CAREER WAGE MOBILITY*

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Job careers are not static. Fresh with their diplomas, most workers enter their chosen profession little better than raw recruits with limited practical knowledge about the skills necessary in their jobs. They spend their first months and years on the job partly as learners investing considerable money and time acquiring job-related skills. Following this, most of them transit into junior membership in their occupations. Later still, the more successful move into full professional status. In the dynamics of occupational careers, some are more able, more ambitious, and luckier than others and careers diverge among people who start the race at the same point. But the general tendency is for productivity and wages to rise the longer workers are on the job. For example, the earnings of men with 20 years of labor force experience typically run 80-90 percent higher than those in the first five years of work, and in some occupations the differentials are much higher.

These large wage differentials associated with labor market tenure raise an issue of the relative career prospects for black and white workers. The confinement of blacks to dead end jobs is often thought to be a quantitatively important cause of the racial wage gap. Many have argued that blacks fall successively behind white workers in a variety of dimensions as their careers proceed. According to this view, black men have been systematically excluded by discriminatory forces from jobs with high career growth potential. In this paper, I take a fresh look at this issue by examining the empirical evidence on male racial differences in occupational and wage mobility over labor force careers.

This paper is organized into three sections. In Sec. 1, I recapitulate the principal empirical data--the less rapid black wage growth with age--that gave rise to the idea that blacks were confined to relatively dead end jobs. The two main theoretical explanations for this age relationship--the secondary labor market and vintage hypothesis--are also outlined in this section. The selective literature review in Sec. 2 summarizes the major empirical evidence that relates to this issue. In the final section, I report some new results, derived from the 1940-1980 Census, that document actual racial differences in career wage growth in far more detail than was previously possible. These new results present a far different historical record of male racial differences in career prospects than was thought to be the case.

The Issue Joined

The question addressed in this paper is deceptively easy to pose. Do black men enjoy salary increases and promotions equal to those of white men?[1] The instinctive reply of most Americans to this question would undoubtedly be in the affirmative, and until recently most economists would have given the same response. Such reactions apparently received widespread empirical confirmation since cross-sectional data indicated that black-white male income differences diverged sharply with age. This divergence spawned theories of labor market discrimination that asserted that one key form which discriminatiton takes is that blacks as a group are forced into sectors

[1]In this paper, I concentrate exclusively on racial differences for men. The more complicated life-cycle labor force histories for women, with career interruptions associated with childbearing the most notable characteristic, raise too many ancillary issues.

of the economy where little career wage growth was possible. This theory dominated thinking on racial job mobility for decades, but it now appears to be, by and large, false.

The empirical origins of the theories that blacks in similar occupations do not progress as rapidly as whites over their careers date back at least to the 1940 Census. This Census was the first to include information on income and the large size of the sample allowed detailed decomposition of income differences between the races. Age stratified income data from the 1940 Census contained the first evidence based on national data that the wage gap between the races expanded systematically with age.[2]

To illustrate the typical cross-sectional pattern, Table 1 depicts black-white male weekly wage ratios from each of the decennial Census tapes between 1940 and 1980. To highlight life cycle patterns, these ratios are listed for 5 year intervals of years of work experience.[3]

One pattern that characterizes all five Census years in Table 1 is that black-white wage ratios decline with years of work experience. For example, in 1950, among men who had spent 36 to 40 years in the labor market, black wages were 47 percent of white. In the same year, among men in their first five years of work experience, black wages were 62 percent of white. This pattern that younger blacks fare better in comparison to whites than their older counterparts is a feature common to all cross-sectional studies.

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[2]For the first extensive use of the 1940 Census data to investigate career wage growth, see Zeman (1955).

[3]Years of market experience is defined as current age--assumed age at leaving school. The mapping from years of schooling completed and school leaving age is as follows: ed 0-11 = age 17, ed 12 = age 18, ed 13-15 = age 20, ed 16 or more = age 23.

