

Employment Restructuring and the Labor Market  
Status of Young Black Men in the 1980s

by

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#### ABSTRACT

This paper examines the effects of recent employment restructuring on young workers by race and sex. Detailed Census occupations are grouped into 10 job segments based on earnings, education and annual hours worked in 1979. Job segments in which young black men were most concentrated had the lowest employment and earnings growth but the highest growth in educational requirements (job cost) over the 1979-89 decade. The results were similar but not as severe for young white men. White women appear to have benefitted most from these trends. While the distributions of moderately educated young black and white women among segments converged over the course of this decade, the black and white male distributions diverged sharply: for those with similar educational attainment, the redistribution of young black men among job segments left them even more disadvantaged than they were in 1979. Changes in labor market participation rates for young workers in these four race/sex groups are consistent with these demand-side developments, declining most for young black males and increasing most for young white women.

The decline in the employment status of young black men relative to their white counterparts is certainly one of the most troubling developments in the post-1970 U.S. labor market. In the case of the least educated cadre of young black men (aged 25-34) the employment to population ratio fell by almost 35% (28 percentage points) between 1970 and 1985 (Jaynes, 1990:Table 2). After several decades of narrowing the earnings gap, the 1980's show widening black/white earnings ratios (Smith and Welch, 1989; Jaynes, 1990).

The recent literature offers little in the way of such a convincing explanation for declines of this magnitude. As Smith and Welch (1989: 548) have concluded, "In our view, one of the major unsettled research questions on race centers around the reasons for the growing fraction of persistently disengaged black men from the labor market" (Smith and Welch, 1989:548). However, cross-metropolitan area studies have lent some support to a demand-side explanation by showing that the work experience of disadvantaged inner city residents is highly responsive to labor market conditions. Cain and Finnie (1990) found that both the hours worked and the average wage of white male youth are closely correlated to hours worked by black youth across metropolitan areas. And the "unifying theme" of the studies based on the 1979 NBER Inner City Youth Survey was that "black male youths are quite responsive to a number of economic incentives..." (Freeman and Holzer, 1986, p. 6).

The growing literature on the effects of recent demand-side trends on black male employment status has relied upon aggregate Census industry and occupation classifications, such as "durable manufacturing"

(which includes industries as diverse as apparel and machinery) and "sales occupations" (which includes both cashiers and securities and financial sales occupations).<sup>1</sup> A central premise of this paper is that the implications of employment restructuring - changes in the mix and quality of jobs - for various demographic groups is best examined, particularly for nonsupervisory workers, by replacing standard Census occupation groups with job segments consisting of detailed occupations grouped by job quality (earnings and hours worked) and job cost (schooling requirements).<sup>2</sup> The significance of this issue of classification is that research findings, and consequently public policies, may be substantially affected simply by the way detailed occupations and industries are grouped. Although most studies of demand-side determinants of black male employment status have focussed almost exclusively on trends in total manufacturing employment, these trends may have little meaning for the obvious reason that most black men with jobs are not employment in manufacturing and employment and earnings patterns vary sharply across manufacturing sectors.

This paper presents an occupational segmentation scheme based on the quality and costs of jobs and makes use of it, first, to describe the distribution of employment in 1979 by race and sex, and second, to examine the effects of employment restructuring over the 1979-89 decade on job growth, earnings and educational requirements for each segment.  
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1 For a survey of this literature see Moss and Tilly (1991).

2 I am currently developing a segmentation scheme that modifies the one presented here by taking into account the industry as well as occupation dimension and by using additional measures of quality (union, pension and health insurance coverage, for example) and cost (e.g., risk of injury and illness).

While it makes no attempt to sort out demand and supply determinants of changes in employment rates, I suggest in section 4 that the correspondence between what happened to the jobs "owned" by each race/sex group and their participation in the labor market is probably not coincidental. The group concentrated in jobs that showed the least employment and earnings growth but the greatest growth in educational requirements showed the greatest declines in participation (young black men); at the opposite extreme, those concentrated in segments with the greatest job growth, greatest wage growth and lowest growth in years of schooling had the greatest increase in participation (young white women). The employment rates of young black women and white men over this period similarly reflect the relative performance of the jobs in which they were most concentrated in 1979.

## **1. Occupation Segments and the Distribution of Employment, 1979**

### Segment Definitions

The labor market may be understood as segmented into a series of job tiers, each offering a different combination of benefits (earnings, benefits, security, mobility) and costs (investment in skills). In addition, some jobs also require far fewer annual hours of work than others, which may be viewed by workers to be either beneficial (greater flexibility and leisure time) or costly (lower annual earnings). The use of these three criteria - earnings, educational attainment and hours worked - has the effect of identifying clusters of jobs that clearly differ in their attractiveness and cost. As the results presented below

demonstrate, these job clusters also show sharp differences in race and gender composition.

