

Secular and cyclical patterns in white and nonwhite employment

For the 1954–93 period, and especially from 1966 to 1976, the nonwhite employment ratio declined relative to the white employment ratio; although both ratios are procyclical, the nonwhite ratio is more volatile

James Eaton
and
Manown Kisor, Jr.

Title VII of the Civil Rights Act of 1964 sought to reduce racial inequality by barring discrimination in the labor market. Employment and earnings data suggest that the Act has achieved mixed results. On the one hand, the compensation of nonwhite workers has risen relative to that of white workers. On the other hand, the employment rate of nonwhites has declined: nonwhites of working age are less likely than white workers to have a job, and their chances of having one were *lower* in 1993 than they were in 1964.

A number of studies have documented these conflicting trends through comparisons of decennial census data. For example, James P. Smith and Finis R. Welch observed that black men's real incomes increased fourfold over the period 1940–80, compared with a two-and-one-half-fold increase for white men's. Measured by weekly wages, black men's earnings rose from 43 percent to 73 percent of white men's earnings over the same period.¹ Decade by decade, relative gains in earnings were larger for younger and better educated black workers. Smith and Welch cited migration from the South and relative increases in the quantity and quality of their education as the major factors responsible for blacks' gains.²

Black men and women were more likely than their white counterparts to be employed in 1940, but less likely to have jobs by the 1980's. In 1980, 1 in 5 black men aged 16 to 64, twice the rate for white men, was not active in the labor market. Declines in black labor force participation over the

1940–80 period are observed over most age ranges and are larger at lower levels of educational attainment.³ Furthermore, the unemployment rate for blacks in the labor force remains more than twice that for whites, a differential that has persisted for decades. Two recent studies decomposed unemployment rate differentials into two parts: a so-called endowment effect based on nonracial demographic differences and a residual effect resulting from differences due to race per se. On the basis of data from the March 1990 Current Population Survey (CPS), Leslie S. Stratton concluded that only 20 percent to 40 percent of the observed unemployment differential between black and white men in 1990 can be explained by differences in demographic characteristics other than race.⁴

Decennial census data have important advantages for research on trends in inequality. Matching individuals' labor market status and earnings with their demographic characteristics allows testing of causal explanations, and comparisons over several decades give a sweeping view of historical change. But census data are less useful if one wants to know what happened during any given decade. Even data from the annual March CPS are limited for investigating how racial differences in employment are affected by the ebb and flow of economic activity. For that, monthly data are needed.

Using monthly CPS data, this article compares the behavior of the *employment ratio* (the ratio of the number of persons employed to the number of persons aged 16 or older in the noninstitutionalized population) for nonwhites with the behavior

James Eaton and Manown Kisor, Jr., are professors of economics at Bridgewater College, Bridgewater, Virginia. A version of this paper was presented at the annual meeting of the Pennsylvania Economic Association, Slippery Rock University, Slippery Rock, Pennsylvania, May 1994.

of the employment ratio for whites over four decades and seven business cycles.⁵ The data are monthly and are available from January 1954 to the present, providing comparisons of the behavior of the two ratios before and after the Civil Rights Act of 1964 and allowing us to examine cyclical as well as secular patterns in nonwhite and white employment. Two points about the CPS data are important to bear in mind: (1) they are strictly macroscopic in nature, and (2) data on blacks alone were not published prior to 1972. Accordingly, to ensure conformity across the entire 1954–93 period, all employment ratio comparisons in this article are between nonwhites and whites.⁶ The nonwhite population encompasses blacks and other races, with blacks making up the bulk of the group.

To the extent that racial inequality in the job market has been reduced, we should find that nonwhites are “catching up” to whites through (1) a secular uptrend in the nonwhite employment ratio relative to the white employment ratio and (2) a reduction in the cyclical volatility of the nonwhite employment ratio relative to the white employment ratio. In other words, the data should show that the nonwhite employment ratio has trended upward relative to the white employment ratio and that the cyclical behavior of the nonwhite ratio has more closely tracked the cyclical behavior of the white ratio over more recent business cycles than earlier ones.

Secular patterns in employment

As far as the secular behavior of the white and nonwhite employment ratios is concerned, it is clear that nonwhites have lost ground over the past 30 years. Chart 1 tracks the white and nonwhite employment ratios from January 1954 through December 1993. In July 1964, when Title VII was passed, 55.6 percent of the working-age white population held jobs; in December 1993, the white employment ratio was 63.1 percent. By contrast, the nonwhite employment ratio slipped slightly, from 56.4 percent to 56.3 percent, over the period.