Table 1

BLACK MALE WAGES AS A PERCENT OF WHITE MALE WAGES, 1940-1980

Years of Market Experience	Census Years 1940	1950	1960	1970	1980
1-5	46.7	61.8	60.2	75.1	84.2
6-10	47.5	61.0	59.1	70.1	76.6
11-15	44.4	58.3	59.4	66.2	73.5
16-20	44.4	56.6	58.4	62.8	71.2
21-25	42.3	54.1	57.6	62.7	67.8
26-30	41.7	53.2	56.2	60.6	66.9
31-35	40.2	50.3	53.8	60.0	66.5
36-40	39.8	46.9	55.9	60.3	68.5
All	43.3	55.2	57.5	64.4	72.6

SOURCE: Public Use Tapes of the decennial Censuses, 1940-1980

How should we interpret this less rapid black male wage growth with age in Table 1? A natural interpretation of the expanding wage differentials with age was the life-cycle interpretation actually assigned to it. Among a group of blacks and whites of similar education, region and initial wage or job, over the career blacks will fall farther and farther behind whites in earnings and job advancements. For a long time, the cross-sectional decline in wage ratios with experience, as depicted in Table 1, was the principal statistical evidence that led to widespread scientific and popular acceptance of a particular theory of labor market discrimination. This theory, labelled the "secondary" or "dual" labor market theory, viewed labor markets as stratified, with some markets being less upwardly mobile than others. Because of discrimination, blacks tended to be relegated to these

secondary markets and to jobs with little potential for career advancement.

However, this cross-sectional increase in black wages with age is also consistent with an alternative "cohort" or "vintage" hypothesis. This cohort view recognizes that each individual in a cross-section is a member of a distinct birth cohort captured at a single point in his life cycle. In the cohort view, the observed cross-sectional decline in relative black-white wages with job experience simply reflects the fact that less experienced workers are simultaneously members of more recent birth cohorts. For example, in Table 1, the 47 percent ratio for the 36-40 experience interval may be lower than the 62 percent ratio for the first five years of experience in 1950 because the more experienced workers were born 35 years earlier. Relative to their contemporary whites, these older blacks had less schooling and attended poorer quality schools than their black successors would 35 years later. If there has occurred more rapid improvement in schooling quality and home environments over time for blacks, blacks and whites would be closer in terms of ability in the 1906-1910 cohorts than they were in the 1886-1895 cohorts. In the cohort view, the cross-sectional decline with age in black-white earnings does not reflect differential life-cycle effects, but rather the movement across age groups from younger to older cohorts.

The secondary labor market and cohort theories offer very different bases for adjusting the past trends and predicting future trends in black-white income disparities. The life-cycle view is basically pessimistic. For any given group of workers, conditions will deteriorate for blacks relative to whites as they get older. Moreover,

there is no reason to presume that in the next group of workers when they start their work careers that blacks will fare any better relative to whites than previous generations did. In the cohort view, however, the relative position of a given group of black and white workers will not change over the work careers, but as each new cohort that arrives on the scene, black wages will be higher relative to whites. Moreover, if the future course of differences among cohorts conforms to the past, the cohort hypothesis tends toward the more optimistic view that wage differences between blacks and whites will continue to narrow over time.

It should be clear that both the life cycle and cohort hypotheses are consistent with the data presented in Table 1. In fact, any single cross-sectional data source, such as the Census, is incapable of distinguishing between the cohort and life cycle hypotheses since by definition more experienced workers must be simultaneously members of older cohorts. In order to discriminate between the two hypotheses, we must be able to follow a given cohort of workers who entered the labor market at the same time over their life cycle careers as they age. There are two techniques that researchers have used to accomplish this. The first involves using successive cross-sectional data sets in different calendar years to create synthetic cohorts. The second relies on longitudinal data sources which explicitly follow a given individual as he ages. The evidence from both techniques points to the same conclusion--by and large the data rejects the life cycle or secondary labor market theories and confirms the cohort or vintage hypothesis.

Before reviewing the evidence, it must be remembered that a finding that black wages do not rise as rapidly as white wages over life cycles would not alone be a confirmation of the secondary labor market

hypothesis. Less rapid black wage growth could reflect other factors which have little to do with the depiction of the labor market inherent in the secondary labor market view. For example, less on the job investment among black men would also lead to less rapid salary increases for them.[4] Indeed, such prominent human capital adherents as Becker and Mincer assigned precisely this interpretation to the smaller age coefficients in black earnings functions. This lower rate of black job investment could reflect a number of factors: (1) an inability of blacks to finance such investments because of their lower wealth and more limited access to capital markets, (2) a higher black discount for future income, or (3) a higher investment cost by blacks possibly due to a higher cost of learning associated with lower schooling quality. All three factors have some plausibility so that less rapid black male wage growth is not necessary evidence in favor of secondary labor markets. However, the reverse is not true. I have argued in this paper that the belief that black wage and occupational mobility is less than that of whites has been critical to a strong acceptance of a racial component to secondary labor markets. In the rest of this paper, I first review the existing evidence on this issue and present as well some new results of my own that address the question.

