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BLACK ECONOMIC PROGRESS AFTER 1964:
WHO HAS GAINED AND WHY?*

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ABSTRACT

Black Economic Progress After 1964: Who Has Gained and Why

This paper examines the incidence and causality of black economic gains in the decade of the 1960's and 1970's. It finds that the relative economic position of blacks, measured by ratios of black to white earnings or ratios of measures of occupational position, rose sharply post-1964. The greatest gains accrued to black women relative to white women; to highly educated and skilled young black men; and to those from more advantaged homes. The traditional lack of a strong relation between family background and education or economic position found among blacks was altered in the period, as background factors came to play a more important role in the socioeconomic success of young blacks and in explaining differences between young blacks and whites. The continued advance of blacks in the worsened job market of the mid-1970's makes it clear that cyclic factors do not explain the post-1964 gains. Regression analysis of time-series data and surveys of corporate personnel policy suggest that equal opportunity activity, initiated in response to antibias laws and regulations, is the main cause for the improved economic position of black Americans.

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Who Has Gained and Why?

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 sizeable declines in traditional discriminatory differences in the 1960s¹--declines which appear to have been maintained in the seventies. 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, permanence, and their effect on the economic well-being of the black community. On the other side are questions of causality--of the effect of factors like governmental anti-discriminatory activity and social programs on the demand for and supply of black labor. Because of the complexity of major social changes, controversy over programs like affirmative action, and the importance of reductions in discriminatory differences to the black community, questions regarding the nature and cause of black economic progress in the post-World War II period have generated considerable scholarly work and controversy and will undoubtedly generate more in the future.

This study uses 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 one of the paper 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 two 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 the 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 III 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 in light of the usual problems of interpreting econometric results.

I. 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,² including diverse measures of pre-labor 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.

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 sizeable "twist" in the trend line for the incomes and occupational attainment of blacks relative to the incomes or occupational attainment of whites after 1964 (R. Freeman, 1973a; W. Vroman; S. Masters). 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 to earnings functions estimated with data from the Census of Population of 1960 show a sharp drop in the effect of race on earnings (J. Smith & F. Welch). Detailed investigation of the National Longitudinal Survey 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 pre-market background characteristics (R. Hall and R. Kasten). The 1973 Occupational Change in a Generation Survey has shown marked advances in the relative position of blacks, particularly those aged 25-34, compared to the comparable 1962 survey (R. Hauser & D. Featherman). 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 (K. Viscusi, W. Epstein, A. Astin, R. Meyer and D. Wise). Finally, in contrast to earlier studies which showed that blacks had relatively small gains from additional schooling (G. Hanoch, R. Weiss), evidence for the late 1960s show a marked convergence in the return to black and white male investments in schooling, especially among the young (L. Weiss and J. Williamson, F. Welch, R. Freeman, 1974a).

Some of the statistical evidence on the improved labor market position of black (or nonwhite)³ workers is given in table 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 the peak year of the late sixties boom, 1969; 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 lines where data is not available until 1967, the pre-1964 changes cover the period 1949 to 1959 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.⁴ Hence, any acceleration in rates of change should be viewed as evidence (all else the same) of significant structural change in the market.

Lines 1-5 present figures for male workers, decomposed by occupation, education, and age. Lines 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 the comments to my 1973 Brookings paper), 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 line 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 sizeable. 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 necessary "first fact" (other factors held fixed) for any case to be made regarding the impact on the job market of the diverse anti-bias activity which became intense in the mid sixties.⁵

Third, with regard to incidence, the income ratios in table 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 13 percentage points from 1967 to 1976 compared to 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 line 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). 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 J. Smith & F. Welch). 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, 1973a).

Table 2 turns to evidence on the occupational 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,⁶ 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. Lines 1 and 2 record ratios of fixed income weighted indices of the value of the nonwhite and white occupational structures. These are calculated by weighing 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 rise, and conversely when the black job structure deteriorates compared to that of whites. 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 indices 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 to 0.3 points per annum in the earlier period. For women

Table 1: The Ratio of the Earnings of Nonwhites or Blacks to the Earnings of White or All Workers and Annual Changes in the Ratios, by Sex, 1949-1976^a

Group and Variable	Earnings					Annual Changes in Earnings in Ratios	
	Pre-1964		1964	Post-1964		Pre-1964 to "1964" ^b	"1964" to 1975 ^c
	1949	1959		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(1949-1959) 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

^aLines 1, 2 and 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.

^bThe data in lines 3-5 are from 1949 to 1959.

^cThe data in lines 2-5 and 7 begin with 1967 as the initial year.

^dData relate to 1955.

^eData relate to 1967

^fData are for 25-29 year olds

^gData are for 1974 since median incomes by occupation and race were not published after 1974.

Table 2: The Relative Occupational Position of Nonwhite Workers and Changes in Position, 1950-1977

Group and Measure of Position	Position				Annual Change in Position	
	1950	1964	1969	1977	1950-1964	1964-1977
<u>Ratio of Nonwhite to White Index of Occupational Position^a</u>						
1. Male	.76	.80	.84	.89	0.3	0.7
2. Female	.49	.69	.80	.92	1.4	1.8
<u>Relative Penetration^b into Selected Jobs</u>						
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

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

^b % nonwhites employed in the occupation/% white workers employed in the occupation.

Source: lines 1,2, 1964, 1969 U.S. Department of Labor Handbook of Labor Statistics, 1974, table 19; 1975, Employment and Earnings (January 1975), table 22, p. 152 1950, from U.S. Bureau of Census, Census of Population 1950 Education P-E No. 5B, table 11, pp. 88-94, (figures for 14 and over).

lines 3-5: 1964, 1969, 1977 from U.S. Bureau of Labor Statistics, Educational Attainment of Workers, Special Labor Force Reports No. 53, table J, P A-14, No. 125, table J, p. A-29, No. 209, table K, p. A-20. 1950 from U.S. Bureau of the Census, op. cit. table 11, pp. 88-94 (figures for 15 and over).

it increased by 1.8 points per annum from 1964 to 1977 compared to 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 lines 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 from 1964-1969 to 1969-1977. 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, 1977).