Now, by itself, this fact simply reinforces the conclusions of many of the studies mentioned earlier: the chances of a nonwhite of working age having a job in 1970 were no higher than they were in 1960, before Title VII was passed, and they were substantially lower in 1980 than in 1970. However, as can be seen in chart 1, the chances of a nonwhite of working age having a job were substantially higher in 1993 than they were in 1980, the last year covered by most of the studies cited. For purposes of further analysis, we identified the following three subperiods within the 1954–93 time frame: 1954–65, 1966–76, and 1977–93.⁷ During the first and third of these subperiods, the proportions of working-age whites and nonwhites who were employed tended to rise and fall together, with the nonwhite employment ratio showing greater volatility than the white employment ratio. In the middle subperiod, one or more special forces seem to have been at work. Around 1966, while the white

employment ratio continued to climb, the nonwhite employment ratio leveled off. Then, in the 1969–70 recession, both ratios fell as the demand for labor weakened along with the economy. However, the decline in the nonwhite employment ratio was much steeper and more prolonged than the decline in the white ratio, and while the white ratio moved into new high ground as the economy recovered in the early 1970’s, the nonwhite ratio failed to regain its prior peak before plummeting again in the next recession.

The three subperiods of markedly different behavior of the nonwhite employment ratio compared with its white counterpart are quite evident in chart 2. This chart shows the *relative employment ratio*—the proportion of working-age nonwhites who hold jobs divided by the proportion of working-age whites who hold jobs. The least squares trend lines for 1954–65, 1966–76, and 1977–93 show how different the middle subperiod was from the first and third subperiods. The special forces at work in the 1966–76 subperiod appear either to have abated or to have been offset by factors tending to reduce racial inequality in the job market during the 1977–93 subperiod.

These forces can be categorized according to whether they affected the demand or the supply side of the labor market.⁸ Table 1 presents the annual growth rates for the total population 16 years and older and the number of persons employed for the period 1954–93 and also shows separate growth rates for the white and nonwhite populations for the subperiods 1954–65, 1966–76, and 1977–93.

For the 1954–93 period as a whole, the average annual increase in the number of persons employed was 1.68 percent for whites, 2.59 percent for nonwhites, and 1.78 percent for the two groups combined. Over the same time frame, the average annual growth in the number of persons 16 years and older was 1.34 percent for whites (0.44 percent slower than the growth in the number of persons employed) and 2.67 percent for nonwhites (0.89 percent faster than the growth in the number of persons employed). For the 1966–76 period, when the nonwhite employment ratio fell both in absolute and in relative terms, the total number of employed whites grew, on average, by 2.00 percent per year, employed nonwhites by 2.40 percent, and the two groups combined by 2.05 percent. Over this time frame, the average annual growth in the number of persons 16 years and older was 1.75 percent for whites (0.30 percent

Table 1. Average annual percent change in employment and in population 16 years and older, 1954–93

Period	Persons employed			16 years and older		
	Total	White	Nonwhite	Total	White	Nonwhite
1954–93	1.78	1.68	2.59	1.50	1.34	2.67
1954–65	1.55	1.49	2.01	1.42	1.35	2.02
1966–76	2.05	2.00	2.40	1.93	1.75	3.37
1977–93	1.77	1.58	3.08	1.27	1.06	2.64