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[4]More precisely, less investment as a proportion of total income. See Mincer (1974) for a detailed exposition of the human capital approach to job investment.

Literature Review

For a long time, almost all researchers agreed on a life-cycle interpretation of the expanding racial wage disparities with age. Research centered instead on the mechanisms producing this empirical "fact". Especially important in this regard was the vast amount of literature that has been subsumed under the label of the secondary or dual labor market hypothesis. More recently, studies have appeared that have relied on longitudinal data to trace life-cycle wage differences between the races. In this section, I present a very selective and brief review of that literature mainly to give a flavor of the content.[5]

Before discussing the secondary labor market studies, one must remember that I am focusing exclusively on a very narrow and specific racial aspect of the dual labor market hypothesis. That is, do black and white men enjoy similar career wage growth? I think a fair reading of scholars adhering to the dual labor market view is they assert that black men fall well short of the salary increases enjoyed by whites. But the dual labor theory deals with many more issues than this specific racial question. One can only be impressed when reading this literature with its grand vision, its richness in descriptive detail, and its historical scope. Such a complex theory can neither be accepted nor dismissed in its entirety with such simple tests as I pursue here. I make no claim on addressing the theory in its full scope in this paper. But it remains true that this literature contains an identifiable racial

[5]For two readable and more lengthy literature reviews by a critic and sympathizer of the dual labor market theories, see Cain (1976) and Reich (1984).

dimension. Dual labor market theorists invariably argue that blacks are disproportionately in the secondary labor market. If so, on average, black salaries advances should be less than that of whites.

The beginning of the dual labor market view is a separation of the labor market into two parts: the primary and the secondary markets. To cite a classic discussion of the difference, Piore writes

> "The primary market offers jobs which possess several of the following traits: high wages, good working conditions, employment stability and job security, equity and due process in the administration of work rules, and chances for advancement. The ... secondary market has jobs which, relative to those in the primary sector, are decidedly less attractice. They tend to involve low wages, poor working conditions, considerable variability in employment, harsh and often arbitrary discipline, little opportunity to advance."

As this quote indicates, the good jobs with high salaries and promotion possibilities are in the primary sector. In contrast, jobs in the secondary labor market are inherently unstable, low wage, and have flat wage seniority profiles.

The critical element of the dual market theory is not this dichotomy, but instead concerns mobility between the two sectors. The assertion that gives the theory its special content is that jobs in the primary sector are rationed. Opinions vary about underlying reasons for this rationing. This diversity is at the core of many of the competing views within the segmented labor market school. Some assign it a distinctly Marxist interpretation with an emphasis on class-conflict, others emphasize the technological emergence of a industrial economy, with internal labor markets in large firms. Finally, others assert that discrimatory forces are the primary reason for this rationing. These disputes need not concern us here. What is essential is the simultaneous pressure of two markets--a primary market with high payoffs to education and seniority and a secondary market where laborers are

largely unrewarded for personal attributes, including education and experience. Second, whatever the cause of the rationing, blacks are disproportionately in the secondary market.

Tests of the dual labor market as applied to race take a variety of forms and it is difficult to characterize them succinctly. A common approach starts by dividing jobs into those thought to be in the primary or those in the secondary sector. The rules that guide this division have been a source of dispute even within the secondary labor market camp. One well cited example is that of Osterman (1975) who candidly admits to its subjectivity in his work. He employed his own judgment to divide jobs into sectors. This judgment was guided by the idea that secondary sector "contains occupations characterized by low wages, instability of employment, and similar factors" (Osterman, 1975, pg. 5B). Other researchers employ more explicit rules.[6]

Given the separation into these markets, the next step involved looking at the nature of the labor market within each market. A standard procedure would be to estimate earnings functions in each market. It was hypothesized that the secondary labor market would have low estimated returns to education and experience. As a typical example, Osterman (1975) estimated such earnings equations based on the 1967 Survey of Economic Opportunity. Consistent with his expectations, neither age nor education had a statistically significant impact on earnings in the secondary labor market. Blacks, of course, were more likely to be in this secondary market.

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[6]Adrisani's, (1973) separation is based on median earnings in occupations. Those below the 33 percentile are in the secondary labor market.

The criticism of this empirical design is now standard, with Cain (1976) as the main citation. The basic point made by Cain concerns sample selection bias. Put simply, he argues that it should come as little surprise if we essentially divide the sample into low wage and high wage sectors that the wage increments to anything in the truncated low wage sector are small.