The apparently strong "new market" for high level black workers is pursued in table 3, which presents data relating to the relative income of selected groups of highly educated or skilled black workers. Lines 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 line 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 National Longitudinal Survey (Grasso). Line 4 gives approximate earnings ratios from a recent American Council on Education survey of graduates,⁷ where it was reported that for recent college graduates, "blacks can command higher salaries than whites . . . as a result of strong

Table 3: The Ratio of the Earnings of High Qualified Black Workers to High Qualified White Workers in the late 1960s and Early 1970s

	Ratio
1. Doctorate Workers (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, Selected Colleges and Majors (1969)	
Howard, B.S. civil engineering	1.00
Howard, bachelors, business fields	.97
North Carolina A & T, engineering	.92
d. Texas Southern, MBA	1.07
4. Bachelors Graduates, 1 Year after degree (1974)	
Business	~1.13
School teaching	~1.36

Source: line 1, National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the U.S., 1973. Detailed statistical tables, Appendix B, table B-10, p. 141.

line 2, tabulated from American Council on Education, 1972-3 survey of teaching faculty, as reported in Freeman (1977) table 3.

line 3, Freeman 1974b, table 3-3.

line 4, Astin, pp. 154-157

^aThere is a range of estimates depending on what characteristics are adjusted for. The lower estimate excludes type of institution employed as a characteristic.

affirmative action pressures on business and industry," (Astin, p. 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.

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 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 differed 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 sizeable 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 discriminatory practices and human capital investment decisions, which effectively "lock" experienced personnel into particular career paths and seniority ladders from which change is difficult.

II. 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),⁸ 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",⁹ 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.

Measures of socioeconomic position

This study examines the effect of family background and other variables on four measures of socioeconomic achievement: the years of schooling attained by an individual; weekly earnings; annual earnings; and an index of occupational position, the median income of male workers in the individual's 3-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 pay¹⁰ 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.

Measures of family and other background variables

The following variables are used to measure family background:¹¹

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 the regressions explaining labor market attainment, since parental education appears to affect individuals through schooling rather than directly.

Living in a one parent/female home at age 14, 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.

The occupational attainment of the head of household at age 14, 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 1960.¹² Because black workers have traditionally been lower paid 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 figures for the occupations of black parents and the occupations of white parents.¹³ Separate indicators for blacks and whites provide a closer fix on economic differences between them, as opposed to differences in socioeconomic status.

Three indicators of household reading resources when the individual was 14 years old: presence of magazines, presence of newspapers, and presence of library cards in the home, 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 14.¹⁴ 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 National Longitudinal Survey data reveal sizeable 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 to a log of the median income of the occupation of parents of white of 8.5; 40% of the young blacks were from one parent/female homes at age 14 compared to 12% of the young white men; 45% of the black youth reported having magazines in their homes compared to 80% of white youth; 69% of the blacks reported the presence of newspapers compared to 92% of the whites; 47% of the black youth reported having library cards compared to 74% of white youths.¹⁵ 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 sizeable differences between the family background resources of young blacks and those of young whites suggest that, if background factors "matter" in attainment, they are likely to be a major cause of economic inequality between young blacks and young whites. To what extent does the educational and labor market attainment of young blacks and young whites depend on background factors?

Background and schooling

Table 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 5. 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.¹⁶

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) 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 to its effect in the older male sample. Whereas among older men, the coefficients on parental occupation, as well as on parental years of schooling, are smaller for blacks, among the young, parental years of schooling has 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, divide 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 as on the years of young whites: the one standard deviation changes alter schooling by .46 standard deviations for whites versus .40 standard deviations for blacks.¹⁷

The estimated coefficient 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 groups) 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 to be about the same 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 4 on the probability of going to college, using the logistic probability model, $P = 1/(1 - \exp(-\sum \beta_i X_i))$, 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 (β_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 below in terms of the coefficients and standard errors for the logistic curve parameters on the years of schooling of parents and on their occupational attainment:

Estimated logistic curve parameter and
standard error on probability
of going to college

	Young Men		Older Men	
	black	white	black	white
family background variables	.13	.17	.17	.19
years of schooling of parent	(.02)	(.01)	(.04)	(.01)
ln of median income of men in parents 3 digit occupation ¹⁸	.52	.51	.03	.81
	(.22)	(.10)	(.33)	(.17)

Source: Freeman, 1976, table 3.

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 finding of a much smaller difference between the effect of background on black and white attainment among younger than among older men.

Table 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)
Northcentral	--	--	--	--
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	1024	3235	471	1408

^aRegressions 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 estimated on the basis of the years of schooling they expect to complete, as described in text.

^bParental 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, 1960 Census of Population, Occupational Characteristics PC(2)-7B, tables 25, 26.

^cAge 15 for men aged 48-62.

^dThe largest loss in the sample occurred because a relatively sizeable number failed to report their parents' education. For results with a sample that excludes parental education see Freeman (1976).

Source: Calculated from National Longitudinal Survey data tapes for young men and for older men in 1969.

Table 5 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 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 background 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 to 3 standard errors and the coefficients on parental occupation are reduced by 1 to 2 standard errors by addition of the new variables. Crude though the calculations are, they suggest a potentially important role for provision of 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.

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, 1977, chapter 2), a substantial difference in years attained 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

Table 5: 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^a

	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. Presence of Magazines in the Home (yes = 1)		.81(.20)		.68(.13)
4. Presence of Newspapers in the Home (yes = 1)		1.12(.23)		.92(.19)
5. Presence of Library Card in the Home (yes = 1)		.80(.21)		.99(.11)

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

found to explain only a modest proportion of the black-white educational gap, (Duncan), 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 4 and 5 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 6 summarizes the results of such calculations using regression coefficients from both the equations for blacks and the equations for whites. Line 1 gives the absolute differences in years attained. Line 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. Line 3 gives the sum of the percentage differentials attributed to family background while line 4 records the percentage contribution of the differences in the distribution of blacks and whites by region and type of place. The figures in columns 1, 2 and 4, 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 equation are used

Table 6: Estimates of Percentage Contribution of Differences in Background Characteristics to Differences in Years of Schooling of Black and White Men^a

	Based on Years of Schooling Equations for Blacks			Based on Years of Schooling Equations for Whites		
	Older Men (1)	Young Men (2)	Young Men (3)	Older Men (4)	Young Men (5)	Young Men (6)
1. Difference in years of schooling of persons of the same age ^b	3.7	1.6 ^b	1.6	3.7	1.7 ^b	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 to 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

^a Estimates of the contribution of factors to the observed differences obtained by the following procedure. Let \hat{a}_i = regression coefficient for the effect of variable i on years of schooling; Δx_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 i th variables is $\hat{a}_i \Delta x_i /$ data in line 1.

Figures for columns 1 and 2 and for columns 4 and 5 obtained using regressions reported in table 4. Figures for columns 3 and 6 based on regressions summarized in table 5.

^b 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 equation for whites.

to weight the different factors. According to column 1 and 2, for example, only 35% of the difference between the years of schooling of older black men and of older white men is attributable to family background factors whereas 81% of the difference in years of schooling 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 equation for blacks between the two samples.

