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# 8 Black Economic Progress after 1964: Who Has Gained and Why?

Richard B. Freeman

After decades of little or no economic progress relative to whites, black Americans made substantial advances in the job market after 1964 and, to a lesser extent, in earlier post–World War II years. Studies based on diverse data sets and analytic models report sizable declines in traditional discriminatory differences in the 1960s—declines which appear to have been maintained in the seventies (see Weiss and Williamson 1972; Freeman 1973; Welch and Smith 1975; Hall and Kasten 1973; Welch 1973; Hauser and Featherman 1975b). While some may (and some have) objected to my 1973 characterization of the gains as "dramatic," heralding the "decline of market discrimination," it is clear that beginning in the 1960s the job market for black Americans diverged sharply from the historic pattern of persistent and unchanging black-white differentials.

The change in the market raises many important questions about the economic well-being of black Americans and the economics of discrimination in a market economy. On the one hand are questions regarding the nature of black economic gains—their magnitude, incidence, and permanence. On the other side are questions of causality—of the effect of factors like governmental antidiscriminatory activity and social programs on the demand for and supply of black labor. Because of the complexity of major social changes, the controversy over programs like affirmative action, and the importance of reductions in discriminatory differences to the United States, questions regarding the nature and cause of black economic progress in the post–World War II period have generated

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considerable scholarly work and discussion and will undoubtedly generate more in the future.

This study used three types of evidence to analyze the nature and cause of black economic progress in post–World War II years: aggregate evidence on the timing and incidence among skill groups of changes in the relative earnings or occupational position of blacks; cross-sectional evidence on the family background determinants of the socioeconomic achievement of blacks; and information from company personnel offices regarding personnel policies toward black (and other) workers affected by civil rights legislation.

Section 8.1 summarizes aggregate evidence on the timing of black economic gains and on the incidence of gains by demographic and skill groups. It finds that gains have been concentrated in the post-1964 period; have not dissipated in the 1970s despite high rates of unemployment; and have been largest among more educated or skilled workers, younger workers, and female workers. Section 8.2 examines the effect of family background factors on black educational, earnings, and occupational attainment. It finds that young blacks from more advantaged family backgrounds have made especially large gains in the market, to such an extent that family background has become a much more important determinant of black socioeconomic position than in the past. As a result of the decline in black-white economic differentials and the enhanced impact of family background on black educational and economic attainment, *background differences appear to have become a more important impediment than market discrimination to attainment of black-white economic parity among the young*. Section 8.3 turns to the issue of causality. It argues that the timing and incidence of gains and the information on company personnel and employment practices supports the proposition that governmental antibias activity played a major role in the change in the job market. The evidence from company studies is given great weight in evaluating causality.

## 8.1 Measuring Black Economic Gains

Analysis of the nature of black economic gains depends at least in part on the statistical measures used to evaluate the economic status of blacks relative to the economic status of whites. In this paper I am concerned with patterns of *labor market discrimination* and choose measures of relative economic status designed to reflect market discrimination. In the framework of the standard economic analysis of discrimination, discriminatory differences will be defined as differences in wages, employment, or occupational attainment between otherwise comparable workers that can be traced to the effect of prejudiced employers, employees, unions,

or consumers on the demand for labor. The conceptual experiment which measures such discrimination would be to change the race (religion, sex, etc.) of the individual and observe what happens to his economic position. A possible practical experiment would be to present employers with a set of job applications from workers that differ solely in, say, their race and find out who would in fact be hired. Discrimination could be inferred from a deviation in the selection process from that predicted by random sampling. In the absence of such experiments, discriminatory differences will be measured as a "residual" from comparisons of economic position corrected for productivity-related or income-related characteristics,[1] including diverse measures of prelabor market factors. Since labor market discrimination involves shifts in demand schedules, which depend on ratios of productivities and wages, the analysis will concentrate on relative rather than absolute economic differentials between blacks and whites. Since individuals rather than families are employed in the job market, the analysis will deal solely with measures of the economic position of individuals, and not with family incomes.

### 8.1.1 The Decline in Discriminatory Differences

Evidence that the labor market position of black Americans improved significantly after 1964, and to some extent earlier, is substantial and growing. Aggregate statistical measures of individual incomes or occupational position reveal a sizable "twist" in the trend line for the incomes and occupational attaintment of blacks relative to the income or occupational attainment of whites after 1964 (Freeman 1973; Vroman 1974; Masters 1975). Cross-sectional and longitudinal data, available from computer tapes on thousands of individuals, corroborate this finding. Comparisons of earnings functions estimated with data from the Census of Population of 1970 with earnings functions estimated with data from the Census of Population of 1960 show a sharp drop in the effect of race on earnings (Welch and Smith 1975). Detailed investigation of the National Longitudinal Survey (NLS) has found the occupational position of young black men entering the market after 1964 to be essentially the same as that of young whites with similar premarket background characteristics (Hall and Kasten 1973). The 1973 Occupational Change in a Generation (OCG) survey has shown marked advances in the relative position of blacks, particularly those aged 25–34, compared with the comparable 1962 survey (Hauser and Featherman 1975b). Several studies oriented toward other labor market problems have found that the traditionally large negative impact of being black on economic status has become much smaller than in the past (Viscusi 1976; Epstein 1977; Astin 1978; and Wise, 1980). Finally, in contrast to earlier studies which showed that blacks had relatively small gains from additional schooling (Hanoch 1967; Weiss 1970), evidence for the late 1960s shows a marked

convergence in the return to black and white male investments in schooling, especially among the young (Weiss and Williamson 1972; Welch 1973; Freeman 1974a).

Some of the statistical evidence on the improved labor market position of black (or nonwhite)[2] workers is given in table 8.1, which records ratios of the income or earnings of nonwhite workers to the income or earnings of white workers. Columns 1 and 2 give ratios for 1949 (except where noted) and for 1959, respectively; column 3 gives ratios for 1964, when the Civil Rights Act was passed but prior to its becoming effective; column 4 records ratios for 1969, the peak year of the late sixties boom; while column 5 records ratios for the latest year for which data are available. Because the Bureau of the Census did not publish incomes by race and occupation or by race and age until 1967 and did not ask for "usual weekly earnings" until then, the figures for those categories in the 1964 column relate, as noted in the table, to 1967.

Columns 6 and 7 present average annual changes in the ratios for the period preceding 1964 and the period following 1964. In the rows where data are not available until 1967, the pre-1964 changes cover the period 1949–59 while the post-1964 changes are from 1967 to the final year. If, as seems reasonable, declines in market discrimination move income ratios toward an asymptote of unity, annual percentage point changes can be expected to decline over time.[3] Hence, any acceleration in rates of change should be viewed as evidence (all else the same) of significant structural change in the market.

Rows 1–5 present figures for male workers, decomposed by occupation, education, and age. Rows 6–9 treat women. As the average female income ratios approach unity by the end of the period and exceed unity within disaggregate skill groupings by the early 1970s (Freeman 1973), I have not decomposed these earnings ratios into the detailed groups used for men.

There are three basic findings in the table. First, contrary to the fears of several analysts that the advances of the late 1960s were due to cyclical rather than more fundamental market changes (see Freeman 1973), the gains in the relative income of blacks did *not* erode through the severe recession of the mid-seventies. Indeed, except for the figures in row 1, the data give little evidence of deceleration in the rate of gain after 1969. Of particular interest is the large increase in the ratio of black to white median usual weekly earnings from 1969 to 1976, which suggests that black wage rates rose rapidly even when unemployment was sizable. Among women, the income ratios rise sharply in the seventies to approach unity by 1976.

The second finding of the table is that in *all* of the comparisons given, the rate of increase in the black-white income ratio is greater after 1964 than before 1964, despite the fact that the "income gap" to be closed tends to be smaller in the latter period. Larger increases post-1964 are a

**Table 8.1** **The Ratio of the Earnings of Nonwhites or Blacks to the Earnings of Whites or All Workers and Annual Changes in the Ratios, by Sex, 1949–76[a]**

| Variable | Earnings | | | | | Annual Changes in Earnings in Ratios | |
|---|---|---|---|---|---|---|---|
| | Pre-1964 | | | Post-1964 | | Pre-1964 to "1964"[b] | "1964" to 1975[c] |
| | 1949 | 1959 | "1964" | 1969 | 1976 | | |
| **Males** | | | | | | | |
| 1. Median wages & salaries | | | | | | | |
| all workers | .50 | .58 | .59 | .67 | .70 | 0.6 | 0.9 |
| year-round and full-time workers | .64[d] | .62 | .66 | .69 | .75 | 0.1 | 0.8 |
| 2. Median "usual weekly earnings" | — | — | .69[e] | .71 | .78 | — | 1.0 |
| 3. Median income, by age, all workers (1949–59) and year-round and full-time workers (other years) | | | | | | | |
| 20–24 | .66 | .64 | .70[e] | .82 | .82 | −0.2 | 1.3 |
| 25–34 | .60[f] | .61[f] | .75[e] | .72 | .81 | 0.1 | 0.7 |
| 45–54 | .54 | .55 | .66 | .64 | .67 | 0.1 | 0.1 |
| 4. Median income, all workers (1949, 1959) and year-round and full-time workers (other years) by occupation | | | | | | | |
| Professionals | .57 | .68 | .69[e] | .73 | .84[g] | 1.1 | 2.6 |
| Managers | .50 | .57 | .64[e] | .60 | .72[g] | 0.7 | 1.1 |
| Craftsmen | .63 | .66 | .71[e] | .74 | .78[g] | 0.3 | 1.0 |
| Operatives | .72 | .70 | .78[e] | .80 | .84[g] | −0.2 | 0.9 |
| Service Workers | .78 | .76 | .75[e] | .77 | .84[g] | −0.2 | 1.3 |
| Laborers | .81 | .83 | .73[e] | .88 | .85[g] | 0.2 | 1.7 |
| 5. Median income or mean earnings for young men 25–29 years old, by education | | | | | | | |
| high school graduates | .73 | .70 | — | — | .77 | −0.3 | 0.4 |
| college graduates | .67 | .70 | — | — | .94 | 0.3 | 1.4 |
| **Females** | | | | | | | |
| 6. Median wages & salaries | | | | | | | |
| all workers | .40 | .53 | .58 | .79 | 1.01 | 1.8 | 3.6 |
| year-round and full-time workers | .57[d] | .66 | .69 | .82 | .94 | 1.3 | 2.1 |
| 7. Median "usual weekly earnings" | — | — | .80[e] | .83 | .94 | — | 2.0 |

[a]Lines 1, 2, 6, and 7 give the ratios of the earnings of nonwhites to the earnings of whites. The data for 1969 and 1959 in all of the other lines give the ratios of the income of nonwhites to all workers. The remaining data give the incomes of blacks relative to the incomes of all workers.
[b]The data in lines 3–5 are from 1949 to 1959.
[c]The data in lines 2–5 and 7 begin with 1967 as the initial year.
[d]Data relate to 1955.
[e]Data relate to 1967.
[f]Data are for 25–29-year-olds.
[g]Data are for 1974 since *median* incomes by occupation and race were not published after 1974.

necessary "first fact" (other factors held fixed) for any case to be made regarding the impact on the job market of the diverse antibias activities which became intense in the mid-sixties.[4]

Third, with regard to incidence, the income ratios in table 8.1 reveal markedly different rates of progress for various groups of black workers. Among men, greater gains were made by younger black workers than by older black workers with, for example, the income ratio for 20–24-year-old full-time and year-round workers rising by twelve percentage points from 1967 to 1976 compared with almost no change for those aged 45–54. Greater gains were also made by the more highly qualified, such as professionals, managers, and (to a lesser extent) craftsmen. Perhaps most importantly, the income ratios in row 6, which focus on persons with the same education and age, show larger gains for young black college graduates than for young black high school graduates. In 1976, 25–29-year-old black male college graduates earned almost as much as white male college graduates. The ratio of black to white earnings for college men was much higher than that for young high school graduates, a result which contrasts markedly with that found in earlier years (Hanoch 1967). Studies of other data sets also find that better-educated and young black men obtained greater advances in the post-1964 period than did less-educated and less-skilled older workers (see Welch and Smith 1975). Black women, as noted earlier, had especially large gains in relative income, due in part to their movement from household service jobs to factory and clerical positions (Freeman 1973).

Table 8.2 turns to evidence on the occuational attainment of black and white workers. The occupation data have two advantages in analysis. First, occupation may be a more permanent indicator of economic status than incomes, which tend to be sensitive to cyclical ups and downs and other transitory fluctuations. Second, unlike income comparisons, which could be biased by investments in newly available opportunities to attain higher lifetime income streams,[5] occupation is likely to reflect the result of relatively enduring movements into higher or lower-paying jobs. Even if the income gains of black men had slackened in the seventies (which does not appear to be the case), evidence of continued occupational advance might be taken as indicative of continued declines in discriminatory differences.

The position of blacks in the occupational structure is measured in two ways in the table. Rows 1 and 2 record ratios of fixed income weighted indexes of the value of the nonwhite and white occupational structures. These are calculated by weighting the proportion of nonwhite or white persons in an occupation by the median income of all men or women in the occupation reported in the Census of Population of 1960. When the job distribution of nonwhites shifts toward higher-income occupations relative to the occupational distribution of whites, these statistics will

**Table 8.2** **The Relative Occupational Position of Nonwhite Workers and Changes in Position, 1950–77**

| Group | Position | | | | Annual Change in Position | |
|---|---|---|---|---|---|---|
| | 1950 | 1964 | 1969 | 1977 | 1950–64 | 1964–77 |
| Ratio of Nonwhite to White Index of Occupational Position[a] | | | | | | |
| 1. Male | .76 | .80 | .84 | .89 | 0.3 | 0.7 |
| 2. Female | .49 | .69 | .80 | .92 | 1.4 | 1.8 |
| Relative Penetration into Selected Jobs[b] | | | | | | |
| 3. Professionals, male | .39 | .45 | .48 | .64 | 0.4 | 1.5 |
| 4. Managers, male | .22 | .22 | .28 | .43 | 0.0 | 1.6 |
| 5. Managers, male college graduates only | .42 | .41 | .49 | .72 | 0.0 | 2.4 |
| 6. Craftsmen, male | .41 | .58 | .68 | .72 | 1.2 | 1.1 |
| 7. Professionals, female | .47 | .60 | .70 | .89 | 0.9 | 2.2 |
| 8. Clericals, female | .15 | .33 | .55 | .72 | 1.3 | 3.0 |

Source: Rows 1 and 2: U.S. Department of Labor 1977 table 19; 1975 table 22; U.S. Bureau of the Census 1953 table 11. Rows 3–5: U.S. Bureau of Labor Statistics 1965 table J; 1970 table J; 1978 table K; U.S. Bureau of the Census 1953 table 11.