For reasons of manageability and sample size, the 500+ 3-digit Census occupations were reclassified into 123 occupation groups, which were then allocated to one of ten occupation segments on the basis of average earnings, average hours worked and average educational requirements in 1979. The segmentation scheme was designed to focus on differences among low-income and middle-income jobs since changes in the number and quality of these jobs were expected to have the greatest effect on the decision by those without a college education to participate in the labor market. The occupations were first allocated to one of four income groups, defined with reference to the Labor Department's "Lower", "Intermediate", and "High" budget for a young urban family of four - husband and wife under age 35 with two children under 6 (U.S. Department of Labor, 1980, Table C):<sup>3</sup>

Poverty Income: occupations whose average wage and salary income for workers were employed for at least 40 weeks and usually worked at least 30 hours per week<sup>4</sup> was less than \$8,475, the "lower budget" for a young urban family of four.

Low Income: occupations whose wage and salary income (as defined above) was greater than the "Lower Budget" (\$8,475) and less than the "Intermediate Budget" (\$13,591).

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<sup>3</sup> Only the "Annual Consumption Budget" was reported for this young family of four in this document, which excludes social security, disability and income taxes, gifts, life insurance and occupational expenses. I used the share of these excluded items in the 4-person family budget (at each budget level), which is reported, to transform the reported annual consumption budgets of young families into a full budgets. As a result, the low budget is  $\$7370 * 1.15 = \$8,475$ ; the intermediate budget is  $\$11,050 * 1.23 = \$13,591$ ; and the high budget is  $\$15,170 * 1.34 = \$20,328$ .

<sup>4</sup> The relatively low annual figure of 1200 hours was used so as not to exclude occupations with low average hours, such as teachers and construction workers.

Middle Income: occupations whose wage and salary income between the Intermediate Level Budget (\$13,591) and the High Income Budget (\$20,327).

High Income: wage and salary income greater than \$20,327.

The next step was to subdivide the Low and Middle Income groups into segments based on educational requirements (highest grade attended) and hours worked. Three educational categories were used: Low - less than 12 years; Moderate - 12-13.5 years; High - more than 13.5 years. Two hours worked categories were used: Low Hours: average annual hours worked of less than 1680 (35 hours per year, 48 weeks per year); and Regular Hours: at least 1680 hours.

The education and hours categories produced four low income and four middle income segments. These eight segments were then combined with the poverty and high income groups to make 10 occupational segments. Table 1 lists each of these segments. Segments 2, 3 and 6 are, in the broadest sense of the term, "production" segments (consisting of blue-collar, primarily manual jobs), while segments 4 and 5 consist of "Office and Sales" jobs, which are primarily the clerical, sales and technician occupations. Segments 2 and 4 are termed "Secondary" to indicate that, compared with Segments 3 and 5 (called "Regular"), they typically work fewer hours<sup>5</sup>, are paid lower wages, and require fewer years of education. The complete occupational composition of the segments is presented in the Appendix.

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5 "Low-Hours" refers to occupations in which the average worker was employed less than 1680 hours (35 hours per week, 48 weeks per year) in 1979. This could be the result of high turnover, high shares of part-time workers, low full-time weekly hours, or low annual weeks worked (e.g. teachers and construction workers).

Segment Characteristics, 1979

Table 2 reports average annual and hourly income, hours worked, and educational attainment for each of the ten segments in 1979 for all workers and for black workers. Annual annual income of the occupations comprising the four Low Income segments ranged from \$7,900 to \$10,800, far higher than the \$5,700 income earned in the Poverty Income segment. As Figure 1 will show, segments 2 and 3 are predominantly male, while segments 4 and 5 are mainly female. The difference between the earnings means of these two "male" and "female" job segments is statistically significant at the most stringent conventional levels. The Moderate Income segments had average earnings that ranged from \$12,200 to \$16,800. While segments 7 and 9 had very similar hourly and annual earnings levels, segment 9 had substantially higher educational attainment.

Column 1 shows that black workers had higher than average earnings in segments 1, 4 and 8, and column 2 shows that hourly income was higher for blacks in six of the 10 segments. These results are almost certainly due to the concentration of black workers in higher cost of living (urban) areas. This table also shows that black workers tended to work fewer hours and had identical or slightly lower educational attainment in each segment in 1979.

Figure 1 suggests that job clusters defined on the basis of earnings, hours and education can be identified as either "male" or "female". Segments 1, 4, 5 and 8 were at least 63.7% female in 1979, while the other six segments ranged from 27.8% to 8.5% female. As Table 2 showed, earnings tend to be higher and educational attainment lower in these male segments. The right side of the chart shows that full-time

full-year earnings per grade is strongly inversely related to the female share of employment: the female segments had earnings per grade that ranged from \$772 to \$1,095, whereas the figures for the male segments ranged from \$1,150 to \$1,418.