In contrast to the increased importance of differences in family background factors as causes of differences in years of schooling, the table shows sizeable reductions in the impact of differences in the distribution of persons by geographic area between the two samples. This is largely due to the convergence in the coefficient on the geographic variables between blacks and whites shown in table 4.

Columns 3 and 6 of the table, 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+% of the difference is accounted for by background factors. Similar findings are reported by Epstein using the National Longitudinal Survey of the High School Class of 1972 and by Hauser and Featherman in their analysis of the 1972 Occupational Change in a Generation 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.

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 individuals 3-digit occupation were regressed on the family, regional and size of place variables used earlier and on years of work experience. For young men years of experience is calculated using a complex algorithm designed to measure, as best as possible, actual time worked.¹⁹ For older men, years of experience is measured by two variables: years of tenure in a job and by age minus years of schooling minus 5. Parental years of schooling was deleted from the analysis after preliminary calculations showed that the variable had little effect on the labor market position of individuals.²⁰ Years of schooling of the individual was first excluded from the regressions to obtain estimates of the full or reduced form impact of background factors and then included as an additional measure of 'pre-labor market' determinants of labor market position. In the regressions for young men, those still enrolled in school were deleted from the calculations.

Table 7 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 effect of parental occupation on the labor market position of young blacks and whites compared to the effect of the variable on the labor market position of older blacks and whites. Among the older men, the background variable has a much smaller and generally negligible effect on the position of blacks compared to the position of whites. This is consistent with the traditional finding in the sociology literature (Duncan) 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 sizeable 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 earnings regressions, however, the coefficient on black parental occupation is still noticeably smaller

than the coefficient on white parental occupation.

As there are no apparent life cycle changes in the effect of family background factors on the attainment of individuals,²¹ the greater coefficient on parental occupational variable obtained for young blacks as opposed to those for older 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 towards 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 sizeable black economic advance relative to whites.²²

In contrast to the past, when "stratification within the Negro population (was) less severe than in the white" (Duncan, p. 88) what sociologists call "intergenerational status transmission" has become quite similar for young persons in the late 1960s.

Background vs. '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 of racial economic differences and "residual market discrimination" to explain a lesser fraction of the differences than in the past.²³

Table 8 presents calculations which confirm both of these expectations. Line 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. Lines 2 and 3 estimate the percentage contribution of differences in background variables to the

Table 7: 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^a

<u>Dependent Variable and Group</u> ^b	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 ^c		
young men	.20(.07)	.23(.04)
older men	.03(.06)	.24(.03)

^aThe 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 4.

In addition the regressions include measures of years of work experience: for younger men, years of experience is determined by algorithm based on weeks worked in each year since 1966 and on years since first post-school 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 measured as the log of income in the parents' 3-digit occupation as described in the text.

^bThe sample sizes are: young black men, 634; young white men, 1607; older black men, 947; older white men, 2131. The samples are restricted to persons not enrolled in school in 1969 and reporting data for all of the variables in the regressions.

^cIndex of occupational status is measured by the log of the median income in the individuals' three-digit occupation in 1969, as reported in the U.S. Bureau of the Census, 1970 Census of Population, PC 2-7A Occupational Characteristics, tables 16 and 17.

differences in labor market position using the procedure described on p.22-- that is, by multiplying differences in the mean value of the explanatory variables by the regression coefficient estimate of its impact on attainment.

The effect of differences in parental occupational position on differences in labor market position are given in line 2 using the regression coefficients from table 7. The effect of differences in a "full" set of pre-labor market variables--parental occupational position, region and type of place, and of years of schooling--are given in line 3, using coefficients obtained by including the person's years of schooling in the regressions of table 7. Line 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.

What stands out in the table is the dominant role of pre-market factors in accounting for black-white economic differentials among the young compared to 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 40% of the difference in occupational attainment between young black and white men, and account for 36% of the difference in hourly earnings, and 39% 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 pre-labor 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 from 72% to 88% of the differences among the young to differences in pre-labor market factors. The white attainment equations attribute from 71% to 111% of the differences among the young to differences in pre-labor market factors. By contrast, in the older male sample, with the attainment equations for older black or for older white men, the contribution of background factors to economic differences are 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 pre-labor market factors, particularly in family background resources, a more important cause of economic inequality. The decline in the importance of discriminatory differences and heightened role of family background differences in racial economic inequality 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, should 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.

Table 8: Estimated Percentage Contributions of Parental Occupational Status and Pre-labor Market Factors to Economic Differences Between Blacks and Whites and Estimated "Residual Market Discrimination, Younger and Older Men, 1969^a

	log difference between blacks and whites, adjusted for years of work experience ^b	Percentage of differences due to differences in parental occupational status ^c	Percentage of Differences due to differences in pre-labor market factors ^d				Residual Market Discrimination
	(1)	(2)	parental occupational status	region and type of place of residence	years of schooling	pre-labor market factors (3+4+5)	(7)
<u>Based on Regression Equations for Black Workers</u>							
1. Index of Occupational Position			(3)	(4)	(5)	(6)	
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
<u>Based on Regression Equations for White Workers</u>							
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; Δx_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 i th variable is $\hat{a}_i \Delta x_i / \text{data in column (1)}$.

^b The figures adjusted for years of experience differ between young blacks and young whites because of different regression coefficients between the equations for blacks and for whites and sizeable differences in years of experience. One reason for the different years of experience are differences in age: 62% of blacks in the sample are below 23 years of age compared to 50% of whites in the sample. Another reason is that blacks experience more instability in employment than whites, thereby accruing less experience. Years of experience has a large effect on annual earnings but not on hourly earnings nor on the index of occupational standing.

^c Based on regression coefficients presented in table 7.

^d Based on regression coefficients obtained by adding years of schooling of the individual to the regressions of table 7.

VI . . Why?

What factors underly 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 expenditures rose from modest amounts to \$55 million dollars by 1975 while cases handled increased from about 9,000 in 1966 to 77,000 in 1975.^{/24} Following Executive Order 11246 the Office of Federal Contract Compliance 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.^{/25} 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.^{/26}

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, as causing the improvement in economic status (F. Welch & J. Smith). While there is no denying the long-term improvement in the relative quality of black schooling (see Welch, 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 (Polachek, Kneisser, Padilla 1978a, 1978b; Garfinkle; Padilla; Levin; Freeman 1977). 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 (R. Butler & J. Heckman). 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. On the one hand, because the black population has increased more rapidly than the white population, the ratio of nonwhite workers to white workers increased, rather than decreased since 1964,^{/27} which would reduce rather than increase relative earnings by causing a movement down rather up the demand curve. On the other hand, there is no evidence that the lower tail of the black earnings distribution diminished,^{/28} 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.^{/29}

This section shows that the evidence on the timing and incidence of gains, while not ruling out potentially important supply side effects, is 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.