[a]Index calculated as ratio of $\Sigma_i \alpha_{ij} w_i$ for blacks ($j = 1$) and whites ($j = 2$) where $\alpha_{ij}$ = share of workers in the $j^{th}$ group in occupation $i$ and $W_i$ = median income of all workers in 1959.

[b]Percent nonwhites employed in the occupation/percent whites employed in the occupation.

rise, and conversely. During the period covered, the data show a marked improvement in the relative occupational position of nonwhites, particularly after 1964. From 1964 to 1969 the ratio of occupational indexes rises by .04 points for nonwhite men and .11 points for nonwhite women; from 1969 to 1977, the increases were .05 and .12 points, respectively. Overall, the rate of nonwhite advance accelerated by 0.4 points for both sexes after 1964. For men, it increased by 0.7 points per annum in the post-1964 period compared with 0.3 points per annum in the earlier period. For women it increased by 1.8 points per annum from 1964 to 1977 compared with 1.4 points from 1950 to 1964.

The second measure of the relative occupational position of nonwhites is the "relative penetration ratio." This is defined as the ratio of the proportion of all nonwhite workers in an occupation to the proportion of all white workers so employed. When it is unity, nonwhites and whites are equally represented in an occupation; when it is below one, nonwhites are less than proportionately represented, and conversely when it is above one. The statistics in rows 3–8 show a marked post-1964 improvement in the relative proportion of nonwhites in the "good" jobs covered in the table and indicate that the movement continued, in some instances at an accelerated rate, into the 1970s recession. Among men, the rate of advance into professional and managerial jobs accelerates sharply between 1964–69 and 1969–77. Of particular importance is the

large flow of nonwhite male college graduates into managerial positions in the latter period, presumably the result of changes in education and career training induced by new opportunities (Freeman 1977a).

The apparently strong "new market" for high-level black workers is pursued in table 8.3, which presents data relating to the relative income of selected groups of highly educated or skilled black workers. Rows 1 and 2 show that among Ph.D.'s and faculty, blacks earned roughly as much as comparable whites in 1973, which contrasts sharply to long-standing patterns of market discrimination. The evidence in row 3 shows that the starting pay of black male college graduates was roughly equal to the starting pay of white male college graduates as early as 1969, a finding corroborated through 1973 by analysis of the NLS. Row 4 gives approximate earnings ratios from a recent American Council on Education survey of graduates,[6] where it was reported that for recent college graduates, "blacks can command higher salaries than whites . . . as a result of strong affirmative action pressures on business and industry" (Astin 1978: 155). Any explanation of the improved market for black workers must come to grips with the pattern of change in which young and more-qualified men appear to have made especially large gains relative to other black men.

**Table 8.3** **The Ratio of the Earnings of High-Qualified Black Workers to High-Qualified White Workers in the Late 1960s and Early 1970s**

| | |
|---|---|
| 1. Ph.D.'s (1973) | |
| Total | 1.01 |
| Physical science | 0.95 |
| Social science | 1.12 |
| Engineers | 1.02 |
| 2. Faculty (1973) | |
| Initial | .93 |
| "Adjusted" for quality[a] | 1.00–1.07 |
| 3. Starting bachelors (1969) | |
| Howard, civil engineering | 1.00 |
| Howard, business fields | .97 |
| North Carolina A & T, engineering | .92 |
| Texas Southern, MBA | 1.07 |
| 4. Bachelors, 1 year after degree (1974) | |
| Business | ≈1.13 |
| School teaching | ≈1.36 |

Source: Line 1: National Science Foundation, 1974, p. 141.
Line 2: Tabulated from American Council on Education, 1972–73 survey of teaching faculty, as reported in Freeman 1977a, table 3.
Line 3: Freeman 1974b, table 3-3.
Line 4: Astin 1978: 154–57.
[a]There is a range of estimates depending on what characteristics are adjusted for. The lower estimated excludes type of institution employed as a characteristic.

There are two basic conclusions to be reached from this review of black economic progress. First, the advances in the 1960s and to some extent earlier which motivated my 1973 Brookings paper (Freeman 1973) *have not been eroded* by the weakened job market of the 1970s and thus cannot be readily attributed, as some argued, to the late 1960s boom. More is involved than simple cyclical patterns. Second, the rate of black economic advance has varied significantly by sex, education, age, and skill groups. Black women attained approximate parity with white women having similar skills, though both groups trail white men by considerable amounts. Among men, where sizable economic differences remain overall, the differences declined most and/or became smallest among the highly educated and skilled. Large advances were made by the young, especially those going on to higher education, possibly because the young were not hampered by past disciminatory practices and human capital investment decisions, which effectively "lock" experienced personnel into particular career paths and seniority ladders from which change is difficult.

## 8.2 Changed Social Mobility Patterns and Discriminatory Differences among Young Men

The extent and incidence of economic advance among young black men is examined in greater detail in this section with data from the National Longitudinal Survey (NLS) (see U.S. Department of Labor 1970), which contains information on the labor market position, family background, and diverse other variables for about 5,200 young men. The analysis concentrates on the family background determinants of educational and labor market attainment and on the contribution of background factors to differences between blacks and whites in years of schooling, earnings, and occupational position. For the purpose of determining whether there have been changes in mobility patterns, the effect of background factors on young men in the NLS sample is compared with the effect of background factors on older men from the comparable NLS survey of 45–59-year-olds in 1966 (on the assumption that the socioeconomic status of the older men was essentially determined years earlier) and with the results of studies covering the pre-1964 period.

The principal finding is that, in contrast to the pattern of social mobility before 1964, when family background was found to have relatively small effects on black achievement and when only a modest fraction of black-white economic differences could be attributed to the "burden of background,"[7] in the late 1960s background factors became an important determinant of black socioeconomic advancement and the major cause of economic differences between black and white young men. The implication is that *blacks from more advantaged backgrounds made greater gains in the market than those from less advantaged backgrounds*

### 8.2.1 Measures of Socioeconomic Position

This study examines the effect of family background and other variables on four measures of individual socioeconomic achievement: years of schooling; weekly earnings; annual earnings; and an index of occupational position, the median income of male workers in the individual's three-digit occupation in 1969. The weekly earnings variable (obtained by division of yearly earnings by weeks worked over the year) is designed to measure rates of pay,[8] while the yearly earnings variable depends on time worked over the year as well as on the rate of pay. The index of occupational position uses the same incomes for blacks and whites in an occupation despite differences in earnings within occupations, so as to focus on occupational attainment.

### 8.2.2 Measures of Family and Other Background Variables

The following variables are used to measure family background:[9]

1. Years of schooling of the head of the parental family, which is entered in regressions explaining the individual's years of schooling but not in regressions explaining labor market attainment, since parental education appears to affect individuals through school rather than directly.
2. Living in a one parent/female home at age fourteen, a 0–1 dummy variable entered to control for differences in the economic resources between households which include a male head and those which do not and for the possible effect of the absence of a male "role model" on the young.
3. The occupational attainment of the head of household at age fourteen, measured by the logarithm of the median income of male workers in the three-digit occupation in which the parent worked, as given in the U.S. Census of Population of 1960.[10] Because black workers have traditionally been paid lower than whites in the same occupation, the occupational attainment of black parents is measured by nonwhite median incomes while that of white parents is measured by total median incomes. Measuring parental status in this way yields larger differences between the family backgrounds of blacks and whites than those obtained in sociology studies which use the same figure for the occupations of black parents and the occupations of white parents.[11] Separate indicators for blacks and whites provide a closer fix on *economic* differences between them, as opposed to differences in socioeconomic status.
4. Three indicators of household reading resources when the individual was fourteen years old: magazines; newspapers; and library cards, entered to try to capture some of the more explicit activities or resources by which family background influences the young. While by no means optimal, these measures provide some indication of activities in the home beyond the crude standard measures of parental schooling and occupation.

In addition to the measures of family background, the calculations also contain measures of the region and type of residence of the person at age fourteen.[12] These measures are entered because of the traditional importance of "regional background" in black-white economic differences due in part to the extraordinary discrimination in schooling in the South (Welch 1973; Freeman 1974b), especially in rural areas.

The NLS data reveal sizable black disadvantages in each of the background variables. In the young male sample the parents of blacks averaged 7.9 years of schooling, whereas the parents of whites averaged 10.5 years. The log of the median income of the occupation of parents of blacks was 7.7 compared with 8.5 for the parents of whites. Forty percent of the young blacks were from one parent/female homes at age fourteen compared with twelve percent of the young white men. Forty-five percent of the black youth reported having magazines in their homes compared with eighty percent of white youth. Sixty-nine percent of the blacks reported the presence of newspapers compared with ninety-two percent of the whites. Forty-seven percent of the black youth reported having library cards compared with seventy-four percent of white youths.[13] In terms of the regional variables, young blacks were more likely to have been brought up in the South and in rural areas than young whites.

The sizable differences between the family background resources of young blacks and whites suggest that, if background factors "matter" in attainment, they are likely to be a major cause of economic inequality. To what extent does the educational and labor market attainment of young blacks and young whites depend on background factors?

### 8.2.3 Background and Schooling

Table 8.4 presents least-squares estimates of the effect of family background and region and type of residence on the years of schooling of young black and white men and, for comparison, estimates of the effect of these variables on the years of schooling of older black and white men as well. Since measures of household reading resources are unavailable for the older men, these variables have been excluded from the calculations; their effect on the attainment of the young is analyzed separately in table 8.6. Because many of the young men in the NLS were still enrolled in school in 1969, the year for which the analysis was conducted, they could not report their final years completed. The attainment of these men was estimated by the number of years they "expected to complete." Experiments with other methods of estimating years completed, ranging from limiting the sample to the out of school population to assigning the enrolled their current years, were also made, with results similar to those given in the table.[14]

The principal finding is that in contrast to the large racial differences in the effect of family and regional background factors on years of schooling found in pre-1964 data (Duncan 1968) and in the older male NLS sample,

there are at best only slight differences in the effect of family and regional background variables on the years of schooling of young black versus young white men.

With respect to family background, what stands out in the table is the differential effect of parental occupation on the attainment of blacks and whites in the young male sample compared with its effect in the older male sample. Whereas among older men, the coefficients on parental

**Table 8.4** **Regression Coefficients and Standard Errors for the Effect of Background Factors on Years of Schooling of Black and White Men Aged 17–27 and 48–62[a]**

| | Young Men | | Older Men | |
|---|---|---|---|---|
| | Black | White | Black | White |
| 1. Mean years of schooling and standard deviation of years | 11.5(3.1) | 13.2(2.9) | 6.8(3.7) | 10.3(3.3) |
| 2. Coefficients on parental status variables | | | | |
| Parental years of schooling | .20(.03) | .31(.01) | .23(.04) | .30(.02) |
| Parental occupational status[b] | .84(.21) | .57(.12) | .52(.32) | 1.37(.22) |
| Residence in one parent/female Household at age 14[c] | −.71(.19) | −.83(.15) | −.67(.35) | −.44(.21) |
| 3. Coefficients on region of residence at age 14[c] | | | | |
| Northeast | .04(.36) | .16(.13) | .42(1.07) | −.10(.21) |
| South | .13(.32) | −.35(.13) | −1.84(.83) | −.68(.21) |
| West | .10(.52) | −.15(.15) | 2.21(1.53) | −.29(.34) |
| North Central | — | — | — | — |
| 4. Coefficients on type of residence at age 14[c] | | | | |
| Rural | −.50(.29) | −.20(.14) | −1.56(.65) | −.49(.26) |
| Small town | .39(.27) | −.04(.13) | −.28(.64) | .18(.22) |
| Small city | .09(.58) | .09(.19) | 1.38(2.49) | .09(.49) |
| Suburb | .15(.30) | −.11(.15) | .20(.67) | .03(.28) |
| Large city | — | — | — | — |
| 5. Coefficients for other variables | | | | |
| Age | −.10(.03) | .00(.01) | −.16(.04) | −.07(.02) |
| Constant | 4.8 | 4.7 | 12.9 | .2 |
| 6. $R^2$ | .180 | .204 | .268 | .296 |
| 7. Size of sample[d] | 1,024 | 3,235 | 471 | 1,408 |

Source: Calculated from NLS data tapes for young men and for older men in 1969.
[a]Regressions for older men relate to 1966. Regressions for young men relate to 1969. For young men who are enrolled in school in 1969, years of schooling were estimated on the basis of the years of schooling they expect to complete, as described in text.
[b]Parental occupational position measured by median male income of three-digit occupation in 1959. Income figures for all men used for whites; nonwhite incomes used for blacks. Data taken from U.S. Bureau of the Census (1963), tables 25, 26.
[c]Age 15 for men aged 48–62.
[d]The largest loss in the sample occurred because a relatively sizable number failed to report their parents' education. For results with a sample that excludes parental education see Freeman (1976).

occupation, as well as on parental years of schooling, are smaller for blacks, among the young, parental years of schooling have a smaller effect on blacks than on whites but parental occupation has a *larger* effect. Given the differences in the coefficients on the two variables, it is necessary to "average" the coefficients in some way to evaluate whether background factors have a more or less powerful effect on young blacks than on young whites. One reasonable way to form such an average is to multiply the regression coefficients by their standard deviations in the sample, divided by the standard deviation of years attained, and sum the resultant β weights to get the effect of a standard deviation increase in each. With this metric, family background is estimated to have about the same effect on the years of schooling of young blacks and young whites: the one-standard-deviation changes alter schooling by .46 standard deviations for whites versus .40 standard deviations for blacks.[15]

The estimated coefficients on the region and size of place of residence dummy variables also reveal striking changes between the younger and older male samples, with the enormous deterrent effect of southern and regional locale on black schooling in the older male sample (−1.8 years for the South and −1.6 years for rural residence versus the deleted group), dropping to insignificance among younger men (.13 years for southern residence and −.5 years for rural residence). Among whites, there is a smaller decline in the negative effect of southern and rural residence on years of schooling between the young male and older male samples. Presumably because of the decline in the discriminatory allocation of school resources in the rural South, the "burden" of southern and rural background was greatly reduced for blacks until it became about the same as for whites.

Analysis of the converging effect of family background factors on the years of schooling of blacks and whites between the time when the younger men were educated and the time when the older men were educated can be pursued by focusing on the effect of parental education and occupation on what has become the "cutting edge" in investment in education decisions—enrollment in college. Accordingly, I estimated the effect of the family and regional background variables treated in table 8.4 on the probability of going to college, using the logistic probability model $P = 1/(1 - \exp\Sigma\beta_i X_i)$, where $P$ = the probability of going to college and $X_i$ are the explanatory factors. In this functional form, the effect of $X_i$ on $P$ is $dP/dX_i = \beta_i P(1 - P)$, so that the same parametric relation ($\beta_i$) implies different changes in probabilities depending on the starting point. The advantage of this functional specification over the linear probability model is that it correctly bounds the estimated $P$ between 0 and 1 and takes account of the binomial structure of the errors.