The concern of this paper is with the opportunities and incentives facing young black male workers. Figure 2 reports the distribution of young moderately educated black and white male workers across segments in 1979. The sample was limited to workers who were at least 19 but not older than 35. Youth (16-18) were excluded because their labor market behaviour is complicated by schooling and family. The 12-15 years of schooling constraint was imposed both to focus on what is happening to workers who have clearly made some commitment to the legitimate labor market and to facilitate comparisons with white men, white women and black women (since each group has a different educational profile).<sup>6</sup>

About two-thirds of all young moderately educated black men with work experience in 1979 were employed in the three production segments (2-3 and 6). Figure 2 shows that young white men were also concentrated in these segments, but a much higher share of young black workers were employed in the relatively low-paying secondary production segment (2) than their white counterparts while the reverse was true for the high-wage production segment (6).<sup>7</sup>

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6 For example, according to O'Neill (1990:28) "Among men ages 25-34 in 1988, 15.4 percent of black men had completed college compared to 27.9 percent of white men."

7 While Segment 2 paid a mean income of \$7,423 to moderately educated young black men, Segment 6 paid \$11,084. The difference was also large for white workers: \$9,151 in Segment 2 versus \$13,337 in Segment 6. Almost all of the difference between black and white annual earnings in each segment was due to differences in hours worked.

### 3. Effects of Employment Restructuring on Black Americans, 1979-89

What has been the effect of employment restructuring since 1979? Figure 3 shows the change in total employment for each segment between 1979 and 1989. The three relatively highly paid but low-skill production segments (2, 3 and 6), which all saw modest growth in the 1970's (not shown), declined in absolute terms in the 1980's. Indeed, the higher the earnings, the larger was the decline (segment 3 compared to 2 and segment 6 compared to 3). Young black men, already more highly concentrated in low-skill segments 1-3, became even more over-represented there relative to white men with similar years of schooling: young black men had far greater gains in Segment 1 and smaller declines in Segments 2 and 3. They also experienced a much smaller shift than did young white men to the Regular Office and Sales Segment (5), which showed relatively high earnings growth and the lowest percentage increase in education requirements (Figures 4-5). And while the distribution of white workers shifted toward segments 8-10, similarly aged and educated black workers were less concentrated here than they were in 1979. The only positive development for black men was a fairly pronounced shift towards Segment 7, which consists of moderately educated supervisors, mechanics, sales workers and miscellaneous public sector jobs.

The consequence of these trends was that the black and white male employment distributions became more dissimilar over this decade, to the disadvantage of black men. While the simple correlation between the distribution of young moderately educated white and black men was .907 in 1979, it fell to .813 in 1989. In sharp contrast, the coefficient for

moderately educated young white and black women was .906 in 1979 and rose to .969 in 1989.

As Figures 4-6 indicate, substantial differences in the growth of earnings, educational requirements and employment across segments characterized the 1979-89 decade. Figure 4 shows that in the four low-skill segments that employed three quarters of young moderately educated black men in 1979 saw increases in annual earnings that were less than 36%; segments 5, 7, 8, 9 and 10 had increases that ranged from 43% to almost 57%. This Figure also shows that segments 1-3 had by far the lowest increases in hourly wages.

Perhaps more surprising are the results on changes in mean educational attainment by segment shown in Figure 5. With one exception (segment 4), the segments with the greatest increases in educational requirements were those that employed the largest shares of young black men (segments 2-3 and 6). Since these were also the segments with the lowest grade levels in 1979, these figures indicate that there was a strong tendency towards convergence in educational requirements across segments.

Again with the exception of segment 4, Figure 6 shows that segments 2, 3 and 6 had the slowest rates of employment growth, with segment 6 declining by 51.5%.

Table 3 underlines the significance of these trends by reporting the 10-segment correlations between the employment distributions of young workers by race and sex in 1988 and the percentage growth in total segment employment, hourly and annual earnings, and educational require-

ments over the previous decade.<sup>8</sup> Virtually all of the statistically significant coefficients are for black males; their signs indicate that by these criteria black men were the clear losers in this decade. The 1988 distribution of young black men (and those with 12-15 years of schooling) was strongly negatively related to the growth in income, wages and employment, but was highly correlated (.77 and .83) to increases in educational requirements: fewer jobs at lower pay but at a higher educational cost. The pattern is similar for young white men, but the strength of the relationships are weaker - only education and employment growth are significant at the 10% level. Although not significant at conventional levels, the results suggest that economic restructuring over this decade was most beneficial for young white women, with less clear effects on young black women.

#### **4. Employment Rates of Young Workers, 1979-88**

Based on the distribution of workers among occupation segments in 1979 or 1988, the employment restructuring of 1979-89 appears to have benefitted white women most, followed by black women. These trends were clearly disadvantageous to young white men as a whole, but those hurt the most were black men, whose distribution in 1988 was not only the most strongly negatively correlated with both employment and earnings growth, but was also the most positively correlated to growth in educational requirements. The 1979-89 redistribution of young moderately educated black men across the 10 segments left them even more disadvantaged

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<sup>8</sup> Using the 1979 distributions resulted in a similar pattern of results but slightly lower coefficients.

than they were in 1979. While black and white women became more similarly distributed across segments, black and white men became much less similarly concentrated over this decade. Are recent changes in rates of labor market discouragement (the supply-side) consistent with these (demand-side) trends?