An example of an alternative approach is that followed by Rumberger and Carnoy (1980). Using 1970 Census data, they also separate markets into two groups. An attractive feature of their study is that they tracked actual mobility for individuals rather than deducing that mobility from an age coefficient. They report that blacks were less likely than whites to move from the secondary to primary sector between 1965 and 1970, but blacks were also more likely to fall from the primary to secondary sector over that period.

However this procedure suffers from considerable problems. Essentially, Rumberger and Carnoy posit a line and all occupations above the line are in the primary sector and those below in the secondary. Crossing this line alone constitutes mobility. Within the secondary segment, blacks will be in occupations further down from this crossing point than whites. Given their diverse starting points, even if there exists equal occupational mobility between the races, whites will be more likely to cross the line simply because they are closer to it to begin with. An analogous argument holds within the primary sector. In this sector, whites have the better jobs and are further above the crossing line. Clearly, whites will be less likely to traverse this line than blacks are. But that hardly constitutes a test of racial differences in occupational mobility.[7]

[7]It should be pointed out that using a more continuous definition

Longitudinal Data

At first blush, it is surprising that so little empirical research has relied on panel data to test for differential career wage growth between the races. Panel data most directly monitors the actual wage changes associated with an additional year in the labor force. Unfortunately, existing longitudinal data quickly confront severe problems of adequate sample sizes, especially among black men. In addition, because of its recent availability, such data are limited largely to describing patterns of the last two decades. For these two reasons, panel data has proven to be far less useful for this issue than one would have hoped.

However, two studies that did use longitudinal data to estimate life-cycle wage profiles by race are Hoffman[8] and Duncan-Hoffman[9]. Both used the Panel Study of Income Dynamics (PSID) in their empirical work. Hoffman's work, the most directly relevant of the two, was motivated precisely to address the issue of racial differences in career wage growth. He starts with the familiar observation that cross-sectitonal estimates of black career wage growth might severely bias downwards the actual wage improvement black men enjoyed as their careers proceeded. The central purpose of his paper was to contrast the cross-sectional wage profile to that obtained from actually following a group of workers over time.

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of occupatiional mobility and without this separation into two segments, Leigh (1976) finds little evidence of black-white differences in occupational mobility.

[8]See "Black-White Life Cycle Earnings Differences and the Vintage Hypothesis: A Longitudinal Analysis", American Economic Review, by Saul Hoffman, Vol. 69, No. 5, pp. 855-867, December 1979.

[9]See "A New Look at the Causes of the Improved Economic Status of Black Workers", Journal of Human Resources, Vol. XVII, No. 2, pp. 268-282, 1983.

In Hoffman's work, individuals were followed across the eight year period 1967-1974. The PSID sample was divided into men aged 20-29 in 1967 and those men who were 30-39 years old in that year. As a consequence, life-cycle wage histories up to age 46 were traced. These actual life cycle wage histories were then contrasted to those predicted by a 1967 cross-sectional wage equation.

Hoffman's study points to a number of conclusions. Most important, it demonstrates once again that vintage effects are quite strong for black men. Because of the rapid improvement in economic opportunities across black birth cohorts, the cross-sectional data seriously bias downward predictions of actual career wage growth among black men. For example, evaluated at eight years of experience, an extra year of work enhanced black male wages by 1.75 percent, if the cross-sectional results are used. The true life-cycle wage growth was actually 3.53 percent per year.

For black men in both age groups, the estimated cross-sectional experience terms were at least half the size of the actual age related wage growth. For example, cross-sectional estimates indicated essentially a zero wage growth for black men 30-39 years old while the "true" effect was that black wages grew by 3.96 percent per year with each extra year on the job. In contrast, the vintage effects for whites were small (i.e., the estimated cross-sectional and longitudinal estimates of experience was quite similar). Reliable estimates of the true career prospects for black men simply cannot be obtained from cross-sectional studies.

Given the unreliability of cross-sectional estimates, Hoffman turns to his longitudinal analysis to compare actual wage growth between the races. The results varied with the age class considered. In the younger age group (i.e., those initially aged 20-29 years old in 1967), estimates were sensitive to the number of years of work experience. Among men with 10 or more years of work experience, black wage growth actually exceeded slightly that of whites.[10] In contrast, among workers with less than 10 years of work experience, white wage growth was larger than that experienced by black men.[11] For example, evaluated at eight years of work experience, white male wages grew 1.5 percent more per year than did wages of black men.

The results are more clear cut for men 30-39 years old. Within this age group, the actual life-cycle wage experience favored black men. Among men in this age group, blacks were favored in wage growth by one and a half percent per year.