The results of the logistic curve estimation are summarized in table 8.5, in terms of the coefficients and standard errors for the logistic curve

**Table 8.5** **Estimated Logistic Curve Parameter and Standard Error on Probability of Going to College**

| Family Background Variables | Young Men | | Older Men | |
|---|---|---|---|---|
| | Black | White | Black | White |
| Years of schooling of parent | .13 | .17 | .17 | .19 |
| | (.02) | (.01) | (.04) | (.01) |
| $\ell n$ of median income of men in parent's 3-digit occupation | .52 | .51 | .03 | .81 |
| | (.22) | (.10) | (.33) | (.17) |

Source: Freeman 1976, table 3.
$\ell n$ of median income calculated from the same median income measures as in table 8.4.

parameters on the years of schooling of parents and on their occupational attainment. These calculations show little difference in the impact of parental years of schooling or parental occupational attainment on the logistic curve parameters for young blacks and for young whites but show that the parental occupation variable has a much greater effect on older whites than on older blacks. This confirms the findings of a much smaller difference between the effects of background on black and white attainment among younger and older men.

Table 8.6 examines the effect of adding the "household reading resource" variables to the years of schooling regressions for the young men. Columns 1 and 3 record the coefficients on parental occupational status and parental years of schooling from table 8.4, while columns 2 and 4 give the coefficient on those variables and on the presence of magazines, newspapers, and library cards. The decline in the coefficients on parental occupation and years of schooling upon addition of the new variables provides some indication of the extent to which the traditional back-

**Table 8.6** **Regression Coefficients and Standard Error of Estimates of the Effect of Parental Occupation, Years of Parental Schooling, and "Household Reading Resources" on Years of Schooling of Young Black and Young White Men, 1969**

| | Young Black Men | | Young White Men | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| 1. Index of parental occupational status | .84(.21) | .61(.20) | .57(.12) | .36(.12) |
| 2. Years of parental schooling | .20(.03) | .15(.03) | .31(.01) | .25(.02) |
| 3. Magazines in the home (yes = 1) | | .81(.20) | | .68(.13) |
| 4. Newspapers in the home (yes = 1) | | 1.12(.23) | | .92(.19) |
| 5. Library card in the home (yes = 1) | | .80(.21) | | .99(.11) |

Note: Regression coefficients in columns 1 and 3 are taken from table 8.4. Regression coefficients in columns 2 and 4 are based on regressions of years of schooling on the variables in table 8.4 plus the three dummy variables for household reading resources. The sample sizes are the same as in table 8.4.

ground variables operate through provision of an environment with reading materials.

The calculations show that the household reading resources significantly influence educational attainment and are an important intervening factor in the link between family background and educational attainment. The coefficients on parental education are reduced by 2–3 standard errors, and the coefficients on parental occupation are reduced by 1–2 standard errors, by addition of the new variables. Crude though the calculations are, they suggest a potentially important role for household reading resources as a determinant of years attained and as a major intervening variable in the usual background-education relation. They direct attention to the absence of reading material in black homes (which might be ameliorated by special school programs) as a likely cause of differences in years attained among the young in the 1960s.

### 8.2.4 The Gap in Educational Attainment

Despite the significant increase in black educational attainment in the post–World War II period and the sharp influx of blacks into college in the late 1960s (Freeman 1977a, chapter 2), a substantial difference remains among the young in the NLS sample in 1969. To what extent do differences in schooling among the young reflect differences in family background? Have background differences, which traditionally were found to explain only a modest proportion of the black-white educational gap (Duncan 1968), become an important deterrent to attainment of equality in years of schooling between the groups?

Estimates of the contribution of family background differences to the difference in years of schooling of blacks and whites can be obtained by multiplying the estimated regression coefficients from tables 8.4 and 8.6 by the average difference in the level of the background variables. Formally, if $\hat{a}_i$ is the estimated impact of $X_i$ on years attained, and $\bar{X}_{iB}$, $\bar{X}_{iW}$ are the mean levels of $X_i$ for blacks and whites respectively, the contribution of differences in $X_i$ to the gap can be estimated as $\hat{a}_i(\bar{X}_{iB} - \bar{X}_{iW})$ and the contribution of all relevant variables as $\sum_i \hat{a}_i(X_{iB} - X_{iW})$. Since the regressions treat blacks and whites separately, there are two sets of coefficients for the calculations, $\hat{a}_i$ from the equations for blacks and $\hat{a}_i$ from the equations for whites.

Table 8.7 summarizes the results of such calculations using regression coefficients from both the equations for blacks and the equations for whites. Row 1 gives the absolute differences in years attained. Row 2 records the percentage contributions of each of the family background factors to the difference in years attained, obtained by dividing $\hat{a}_i(\bar{X}_{iB} - \bar{X}_{iW})$ by the absolute difference in years attained. Row 3 gives the sum of the percentage differentials attributed to family background, while row 4 records the percentage contribution of the differences in the

**Table 8.7** **Estimates of Percentage Contribution of Differences in Background Characteristics to Differences in Years of Schooling of Black and White Men**

| | Based on Years of Schooling Equations for Blacks | | | Based on Years of Schooling Equations for Whites | | |
|---|---|---|---|---|---|---|
| | Older Men | Young Men | | Older Men | Young Men | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| 1. Difference in years of schooling of persons of the same age | 3.7 | 1.6 | 1.6 | 3.7 | 1.7 | 1.7 |
| 2. Percentage contribution to differences in years of schooling of differences in: | | | | | | |
| a) parental occupational status | 16 | 44 | 31 | 41 | 24 | 21 |
| b) parental years of schooling | 16 | 31 | 25 | 22 | 47 | 41 |
| c) residence in one parent/female home | 3 | 6 | 6 | 3 | 12 | 12 |
| d) household reading resources | — | — | 44 | — | — | 41 |
| 3. Percentage contribution to differences in years of schooling of all family background factors (sum of 2a–2d) | 35 | 81 | 106 | 66 | 83 | 100 |
| 4. Percentage contribution of differences in region and type of place of residence | 14 | −6 | −6 | 14 | 12 | 6 |
| 5. Percentage contribution of all background factors (3 + 4) | 49 | 75 | 100 | 80 | 95 | 106 |

Note: Estimates of the contribution of factors to the observed differences were obtained by the following procedure. Let $\hat{a}_i$ = regression coefficient for the effect of variable $i$ on years of schooling; $\Delta x_i$ = differences between the mean value of variable $i$ for blacks and the mean value of variable $i$ for whites. Then the percentage contribution of the $ith$ variable is $\hat{a}_i \Delta x_i /$ data in row 1.
Figures for columns 1 and 2 and for columns 4 and 5 obtained using regressions reported in table 8.4. Figures for columns 3 and 6 based on regressions summarized in table 8.6.
Years of schooling differences have been adjusted for the effect of age by multiplying the difference in the mean ages of blacks and whites by the coefficient on age in the schooling equations. As age has a positive effect on years of schooling in the equation for blacks but not in the equation for whites, this adjustment produces a smaller difference in the analysis based on the equations for blacks than in the analysis based on the equations for whites.

distribution of blacks and whites by region and type of place. The figures in columns 1, 2, 4, and 5 show that family background factors are a much more important cause of black-white differences in years of schooling among young men than among older men, indicative of considerable change in social mobility patterns. The differences are particularly

marked when the regression coefficients from the black schooling equations are used to weight the different factors. According to columns 1 and 2, for example, only thirty-five percent of the difference between the years of schooling of older black men and older white men is attributable to family background factors, whereas eighty-one percent of the difference between younger black and white men is attributable to family background factors. This reflects in large part the increased effect of background factors in the schooling attainment equations for blacks between the two samples.

In contrast to the increased importance of differences in family background, the table shows sizable reductions in the impact of differences in the distribution of persons by geographic area. This is largely owing to the convergence in the coefficients on the geographic variables between blacks and whites shown in table 8.4.

Columns 3 and 6, based on regressions which include household reading resources as explanatory variables, show that essentially *all* of the difference in educational attainment between young black and white men in 1969 can be attributed to family background factors. Even with the family resources excluded, 80 + percent of the difference is accounted for by background factors. Similar findings are reported by Epstein (1977) using the NLS for the high school class of 1972 and by Hauser and Featherman (1975a) in their analysis of the 1972 OCG data file. For young black men the disadvantages in family background have become *the* deterrent to attainment of parity with whites in years of school completed.

### 8.2.5 Background and Labor Market Attainment

To analyze the effect of family and other background variables on the labor market position of men, the three measures of market attainment described earlier—hourly earnings, yearly earnings, and the median income of men in the individual's three-digit occupation—were regressed on the family and regional and size of place variables used earlier and on years of work experience. For young men, years of experience are calculated using a complex algorithm designed to measure, as well as possible, actual time worked.[16] For older men, years of experience are measured by two variables: years of tenure in a job, and age minus years of schooling minus 5. The parental years of schooling variable was deleted from the analysis after preliminary calculations showed that it had little effect on the labor market position of individuals.[17] Years of schooling of the individual were first excluded from the regressions to obtain estimates of the full or reduced form impact of background factors and then included an additional measure of "prelabor market" determinants of labor market position. In the regressions for young men, those still enrolled in school were deleted from the calculations.

Table 8.8 summarizes the results in terms of the estimated coefficients on the log of the index of parental occupational standing. It shows a marked difference between the effects of parental occupation on the labor market position of young blacks and whites and older blacks and whites. Among the older men, the background variable has a much smaller and generally negligible effect. This is consistent with the traditional finding in the sociology literature (Duncan 1968) that parental status has a more modest effect on the attainment of blacks than on the attainment of whites. Among younger men, by contrast, the coefficients on the background variable for blacks are sizable and significant in all of the calculations. In the hourly earnings regressions and in the occupational status regressions the coefficients in the black equations are roughly comparable in magnitude to the coefficients obtained in the equations for whites. In the annual regressions, however, the coefficient on black parental occupation is still noticeably smaller than the coefficient on white parental occupation.

**Table 8.8** **Regression Coefficients and Standard Errors of Estimates for the Impact of the Log of Parental Occupational Status on the Log of Weekly Earnings, Annual Earnings, and Occupational Status for Young and Older Men, by Race, 1969**

| Dependent Variable and Group | Black | White |
|---|---|---|
| Hourly earnings | | |
| Young men | .17(.09) | .16(.05) |
| Older men | .02(.05) | .22(.03) |
| Annual earnings | | |
| Young men | .09(.03) | .18(.02) |
| Older men | .04(.03) | .13(.02) |
| Index of occupational status | | |
| Young men | .20(.07) | .23(.04) |
| Older men | .03(.06) | .24(.03) |

Note: The regressions include the following control variables: 3 dummy variables for region of residence at age 14; 5 dummy variables for type of place of residence at age 14; dummy variable for living in one parent/female home at age 14. These variables are described in table 8.4.
In addition the regressions include measures of years of work experience: for younger men, years of experience are determined by an algorithm based on weeks worked in each year since 1966 and on years since first postschool job; for older men, years of tenure with current employer and years since leaving school minus 5 are used to measure experience.
Parental occupational status is measured as the log of income in the parents' three-digit occupation as described in the text.
The sample sizes are: young black men, 634; young white men, 1,607; older black men, 947; older white men, 2,131. The samples are restricted to persons not enrolled in school in 1969 and reporting data for all of the variables in the regressions.
Index of occupational status is measured by the log of the median income in the individual's three-digit occupation in 1969, as reported in the U.S. Bureau of the Census (1973c), tables 16 and 17.

As there are no apparent life cycle changes in the effect of family background factors on the attainment of individuals,[18] the greater coefficient obtained for young blacks would appear to reflect a trend over time in social mobility patterns, with young black men from more advantaged homes making greater economic advances in the job market than those from less advantaged homes. Presumably as a result of the decline in market discrimination, the pattern of social mobility among blacks seems to have converged toward that found among whites. Since Duncan found little effect of background on black labor market attainment in 1962, moreover, *the change appears to have occurred in the period of intense antibias activity and of sizable black economic advance relative to whites*.[19] In contrast to the past, when "stratification within the Negro population (was) less severe than in the white" (Duncan 1968: 88), what sociologists call "intergenerational status transmission" has become quite similar for young persons in the late 1960s.

### 8.2.6 Background versus "Residual Discrimination"

Given that family background has become more important in black economic attainment and that black-white economic differences have diminished, differences in the background resources of blacks and whites can be expected to explain a greater fraction, and "residual market discrimination" to explain a lesser fraction, of racial economic differences now than in the past.[20]

Table 8.9 presents calculations which confirm both of these expectations. Row 1 gives estimates of the log differences in occupational position, weekly earnings, and yearly earnings of young and older black and white men, adjusted for differences in years of experience. Rows 2 and 3 estimate the percentage contribution of differences in background variables to the differences in labor market position using the procedure described on p. 00—that is, by multiplying differences in the mean value of the explanatory variables by the regression coefficient estimate of their impact on attainment.

The effect of differences in parental occupational position on differences in labor market position are given in row 2 using the regression coefficients from table 8.8. The effect of differences in a "full" set of prelabor market variables—parental occupational position, region and type of place of residence, and years of schooling—are given in row 3, using coefficients obtained by including the person's years of schooling in the regressions of table 8.8. Row 4 estimates the extent of "residual" discrimination, defined as the log differential not attributed to differences in the background variables and in schooling. Columns 1–6 use regression coefficients from attainment equations for blacks while columns 7–12 use regression coefficients from attainment equations for whites.

**Table 8.9** **Estimated Percentage Contributions of Parental Occupational Status and Prelabor Market Factors to Economic Differences between Blacks and Whites and Estimated Residual Market Discrimination, Young and Older Men, 1969[a]**

| | Log Difference between Blacks and Whites, Adjusted for Years of Work Experience[b] (1) | Percentage of Differences Due to Differences in Parental Occupational Status[c] (2) | Percentage of Differences Due to Differences in Prelabor Market Factors[d] | | | | Residual Market Discrimination (7) |
|---|---|---|---|---|---|---|---|
| | | | Parental Occupational Status (3) | Region and Type of Place of Residence (4) | Years of Schooling (5) | Prelabor Market Factors (3+4+5) (6) | |
| | Based on regression equations for black workers | | | | | | |
| 1. Index of occupational position | | | | | | | |
| Young men | .20 | 40 | 25 | 15 | 40 | 80 | .04 |
| Older men | .30 | 13 | 7 | 17 | 27 | 51 | .15 |
| 2. Log of weekly earnings | | | | | | | |
| Young men | .23 | 36 | 28 | 36 | 24 | 88 | .03 |
| Older men | .62 | 3 | −3 | 31 | 24 | 52 | .32 |
| 3. Log of yearly earnings | | | | | | | |
| Young men | .44 | 39 | 27 | 34 | 11 | 72 | .12 |
| Older men | .66 | 4 | −5 | 36 | 18 | 49 | .34 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Based on regression equations for white workers | | | | | | |
| 1. Index of occupational position | | | | | | | |
| Young men | .19 | 79 | 47 | 53 | 11 | 111 | −.02 |
| Older men | .30 | 47 | 17 | 43 | 10 | 70 | .09 |
| 2. Log of weekly earnings | | | | | | | |
| Young men | .27 | 41 | 26 | 33 | 30 | 89 | .03 |
| Older men | .62 | 37 | 13 | 40 | 11 | 64 | .22 |
| 3. Log of yearly earnings | | | | | | | |
| Young men | .41 | 49 | 22 | 39 | 10 | 71 | .12 |
| Older men | .68 | 37 | 12 | 41 | 10 | 63 | .25 |

[a]Estimates of the contributions of factors to the observed differences obtained by the following procedure: Let $\hat{a}_i$ = regression coefficient for the effect of variable $i$ on the dependent variable; $\Delta x_i$ = difference between the mean value of variable $i$ for blacks and the mean value of variable $i$ for whites. Then the percentage contribution of the $ith$ variable is $\hat{a}_i \Delta x_i$/data in column 1.

