Post-1975 evidence of growing enforcement budgets with weaker employment and wage effects for black workers may largely be a manifestation of the triumph of the initial Southern initiative and diminishing returns to a federal enforcement effort that turned Northward, and began focussing on sex and age discrimination in addition to racial discrimination.

IV. Conclusion

The debate over the role of federal civil rights policy in generating black economic progress can be framed as the division between supply and demand explanations and monolithic forces as opposed to episodic change. To be sure, long-term supply factors did generate upward pressure on black earnings and levels of employment over a considerable period of time. But prior to World War II this pressure was ineffective in the South. Much of the significant black economic progress that occurred in the twenty-year period from 1940 to 1960 was the product of migration out of the South. Progress continued over the next twenty years, particularly in the decade from 1965 to 1975, even though Northern migration had ended by that time. We have noted the finding of numerous studies that the overall strength of the economy does not solely explain black relative progress in this period,⁴⁵ and that 10-20 percent of measured black relative gains were generated by the selective attrition of blacks from the labor force. In addition, according to Card and Krueger, schooling quality improvements for blacks explain another 15-20 percent of the black relative gains between 1960 and 1980, while the contribution of schooling quantity gains is no larger. Consequently, a considerable portion of the post-1964 black progress would appear to be unexplained by the usual supply-side sources, which may suggest that the role of governmental antidiscrimination efforts was substantial. A major obstacle to attributing the remaining unexplained portion of the post-1964 black progress to federal civil rights activity is that this position cannot be readily verified or falsified through standard econometric tests because of the difficulties in measuring federal pressure.

⁴⁵Although the unusually tight labor markets induced by World War II do seem to have generated black relative gains during the period from 1940-1950.

In the introduction to this paper we noted that Federal judicial pressure on the South to desegregate began in 1954 with the Brown decision by the U.S. Supreme Court. That decision served to invigorate a large-scale private civil rights movement but also provoked widespread white resistance. The result was turmoil in the South over the period 1954-1964. Although white resistance slowed black progress in schooling and may have impeded black labor market advance in the short run, some of this turmoil had a strong effect in generating national support for civil rights legislation. Many southern leaders recognized that change in racial relations was inevitable and integrated workplaces and public facilities. This contributed to black improvement in the region that begins before 1964. The 1964 Civil Rights Acts and related executive orders and legislation presented the South with a unified, vigorous attack on blatant discrimination. It is fair to say that 1964 was the year that effective legislative and executive pressure was applied to the South. However, it is important to keep in mind that the post-54 civil rights activity laid the foundations for the 1964 laws and orders and brought about social change in its own right. It is inappropriate to attribute all of the impact of federal policy to civil rights laws passed in 1964, but it is difficult -- if not impossible -- to parse out the effects of pre-64 from post-64 activity.

However such a division might be made, the nature, location, and timing of black progress in the decade following the passage of the 1964 Civil Rights Act and the creation of the Office of Federal Contract Compliance support a federal enforcement story. With the greatest relative black improvement coming in the South, which was the target of a comprehensive federal effort to dismantle segregation in schooling, voting, accommodations, and employment, the inference is buttressed that federal civil rights policy was the major contributor to the sustained improvement in black economic status that began in 1965. Future work will have to explore more carefully the mechanism by which the federal antidiscrimination framework translated the command of law into significant black economic advance.

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