Hoffman summarizes his conclusions succintly:

> "The results suggest that differences in earnings growth did exist in the first eight to ten years of work, but that thereafter, earnings differences were maintained or even reduced. For birth cohorts, the pooled and extrapolated results indicate a far more optimistic life-cycle situation than would be inferred from cross-sectional results". Hoffman, page 864.

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[10]Hoffman reports that for workers with 10 or more years of work experience, the eight year growth rate was 18.2 percent for blacks and 15.1 percent for whites.

[11]However, small sample sizes suggest caution in reaching conclusions for this age group. Hoffman reports, for example, that there were only four blacks in the PSID sample with four years of experience or less.

The second study, Duncan-Hoffman, used the PSID data over the 12 year period 1967-1978. Although 12 years of the PSID are used, individuals are only followed for 4 years due to the separation of the data into these three segments. The data are divided into 3 four-year panels--1967-1970, 1971-1974, 1975-1978. Black-white hourly wage ratios are listed for those aged 25-54 and separately for those men aged 25-34.

In large part, Duncan-Hoffman's findings parallel those reported earlier in Hoffman. Once again, the data overwhelmingly points to strong black vintage effects. In fact, according to Duncan-Hoffman, virtually all the improvement in black-white wage represented across-cohort improvement. Across the full sample of men aged 25-54, black-white males wage ratios remained essentially constant as the workers aged.[12] Among younger workers, mixed results were obtained.[13] In two of the three cohorts, black-white male wages declined while wage ratios were constant at .81 during the 1975-1978 period.[14]

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[12]For the first period, the wage rate was .64 in 1967 and .65 in 1970. During the second four years the ratio was .71 in 1971 and .69 in 1974. Finally, the wage ratio was .75 in 1975 and 1978.

[13]The usefulness of the Duncan-Hoffman study for testing life-cycle evaluation is seriously marred by a change in sample definition between their first descriptive table (Table 1) and the remainder of their analytical work. In their descriptive table, they imposed the restriction that a man had to work at least 500 hours in a year of the four years of the panel. However, in the analytical work, their restriction was the man was in the sample if he worked 500 hours in a given year no matter what he worked in any other year. Thus, none of their analytical work follows identical individuals over time, because only the descriptive table is used. Another major problem with the Duncan-Hoffman study is that age rather than experience stratification is used. Those aged 25-34 vary a good deal in work experience depending on the education level achieved. The whole debate centers on comparing blacks and whites at the same point in their work careers.

[14]The ratio declined from .75 to .70 between 67-70, and .81 to .73 from 71 to 74.

New Evidence

This brief and selective literature review indicates that the debate has not been conclusively settled. A major limitation of recent studies is that they have been largely confined to the last few decades, a period which many view as too unique in America's racial history to allow historical generalizations. In addition, recent tests of alternative theories, while they offer much of value, have become intricate and subtle. These tests have lost sight of the simple and powerful empirical relation--the much more rapid white male wage growth with age--that gave rise to the notion of black confinement to secondary markets in the first place.

In this section, I present some new evidence that challenges the simple fact that gave birth to the racial dimension of the secondary labor market view in the first place. My evidence relies on long term historical tracking of actual career related wage disparities between the races. My data comes in two parts. The first long term series presents life-cycle profiles throughout the twentieth century. The disadvantage of this series is that it is indirectly derived from occupation data. The second series relies on actual wage data from 1940-1980.

Turn first to the long term series. Until recently, series that tracked relative career progress by race simply did not exist. One reason is that nationally representative income data was not available before 1940. In order to provide information on what happened before that date, it is necessary to rely on indirect methods. In this section, I summarize such estimates originally presented in Smith (1984).

My long term series was derived from published Census occupational distributions of the workforce. These distributions were available by race, sex, and age for all decennial Censuses from 1890 onward. Occupations were first aggregated into a consistent set of 133 categories that could be calculated in each Census year. Each occupation was then assigned a race, sex, and age-specific average income based on mean incomes derived from the 1970 Census. My occupation based income series derived from this procedure is presented in Table 2.

Table 2 is organized to facilitate tracking of black-white income ratios across work careers. The first column lists five year birth cohorts starting with those born between 1826. By reading across the rows, we are able to monitor life cycle income ratios for those cohorts listed in the first column. Complete careers of birth cohorts who entered the labor force in the twentieth century are presented in this table, as well as partial segments of careers for those men who entered the labor force in the last half of the nineteenth century.