[b]The figures adjusted for years of experience differ for young blacks and young whites because of different regression coefficients in the equations for blacks and whites and sizable differences in years of experience. One reason for the different years of experience is differences in age: sixty-two percent of blacks in the sample are below twenty-three years of age compared with fifty percent of whites. Another reason is that blacks experience more instability in employment than whites, thereby accruing less experience. Years of experience have a large effect on annual earnings but not on hourly earnings or on the index of occupational standing.

[c]Based on regression coefficients presented in table 8.8.

[d]Based on regression coefficients obtained by adding years of schooling of the individual to the regressions of table 8.8.

What stands out in the table is the dominant role of premarket factors in accounting for black-white economic differentials among the young, compared with the modest role of these variables in explaining economic differences among older men. With the regression weights from the attainment equations for blacks, differences in parental occupation account for forty percent of the difference in occupational attainment between young black and white men, for thirty-six percent of the difference in hourly earnings, and for thirty-nine percent of the difference in yearly earnings. By comparison, differences in parental occupational attainment make only a negligible contribution to differences in the labor market position of older black and white men. With the regression weights from the white attainment equations, the results are less dramatic but similar.

The calculations for the full set of prelabor market factors show that, as expected, differences in these factors have become more important deterrents to the attainment of black-white economic parity among the young than residual market discrimination. The black attainment equations attribute 72%–88% of the differences among the young to differences in prelabor market factors, the white attainment equations 71%–111%. By contrast, in the older male sample, with either set of the attainment equations, the contribution of background factors to economic differences is noticeably lower.

The final column of the table records the "residual" difference in the dependent variables which may be attributable to market discrimination. It shows strikingly lower discriminatory differences between young blacks and whites than between older blacks and whites, with virtually no differentials among the young in occupational position or in weekly earnings. Large discriminatory differentials do however remain in yearly earnings, which highlights the importance of differences in time worked in causing black-white economic differences among the young.

We conclude that, while residual market discrimination has not disappeared, the changing job market of the 1960s reduced the importance of residual discrimination in economic inequality between young blacks and whites and made disadvantages in prelabor market factors, particularly family background resources, a more important cause of economic inequality. The decline in the importance of discriminatory differences and heightened role of family background raises a host of new questions for policy regarding black-white economic differences. What responsibility should the society take for helping blacks to overcome long-run disadvantaged backgrounds? Since part of the background disadvantage of blacks results from past discrimination, do they merit special compensatory or redistributive programs? If the developments delineated in this section persist, these issues may come to the fore in the debate on how to eliminate economic differences between blacks and whites.

## 8.3 Why?

What factors underlie the improvement in the relative economic position of black workers found in this and in other studies?

From the perspective of the basic economic analysis of demand and supply, the observed increases in the relative income and occupational status of blacks could be due, ceterus paribus, either to increased demand for black labor relative to white labor or to shifts in the supply of black labor relative to white labor.

On the demand side, the principal force likely to have increased demand for black labor was the intense antibias activity which followed the Civil Rights Act of 1964 and which caused significant changes in corporate recruitment and personnel policies. Prior to the act, there was no federal law against discrimination and no serious effort to increase minority or female employment in sectors of severe underrepresentation. Beginning in March 1965, the Equal Employment Opportunities Commission (EEOC), which was set up by Title VII of the act, became increasingly active; EEOC annual reports show that expenditures rose from modest amounts to $55 million by 1975, while cases handled increased from about nine thousand in 1966 to seventy-seven thousand in 1975. Following Executive Order 11246, the Office of Federal Contract Compliance (OFCC) and related agencies exerted considerable pressure on enterprises to develop affirmative action programs to increase minority and female employment. Most important, from the mid-1960s to the early 1970s federal courts interpreted the law in ways that tended to favor active equal employment and affirmative action programs. In the mid-1970s, however, a change in the tone of decisions is evident.[21] At the state level, the activities of state fair employment practice commissions (FEPC) grew markedly, in part because of EEOC deferral of cases to state agencies: state FEPC expenditures grew from about $2 million in 1964 to about $34 million in 1975 (see Freeman 1977a).

On the supply side, two very different sets of factors have been suggested as contributing to the improved economic status of blacks. Some have cited increases in the quality of schooling afforded blacks, which have been immense over the long run (Welch and Smith 1975). While there is no denying the long-term improvement in the relative quality of black schooling (see Welch 1973; Freeman 1974a), many have argued that changes in quality of schooling have made only a modest contribution to the post-1964 changes in black earnings (Kneisser, Padilla, and Polachek 1978a b; Akin and Garfinkle 1980; Padilla, n.d.; Levin 1978; Freeman 1977a). Others have hypothesized that the gains in black economic status are the result of a decline in black labor force participation rates allegedly due to expanded social programs, which reduced the relative quantity of black labor and removed those with especially low

earnings from the work force (Butler and Heckman 1977). While there is no denying the decline in black participation rates, the evidence does not support the argument that welfare-induced changes in the relative supply of black labor caused relative earnings to rise. First, the black population has increased more rapidly than the white population, so that the ratio of nonwhite workers to white workers has *increased*, rather than decreased since 1964,[22] which would reduce rather than increase relative earnings by causing a movement down rather than up the demand curve. Second, there is no evidence that the lower tail of the black earnings distribution diminished,[23] as would be expected if the earnings increase were due to withdrawal of low earners, and no evidence that labor force withdrawal is closely linked to expansion of welfare payments over time.[24]

This section shows that the evidence on the timing and incidence of gains, while not ruling out potentially important supply side effects, are consistent with an explanation of black economic gains post-1964 that stresses the role of national antibias activity in raising the demand for black labor. Because of the problems in interpreting limited time series, which underlies controversies over the causal forces at work, the section also reviews evidence on the effect of the law on company personnel and employment practices. This evidence makes it difficult to gainsay the impact of federal equal opportunity and affirmative action pressures on employer behavior.

### 8.3.1 Evidence on Timing

Since the national antibias effort was initiated following passage of Title VII of the Civil Rights Act of 1964, a sine qua non for any case to be made regarding the impact of that effort is that increases in the ratio of black to white economic position be greater post-1964 than prior to 1964. Such a pattern was found in tables 8.1 and 8.2, but must be viewed solely as suggestive. There may be other correlated patterns of change that commenced in the mid 1960s. To see whether there is, in fact, a statistically significant post-1964 improvement in the relative economic position of blacks which could be attributed to changes in demand or whether the post-1964 changes are due to other measurable factors, measures of the relative economic position of blacks were regressed on an indicator of federal antibias activity and several other factors that might cause the relative economic position of blacks to improve (see table 8.10). The dependent variables, measured in logarithmic form, are: the median wage and salary earnings of nonwhite workers relative to white workers from 1948 to 1975; the median wage and salary earnings of nonwhite workers employed full-time year-round to the earnings of comparable white workers from 1955 to 1975; the ratio of the fixed weight index of the occupational position of nonwhite workers to the index for white workers from 1958 to 1975.

The explanatory variables are:

TIME, a time trend which takes the value 1 in the first year of the regression and increases by one unit in each succeeding year. This variable is designed to control for overall trends in the relative earnings of nonwhites.

CYCLE, a business cycle indicator which is obtained as the deviation of the log of real gross national product from its trend level.

EEO, real cumulated expenditures by the equal employment opportunity agency per nonwhite worker, measured in log units, with the value 1 used for the period prior to the Civil Rights Act of 1964, and the value of cumulated real spending per nonwhite plus 1 in later periods.[25] This variable is essentially a post-1964 trend variable, which has the value 0 until 1965, when the act became effective and which trends upward thereafter. It is to be viewed as an indicator of the shift in demand for the period and *not* as a measure of the effectiveness of the EEOC or of any specific governmental activity. If in the future the pattern of demand should change owing, say, to court rulings reducing the efficacy of the affirmative action effort, a more complex variable would be required.

RED, the ratio of the median years of schooling of nonwhite workers to the median years of schooling of white workers, entered to control for the increased educational attainment of nonwhite relative to white workers. Because this variable has a very strong trend, however, its effect cannot be readily distingusihed from TIME. It is entered only in a limited number of equations.

REMP, the log of the ratio of nonwhite employment to white employment, which is designed to test for the possibility that changes in relative earnings are due to movements along a relative demand schedule as a result of shifts in supply. Since relative employment is endogenous, the coefficient on REMP is estimated by instrumental variables, with the following instruments: the ratio of the nonwhite population to the white population and the two social welfare programs which are alleged to reduce supply (Butler and Heckman 1977): Aid to Families of Dependent Children (AFDC) payments and unemployment compensation.

RPART, the log of the ratio of the nonwhite participation rate to the white participation rate. This variable is entered to test the possibility that the reduction of the ratio of nonwhite to white participation rates raised the ratio of nonwhite earnings relative to white earnings by removing nonwhites with low earnings from the work force. Since relative participation rates are endogenous, the effect is estimated by instrumental variables, with the two social welfare program measures used as instruments.

Regressions for men are given at the left-hand side of the table, while regressions for women are presented at the right-hand side. All of the variables except the relative employment and participation rates are the

**Table 8.10** **Regression Coefficients and Standard Errors for the Effect of Variables on the Log of the Ratio of Nonwhite to White Earnings and Occupational Position, 1948–75[a]**

| Measure of Relative Economic Position | Male Workers | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Constant | TIME | CYCLE[b] | EEO | RED | REMP[c] | RPART[d] | $R^2$ | DW |
| 1. Median wages & salaries, 1948–75 | −.55 | −.001 (.002) | .42 (.23) | .08 (.01) | | | | .83 | 2.32 |
| 2. Median wages & salaries of year-round and full-time workers, 1955–75 | −.49 | .003 (.002) | −.40 (.17) | .03 (.01) | | | | .87 | 2.19 |
| 3. Occupation index, 1958–75 | −.33 | .003 (.002) | .10 (.05) | .02 (.004) | .08 (.14) | | | .99 | 2.31 |
| 4. Median wages & salaries, 1948–75 | 1.98 | .005 (.005) | .33 (.30) | .12 (.03) | .84 (.80) | −.97 (.74) | | .82 | 2.45 |
| 5. Median wages & salaries, 1948–75 | −.25 | .004 (.003) | .42 (.30) | .12 (.06) | −.48 (.55) | | 1.07 (2.52) | .82 | 2.41 |
| 6. Median wages & salaries of year-round and full-time workers, 1955–75 | 2.24 | −.011 (.011) | −.92 (.38) | .04 (.02) | .49 (.58) | 1.28 (.91) | | .88 | 2.05 |
| 7. Median wages & salaries of year-round and full-time workers, 1955–75 | −.95 | −.006 (.009) | −.82 (.39) | .07 (.05) | .81 (.74) | | 2.47 (2.33) | .87 | 1.99 |

| Female Workers | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Constant | TIME | CYCLE[b] | EEO | RED | REMP[c] | RPART[d] | $R^2$ | DW |
| −.96 | .022 | .34 | .13 | | | | .97 | 1.85 |
| | (.002) | (.32) | (.02) | | | | | |
| −.70 | .019 | −.48 | .05 | | | | .96 | 1.30 |
| | (.004) | (.27) | (.02) | | | | | |
| −.97 | −.001 | .12 | .07 | .66 | | | .99+ | 2.03 |
| | (.005) | (.10) | (.01) | (.25) | | | | |
| 1.09 | .025 | .52 | .12 | .008 | 1.12 | | .98 | 1.89 |
| | (.016) | (.36) | (.02) | (.81) | (.66) | | | |
| −1.66 | −.014 | −.011 | .12 | 1.78 | | −.97 | .98 | 2.22 |
| | (.025) | (.46) | (.04) | (1.22) | | (1.62) | | |
| −6.25 | .055 | −.20 | −.08 | −1.26 | −3.29 | | .93 | 1.70 |
| | (.056) | (.65) | (.17) | (2.12) | (3.85) | | | |
| −1.68 | .030 | −.71 | .21 | −.08 | | 3.24 | .97 | 2.00 |
| | (.025) | (.39) | (.14) | (.99) | | (2.85) | | |

Source: See appendix.

[a]Dependent variables are the log of the relative economic status of nonwhites to whites.

[b]CYCLE obtained as residual from regression: $GNP = 6.14 + \underset{(.001)}{.035T}$; $R^2 = .99$ where GNP = log of GNP in 1972 dollars.

[c]Log ratio of nonwhite to white employment, instrumented on log ratio of nonwhite to white population 16 and over (male or female); AFDC payment; unemployment compensation per person.

[d]Log ratio of nonwhite to white labor participation rates instrumented on AFDC payment; unemployment compensation per person.

same for the two groups; those variables relate to men or women, respectively.

Rows 1–3 record the results of least-squares regressions of the three measures of relative economic position on TIME, CYCLE, and EEO. If the post-1964 changes in the relative economic position of blacks were due to past trends or cyclical changes rather than to post-1964 antibias activity, the coefficient on the EEO variable would be insignificant while the other variables would dominate the calculations. If, by contrast, post-1964 changes in the relative economic position of blacks were in fact due to post-1964 antibias activity, the coefficient on the EEO variable would be significant and positive.