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. While such a pattern was found in tables 1 and 2, the post-1964 acceleration in black economic gains could be only weakly statistically related to the antibias activity or due to 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. 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:

TREND, 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 as cumulated real spending per nonwhite plus 1 in later periods. ^{/30} 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 changed due, 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 distinguished from the trend. 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 & Heckman): 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 same for the two groups; those variables relate to men or women, respectively.

Lines 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 to that of white men accord the EEO indicator a positive significant coefficient in each case. The regressions comparing the economic position of nonwhite to 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:

$$\begin{array}{l} \text{Log: odds ratio of Median Wages \& Salaries} \\ \text{of Year-Round and Full-Time Women, 1955-1973} \end{array} = \begin{array}{l} -.11 \\ (.025) \end{array} + \begin{array}{l} .036\text{TIME} \\ (1.78) \end{array} - \begin{array}{l} 9.34\text{CYCLE} \\ (1.78) \end{array} + \begin{array}{l} .61 \text{EEO} \\ (.14) \end{array}$$

$$\begin{array}{l} R^2 = .94 \\ \text{d.w.} = 1.35 \end{array}$$

With the logit specification, the t-statistic on the EEO variable is 5.0, compared to the value of 2.2 in line 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 to that of white men rather than to another group protected by the law, white women. Regressions of log(earnings of nonwhite women/earnings of white men) on EEO, TIME and CYCLE, as in lines 1

and 2 of table 9, 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 lines 4-7, using two stage least square regressions, along lines set out by Butler & Heckman.³¹ Lines 4 and 6 examine the effect of the relative employment of nonwhite workers (REMP) on relative earnings. If the increased relative earnings of blacks is due largely to movements up a demand curve due to 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. Lines 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 due 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 of 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 3 of 4 cases does not, of course, mean that either the labor demand curve is wrongly shaped nor 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 lines 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 sizeable and significant. When the relative median wages and salaries of year-round and full-time workers is 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 line 6 yields a positive coefficient on EEO and a positive coefficient on REMP. ^{/32}

All told, with the exception of the regression for females in line 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. ^{/33}

Table 9: Regression Coefficients and Standard Errors for the Effect of Variables
on the Log of the Ratio of Nonwhite to White Earnings and Occupational Position, 1948-1975^{/a}

Measure of Relative Economic Position	Male Workers									Female Workers								
	constant	TIME	CYCLE ^{/b}	EEO	RED	REMP ^{/c}	RPART ^{/d}	R ²	d.w.	constant	TIME	CYCLE ^{/b}	EEO	RED	REMP ^{/c}	RPART ^{/d}	R ²	d.w.
1. Median Wages & Salaries, 1948-1975	-.55	-.001	.42	.08				.83	2.32	-.96	.022	.34	.13				.97	1.85
		(.002)	(.23)	(.01)							(.002)	(.32)	(.02)					
2. Median Wages & Salaries of Year-Round and Full-Time Workers, 1955-1975	-.49	.003	-.40	.03				.87	2.19	-.70	.019	-.48	.05				.96	1.30
		(.002)	(.17)	(.01)							(.004)	(.27)	(.02)					
3. Occupation Index, 1958-1975	-.33	.003	.10	.02	.08			.99	2.31	-.97	-.001	.12	.07	.66			.99+	2.03
		(.002)	(.05)	(.004)	(.14)						(.005)	(.10)	(.01)	(.25)				
4. Median Wages & Salaries, 1948-1975	1.98	.005	.33	.12	.84	-.97		.82	2.45	1.09	.025	.52	.12	.008	1.12		.98	1.89
		(.005)	(.30)	(.03)	(.80)	(.74)					(.016)	(.36)	(.02)	(.81)	(.66)			
5. Median Wages & Salaries, 1948-1975	-.25	.004	.42	.12	-.48		1.07	.82	2.41	-1.66	-.014	-.011	.12	1.78		-.97	.98	2.22
		(.003)	(.30)	(.06)	(.55)		(2.52)				(.025)	(.46)	(.04)	(1.22)		(1.62)		
6. Median Wages & Salaries of Year-Round and Full-Time Workers, 1955-1975	2.24	-.011	-.92	.04	.49	1.28		.88	2.05	-6.25	.055	-.20	-.08	-1.26	-3.29		.93	1.70
		(.011)	(.38)	(.02)	(.58)	(.91)					(.056)	(.65)	(.17)	(2.12)	(3.85)			
7. Median Wages & Salaries of Year-Round and Full-Time Workers, 1955-1975	-.95	-.006	-.82	.07	.81		2.47	.87	1.99	-1.68	.030	-.71	.21	-.08		3.24	.97	2.00
		(.009)	(.39)	(.05)	(.74)		(2.33)				(.025)	(.39)	(.14)	(.99)		(2.85)		

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

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

^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

Source: See Data Appendix

The time series data in table 9 can, it should be stressed, be analyzed in other ways. In earlier work Vroman and Masters 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 9. Since the EEO indicator is essentially a post-1964 trend, results with the trend measure must, of necessity, give similar statistical findings.¹³⁴ Burstein has developed a more complex model, including measures of changes in taste, and found that his additional variables also left a sizeable 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. 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, however, other types of evidence should also be examined to minimize the chances of misinterpreting the causes of observed changes.

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 to those in table 9 suggest that the regional changes are also broadly consistent with the demand hypothesis. For male workers, the regressions given in figure 1 show that the EEO indicator has a very sizeable positive coefficient in the South, where discrimination was most severe, and obtains