Table 4 reports that for both 20-24 and 24-35 age groups and for both labor force participation rates and employment rates, the rankings by race/sex group on growth in earnings, employment and educational requirements mirrors the pattern that appears in Table 3: white women increased their participation and employment rates most, followed by black women. Young white men show declines in both rates, but those with by far the greatest declines over this decade are young black men. There appears to be a strong link between changes in the availability, quality and educational costs of jobs in which various demographic groups are concentrated and changes in the extent to which they participate in the labor market. As Jaynes (1990, p. 22) has suggested, "the rise in unemployment and the increased competition for moderate to high pay jobs may have led to a rise in the number of discouraged workers...."

It should be emphasized, however, that this restructuring worked against young moderately skilled white workers as well (see Table 3), and the declining participation and employment rates for young white workers shown in Table 4 probably reflects this. These declines are smaller than those for young black workers, and the results reported above suggest two reasons for this difference. First, given the employment and earnings trends that took place in the 1980's, young moderately educated black men were less favorably distributed among jobs than

similar white men in 1979. And second, while young moderately educated white men increased their concentration in the top three segments between 1979 and 1989, similarly defined black men did not, but rather increased substantially their concentration in the Poverty-Wage segment.

#### 5. Concluding Remarks

The results presented above suggest a strong link between changes in rates of labor market discouragement and changes in job opportunities, job quality, and job cost (educational requirements). Demand-side changes since 1979 were particularly harmful to young moderately educated black men. This finding needs to be confirmed with more ambitious cross-SMSA statistical tests. But in addition, we need a convincing explanation for the failure of young black men to redistribute themselves towards higher quality, growing job segments as successfully as have similarly educated white men. Our finding that the distribution of young moderately educated black and white women has narrowed substantially in recent years suggests that a spatial explanation for the failure of young black men to show a similar convergence with white men cannot rest upon a claim that there is simply a shortage of low-skill entry level jobs in central cities. A more likely spatial explanation is that there there has been a redistribution of good "male" jobs requiring only moderate levels of schooling away from poor urban black communities, and tests of this proposition should be a focus of future research.

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TABLE 1  
Ten Occupation Segments: 1979<sup>1</sup>

I. Poverty Income

1. Poverty-Wage Jobs: child care and pre-k teachers, light sales and health and food service occupations.

II. Low Income

2. Secondary Production Jobs: Low Education, Low Hours (misc. construction jobs, helpers and laborers, garage workers and janitors).
3. Regular Production Jobs: Low Education, Regular Hours (misc. construction and manufacturing occupations as well as guards and bus/taxi drivers).
4. Secondary Office and Sales Jobs: Moderate-High Education/Low Hours.
5. Regular Office and Sales Jobs: Moderate-High Education, Regular Hours.

III. Middle Income

6. High-Wage Production Jobs: Low Education, Regular Hours (mechanics and machine operators in selected industries, truck drivers, plumbers).
7. Misc. Moderately Skilled Jobs: Moderate Education, Regular Hours (misc. supervisors, mechanics, sales, corrections and postal).
8. Education and Health Related Jobs: High Education, Low Hours (includes librarians and writers and artists).
9. Financial, Technical and Sales Jobs: High Education, Regular Hours (Accountants, Technicians and Sales Representatives).

IV. High Income

10. Professional, Technical and Managerial Jobs: High Income.

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<sup>1</sup> The occupational composition of each segment is shown in the Appendix. See the text for a discussion of the criteria (income, education and hours worked) used to group occupations.

TABLE 2  
Summary Statistics for Ten Occupation Segments: 1979

	Mean Annual Income (1)	Mean Hrly Income (2)	Mean Highest Grade (3)	Mean Annual Hours (4)	Empl Distr (%) (5)	Sample Size (000) (6)
<u>Poverty Income</u>						
Seg 1: Total:	5,677	4.52	11.7	1465	12.2	106.9
Black:	5,875	5.12	11.2	1497	19.3	17.1
<u>Low Income</u>						
Seg 2: Total:	8,882	6.20	10.7	1652	7.1	62.8
Black:	7,926	6.27	10.3	1596	13.5	11.9
Seg 3: Total:	10,817	6.50	11.3	1824	11.2	98.5
Black:	10,035	6.87	11.1	1734	14.5	12.8
Seg 4: Total:	7,948	5.39	12.8	1583	7.8	68.5
Black:	8,007	5.71	12.8	1591	8.3	7.3
Seg 5: Total:	10,366	6.04	13.2	1881	15.2	147.4
Black:	9,787	6.34	13.0	1836	12.4	13.2
<u>Moderate Income</u>						
Seg 6: Total:	14,064	7.66	11.3	1991	10.5	92.1
Black:	11,978	5.56	10.9	1852	10.9	9.6
Seg 7: Total:	16,789	8.86	12.5	2085	8.0	70.1
Black:	14,772	8.30	12.5	1967	5.9	5.2
Seg 8: Total:	12,200	8.76	16.0	1614	6.3	55.7
Black:	12,595	10.27	15.7	1562	5.3	4.7
Seg 9: Total:	16,534	8.75	14.5	2005	9.6	84.7
Black:	13,843	7.79	14.1	1895	4.8	4.2
<u>High Income</u>						
Seg 10: Total:	20,907	10.46	15.0	2154	12.2	106.9
Black:	15,496	9.32	14.4	1939	5.0	4.5

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1. The data cover workers aged 19-70 with at least 1 week of work in 1979. Income is defined as wages and salaries, hourly income is wage and salary income divided by total annual hours, and mean highest grade measures highest grade attended (not necessarily completed).