The regressions comparing the economic position of nonwhite men with that of white men accord the EEO indicator a positive significant coefficient in each case. The regressions comparing the economic position of nonwhite with white women tell a similar story for women, with the EEO variable obtaining a highly significant coefficient on the median wages and salaries of all workers and on the index of occupational position but a much smaller and less significant coefficient in the regression for the year-round and full-time workers. Because the ratio of the earnings of nonwhite women working year-round and full-time to the earnings of white women working year-round and full-time became relatively high in the 1960s, the small estimated effect of EEO on year-round and full-time relative earnings could result from the particular functional form used, which requires that the EEO variable (and other variables) have the same effect on relative earnings even when the potential asymptote of equality is approached. An alternative, more appropriate functional form when earnings ratios approach 1.00 is the logistic or log odds ratio, which allows for differential effects of variables depending on the level of the nonwhite-white differential. Regressing the log odds ratio of nonwhite to white earnings of year-round and full-time women on the independent variables yields:

Log odds ratio of Median Wages & Salaries of Year-Round and Full-Time Women, 1955–1973

$$= -.11 + .036\text{TIME} - 9.34\text{CYCLE} + .61\ \text{EEO}$$
$$\qquad (.025) \qquad (1.78) \qquad (.14)$$

$$R^2 = .94$$
$$d.w. = 1.35$$

With the logit specification, the $t$-statistic on the EEO variable is 5.0, compared with the value of 2.2 in row 2. The reason for the increased significance of the EEO variable is that the logit form requires, all else the

same, slackened growth in the ratio of earnings as it rises toward unity and "attributes" the continued increase in the ratio in the 1970s to the EEO variable. Comparable regressions with log odds ratio of other dependent variables show that the logit form generally yields stronger results on the EEO variable, presumably for the same reasons.

An additional experiment is to compare, as some civil rights activists have suggested, the position of nonwhite women with that of white men rather than with another group protected by the law, white women. Regressions of log (earnings of nonwhite women/earnings of white men) on EEO, TIME, and CYCLE, yield the following regression coefficients and standard errors on EEO: for median wages and salaries, .16(.02); for median salaries of year-round and full-time workers, .07(.02).

The possible effect of changes in relative supplies due to expanded social welfare programs on relative earnings is estimated in rows 4–7, using two-stage least-square regressions, along lines set out by Butler and Heckman.[26] Rows 4 and 6 examine the effect of the relative employment of nonwhite workers (REMP) on relative earnings. If the increased relative earnings of blacks are due largely to movements up a demand curve caused by expanded welfare programs rather than to increased demand for black labor post 1964, the relative employment measure should obtain a negative coefficient in the regressions and "knock out" the EEO indicator. Rows 5 and 7 examine the effect of the ratio of nonwhite to white participation rates (RPART) on relative earnings. If the main reason for increased median earnings of blacks was the removal of low wage earners from the working population, the relative participation variable would obtain a negative coefficient in the regression and "knock out" the EEO indicator. All of the calculations include the ratio of nonwhite to white median years of education to make sure that the changes under study are not due to increased demand for black labor owing to increased education. The effects of relative employment and relative participation rates are estimated, as noted previously, by instrumental variables. Given the limited variation in the time series, however, there is good reason to be leary of the regression estimates, as they are making great demands on weak data.

The resultant calculations for male workers tend to support the demand shift hypothesis and to reject the supply shift explanation of improvements in the ratio of black to white earnings. In all of the calculations the EEO variable obtains a positive sign, while the coefficients on relative employment or participation have insignificant positive signs in three or four cases and an insignificant negative sign in one case. Relative years of schooling, which trends upward over time, has an insignificant positive or negative coefficient in the regressions. The positive signs on REMP or RPART in three out of four cases do not, of course, mean

either that the labor demand curve is wrongly shaped or that low wage workers were not withdrawing from the labor force, but rather that these factors have too weak an effect in the time series to be discerned. The data reject the model based on supply shifts.

For women, the picture is more complex. With relative median wages and salaries as the dependent variable in rows 4 and 5, we find that relative employment has a positive coefficient while the relative participation rates obtain a negative insignificant coefficient, which again rejects the supply shift story. By contrast, the coefficient on the EEO variable remains sizable and significant. When the relative median wages and salaries of year-round and full-time workers are the dependent variable, however, results are mixed: the relative employment variable obtains the expected negative coefficient and "knocks out" the EEO variable, while the relative participation variable obtains a positive sign and does not remove a significant EEO effect. Since the ratio of the earnings of year-round and full-time workers is close to unity, however, the result on the relative employment term could reflect improper functional form. Regressing the logit of relative earnings of year-round and full-time workers on the variables in row 6 yields a positive coefficient on EEO and a positive coefficient on REMP.[27]

All told, with the exception of the regression for females in row 6, the calculations show that the supply side factors neither explain the post-1964 gains nor eliminate the indicator of post-1964 equal employment activity from the regressions.[28]

The time series data in table 8.10 can, it should be stressed, be analyzed in other ways. In earlier work Vroman (1974) and Masters (1975) used simple post-1964 trend variables to pick up the presumed shift in demand for black labor following the initiation of EEO activity and obtained positive coefficients on their post-1964 variable. Similar results in the post-1964 trend can be obtained using the data underlying table 8.10. Since the EEO indicator is essentially a post-1964 trend, results with the trend measure must, of necessity, give similar statistical findings.[29] Burstein has developed a more complex model, including measures of changes in taste, and found that his additional variables also left a sizable positive coefficient to a measure of post-1964 EEO activity.

While it is still possible that some unmeasured factor that changed sharply after 1964 is, in fact, the true causal force, it is difficult to say what that other factor might be. In the absence of contrary evidence, the data appear consistent with a demand side explanation of black economic gains post 1964. But as the time series really consists of only a single fact—namely, that black economic gains were more rapid after 1964 when serious federal antibias activity commenced than before 1964—other types of evidence should also be examined to minimize the chances of misinterpreting the causes of observed changes.

### 8.3.2 Evidence on Regional Incomes

Because time series changes in the ratio of nonwhite to white incomes by region have occasionally been viewed as running counter to a demand shift explanation of black economic progress post 1964, it is of some value to examine regional patterns of change. While the regional evidence is not one-sided, regressions comparable with those in table 8.10 suggest that the regional changes are also broadly consistent with the demand hypothesis. For male workers, the regressions given in figure 8.1 show that the EEO indicator has a very sizable positive coefficient in the South, where discrimination was most severe, and obtains smaller positive coefficients in the Northeast and north central areas. The data for the West (where less than 10 percent of blacks are located) run counter to the demand hypothesis.

For women, the picture is quite different, though for an interesting reason. In the South, the calculations for the median incomes of all women yield a large significant positive EEO coefficient, but in the Northeast, north central region, and West, the coefficients on the EEO variable for earnings are negative. In each of these regions, however, the ratio of nonwhite to white median incomes for women *exceeded* unity long before 1964: the ratio exceeded unity in 1956 in the Northeast; in 1959 in the north central region; and in 1961 in the West. *As measured by these data, there was no nonwhite-white income inequality among women to be remedied by EEO*, and thus no reason to expect a positive coefficient on the variable. For the two regions where sufficient data exist on the incomes of year-round and full-time workers to merit investigation, the South and the Northeast, the EEO variable obtains a significant positive coefficient. The rejection of the demand hypothesis when the nonwhite/white income ratio exceeds unity and "acceptance" of the hypothesis when the nonwhite/white income ratio is below unity, and the strong EEO effects in the South where discrimination has been most severe, lend additional support to the hypothesis. These results suggest that the positive coefficients on EEO do in fact reflect declines in discrimination rather than some correlated general shift in demand for black labor.

### 8.3.3 Evidence on Incidence

One additional type of evidence which can be used to evaluate alternative explanations of the post-1964 economic gains of blacks is information on which groups of black workers made the most significant progress. The analysis in this and in other studies indicates that the largest relative economic gains were won by young black men, by highly educated and skilled black men, by those from more advantaged family backgrounds, and by black women. This pattern of incidence is consistent with the demand shift hypothesis.

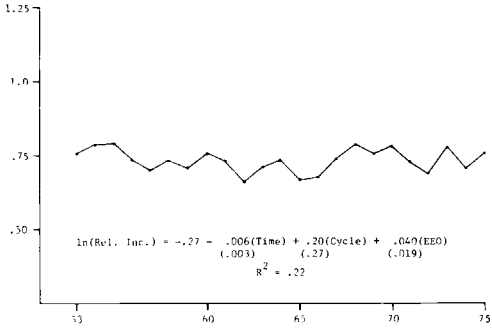


Chart 1: Northeast Relative Nonwhite/White Median Incomes - Male

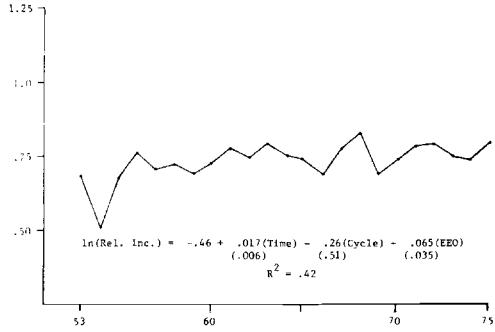


Chart 4: Western Relative Nonwhite/White Median Incomes - Male

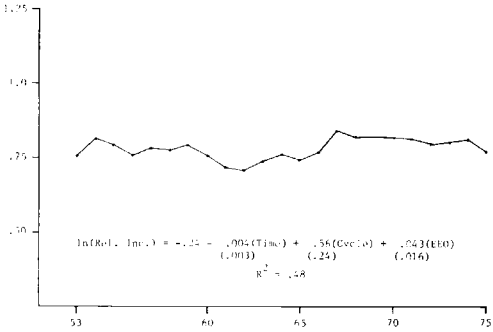


Chart 2: Northcentral Relative Nonwhite/White Median Incomes - Male

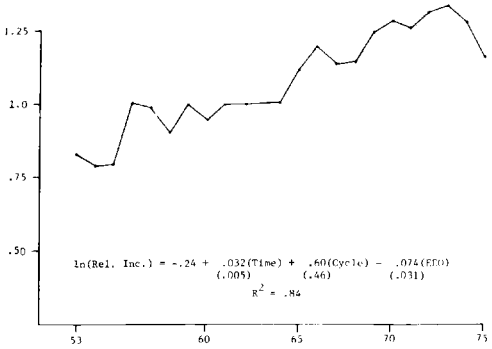


Chart 5: Northeastern Nonwhite/White Median Incomes - Female

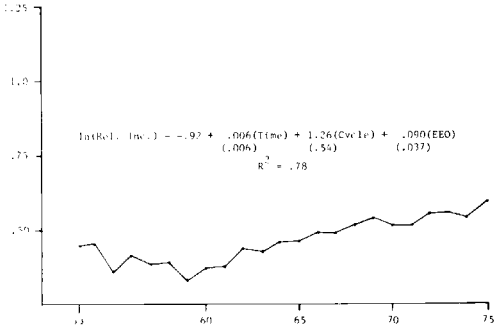


Chart 3: Southern Relative Nonwhite/White Median Incomes - Male

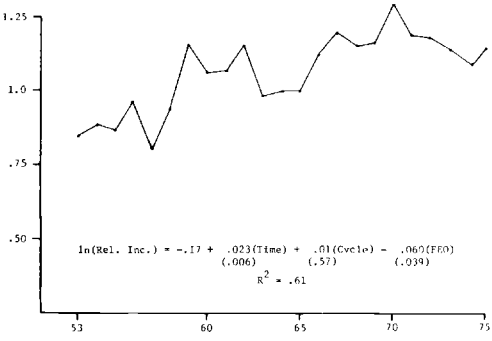


Chart 6: Northcentral Relative Nonwhite/White Median Incomes - Female

**Figure 8.1** Ratio of Nonwhite to White Median Incomes

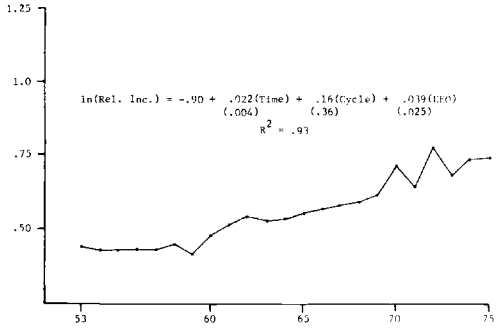


Chart 7: Southern Relative Nonwhite/White Median Incomes - Female

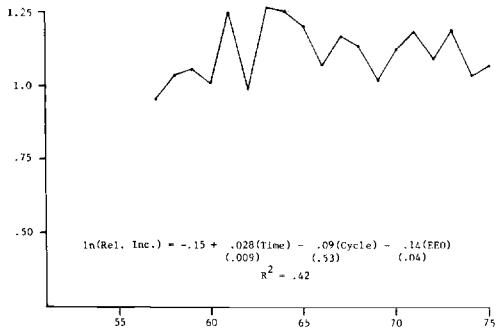


Chart 8: Western Relative Nonwhite/White Relative Incomes - Female

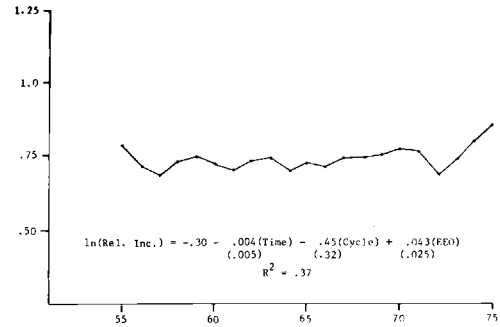


Chart 9: Northeast Relative Nonwhite/White Median Incomes of Full-Time, Year-Round Male Workers

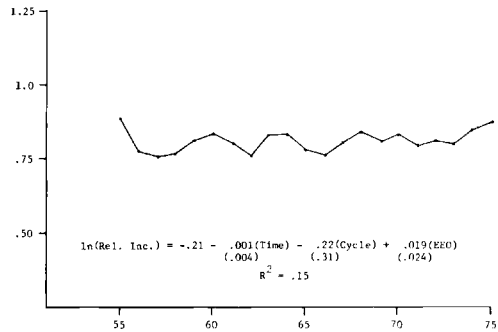


Chart 10: Northcentral Relative Nonwhite/White Median Incomes of Full-Time, Year-Round Male Workers

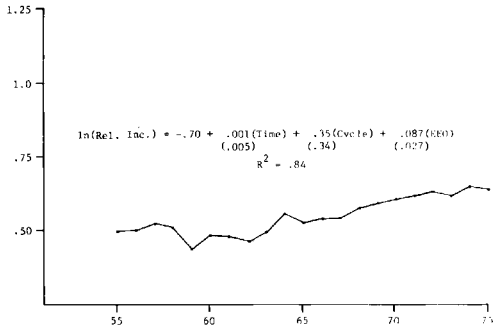


Chart 11: Southern Relative Nonwhite/White Median Income of Full-Time, Year-Round Male Workers

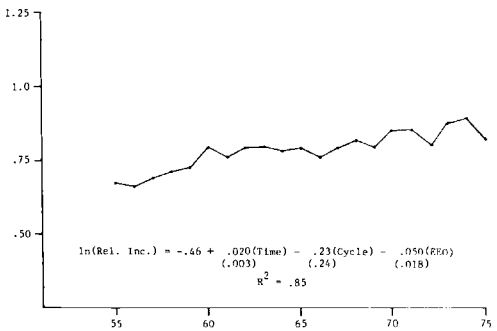


Chart 12: Western Relative Nonwhite/White Median Incomes of Full-Time, Year-Round Male Workers