Before looking at the actual life-cycle paths, it is informative to use Table 2 to see what the cross-sectional data would have predicted. The cross-sectional age relationship can be obtained by reading down the column under any Census year. The qualitative pattern is the same in all Census years from 1890-1980. Each cross-section indicates a deterioration in black-white income ratios with age. If we had used the cross-section to project, black men should have fallen progressively behind whites as their careers proceeded.

Table 2

ESTIMATED BLACK-WHITE MALE INCOME RATIOS
BY BIRTH COHORTS

Birth Cohort	Census Year 1890	1900	1910	1920	1930	1940	1950	1960	1970	1980
1956-60										.653
1951-55										.625
1946-50									.646	.624
1941-45									.608	.610
1936-40								.571	.583	.573
1931-35								.561	.582	.593
1926-30							.555	.555	.577	.583
1921-25							.542	.546	.571	.554
1916-20						.501	.532	.537	.562	.583
1911-15						.488	.516	.536	.562	
1906-10					.509	.480		.526	.548	
1901-05					.500	.482	.508	.524		
1896-1900				.515	.498	.483		.519		
1891-95					.494	.478	.503			
1886-90				.494	.492	.469	.501			
1881-85		.488			.481	.465				
1876-80					.458	.445				
1871-75	.472	.463		.387	.452					
1866-70					.438					
1856-65	.454	.451								
1846-55	.435	.428								
1836-45	.417	.398								
1826-35	.397									
All Ages 10-75	.433	.442	.455	.476	.479	.474	.516	.542	.590	.611
Ages 20-64	.439	.449		.484	.486	.479	.522	.543	.585	.605

Reality turned out to be quite different. If we consider men who entered the labor force during the twentieth century (for example, those born after 1886), black-white income ratios did not decline over life cycles. The cross-sectional decline apparently results from more rapid cohort effects for blacks, and not from differential life cycle career paths. On the basis of this occupation based income data, blacks did not fall behind whites as their careers unfolded. Among men born before 1886, Table 2 does provide evidence of a less rapid career income growth for black men, although obviously not as pronounced as the cross section would predict.

By construction, the ratios presented in Table 2 can only detect life cycle decay in the relative economic status of blacks that have their origin in movements across occupations. This table does demonstrate the important point that any cross-sectional decline in relative incomes of blacks due to different occupational distributions for men of different ages is a cohort and not a life cycle phenomenon. However, within occupations, incomes of blacks may be falling relative to whites, or more white-intensive occupations may exhibit faster career wage growth, even if race income neutrality prevails within occupations. If either of these two events occurred, relative income ratios of blacks would decline with age, but we would not capture it in Table 2. To find out about such possibilities, we must turn to actual income data.

One of the great advantages of the recently released 1940 and 1950 Census data is that long term career changes can be monitored. For the first time, we can observe what actually happened to work careers across a forty year period. A second advantage is that relative racial careers

across many diverse decades can be followed. Many have claimed that the 1960s and 1970s were a special case. If so, these decades may not be an appropriate period to test hypotheses that center around racial differences in the career progression. All agree that these decades were a period of rapid black economic progress and many viewed them as quite unique. For example, other confounding forces, including the implementation of the major Civil Rights employment discrimination legislation offered to some a plausible alternative explanation of racial progress. In the remainder of this section, I report some new research results derived from the 1940-1980 Census files.

Table 3 isolates the actual labor market experiences of labor market cohorts by rearranging the items in Table 1. This rearrangement involved centering the original data by the initial year of labor market entry. For example, men in their first five years of work in 1940 first entered the labor market, on average, in 1938. Among these men, blacks earned 46.7 percent as much as whites. These same men by 1950 had spent 10-15 years in the labor market; blacks in this cohort now earned 58.3 percent as much as whites. By reading across any row in Table 3, we can follow the actual life-cycle path of relative wages of the labor market cohorts indexed in the first column.

The message of Table 3 is unambiguous. In contrast to the cross-sectional implication of deterioration in the relative economic status of blacks across labor market careers, the reality is that, if anything, black men actually improved their situation relative to whites. In virtually every instance depicted in Table 3, black men narrowed the gap between their incomes and those of their white contempories as their careers evolved. The cross-sectional decline in each Census year that