Figure 1: Ratio of Nonwhite to White Median Incomes

Male

ratio of nonwhite to white incomes

Ratios for All Workers

Ratios for Year-round and Full-time Workers

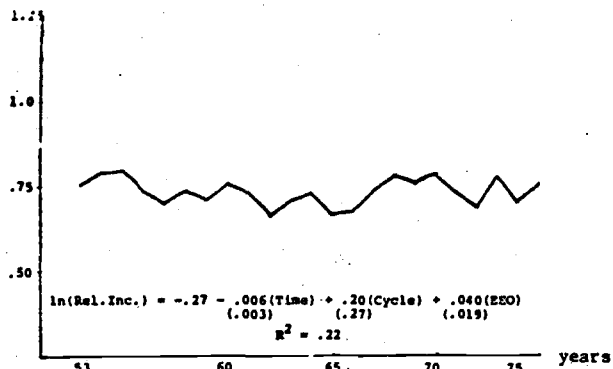


Chart 1: Northeast

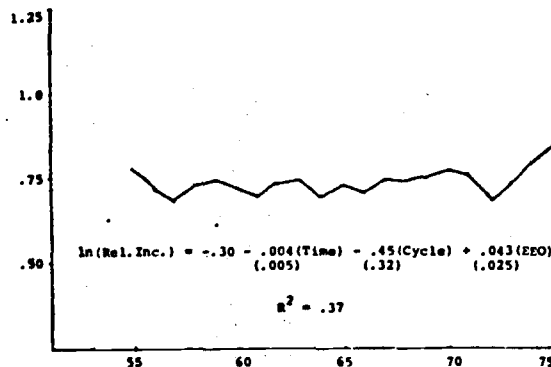


Chart 9: Northeast

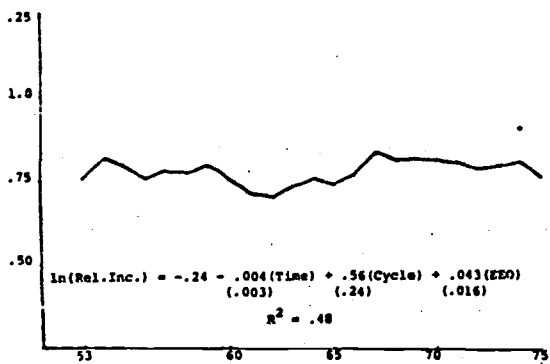


Chart 2: Northcentral

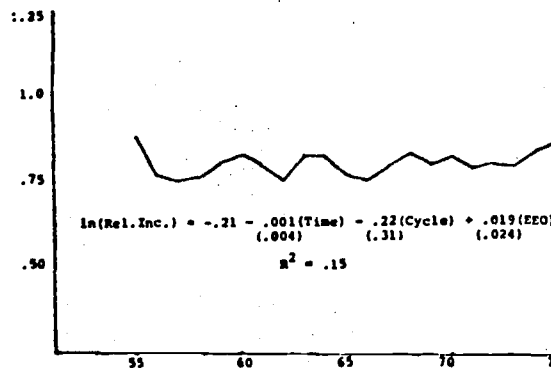


Chart 10: Northcentral

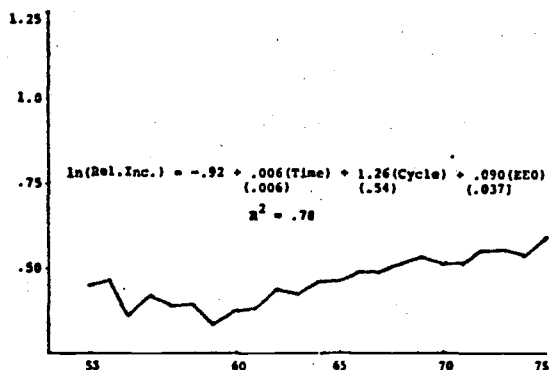


Chart 3: South

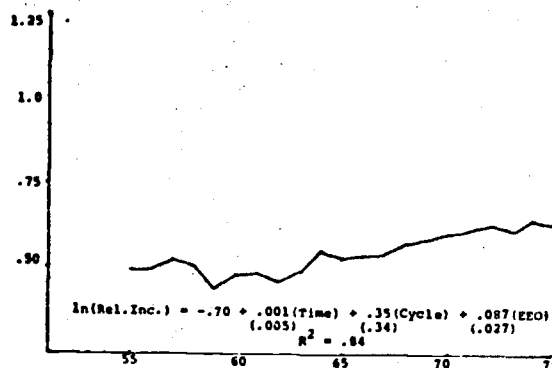


Chart 11: South

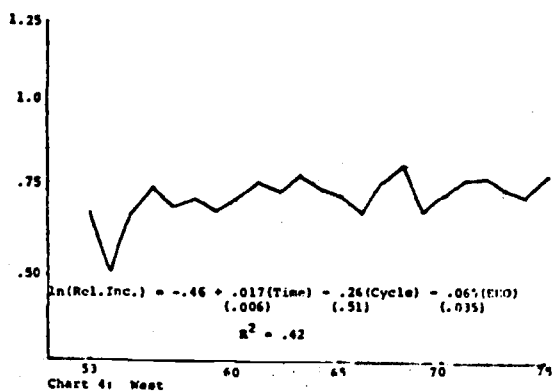


Chart 4: West

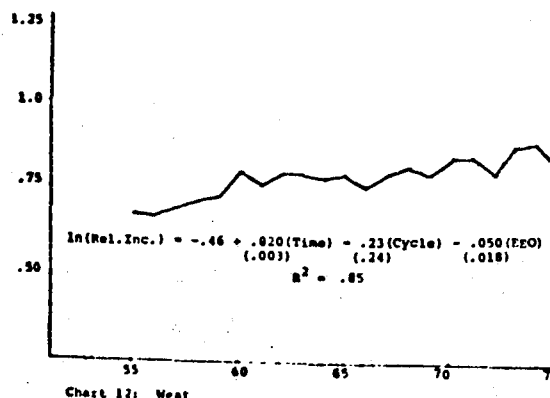


Chart 12: West

Figure 1: Ratio of Nonwhite to White Median Incomes

Female

Ratios for All Workers

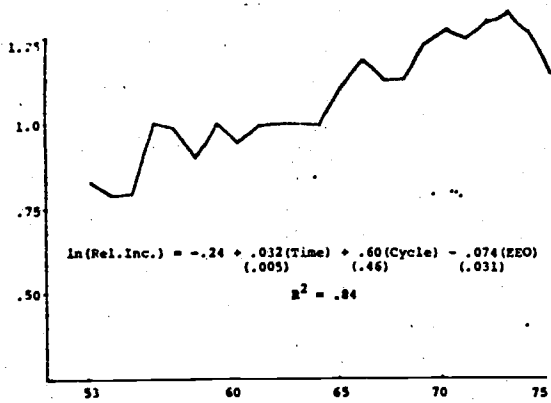


Chart 5: Northeast

Ratios for Year-round and Full-time Workers

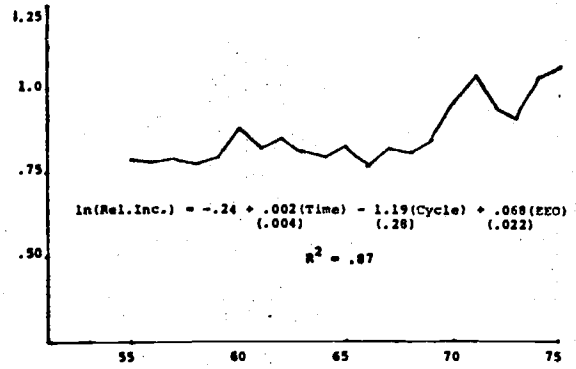


Chart 13: Northeast

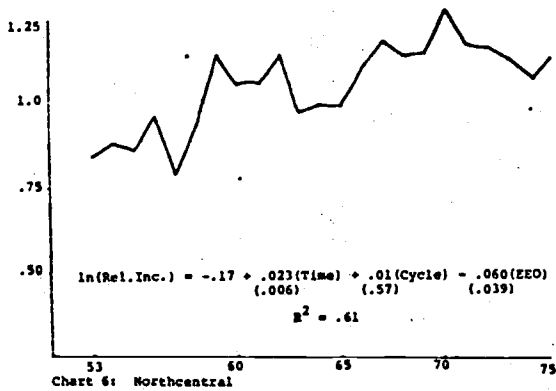


Chart 6: Northcentral

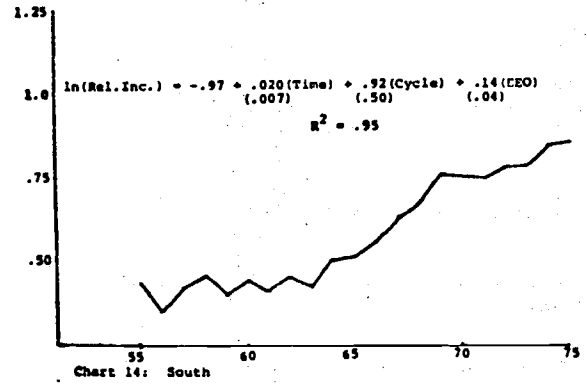


Chart 14: South

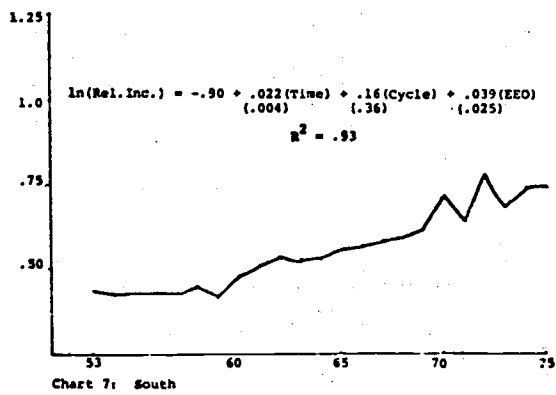


Chart 7: South

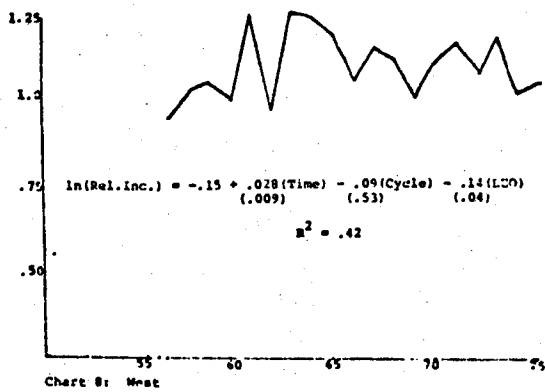


Chart 8: West

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 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; 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, lends 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.

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.

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, and a likely inelastic supply of black workers to those jobs, moreover, increases in demand are likely to yield greater income increases in higher-skill occupations 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 under-represented, 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, assuming 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 college of the South. Since the national institutions offer higher quality education than the primarily black colleges, there was undoubtedly 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, 1977, chapter 3).

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, because 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, because in the absence of widespread changes

in company personnel practices, it is difficult to see how antidiscrimination policies could cause sizeable 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 college 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 1977, p. 35). A recent Bureau of National Affairs 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 B.N.A., "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" (p. 1). As table 10 documents, in the BNA sample eighty-six percent of the companies have formal EEO programs; 96 percent of those subject to OFCP regulations have AAP's; 63 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 guidelines; the weekly publication of a Fair Employment Practices newsletter;

Table 10 Evidence of Changes in Personnel Practices Due to EEO

	% of companies
1. Have <u>Formal</u> EEO Program	86
Including Affirmative Action Plan (of those subject to OFCCP regulations)	96
2. Have had investigation or other action under Title VII	63
3. Changes in selection procedures for EEOC 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 insure 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 Personnel Policies Forum
Equal Employment Opportunity: Programs & Results
 PPF Survey No. 112, March 1976
 line 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