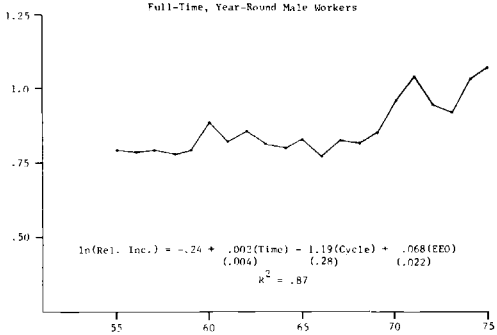


Chart 13: Northeastern Relative Nonwhite/White Median Incomes of Full-Time, Year-Round Female Workers

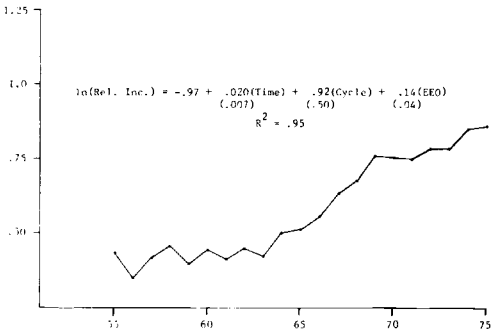


Chart 14: Southern Relative Nonwhite/White Median Incomes of Full-Time, Year-Round Female Workers

Changes in demand for black labor due to declines in discrimination or other factors can be expected to have differential effects on groups of workers depending on their position in the labor market. Larger or more immediate impacts are likely for groups of workers with flat age-earnings profiles, such as women, as opposed to workers whose earnings depend greatly on investment in skill and cumulated experience, such as older men; for groups of workers just entering the job market, such as young men; and for those in relatively short supply, such as the more skilled and educated. Given the length of training required for higher-level jobs, the supply of black workers to those jobs is likely to be inelastic, so that increases in demand are likely to yield greater income increases than in lower-skill occupations where labor supply is more elastic. Finally, to the extent that affirmative action pressures are concentrated in occupations where blacks are relatively underrepresented, the actual shifts in demand are likely to be more pronounced in high-level occupations.

The tendency for young black men from more-advantaged homes to make greater progress in the market than those from less-advantaged backgrounds can be interpreted as the result of both demand and supply forces. On the demand side, if we assume that the prime impediment to "normal" social mobility patterns in the black community was the severe discrimination against highly educated and skilled blacks, especially the lack of opportunities for managerial and professional employment in national businesses, the change in demand could be expected to create social mobility patterns comparable to those in the white community. On the supply side, young persons from the more-advantaged homes are presumably more likely to have the educational resources and personal skills which make them more adept at responding to new opportunities than those from less-advantaged homes.

Since the number of young and educated or skilled black workers has increased in the period under study, it is difficult to explain the incidence of economic gains in terms of an autonomous decline in supply. Improvements in the quality of black schooling, on the other hand, may have played a role in the rate of advance. Among college students, for example, the increased opportunities for young blacks in the higher educational system and in the job market led many to enroll in primarily white national colleges and universities, as opposed to the traditional black colleges of the South. Since the national institutions offer higher-quality education than the primarily black colleges, there was undoubtably an improvement in the quality of black college graduates in the period. This improvement was in large part induced by the same civil rights and antibias activities as the changes in the job market and should not be viewed as an autonomous development (Freeman 1977a, chapter 3).

### 8.3.4 Evidence from Personnel Departments and Studies of Company Employment

The most telling evidence on the effect of antibias activities on demand for black labor and thus on black economic progress post 1964 comes from studies of the personnel and employment practices of individual companies. Such evidence is critical in evaluating the role of demand forces in black economic progress post 1964 for two reasons. First, the appropriate statistical materials, while useful, do not by themselves provide information on the actual activities of employers, and thus permit alternative interpretations, as evidenced in the controversy over causality. Second, in the absence of widespread changes in company personnel practices, it is difficult to see how antidiscrimination policies could cause sizable aggregative effects, given the small number of workers likely to benefit in specific antidiscrimination cases.

The evidence that personnel policies have, in fact, been greatly altered by federal equal employment opportunity and affirmative action pressures is overwhelming. In the market for young college graduates there was a remarkable upsurge in corporate recruitment visits to the traditionally black colleges of the South, with accompanying hiring of graduates whose previous opportunities were limited to segregated professional services, especially teaching. In 1960 almost no firms recruited from the traditionally black southern colleges; in 1965 a sampling of colleges averaged 50 recruitees per school; in 1970, they averaged 277 recruitees (Freeman 1977a: 35). A 1976 Bureau of National Affairs (BNA) survey of personnel and industrial relations executives documents the far-reaching impact of the federal equal employment pressures on corporate labor market behavior. According to the BNA (1976: 1) "Equal Employment Opportunity (EEO) Programs complete with Affirmative Action Plans (AAP) are viewed as 'a fact of life' by nearly all employers, and the personnel function has changed in a variety of ways as a result of the government's efforts to enforce the employment provisions of the act." As table 8.11 documents, in the BNA sample eighty-six percent of the companies have formal EEO programs: ninety-six percent of those subject to OFCC regulations have AAP's; sixty-three percent have been investigated under Title VII. Most of the firms in the survey report changing their selection procedures (line 3) and introducing special recruiting programs (line 4) for minority workers. One third of the companies have made EEO achievements a criterion in performance appraisals of managers while many also initiated special training programs. The attention given by personnel officials to the "Uniform Guidelines on Employee Selection Procedures (1978)" and its predecessor

**Table 8.11 Evidence of Changes in Personnel Practices Due to EEO**

| | % of Companies |
|---|---|
| 1. Have *formal* EEO program | 86 |
| Including affirmative action plan (of those subject to OFCC regulations) | 96 |
| 2. Have had investigation or other action under Title VII | 63 |
| 3. Changes in selection procedures for EEO reasons: | 60 |
| Testing procedures | 39 |
| Revised job qualifications | 31 |
| Application forms | 20 |
| Recruiting techniques | 19 |
| 4. Special recruiting programs | |
| For all minority workers | 69 |
| For minorities in professional/managerial positions | 58 |
| 5. Programs to ensure EEO policies are implemented | |
| Communications on EEO policy | 95 |
| Follow-up personnel or EEO office | 85 |
| Training sessions on EEO | 67 |
| Periodic publications of EEO results | 48 |
| EEO achievements included in performance appraisals | 33 |
| 6. Special training programs | |
| For entry-level jobs | 16 |
| For upgrading | 24 |
| For management positions | 16 |

Source: Bureau of National Affairs 1976; lines, 1, 2, table 9, p. 15; line 3, table 3, p. 4; line 4, table 1, p. 2; line 5, table 6, p. 9; line 6, table 5, p. 8.

guidelines; the weekly publication of a fair employment practices newsletter; the creation of the Equal Employment Advisory Council to advise businesses about equal employment issues; and diverse other activities make it clear that *governmental EEO and AAP pressures have revolutionized personnel and employment selection practices*. Unless company personnel policies are totally ineffective or a complete sham, there would appear to be a substantial upward shift in demand for black labor as a result of these changes. This type of evidence provides a strong prior justification for evaluating aggregate data on black economic progress.

Studies of the effect of federal contract compliance pressures on employment of blacks by individual companies also yield results consistent with the demand shift hypothesis. In the earliest such study, Ashenfelter and Heckman (1976) estimated that the federal pressures raised black male employment in specific companies by 12.9 percent. Burman (1973), using different modeling procedures, estimated that OFCC pressure caused an increase in black employment in companies of 5.6 percent. Later work by Heckman and Wolpin (1976) estimated that the federal

pressures raised black male employment in specific companies by 10.4 percent. Only the study by Goldstein and Smith (1976) did not find such effects. Since none of the studies allows for "spillover" effects, by which one company's policies are altered as a result of pressures from a neighboring enterprise, or for the effects of the EEOC, of state fair employment practices commissions, or of court cases, these figures are likely to understate the full effects of the changes induced by such pressures.

In sum, while by no means definitive, or ruling out other factors, the evidence on timing, on incidence, and on company personnel and employment practices suggests that at least some of the post-1964 black gains resulted from increases in demand for black labor induced, at least in part, by programs designed to accomplish that purpose. Imperfect though it is, the evidence indicates that the national antibias effort has contributed to black economic progress. As far as can be told from the data, if Title VII were repealed and equal employment efforts ended, the rate of black advancement would fall.

## 8.4 Conclusion

The improvement in the relative economic position of blacks documented here and elsewhere does not mean that sizable gains have been obtained in all dimensions of economic well-being or that black-white economic differences are likely to disappear in the future.

For one, the relative economic position of the black family did not improve as rapidly as that of individual earners, in large part because of the continued increase in the relative number of female-headed homes.

Second, the enormous prelabor market disadvantage of blacks—the burden of coming from families and neighborhoods of low socioeconomic conditions which fail to provide the background resources that facilitate economic success—remains. In the 1970s black youngsters trail whites greatly in a wide variety of background resources which, discrimination aside, can be expected to produce black-white labor market differences ranging 10–20 percent. These differences cannot, by their nature, be eliminated by antibias policy in the labor market and promise continued racial income inequalities into the foreseeable future.

Third, large groups of black workers—notably, experienced men—have benefited only modestly from the decline in job market discrimination. Because many "male occupations" require considerable investment in skill and cumulated experience and often have lengthy formal seniority promotion ladders, these men face the problem not simply of equal opportunity today but of making up the deficit of education and work skills of the past. Perhaps most striking, the labor force participation rate of experienced black men has declined sharply, perhaps as a result of the growth in female-headed families among blacks, and of Social Security

disability insurance and related welfare programs. Whatever the causal connections, the fact is that the job market position of a large group of black workers has been only modestly improved by reducing market discrimination.

Fourth, the initial gains for young blacks in the period may dissipate over time, if discrimination in promotions reduces their advance in corporate hierarchies. While their lifetime income would still be higher than in the past, the extent of the gains would be less striking than if young blacks maintain their relatively strong starting position compared with young whites.

Fifth, unemployment remains a much more serious problem in the black than in the white community, particularly among younger persons.

The common thread running through most of the problem area—family income and composition, the burden of poor backgrounds, and the lack of sharp progress among older black male workers—is that simply ending job market discrimination and guaranteeing equal employment opportunity have not achieved black-white parity and are unlikely to. Other programs or activities (private as well as or instead of public) are needed.

**Appendix** **Data for Time Series Analysis**

| Year | GNP ($ millions) | CPI (X 100) | AFDC ($ per person) | UNCOMP ($ per person) | EEOC Spending ($1,000s) | Post 1964 Trend |
|---|---|---|---|---|---|---|
| 1948 | 487.700 | 72.1000 | 20.9200 | 19.0300 | 0.0 | 0 |
| 1949 | 490.700 | 71.4000 | 21.7000 | 20.4800 | 0.0 | 0 |
| 1950 | 533.500 | 72.1000 | 20.8500 | 20.7600 | 0.0 | 0 |
| 1951 | 576.500 | 77.8000 | 22.0000 | 21.0900 | 0.0 | 0 |
| 1952 | 598.500 | 79.5000 | 23.4500 | 22.7900 | 0.0 | 0 |
| 1953 | 621.800 | 80.1000 | 23.2000 | 23.5800 | 0.0 | 0 |
| 1954 | 613.700 | 80.5000 | 23.2500 | 24.9300 | 0.0 | 0 |
| 1955 | 654.800 | 80.2000 | 23.5000 | 25.0400 | 0.0 | 0 |
| 1956 | 668.800 | 81.4000 | 24.8000 | 27.0200 | 0.0 | 0 |
| 1957 | 680.900 | 84.3000 | 25.4000 | 28.2100 | 0.0 | 0 |
| 1958 | 679.500 | 86.6000 | 26.6500 | 30.5800 | 0.0 | 0 |
| 1959 | 720.400 | 87.3000 | 27.3000 | 30.4100 | 0.0 | 0 |
| 1960 | 736.800 | 88.7000 | 28.3500 | 32.8200 | 0.0 | 0 |
| 1961 | 755.300 | 89.6000 | 29.4500 | 33.8000 | 0.0 | 0 |
| 1962 | 799.100 | 90.6000 | 29.3000 | 34.5600 | 0.0 | 0 |
| 1963 | 830.700 | 91.7000 | 29.7000 | 35.2700 | 0.0 | 0 |
| 1964 | 874.400 | 92.9000 | 31.5000 | 35.9200 | 0.0 | 0 |
| 1965 | 925.900 | 94.5000 | 32.6500 | 37.1900 | 3,875.00 | 1 |
| 1966 | 981.000 | 97.2000 | 36.2500 | 39.7500 | 4,245.00 | 2 |
| 1967 | 1,007.70 | 100.000 | 39.5000 | 41.2500 | 5,947.50 | 3 |
| 1968 | 1,051.80 | 104.200 | 42.0500 | 43.4300 | 7,887.50 | 4 |
| 1969 | 1,078.80 | 109.800 | 45.1500 | 46.1700 | 11,260.0 | 5 |
| 1970 | 1,075.30 | 116.300 | 49.6500 | 50.3400 | 14,792.5 | 6 |
| 1971 | 1,107.50 | 121.300 | 52.3000 | 54.0200 | 19,592.5 | 7 |
| 1972 | 1,171.10 | 125.300 | 54.1000 | 56.7500 | 27,500.0 | 8 |
| 1973 | 1,233.40 | 133.100 | 56.9500 | 59.0000 | 38,200.0 | 9 |
| 1974 | 1,210.70 | 147.700 | 65.5000 | 64.2400 | 49,740.5 | 10 |
| 1975 | 1,191.70 | 161.200 | 72.4100 | 70.3900 | 61,706.2 | 11 |