Source: 1% Public Use Sample, 1980 Census (computer tape).

Table 3  
Correlations Between the Distribution of Young Workers  
in 1988 and the 1979-88 Changes in Segment Earnings,  
Education and Employment

<u>1988 Employment</u> <u>Empl Distribution</u> <u>(Ages 19-35)</u>	----- SEGMENT CHARACTERISTICS, 1979-88 -----			
	<u>%ΔIncome</u>	<u>%ΔWage</u>	<u>%ΔEduc</u>	<u>%ΔEmployment</u>
<b>White Males</b>				
Total	-.269	-.16	.312	-.296
12-15 Yrs of Educ	-.456	-.308	.606*	-.582*
<b>Black Males</b>				
Total	-.748**	-.734**	.773**	-.546*
12-15 Yrs of Educ	-.765**	-.689*	.828**	-.541*
<b>White Female</b>				
Total	.097	.283	-.109	.348
12-15 Yrs of Educ	-.055	.243	.083	.212
<b>Black Female</b>				
Total	-.153	.04	.131	.206
12-15 Yrs of Educ	-.206	.033	.212	.146

† See Table 4.

\* Significant at the 10% level.

\*\* Significant at the 1% level.

Sources: Wage, Income and Grade - 1989 March CPS and 1980 Census 1% Public Use Sample Tape, for Ages 19-70 who worked at least one week in the previous year (1988 and 1979);

Employment - 1989 March CPS and 1980 Census (U.S. Department of Commerce, 1984, Table 278), for Ages 16+ with work experience in the survey week (1989 and 1980).

Table 4  
 Labor Force Participation and Employment Rates  
 for Young Workers by Race and Sex:  
 Levels and Percentage Change, 1979-88

<b>Ages 20-24</b>	----- LFPR-----			----- EMPL/POP-----		
	<u>1979</u>	<u>1988</u>	<u>%Δ</u>	<u>1979</u>	<u>1988</u>	<u>%Δ</u>
White Male	87.6	86.6	-1.14	81.1	80.1	-1.23
Black Male	80.7	79.3	-1.73	65.5	63.9	-2.44
White Female	70.5	74.9	6.24	65.0	69.8	7.38
Black Female	61.5	63.2	2.76	47.7	50.7	6.29
<b>Ages 24-35</b>	----- LFPR-----			----- EMPL/POP-----		
	<u>1979</u>	<u>1988</u>	<u>%Δ</u>	<u>1979</u>	<u>1988</u>	<u>%Δ</u>
White Male	96.0	95.2	-.83	92.5	90.9	-1.73
Black Male	90.8	89.3	-1.65	82.0	79.5	-3.05
White Female	63.1	73.0	15.69	59.5	69.7	17.14
Black Female	70.1	73.7	5.14	61.7	64.3	4.21

Source: Handbook of Labor Statistics, U.S. Department of Labor, Bulletin 2340, August 1989, Tables 5 and 16.