Table 3

BLACK MALE WAGES AS A PERCENT OF WHITE MALES BY LABOR MARKET COHORT

Median Year of Initial Labor Market Work	Census Year 1940	1950	1960	1970	1980
1978					84.2
1973					76.6
1968				75.1	73.5
1963				70.1	71.2
1958			60.2	66.2	67.8
1953			59.1	62.8	66.9
1948		61.8	59.4	62.7	66.5
1943		60.0	58.4	60.6	68.5
1938	46.7	58.3	57.6	60.0	
1933	47.5	56.6	56.2	60.3	
1928	44.4	54.1	53.8		
1923	44.4	53.2	55.9		
1918	42.3	50.3			
1913	41.7	46.9			
1908	40.2				
1903	39.8				
All	43.3	55.2	57.5	64.4	72.6

SOURCE: Public Use Tapes of the decennial censuses 1940-1980.

characterized Table 1 is not the result of any increasing life-cycle differentiation by race. Instead, improvement in the quality of black workers relative to white workers across successive birth cohorts accounts for the cross-sectional decline.

A useful historical summary is provided by combining these Census profiles with those obtained from the yearly CPS tapes between 1968-1982. The results of that blend are presented in Table 4.[15] This

[15]The CPS numbers were derived from yearly Current Population Survey Public Use Tapes. The Census numbers were derived by centering the numbers in Table 3 in the experience midpoint and linearly interpolating between those midpoints. Similarly, intercensal years were also derived by linear interpolation. Whenever CPS and Census data were both available, CPS numbers were used. The CPS and Census series

table lists for all work cohorts[16] (beginning with those who started work in 1928) black white male ratios of weekly wages for given accumulation of years of work experience. In this table, reading down a column follows a work cohort across their careers.

The patterns in Table 4 are remarkable. Instead of blacks falling progressively behind whites, black men typically enjoyed larger wage increases than white men did. For example, among men who entered the labor market between 1946-48, black wages were initially 57.6 percent of whites. When we observed this group thirty five years later, black men were earning 62.4 percent of whites. The problem blacks face is clearly the large wage disparities that exist at the beginning of their labor market careers, not what evolves over labor market careers.

The only real exception to this rule took place in the 1970s. Especially during the first five years of work experience, black wages did not rise as rapidly as whites did. For example, the relatively high initial black male wages for the 1970-1978 work cohorts were not maintained over the first five years of work experience. These years was the same period studied by Hoffman and Duncan, using the longitudinal PSID data. They also reported that the only case in which black wages failed to keep up with those of whites was in the first 5-8 years of work.

The interpretation of this recent divergence from the more common historical pattern is an open question. But, note that this initial year relative wage base in the early 1970s was sharply above that only

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matched up very well when they met. As a result of all these interpolations, the simulations in Table 4 should be regarded mainly as illustrative.

[16]A work cohort is defined by the year of initial labor market entry.

Table 4

COHORT SPECIFIC WAGES OF BLACK MALES AS A PERCENT OF WHITE MALES

Years of Labor Market Experience	Birth Cohort								
	28-30	31-33	34-36	37-39	40-42	43-45	46-48	49-51	52-54
0-1					46.1	51.7	57.6	63.0	62.8
2-4				47.7	52.4	57.1	61.8	62.2	61.9
5-7			48.1	51.4	56.1	60.7	61.1	61.1	61.1
8-10		48.1	51.3	55.0	59.6	60.1	60.4	59.4	60.4
11-13	46.6	51.0	54.5	58.7	59.2	59.6	59.6	59.9	61.4
14-16	49.4	53.7	57.6	58.4	58.8	59.0	60.0	61.0	59.9
17-19	52.3	56.5	57.5	58.1	58.4	59.2	61.1	59.0	60.7
20-22	55.1	56.7	57.3	57.9	58.7	60.0	59.2	60.6	62.9
23-25	55.2	56.8	57.1	58.2	59.4	59.5	60.4	62.8	67.0
26-28	55.3	56.9	57.6	58.9	59.0	61.1	64.0	66.3	65.7
29-31	55.4	57.0	58.6	58.2	61.8	64.8	65.9	65.7	
32-34	55.8	57.3	58.3	61.7	64.7	65.5	62.4		
35-37	56.2	57.6	61.6	64.2	66.8	64.5			
38-40	56.5	59.9	62.3	66.4	67.2				

	55-57	58-60	61-63	64-66	67-69	70-72	73-75	76-78	79-81
0-1	61.4	60.6	65.0	69.5	73.9	82.4	81.5	81.8	81.7
2-4	61.6	61.3	64.4	67.4	73.6	76.9	75.1	77.2	
5-7	61.1	63.2	65.2	69.6	72.7	73.0	76.4		
8-10	62.8	64.8	67.7	71.4	73.1	74.7			
11-13	62.2	65.2	69.3	72.8	70.1				
14-16	62.6	66.3	71.0	69.6					
17-19	64.6	69.7	70.9						
20-22	68.6	70.5							
23-25	68.4								
26-28									
29-31									
32-34									
35-37									
38-40									

five years earlier. In other work, I argue that this wage bubble in the early 1970s was an effect of affirmative action, but that the gains were short-lived.[17] In the early stages of affirmative action, covered