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 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, O. Ashenfelter and J. Heckman estimated that the federal pressures raised black male employment in specific companies by 12.9 percent. G. Burman, using different modelling procedures, estimated that OFCC pressure caused an increase in black employment in companies of 5.6 percent. Later work by J. Heckman and K. Wolpin estimated that the federal pressures raised black male employment in specific companies by 10.4 percent. Only the study by R. Goldstein and R. Smith did not find such effects. Since none of the studies allow for "spillover" effects, by which one company's policies are altered as a result of pressures on a neighboring enterprise, nor for the effects of the Equal Employment Opportunities Commission, or of Fair Employment Practices commissions, nor 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, nor 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.

IV. Conclusion

The improvement in the relative economic position of blacks documented here and in other papers does not mean that sizeable gains have been obtained along all dimensions of economic well-being nor 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 pre-labor market disadvantage of blacks -- the burden of coming from families and neighborhoods of low socio-economic 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 from 10 to 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 benefitted 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 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 present values of 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 to 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 areas -- 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 has not and is unlikely to achieve black-white parity. Other programs or activities (private as well or instead of public) are needed.

FOOTNOTES

1

See J. Williamson and L. Weiss; R. Freeman, 1973a; F. Welch and J. Smith; R. Hall and R. Kasten; F. Welch; R. Hauser and D. Featherman.

2

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 (1977, chapter 8).

3

Some of the published data refers to nonwhites. As about 90 percent of nonwhites are black, it is legitimate to use data on nonwhites to make inferences about the position of blacks. In the text I use the term black except where data specifically refer to nonwhites.

4

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.

5

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.

6

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

7

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

8

For a detailed discussion of the survey, see U.S. Department of Labor (1970).

9

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.

10

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

11

In the younger male NLS sample the questions relating to background refer to the position of the individual at age 14. In the older male NLS sample the questions refer to the position of the individual at age 15. For heuristic purposes, I refer to the position of persons at age 14 throughout the text, although the older male data relate to age 15.

12

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.

13

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 differences in the parental occupation of young blacks and of young whites obtained from using the median income of all men for both groups is about half as large.

14

The region of residence at age 14 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.

15

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

16

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 4.

17

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

18

These calculations use the same median income measures as in table 4.

19

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.

20

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.

21

Duncan, Featherman, and Duncan obtain roughly similar parental regression coefficients for the link between occupational status of the first job and family background as for the link of current occupation with background for various cohorts. Their cross-sectional analysis of the Occupational Change in a Generation (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.