**Fig 1: Percent Female and Income Per Grade by Segment, 1979 (ages 19-70)**

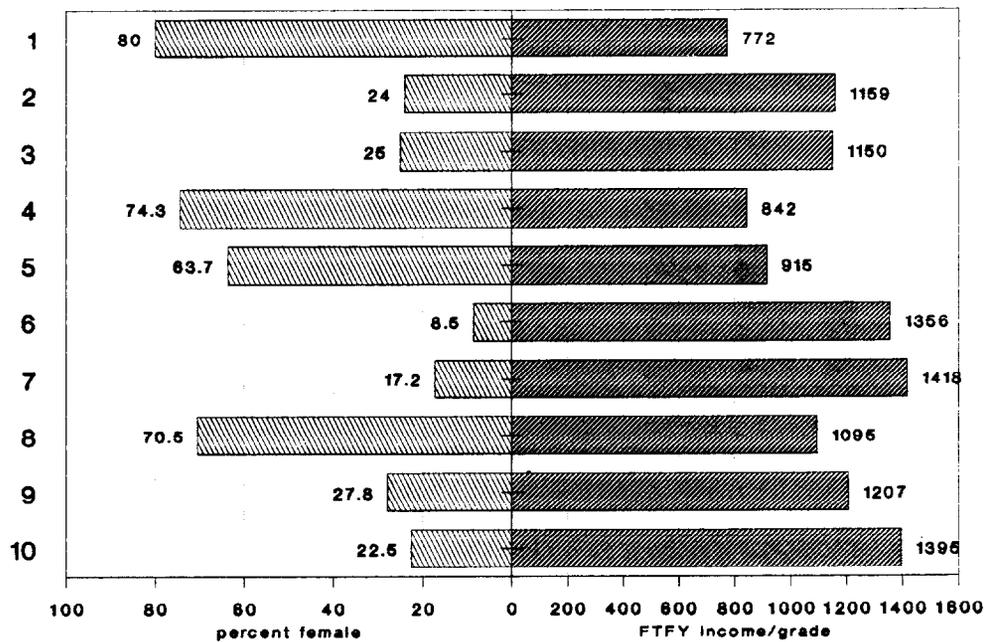
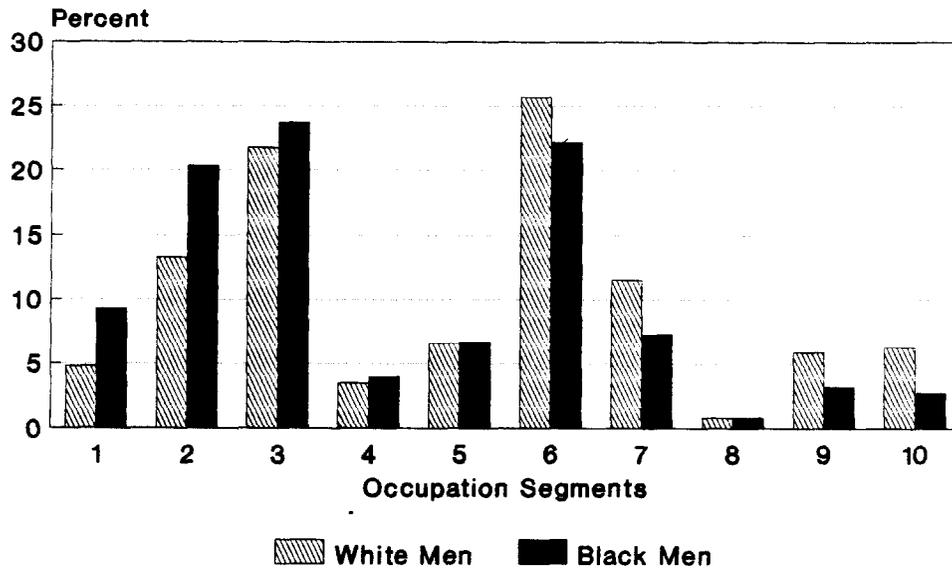
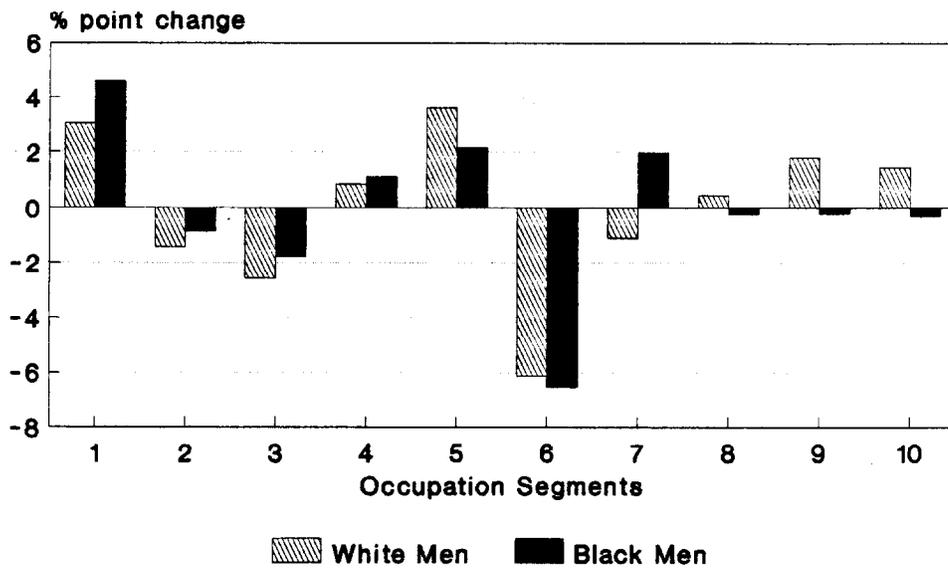