| | Labor Force Participation Rates (%) | | | | Population (in thousands) | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | |
| Year | White | Non-white | White | Non-white | White | Non-white | White | Non-white |
| 1948 | 86.5000 | 87.3000 | 31.3000 | 45.6000 | 45,211.5 | 4,784.65 | 47,763.6 | 5,307.02 |
| 1949 | 86.4000 | 87.0000 | 31.8000 | 46.9000 | 45,506.9 | 4,816.09 | 48,305.0 | 5,366.73 |
| 1950 | 86.4000 | 85.9000 | 32.6000 | 46.9000 | 45,871.5 | 4,854.48 | 48,843.6 | 5,358.21 |
| 1951 | 86.5000 | 86.3000 | 33.4000 | 46.3000 | 44,966.5 | 4,758.98 | 49,404.2 | 5,395.25 |
| 1952 | 86.2000 | 86.8000 | 33.6000 | 45.5000 | 44,945.5 | 4,755.76 | 49,976.2 | 5,320.88 |
| 1953 | 86.1000 | 86.2000 | 33.4000 | 43.6000 | 45,893.1 | 4,857.30 | 50,673.7 | 5,954.13 |
| 1954 | 85.6000 | 85.2000 | 33.3000 | 46.1000 | 46,448.6 | 4,933.10 | 51,222.2 | 5,685.46 |
| 1955 | 85.4000 | 85.0000 | 34.5000 | 46.1000 | 47,067.9 | 5,034.11 | 51,843.5 | 5,776.57 |
| 1956 | 85.6000 | 85.1000 | 35.7000 | 47.3000 | 47,586.4 | 5,122.21 | 52,361.3 | 5,852.01 |
| 1957 | 84.8000 | 84.3000 | 35.7000 | 47.2000 | 48,138.0 | 5,190.98 | 52,997.2 | 5,957.63 |
| 1958 | 84.3000 | 84.0000 | 35.8000 | 48.0000 | 48,730.7 | 5,288.09 | 53,667.6 | 6,052.08 |
| 1959 | 83.8000 | 83.4000 | 36.0000 | 47.7000 | 49,399.8 | 5,383.69 | 54,322.2 | 6,138.36 |
| 1960 | 83.4000 | 83.0000 | 36.5000 | 48.2000 | 50,050.3 | 5,596.38 | 55,263.0 | 6,367.22 |
| 1961 | 83.0000 | 82.2000 | 36.9000 | 48.3000 | 50,585.5 | 5,676.40 | 56,010.8 | 6,492.75 |
| 1962 | 82.1000 | 80.8000 | 36.7000 | 48.0000 | 51,073.1 | 5,777.23 | 56,727.5 | 6,656.25 |
| 1963 | 81.5000 | 80.2000 | 37.2000 | 48.1000 | 52,029.4 | 5,891.52 | 57,596.8 | 6,817.05 |
| 1964 | 81.1000 | 80.0000 | 37.5000 | 48.5000 | 52,889.0 | 5,981.25 | 58,741.3 | 6,977.32 |
| 1965 | 80.8000 | 79.6000 | 38.1000 | 48.6000 | 53,712.9 | 6,099.25 | 59,658.8 | 7,127.57 |
| 1966 | 80.6000 | 79.0000 | 39.2000 | 49.3000 | 54,059.5 | 6,201.26 | 60,464.3 | 7,296.14 |
| 1967 | 80.7000 | 78.5000 | 40.1000 | 49.5000 | 54,574.9 | 6,299.36 | 61,488.8 | 7,482.82 |
| 1968 | 80.4000 | 77.6000 | 40.7000 | 49.3000 | 55,415.4 | 6,416.23 | 62,466.8 | 7,667.34 |
| 1969 | 80.2000 | 76.9000 | 41.8000 | 49.8000 | 56,340.4 | 6,548.76 | 63,622.0 | 7,867.47 |
| 1970 | 80.0000 | 76.5000 | 42.6000 | 49.5000 | 57,516.2 | 6,773.86 | 64,565.7 | 8,111.11 |
| 1971 | 79.6000 | 74.9000 | 42.6000 | 49.2000 | 58,795.2 | 6,969.29 | 65,701.9 | 8,337.39 |
| 1972 | 79.6000 | 73.7000 | 43.2000 | 48.7000 | 60,213.6 | 7,238.80 | 67,194.4 | 8,724.84 |
| 1973 | 79.5000 | 73.8000 | 44.1000 | 49.1000 | 61,192.4 | 7.527.10 | 68,120.2 | 9,103.87 |
| 1974 | 79.4000 | 73.3000 | 45.2000 | 49.1000 | 62,324.9 | 7,776.26 | 69,008.8 | 9,435.84 |
| 1975 | 78.7000 | 71.5000 | 45.9000 | 49.2000 | 63,381.2 | 8,019.58 | 70,159.0 | 9,745.93 |

| | Median Wage & Salary Income ($) | | | | Median Years of Schooling | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | |
| Year | White | Non-White | White | Non-white | White | Non-white | White | Non-white |
| 1948 | 2,711.00 | 1,615.00 | 1,615.00 | 701.000 | 10.4000 | 6.80000 | 12.0000 | 7.70000 |
| 1949 | 2,735.00 | 1,367.00 | 1,615.00 | 654.000 | 10.5000 | 6.90000 | 12.0000 | 7.80000 |
| 1950 | 2,982.00 | 1,828.00 | 1,698.00 | 626.000 | 10.6000 | 7.00000 | 12.0000 | 7.90000 |
| 1951 | 3,345.00 | 2,060.00 | 1,855.00 | 781.000 | 10.7000 | 7.10000 | 12.1000 | 8.00000 |
| 1952 | 3,507.00 | 2,038.00 | 1,976.00 | 814.000 | 10.8000 | 7.20000 | 12.1000 | 8.10000 |
| 1953 | 3,760.00 | 2,233.00 | 2,049.00 | 994.000 | 10.9000 | 7.30000 | 12.1000 | 8.20000 |
| 1954 | 3,754.00 | 2,131.00 | 2,046.00 | 914.000 | 11.1000 | 7.50000 | 12.1000 | 8.40000 |
| 1955 | 3,986.00 | 2,342.00 | 2,065.00 | 894.000 | 11.2000 | 7.60000 | 12.2000 | 8.60000 |
| 1956 | 4,260.00 | 2,396.00 | 2,179.00 | 970.00 | 11.4000 | 7.80000 | 12.2000 | 8.80000 |
| 1957 | 4,396.00 | 2,436.00 | 2,240.00 | 1,019.00 | 11.5000 | 7.90000 | 12.2000 | 9.00000 |
| 1958 | 4,596.00 | 2,652.00 | 2,364.00 | 1,055.00 | 11.7000 | 8.10000 | 12.2000 | 9.20000 |
| 1959 | 4,902.00 | 2,844.00 | 2,422.00 | 1,289.00 | 11.9000 | 8.30000 | 12.2000 | 9.40000 |
| 1960 | 5,137.00 | 3,075.00 | 2,537.00 | 1,276.00 | 12.0000 | 8.50000 | 12.2000 | 9.70000 |
| 1961 | 5,287.00 | 3,015.00 | 2,538.00 | 1,302.00 | 12.0000 | 8.70000 | 12.3000 | 10.1000 |
| 1962 | 5,462.00 | 3,023.00 | 2,630.00 | 1,396.00 | 12.1000 | 9.00000 | 12.3000 | 10.5000 |
| 1963 | 5,663.00 | 3,217.00 | 2,723.00 | 1,448.00 | 12.1000 | 9.30000 | 12.3000 | 10.7000 |
| 1964 | 5,853.00 | 3,426.00 | 2,841.00 | 1,652.00 | 12.2000 | 9.70000 | 12.3000 | 10.8000 |
| 1965 | 6,188.00 | 3,563.00 | 2,994.00 | 1,722.00 | 12.2000 | 10.0000 | 12.3000 | 11.1000 |
| 1966 | 6,510.00 | 3,864.00 | 3,079.00 | 1,981.00 | 12.3000 | 10.0000 | 12.4000 | 11.2000 |
| 1967 | 6,833.00 | 4,369.00 | 3,254.00 | 2,288.00 | 12.3000 | 10.2000 | 12.4000 | 11.5000 |
| 1968 | 7,291.00 | 4,839.00 | 3,465.00 | 2,497.00 | 12.3000 | 10.7000 | 12.4000 | 11.7000 |
| 1969 | 7,859.00 | 5,237.00 | 3,640.00 | 2,884.00 | 12.4000 | 10.8000 | 12.4000 | 11.9000 |
| 1970 | 8,254.00 | 5,485.00 | 3,870.00 | 3,285.00 | 12.4000 | 11.1000 | 12.5000 | 12.1000 |
| 1971 | 8,550.00 | 5,754.00 | 4,046.00 | 3,480.00 | 12.5000 | 11.4000 | 12.5000 | 12.1000 |
| 1972 | 9,190.00 | 6,261.00 | 4,218.00 | 3,944.00 | 12.5000 | 11.7000 | 12.5000 | 12.2000 |
| 1973 | 9,969.00 | 6,927.00 | 4,441.00 | 3,978.00 | 12.5000 | 11.9000 | 12.5000 | 12.3000 |
| 1974 | 10,745.0 | 7,617.00 | 4,863.00 | 4,751.00 | 12.5000 | 12.0000 | 12.5000 | 12.3000 |
| 1975 | 11,296.0 | 8,296.00 | 5,204.00 | 5,062.00 | 12.6000 | 12.1000 | 12.6000 | 12.4000 |

| | Employment (in thousands) | | | | Median Wage & Salary Income Year-Round, Full-Time Workers ($) | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | |
| Year | White | Non-white | White | Non-white | White | Non-white | White | Non-white |
| 1948 | 37,778.0 | 3,935.00 | 14,382.0 | 2,272.00 | — | — | — | — |
| 1949 | 37,116.0 | 3,788.00 | 14,485.0 | 2,318.00 | — | — | — | — |
| 1950 | 37,770.0 | 3,778.00 | 15,079.0 | 2,302.00 | — | — | — | — |
| 1951 | 37,885.0 | 3,906.00 | 15,808.0 | 2,346.00 | — | — | — | — |
| 1952 | 37,774.0 | 3,913.00 | 16,238.0 | 2,283.00 | — | — | — | — |
| 1953 | 38,526.0 | 3,986.00 | 16,400.0 | 2,490.00 | — | — | — | — |
| 1954 | 37,847.0 | 3,772.00 | 16,110.0 | 2,378.00 | — | — | — | — |
| 1955 | 38,721.0 | 3,903.00 | 17,113.0 | 2,438.00 | 4,458.00 | 2,831.00 | 2,870.00 | 1,637.00 |
| 1956 | 39,366.0 | 4,013.00 | 17,899.0 | 2,521.00 | 4,710.00 | 2,912.00 | 2,958.00 | 1,637.00 |
| 1957 | 39,343.0 | 4,013.00 | 18,109.0 | 2,606.00 | 4,950.00 | 3,137.00 | 3,107.00 | 1,866.00 |
| 1958 | 38,592.0 | 3,831.00 | 18,022.0 | 2,591.00 | 5,186.00 | 3,368.00 | 3,225.00 | 1,988.00 |
| 1959 | 39,493.0 | 3,972.00 | 18,512.0 | 2,652.00 | 5,456.00 | 3,339.00 | 3,306.00 | 2,196.00 |
| 1960 | 39,755.0 | 4,148.00 | 19,095.0 | 2,779.00 | 5,662.00 | 3,789.00 | 3,410.00 | 2,372.00 |
| 1961 | 39,588.0 | 4,067.00 | 19,324.0 | 2,765.00 | 5,880.00 | 3,883.00 | 3,480.00 | 2,325.00 |
| 1962 | 40,016.0 | 4,160.00 | 19,682.0 | 2,844.00 | 6,025.00 | 3,799.00 | 3,601.00 | 2,278.00 |
| 1963 | 40,428.0 | 4,229.00 | 20,194.0 | 2,911.00 | 6,277.00 | 4,104.00 | 3,723.00 | 2,368.00 |
| 1964 | 41,114.0 | 4,359.00 | 20,808.0 | 3,024.00 | 6,497.00 | 4,285.00 | 3,859.00 | 2,674.00 |
| 1965 | 41,844.0 | 4,496.00 | 21,601.0 | 3,147.00 | 6,814.00 | 4,367.00 | 3,960.00 | 2,713.00 |
| 1966 | 42,330.0 | 4,588.00 | 22,689.0 | 3,287.00 | 7,164.00 | 4,528.00 | 4,152.00 | 2,949.00 |
| 1967 | 42,834.0 | 4,646.00 | 23,528.0 | 3,366.00 | 7,512.00 | 5,069.00 | 4,394.00 | 3,363.00 |
| 1968 | 43,411.0 | 4,702.00 | 24,340.0 | 3,467.00 | 8,014.00 | 5,603.00 | 4,700.00 | 3,677.00 |
| 1969 | 44,048.0 | 4,770.00 | 25,470.0 | 3,614.00 | 8,876.00 | 6,158.00 | 5,168.00 | 4,231.00 |
| 1970 | 44,157.0 | 4,803.00 | 26.025.0 | 3,642.00 | 9,373.00 | 6,598.00 | 5,490.00 | 4,674.00 |
| 1971 | 44,499.0 | 4,746.00 | 26,217.0 | 3,658.00 | 9,801.00 | 6,928.00 | 5,749.00 | 5,181.00 |
| 1972 | 45,769.0 | 4,861.00 | 27,305.0 | 3,767.00 | 10,786.0 | 7,548.00 | 6,131.00 | 5,320.00 |
| 1973 | 46,830.0 | 5,133.00 | 28,448.0 | 3,999.00 | 11,633.0 | 8,363.00 | 6,544.00 | 5,772.00 |
| 1974 | 47,340.0 | 5,179.00 | 29,281.0 | 4,136.00 | 12,343.0 | 9,082.00 | 7,025.00 | 6,611.00 |
| 1975 | 46,204.0 | 4,947.00 | 29,429.0 | 4,124.00 | 13,216.0 | 10,168.0 | 7,614.00 | 7,505.00 |

Source: 1. Income figures are from U.S. Bureau of the Census (1949–76).
2. Employment and labor force are from U.S. Department of Labor (1978b), with figures for 1948–53 estimated on the basis of reported unemployment rates and civilian labor participation rates assuming that the nonwhite share of the population aged 16 and over remained at its 1954 level.
3. AFDC payments and unemployment compensation obtained from Butler and Heckman (1977).
4. EEOC spending obtained from annual reports of the agency.
5. Median years of schooling obtained from U.S. Department of Labor (1978a), table B-9, with missing years obtained by interpolation and extrapolation.

# Notes

1. The best tests of discrimination would be in areas where individual productivity is measurable, such as athletics. The "productivity" of academic faculty can be at least crudely measured by numbers of publications, as in Freeman (1977a, chapter 8).

2. Some of the published data refer to nonwhites. As about ninety percent of nonwhites are black, it is legitimate to use data on nonwhites to make inferences about the position of blacks. In the test I use the term black except where data specifically refer to nonwhites.

3. With an asymptote of unity, the ratio of the earnings of black workers to the earnings of white workers might be fit by a logistic growth curve:

$$R = 1/(1 - \exp at)$$

where $R$ = ratio of earnings
$t$ = time, to measure trend over time
$a$ = logistic curve parameter

With this functional form, $dR/dt = aR(1 - R)$ so that $dR/dt$ falls as $R$ approaches unity.

4. 1964 is chosen as the year in which to break the data because the Civil Rights of 1964, which made discrimination in employment on the basis of race illegal, became effective on March 1, 1965. Hence 1964 is the appropriate year for estimating before/after effects.