22

The Hauser-Featherman 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 to a sizeable effect in 1973, much like that for nonblacks.

23

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. 16 with those among older men reported in footnote 14 shows no such decline.

24

See Equal Employment Opportunity Commission, Annual Reports (U.S. Government Printing Office, Washington, D.C.)

25

The changed attitude of courts toward affirmative action is evinced in several successful reverse discrimination suits by those injured by affirmative action. The Weber case currently before the Supreme Court represents the most important such suit.

26

For discussion of the increased state programs see Freeman (1977) p. 126.

27

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

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

Source: U.S. Department of Labor, Employment and Training Report of the President 1977, table A-3, p. 140-141, pp. 158-159.

28

Specifically, one might expect a decline in the lower tail of the wage and salary distribution if large numbers of flow wage earners left the job market. In fact, no such pattern is observed, at least from 1968, when the Current Population Survey published the distributions, 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 was .28 in 1974 when the participation rate was .73. The data are from: U.S. Bureau of the Census, Current Population Reports, Consumer Income Series P-60, No. 66, table 54, p. 124 and No. 101, table 72, p. 146.

29

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:

$$\ln(\text{LFP of Nonwhite Men}) = 6.06 + .005(\text{TIME}) + .06(\text{CYCLE}) + .04(\text{AFDC})$$

(.004)
(.05)
(.05)

$$- .08(\text{Unemp.Comp.}) - .35(\text{Educ.}) - .012(\text{EEO}) \quad R^2 = .99$$

(.06)
(.11)
(.009)

$$\ln(\text{LFP of Nonwhite Women}) = 5.03 + .022(\text{TIME}) - .49(\text{CYCLE}) + .05(\text{AFDC})$$

(.012)
(.15)
(.11)

$$- .31(\text{Unemp.Comp.}) - .12(\text{Educ.}) + .019(\text{EEO}) \quad R^2 = .87$$

(.17)
(.28)
(.018)

³⁰This is a better measure than the comparable variable used in my 1973 Brookings Paper. 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.

³¹These results differ greatly from those reported by Butler & Heckman, who performed identical regressions over slightly different years to those in lines 5 and 7. The reason for the differences is that Butler and Heckman inadvertently used data with numerous keypunch errors. I want to thank them for providing me with the data and helping to obtain a corrected set of data.

³²In the logit form the results are:

$$\text{Log odds ratio of median earnings} = 42.1 + .034 \text{ TIME} - 8.77 \text{ CYCLE} + 1.07 \text{ EEO}$$

(.28)
(3.28)
(.85)

$$-1.02 \text{ RED} + 21.09 \text{ RPART} \quad R^2 = .94 \quad \text{d.w.} = 1.84$$

(11.2)
(19.53)

³³Related 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). Also Burstein (1978).

³⁴It 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 regressions does not support the hypothesis of a once-and-for-all jump in relative black earnings.

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Appendix A

Data for Time Series Analysis

Year	GNP (in million \$)	CPI (X 100)	AFDC (\$ per person)	UNCOMP (\$ per person)	EEOC Spending (1,000\$)	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	3875.00	1
1966	981.000	97.2000	36.2500	39.7500	4245.00	2
1967	1007.70	100.000	39.5000	41.2500	5947.50	3
1968	1051.80	104.200	42.0500	43.4300	7887.50	4
1969	1078.80	109.800	45.1500	46.1700	11260.0	5
1970	1075.30	116.300	49.6500	50.3400	14792.5	6
1971	1107.50	121.300	52.3000	54.0200	19592.5	7
1972	1171.10	125.300	54.1000	56.7500	27500.0	8
1973	1233.40	133.100	56.9500	59.0000	38200.0	9
1974	1210.70	147.700	65.5000	64.2400	49740.5	10
1975	1191.70	161.200	72.4100	70.3900	61706.2	11

A-2

Year	Median Wage & Salary Income				Median Years of Schooling (X 10)			
	Male		Female		Male		Female	
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
1948	2711.00	1615.00	1615.00	701.000	104.000	68.0000	120.000	77.0000
1949	2735.00	1367.00	1615.00	654.000	105.000	69.0000	120.000	78.0000
1950	2982.00	1828.00	1698.00	626.000	106.000	70.0000	120.000	79.0000
1951	3345.00	2060.00	1855.00	781.000	107.000	71.0000	121.000	80.0000
1952	3507.00	2038.00	1976.00	814.000	108.000	72.0000	121.000	81.0000
1953	3760.00	2233.00	2049.00	994.000	109.000	73.0000	121.000	82.0000
1954	3754.00	2131.00	2046.00	914.000	111.000	75.0000	121.000	84.0000
1955	3986.00	2342.00	2065.00	894.000	112.000	76.0000	122.000	86.0000
1956	4260.00	2396.00	2179.00	970.000	114.000	78.0000	122.000	88.0000
1957	4396.00	2436.00	2240.00	1019.00	115.000	79.0000	122.000	90.0000
1958	4596.00	2652.00	2364.00	1055.00	117.000	81.0000	122.000	92.0000
1959	4902.00	2844.00	2422.00	1289.00	119.000	83.0000	122.000	94.0000
1960	5137.00	3075.00	2537.00	1276.00	120.000	85.0000	122.000	97.0000
1961	5287.00	3015.00	2538.00	1302.00	120.000	87.0000	123.000	101.000
1962	5462.00	3023.00	2630.00	1396.00	121.000	90.0000	123.000	105.000
1963	5663.00	3217.00	2723.00	1448.00	121.000	93.0000	123.000	107.000
1964	5853.00	3426.00	2841.00	1652.00	122.000	97.0000	123.000	108.000
1965	6188.00	3563.00	2994.00	1722.00	122.000	100.000	123.000	111.000
1966	6510.00	3864.00	3079.00	1981.00	123.000	100.000	124.000	112.000
1967	6833.00	4369.00	3254.00	2288.00	123.000	102.000	124.000	115.000
1968	7291.00	4839.00	3465.00	2497.00	123.000	107.000	124.000	117.000
1969	7859.00	5237.00	3640.00	2884.00	124.000	108.000	124.000	119.000
1970	8254.00	5485.00	3870.00	3285.00	124.000	111.000	125.000	121.000
1971	8550.00	5754.00	4046.00	3480.00	125.000	114.000	125.000	121.000
1972	9190.00	6261.00	4218.00	3944.00	125.000	117.000	125.000	122.000
1973	9969.00	6927.00	4441.00	3978.00	125.000	119.000	125.000	123.000
1974	10745.0	7617.00	4863.00	4751.00	125.000	120.000	125.000	123.000
1975	11296.0	8296.00	5204.00	5062.00	126.000	121.000	126.000	124.000