Fig 2: Employment Distributions for  
Moderately Educated Young Men, 1979



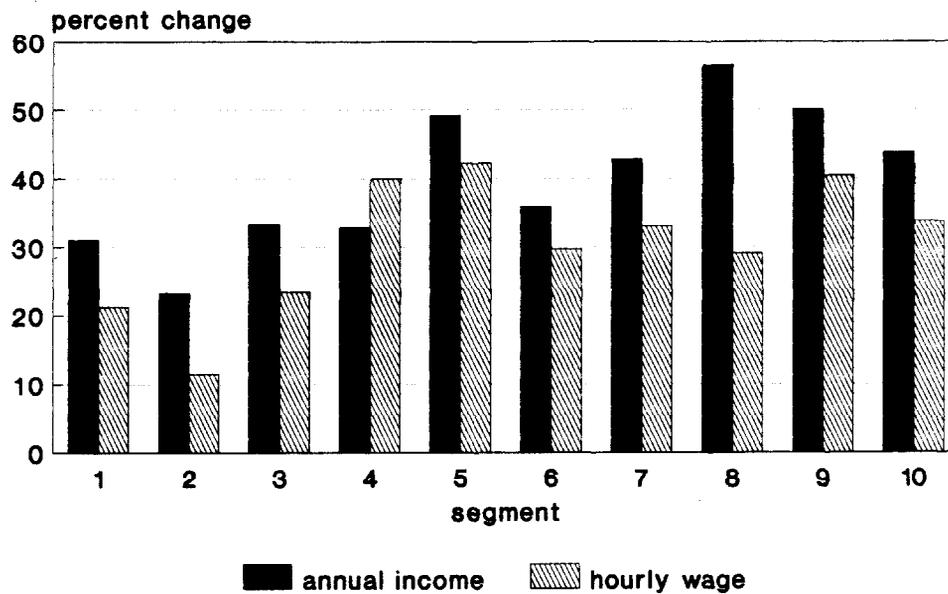
Ages 19-35 with 12-15 years of  
education. Source: 1% Public Use  
Sample, 1980 Census.

**Fig 3: Change in the Distribution of  
Young Moderately Educated Men, 1979-89**



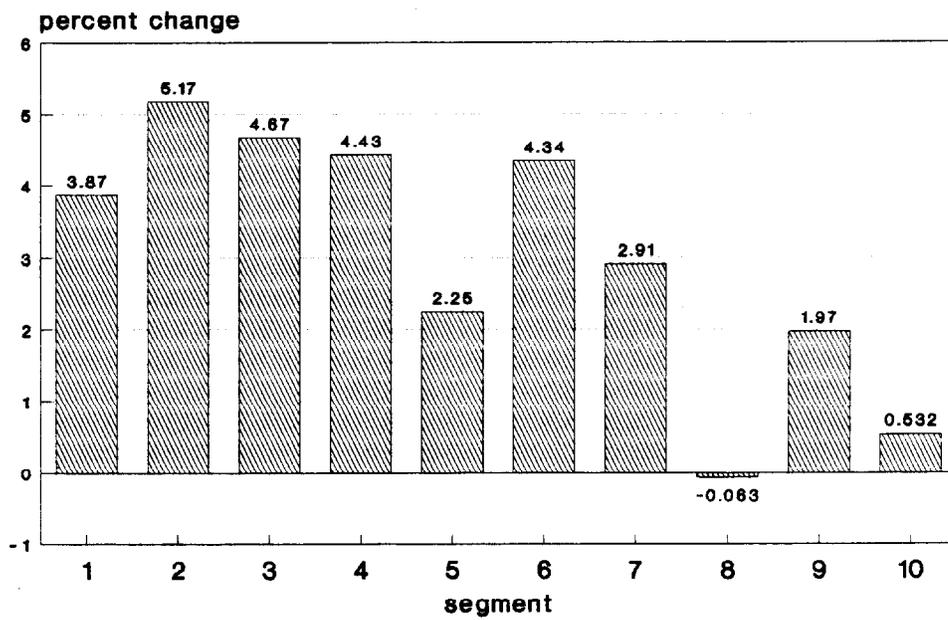
Ages 19-35 with 12-15 years of  
education. Source: 1% Public Use  
Sample, 1980 Census.

Fig 4: Change in Earnings by Segment  
1979-1988 (ages 19-70)



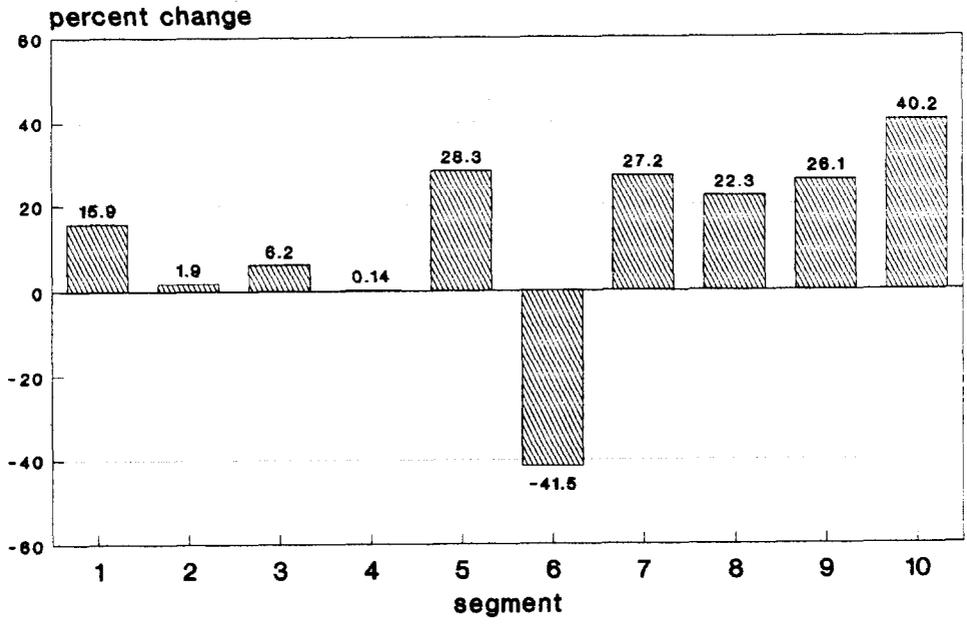
Source: 1989 March CPS and 1980 Census  
1% Public Use Sample.