[17]See Smith-Welch (1986)

firms were desperately attempting to increase the number of black workers they employed. To achieve this aim, they bid up the wages of young black workers, the age group where most of the new hiring was taking place. Wages of young black workers increased dramatically from 1967 to 1972, but these wage gains were eroded by 1977.

CONCLUSION

How then should we sum up? In my view, the evidence is overwhelmingly that once we go past the first five years of work experience, black and white men experience similar career related wage growth. This conclusion is warranted whether we use longitudinal data on individuals or follow synthetic cohorts. The conclusion is also supported for all groups of workers in the forty years since 1940 and far earlier into the twentieth century if we can rely on occupation based wage series. There seems to me little room for ambiguity here.

The remaining issue of legitimate debate should concentrate on the first five years of work. Even here, my actual historical wage profiles show little favoritism for whites. However, during the early 1970s, my data, as well as the longitudinal studies that cover this period, indicate that black men were unable to maintain their historically high initial wage ratios. I believe that this period represents a special case, reflecting a reaction to affirmative action pressures by covered firms. If so, the early 1970s should not serve as a predictor of future events. However, other interpretations are possible. Additional research on the early phase of the career is definitely warranted.[18]

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[18]Care must be exercised in this part of the career. Part of the wage growth we are witnessing represents a transition from the part time teenage and often transitory labor market into full time career jobs.

Yet, there is little doubt that the overall conclusion of similar career wage advancement between the races is the correct one.

There is little doubt that black-white wage disparities are much smaller in this "teenage" labor market. To the extent that early career wage profiles include part of that transition, it would not be surprising to see black-white wage ratios fall. However, the issues addressed in this paper does not refer to that transition, but rather to wage growth after the first full time job was achieved. This same care must be exercised in empirical work to make certain that career wage growth represents only the period after achieving the first full time job.

REFERENCES

Andrisani, Paul J., An Empirical Analysis of the Dual Labor Market Theory, Columbus: Center for Human Resource Research, Ohio State University, 1973.

Cain, Glen, "The Challenge of Segmented Labor Market Theories to Orthodox Theory: A Survey," Journal of Economic Literature, Vol. XIV, No. 4, December 1976, pp. 1215-1257.

Duncan, Greg J., and Saul D. Hoffman, "A New Look at the Causes of the Improved Economic Status of Black Workers," Journal of Human Resources, XVII, 2, pp. 268-282.

Hoffman, Saul D., "Black-White Life-Cycle Earnings Differences and the Vintage Hypothesis: A Longitudinal Analysis," American Economic Review, 69, December 1979, pp. 855-867.

Leigh, Duane, "Occupational Advancement in the Late 1960s: An Indirect Test of the Dual Labor Market Hypothesis," Journal of Human Resources, Vol. XI, No.2, Spring 1976, pp. 155-171.

Mincer, Jacob, Schooling, Experience and Earnings, National Bureau of Economic Research, Columbia University Press, New York and London, 1974.

Osterman, Paul, "An Empirical Study of Labor Market Segmentation," Industrial and Labor Relations Review, Vol. 128, No. 4, July 1975, pp. 508-523.

Piore, Michael J., "The Dual Labor Market," in David J. Gordon (ed.) Problems in Political Economy, Lexington, Mass: D.C. Heath and Co., 1971, pp. 92.

Reich, Michael, "Segmented Labour, Time Series Hypothesis and Evidence," Cambridge Journal of Economics, 1984, 8, pp. 63-81.

Rumberger, Russell W., and Martin Carnay, "Segmentation in the U.S. Labor Market: Its Effects on the Mobility and Earnings of Whites and Blacks," Cambridge Journal of Economics, 1980, 4, pp. 117-122.

Smith, James P., "Race and Human Capital," American Economic Review, Vol. 74, September 1984, pp. 685-698.

Smith, James P., and Finis R. Welch, Closing the Gap: Forty Years of Economic Progress for Blacks, R-3330-DoL, The Rand Corporation, February 1986.

Zeman, Morton, "A Comparative Analysis of White-Nonwhite Income Differentials," unpublished dissertation, University of Chicago, September 1955.