Labor Force Participation Rates

Population (in thousands)

Year	Male		Female		Population (in thousands)			
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
1948	86.5000	87.3000	31.3000	45.6000	45211.5	4784.65	47763.6	5307.02
1949	86.4000	87.0000	31.8000	46.9000	45506.9	4816.09	48305.0	5366.73
1950	86.4000	85.9000	32.6000	46.9000	45871.5	4854.48	48843.6	5358.21
1951	86.5000	86.3000	33.4000	46.3000	44966.5	4758.98	49404.2	5395.25
1952	86.2000	86.8000	33.6000	45.5000	44945.5	4755.76	49976.2	5320.88
1953	86.1000	86.2000	33.4000	43.6000	45893.1	4857.30	50673.7	5954.13
1954	85.6000	85.2000	33.3000	46.1000	46448.6	4933.10	51222.2	5685.46
1955	85.4000	85.0000	34.5000	46.1000	47067.9	5034.11	51843.5	5776.57
1956	85.6000	85.1000	35.7000	47.3000	47586.4	5122.21	52361.3	5852.01
1957	84.8000	84.3000	35.7000	47.2000	48138.0	5190.98	52997.2	5957.63
1958	84.3000	84.0000	35.8000	48.0000	48730.7	5288.09	53667.6	6052.08
1959	83.8000	83.4000	36.0000	47.7000	49399.8	5383.69	54322.2	6138.36
1960	83.4000	83.0000	36.5000	48.2000	50050.3	5596.38	55263.0	6367.22
1961	83.0000	82.2000	36.9000	48.3000	50585.5	5676.40	56010.8	6492.75
1962	82.1000	80.8000	36.7000	48.0000	51073.1	5777.23	56727.5	6656.25
1963	81.5000	80.2000	37.2000	48.1000	52029.4	5891.52	57596.8	6817.05
1964	81.1000	80.0000	37.5000	48.5000	52889.0	5981.25	58741.3	6977.32
1965	80.8000	79.6000	38.1000	48.6000	53712.9	6099.25	59658.8	7127.57
1966	80.6000	79.0000	39.2000	49.3000	54059.5	6201.26	60464.3	7296.14
1967	80.7000	78.5000	40.1000	49.5000	54574.9	6299.36	61488.8	7482.82
1968	80.4000	77.6000	40.7000	49.3000	55415.4	6416.23	62466.8	7667.34
1969	80.2000	76.9000	41.8000	49.8000	56340.4	6548.76	63622.0	7867.47
1970	80.0000	76.5000	42.6000	49.5000	57516.2	6773.86	64565.7	8111.11
1971	79.6000	74.9000	42.6000	49.2000	58795.2	6969.29	65701.9	8337.39
1972	79.6000	73.7000	43.2000	48.7000	60213.6	7238.80	67194.4	8724.84
1973	79.5000	73.8000	44.1000	49.1000	61192.4	7527.10	68120.2	9103.87
1974	79.4000	73.3000	45.2000	49.1000	62324.9	7776.26	69008.8	9435.84
1975	78.7000	71.5000	45.9000	49.2000	63381.2	8019.58	70159.0	9745.93

A-3

Year	Employment (in thousands)				Median Wage & Salary Income Year-Round, Full-Time Workers			
	Male		Female		Male		Female	
	White	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite
1948	37778.0	3935.00	14382.0	2272.00	--	--	--	--
1949	37116.0	3788.00	14485.0	2318.00	--	--	--	--
1950	37770.0	3778.00	15079.0	2302.00	--	--	--	--
1951	37885.0	3906.00	15808.0	2346.00	--	--	--	--
1952	37774.0	3913.00	16238.0	2283.00	--	--	--	--
1953	38526.0	3986.00	16400.0	2490.00	--	--	--	--
1954	37847.0	3772.00	16110.0	2378.00	--	--	--	--
1955	38721.0	3903.00	17113.0	2438.00	4458.00	2831.00	2870.00	1637.00
1956	39366.0	4013.00	17899.0	2521.00	4710.00	2912.00	2958.00	1637.00
1957	39343.0	4013.00	18109.0	2606.00	4950.00	3137.00	3107.00	1866.00
1958	38592.0	3831.00	18022.0	2591.00	5186.00	3368.00	3225.00	1988.00
1959	39493.0	3972.00	18512.0	2652.00	5456.00	3339.00	3306.00	2196.00
1960	39755.0	4148.00	19095.0	2779.00	5662.00	3789.00	3410.00	2372.00
1961	39588.0	4067.00	19324.0	2765.00	5880.00	3883.00	3480.00	2325.00
1962	40016.0	4160.00	19682.0	2844.00	6025.00	3799.00	3601.00	2278.00
1963	40428.0	4229.00	20194.0	2911.00	6277.00	4104.00	3723.00	2368.00
1964	41114.0	4359.00	20808.0	3024.00	6497.00	4285.00	3859.00	2674.00
1965	41844.0	4496.00	21601.0	3147.00	6814.00	4367.00	3960.00	2713.00
1966	42330.0	4588.00	22689.0	3287.00	7164.00	4528.00	4152.00	2949.00
1967	42834.0	4646.00	23528.0	3366.00	7512.00	5069.00	4394.00	3363.00
1968	43411.0	4702.00	24340.0	3467.00	8014.00	5603.00	4700.00	3677.00
1969	44048.0	4770.00	25470.0	3614.00	8876.00	6158.00	5168.00	4231.00
1970	44157.0	4803.00	26025.0	3642.00	9373.00	6598.00	5490.00	4674.00
1971	44499.0	4746.00	26217.0	3658.00	9801.00	6928.00	5749.00	5181.00
1972	45769.0	4861.00	27305.0	3767.00	10786.0	7548.00	6131.00	5320.00
1973	46830.0	5133.00	28448.0	3999.00	11633.0	8363.00	6544.00	5772.00
1974	47340.0	5179.00	29281.0	4136.00	12343.0	9082.00	7025.00	6611.00
1975	46284.0	4947.00	29429.0	4124.00	13216.0	10168.0	7614.00	7505.00

SOURCE

1. Income figures are from Bureau of Census Current Population Survey, Consumer Income Series P-60.
2. Employment and labor force are from Employment and Training Report of the President 1977, with figures for 1948-1953 estimated on the basis of reported unemployment rates and civilian labor participation rates assuming that the nonwhite share of the population 16 and over remained at its 1954 level.
3. AFDC payments and unemployment compensation obtained from Butler & Heckman.
4. EEOC spending obtained from Annual Reports of the Agency.
5. Median years of schooling obtained from
with missing years obtained by interpolation.