Fig 5: Change in Educational Attainment  
by Segment, 1979-1989



Source: 1989 March CPS and 1980 Census  
1% Public Use Sample.

**Fig 6: Change in Employment  
by Segment, 1979-1989**



Source: 1989 March CPS and 1980 Census  
1% Public Use Sample.

APPENDIX

The Occupational Composition of the Ten Segments

I. Poverty Income

- 1. **Poverty-Wage Jobs:** Teachers, Pre-K and Kindergarten; Sales, Light Consumer Goods; Cashiers; Bank Tellers; Teachers Aides; Household Workers; Waiters, Waitresses and Bartenders; Cooks; Misc. Food Occs; Misc. Health Service Occs; Personal Service Occs; Child Care Workers; Health and Nurses Aides; Precision Workers Textile; Machine Operators, Textile.

II. Low Income

- 2. **Secondary Production Jobs:** Building Service Occ's; Brickmasons and Tilesetters; Painters, Plasterers, Drywall and Insulation; Roofers; Helpers and Laborers, Construction; Handpackers; Helpers and Laborers, exc. Construction; Garage and Parking Lot Workers.
- 3. **Regular Production Jobs:** Guards; Supervisors, Building Services; Vehicle Eqt. Mechanics; Carpenters; Constr. Trades, n.e.c.; Precision Workers, Wood; Precision Workers, Food; Machine Operators, Wood; Misc. Machine Operators; Assemblers; Handworking Occs; Production Inspectors; Bus/Taxi Drivers; Garbage Collectors; Stock and Material Handlers.
- 4. **Secondary Office and Sales Jobs:** Teachers, n.e.c.; Recreation Workers; Sales, Hardware and Parts; Sales, Street; Typists; Information Clerks; Records Processing; Communications Eqt. Operators; General Office Clerks; Mail Clerks and Messengers; General Office Clerks; Supervisors, Food Preparation.
- 5. **Regular Office and Sales Jobs:** Managers, Public Adm.; Physicians Assistants; Therapists; Health Technicians; Social/Religious Workers; Supervisors, Sales; Sales, Heavy Consumer Goods; Computer Equipment Operators; Peripheral Equipment Operators; Secretaries; Financial Records Processing; Material Recording, Scheduling Clerks; Adjusters, Investigators; Miscellaneous Clerical Support; Misc. Precision Workers.

III. Middle Income

- 6. **High-Wage Production Jobs:** Machinery Maintenance; Misc. Mechanics; Plumbers; Metal Workers, Construction; Extractive Occupations; Precision Workers, Metalworking; Machine Operators, Metalworking; Machine Operators, Metal and Plastic Processing; Machine Operators, Assorted Materials; Welders and Solderers; Truck Drivers, Heavy; Truck Drivers, Light; Material Moving Eqt. Operators.
- 7. **Misc. Moderately Skilled Jobs:** Managers, Real Estate; Sales, Cars and Boats; Supervisors, Clerical; Postal Clerks and Mail Carriers; Firefighting Occs; Correctional Institution Officers; Supervisors, Mechanics; Electric and Electronic Eqt. Repairers; Supervisors, Construction; Electricians; Supervisors, Production Occupations;

Precision Inspectors; Plant and System Operators; Machine Operators, Printing.

8. **Teachers, and Nurses and Related Jobs:** Registered Nurses; Teachers, Elementary; Teachers, Secondary; Counselors; Librarians; Writers and Artists.

9. **Financial, Technical and Sales Jobs:** Accountants; Management Analysts and Personnel Specialists; Purchasing Agents and Inspectors; Pharmacists; Lawyers and Judges; Reporters and Announcers; Engineering Technicians; Science Technicians; Miscellaneous Technicians; Sales Reps, Finance and Business Services; Sales Reps, Commodities except Retail; Police.

IV. High Income

10. **Professional, Technical and Managerial Jobs:** Financial, Personnel, Marketing Managers; Administrators, Education, Health and Postal; Managers, N.E.C.; Engineers and Architects; Math and Computer Scientists; Natural Scientists; Health Diagnostic Occs; Teachers, Post-Secondary; Supervisors, Protective Service; Supervisors, Extractive Occs; Supervisors, Transportation; Rail and Water Transportation Occupations.