5. If young blacks made less investments in the on-the-job training relative to young whites, black gains in incomes would be overstated. Conversely, if young blacks made greater investments in on-the-job training relative to young whites, black gains would be understated.

6. The ratios are termed approximate because the published survey data are based on small samples.

7. The finding that family background factors do not greatly affect the socioeconomic position of blacks was first developed by Duncan, who used data for 1962, a year just preceding the Civil Rights Act of 1964, and thus providing valuable "before" data for before/after analyses.

8. The NLS does have direct questions on rates of pay, but an examination of these data suggested that except for hourly workers there were considerable reporting problems. Hence the weekly earnings data were used.

9. In the younger male NLS sample the questions relating to background refer to the position of the individual at age fourteen. In the older male NLS sample the questions refer to the position of the individual at age fifteen. For heuristic purposes, I refer to the position of persons at age fourteen throughout the text, although the older male data relate to age fifteen.

10. In one parent/female homes, a potential problem with the use of the median income of men is that male incomes are unlikely to be a good measure of the economic position of the family. To deal with this, the interaction between the measure of occupational attainment of the head of the household and the dummy variable for one parent/female homes was added to some calculations, but the interaction variable obtained small and insignificant coefficients, suggesting that a dummy variable for the one parent/female home suffices to measure the differences in resources between those homes and homes with two parents. For example, in the equations for years of schooling the interaction variables obtain a coefficient and standard error of $-.19(.31)$ for whites and $.09(.43)$ for blacks. The results in the text exclude the interaction variable.

11. The difference in the parental occupation of young blacks and of young whites obtained from using the median income of nonwhites for blacks and the median wage of all men for whites is 0.8 ln points. The difference obtained from using the median income of all men for both groups is about half as large.

12. The region of residence at age fourteen was not reported in the young male sample and was inferred from region where the individual went to high school or (for those not reporting region of high school attendance) current residence.

13. The differences in these background variables in the older male NLS were also sizable. Among older men, the parents of blacks had 5.1 years of schooling compared with 7.8 for the parents of whites; the log of the occupational status was 7.2 for blacks compared with 8.3 for whites; 39 percent of the blacks were brought up in houses without a male head compared with 19 percent of the whites.

14. For example, the effect of the parental occupation index on the years completed by persons out of school was .48 for young whites and .80 for young blacks, which are comparable figures to those in table 8.4.

15. If we take account of the greater impact of the one parent/female home on whites than on blacks the difference is increased marginally.

16. The algorithm adds weeks worked in a year/52 to an initial estimate of years of experience obtained from data on year of first post-school job.

17. The problem of potential sample selection problems due to inclusion or exclusion of persons not reporting parental education is discussed in detail in Freeman (1976), where all calculations are estimated on two samples, one excluding those not reporting parental education, and one including those not so reporting.

18. Duncan, Featherman, and Duncan (1972) obtain roughly similar family background regression coefficients for occupational status of the first job and occupational status of current job for various cohorts. Their cross-sectional analysis of the OCG surveys of 1962 and 1973 also reveals no clear patterns of change in the impact of father's or son's occupation by age groups.

19. The Hauser-Featherman (1975b) analysis of the OCG surveys yields results consistent with a change over time interpretation of the NLS cohort differences: their analysis shows essentially no effect of parental occupation on son's occupation among 25–34-year-old blacks in 1962 compared with a sizable effect in 1973, much like that for nonblacks.

20. If differences in background variables had become smaller over time, background might not become a more important contribution to racial economic inequality. In fact, comparison of the differences in background measures among young men reported on p. 00 with those among older men reported in note 12 shows no such decline.

21. The changed attitude of courts toward affirmative action is evinced in several successful reverse discrimination suits by those injured by affirmative action and in charging burdens of proof in showing discrimination.

22.

**Ratio of Black and Other Workers to White Workers Aged 16 and Over**

| | 1964 | 1976 | Change |
|---|---|---|---|
| Labor force participants | .1258 | .1299 | .0041 |
| Employed persons | .1192 | .1213 | .0021 |

Source: U.S. Department of Labor (1978) table A-3, p. 140–141, pp. 158–159.

23. Specifically, one might expect a decline in the lower tail of the wage and salary distribution if large numbers of low wage earners left the job market. In fact, no such pattern is observed, at least from 1968 to 1974. Among black men, for example, the ratio of the lower quintile of the wage and salary distribution to the median was .28 in 1968 when the labor participation rate was .78, and .28 in 1974 when the participation rate was .73. U.S. Bureau of the Census (1969) No. 66, table 54, p. 124 and U.S. Bureau of the Census (1975), No. 101, table 72, p. 146.

24. Regression of nonwhite male and female participation rates on AFDC payments and unemployment compensation payments, years of schooling (educ.) TIME, CYCLE, and EEO spending yields the following:

ln (LFP of Nonwhite Men)

$$= 6.06 + .005(\text{TIME}) + .06(\text{CYCLE}) + .04(\text{AFDC})$$
$$\quad (.004) \qquad (.05) \qquad (.05$$
$$- .08(\text{Unemp.Comp.}) - .35(\text{Educ.}) - .012(\text{EEO}) \qquad R^2 = .99$$
$$(.06) \qquad (.11) \qquad (.009)$$

ln (LFP of Nonwhite Women)

$$= 5.03 + .022(\text{TIME}) + .49(\text{CYCLE}) + .05(\text{AFDC})$$
$$\quad (.012) \qquad (.15) \qquad (.11)$$
$$- .31(\text{Unemp.Comp.}) - .12(\text{Educ.}) + .019(\text{EEO}) \qquad R^2 = .87$$
$$(.17) \qquad (.28) \qquad (.018)$$

25. This is a better measure than the comparable variable used in my 1973 Brookings paper (Freeman 1973). In that paper I failed to note that the ratio of expenditures to numbers of nonwhites was below unity in the first two years after passage of Title VII, which in log form produces a negative value for the variable. This *biases* results against finding a positive EEO effect. It should be stressed that the cumulated EEO variable is roughly comparable to a trend variable beginning in 1965.

26. These results differ greatly from those reported by Butler and Heckman (1977), who performed regressions identical to those in rows 5 and 7 over slightly different years. The reason for the differences is that Butler and Heckman inadvertently used data with several keypunch errors. I want to thank them for providing me with the data and helping to obtain a corrected set.

27. In the logit form the results are:

Log odds ratio of median earnings

$$= 42.1 + .034\text{TIME} - 8.77\text{CYCLE} + 1.07\text{EEO}$$
$$\quad (.28) \qquad (3.28) \qquad (.85)$$
$$- \ 1.02\text{RED} + 21.09\text{RPART} \qquad R^2 = .94 \qquad d.w. = 1.84$$
$$(11.2) \qquad (19.53)$$

28. Related regressions for median incomes, which depend on non-labor-market earnings as well as on wages and salaries, yield roughly comparable results, with most but not all of the calculations giving large positive coefficients on the EEO variable and insignificant positive or negative coefficients on the relative supply variables. The logit form generally yields higher EEO effects. Related regressions using other measures of EEO activity also yield comparable results. See Freeman 1978; Burstein 1978.

29. It is also possible that the passage of the Civil Rights Act caused a once-and-for-all increase in the relative earnings of blacks. If this were the case, a dummy variable that takes the value 1 in 1965 (or 1964) and each year thereafter would capture the effect. Addition of such a dummy variable to the regessions does not support the hypothesis of a once-and-for-all jump in relative black earnings.

# References

Akin, J. S., and Garfinkle, I. "The Quality of Education and Cohort Variation in Black-White Earnings Differentials" *AER* 70, no. 1 (March 1980): 186–91.

Ashenfelter, O. and Heckman, J. J. "Measuring the Effect of an Antidiscrimination Program," in Orley Ashenfelter and James Blum, eds. *Evaluating the Labor Market Effects of Social Programs*. Princeton: Industrial Relations Section, Princeton University, 1976.

Astin, A. *Four Critical Years*. Josey-Bass, 1978.

Bureau of National Affairs. "Equal Employment Opportunity: Programs and Results." Personnel Policies Forum Survey 112. Mar.1976.

Burman, G. "The Economics of Discrimination: The Impact of Public Policy." Ph.D. Thesis, University of Chicago, 1973.

Burstein, P. "Equal Employment Opportunity Legislation and the Income of Women and Nonwhites." Unpublished MS., Yale University, August 1978.

Butler, R., and Heckman, J. J. "Government's Impact on the Labor Market Status of Black Americans: A Critical Review," in Industrial Relations Research Association, *Equal Rights and Industrial Relations*, pp. 235–81. Wisconsin, 1977.

Duncan, O. "Inheritance of Poverty or Inheritance of Race?" in D. P. Moynihan, ed. *On Understanding Poverty*, pp. 85–110. New York: Basic Books, 1968.

Duncan, O.; Featherman, D. L.; and Duncan. B. *Socioeconomic Background and Achievement*. New York: Seminar Press, 1972.

Epstein, W. *Schooling and Occupation Decisions*. Ph.D. Thesis, Harvard University, 1977.

Farley, R., and Hermailin, A. "The 1960s: A Decade of Progress for Blacks?" *Demography* 9, no. 3 (1972): 353–70.

Freeman, R. "The Changing Labor Market for Black Americans." *Brookings Papers on Economic Activity*, 1973.

_____. "Labor Market Discrimination: Analysis, Findings and Problems," in M. Intriligator and D. Kendrick, eds., *Frontiers of Quantitative Economics*, chap. 9. Amsterdam: North-Holland, 1974a.

_____. "The Changing Labor Market for Minorities," in M. Gordon, ed., *Higher Education and the Labor Market*, chap. 3. N.Y.: McGraw-Hill, 1974b.

_____. "Socioeconomic Mobility and Black-White Economic Differences in the New Market for Black Labor." Revision of Harvard Institute of Economic Research Study Paper No. 377, 1976.

_____. *Black Elite: The New Market for Highly Qualified Black Americans*. N.Y.: McGraw-Hill, 1977a.

_____. "A Premium for Black Academicians?" *Industrial and Labor Relations Review*, January 1977b.

_____. "Time Series Evidence on Black Economic Progress: Shifts in Demand or in Supply?" Harvard Institute of Economic Research Discussion Paper 362, July 1978.

Goldstein, M., and Smith, R. S. "The Estimated Impact of the Anti-Discrimination Program Aimed at Federal Contractors." *Industrial and Labor Relations Review* 29 (July 1976): 523–43.

Griliches, Z. "Wages and Earnings of Very Young Men." *Journal of Political Economy*, June 1976.

Hall, R., and Kasten, R. "The Relative Occupational Success of Blacks and Whites." *Brookings Papers on Economic Activity* 3 (1973): 781–98.

Hanoch, G. "An Economic Analysis of Earnings and Schooling." *Journal of Human Resources* 2 (1967): 310–29.

Hauser, R. M., and Featherman, D. L. "Equality of Access to Schooling: Trends and Prospects." Center for Demography and Ecology Working Paper No. 75–17. Madison: University of Wisconsin, 1975a.

_____. "Racial Inequalities and Socioeconomic Achievement in the U.S., 1962–1973." Institute for Research on Poverty Discussion paper No. 275–75. Madison: University of Wisconsin, 1975b.

Heckman, J. J., and Wolpin, K. "Does the Contract Compliance Program Work? An Analysis of Chicago Data." *Industrial and Labor Relations Review* 29 (July 1976): 544–64.

Kneisser, T.; Padilla, A.; and Polachek, S. "Racial Differences in Earnings over the Business Cycle." Econometric Society Meetings, August 1978b.

_____. "The Rate of Return to Schooling over the Business Cycle" *JHR* 18, no. 2 (Spring 1978a): 264–77.

Levin, H. M. "Education and Earnings of Blacks in the Brown Decision." Stanford University, September 1978.

Lewis, W. A. "The Road to the Top is through Higher Education Not Black Studies." *New York Times Magazine*, 11 August 1969.

Masters, S. "Black-White Income Differentials," in *Empirical Studies and Policy Implementation*. Academic Press, 1975.

Meyer, R., and Wise, D. "High School Preparation and Early Labor Market Experience." MS. National Bureau of Economics Research Working Paper, 1980.

Moynihan, D. P. "The Schism in Black America." *The Public Interest*, Spring 1972, pp. 3–24.

National Science Foundation. "Characteristics of Doctoral Scientists and Engineers in the U.S." 1978.

Padilla, A. "Race and Economics: A Human Capital Inquiry." Unpublished MS.

U.S. Bureau of the Census. *Current Population Survey: Consumer Income*. Series P60. Washington, D.C., 1949–76.

_____. *Census of Population 1950: Education*. Series PL–5B. Washington, D.C., 1953.

_____. *Census of Population, 1960: Occupational Characteristics*. Series PC2–7a. Washington, D.C., 1963.

_____. *Statistical Abstract of the United States, 1971*. 92d Ed. Washington, D.C., 1971.

_____. *Census of Population, 1970: Occupational Characteristics*. Series PC2–7B. Washington, D.C. 1973a.

_____. *Current Population Reports: The Social and Economic Status of the Black Population in the U.S., 1972*. Series P–23, no. 46. Washington, D.C., 1973b.

_____. *Census of Population 1970: Occupational Characteristics*. Series PC2–7A. Washington, D.C., 1973c.

U.S. Bureau of Labor Statistics. Educational Attainment of Workers. Special Labor Force Report. Washington, D.C., 1960–77.

U.S. Department of Labor. Manpower Administration. *Employment and Earnings*. Washington, D.C., January 1975.

_____. *Handbook of Labor Statistics 1976*. Bulletin 1905. Washington, D.C., 1977.

_____. *Career Thresholds*. Manpower Administration Research Monograph No. 16, 1978a.

_____. Employment and Training Report of the President 1977. Washington, D.C., 1978b.

Viscusi, W. K. *Employment Hazards: Investigation of Market Performance*. Ph.D. Thesis, Harvard University, 1976.

Vroman, W. "Changes in Black Workers' Relative Earnings: Evidence for the 1960s," in G. Von Furstenberg, ed., *Patterns of Racial Discrimination*, vol. 11, chap. 11. Lexington, Mass.: Heath-Lexington, 1974.

Weiss, L., and Williamson, J. "Black Education, Earnings and Interregional Migration: Some New Evidence." *American Economic Review*, 62 (June 1972): 372–83.

Weiss, R. "The Effect of Education on the Earnings of Blacks and Whites." *Review of Economics and Statistics*, May 1970.

Welch, F. "Black-White Returns to Schooling." *American Economic Review* 63, no. 5 (March 1973): 893–907.

Welch, F., and Smith, J. "Black/White Male Earnings and Employment: 1960–1970." U.S. Department of Labor Publication R–1666–DOL, June 1975.