Chart 1. White and nonwhite employment ratios, 1954-93

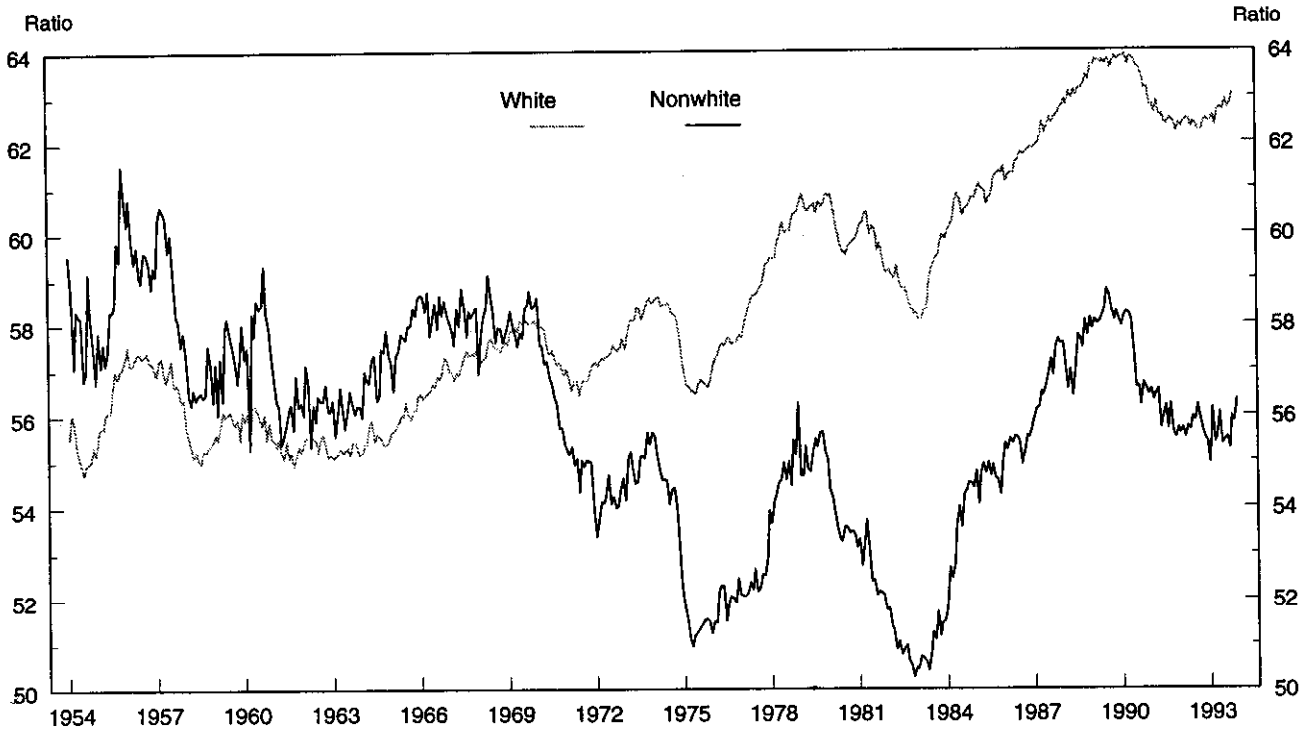
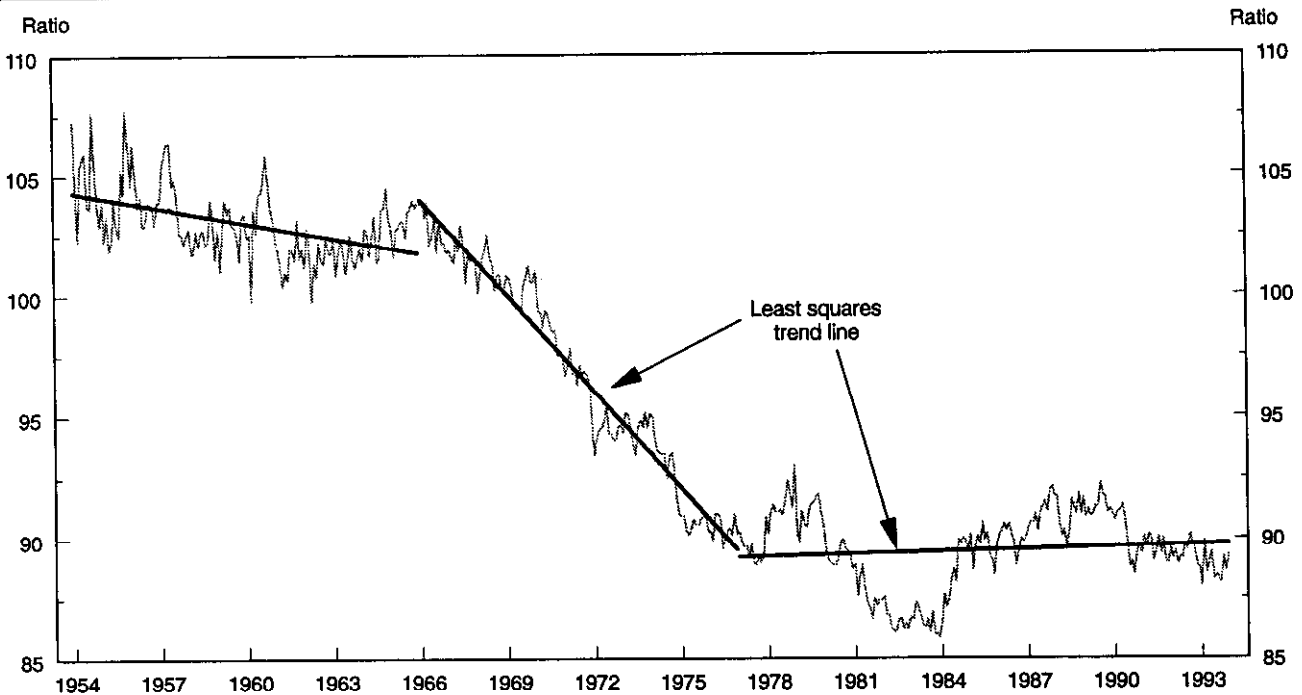


Chart 2. Nonwhite-to-white relative employment ratio,¹ 1954-93



¹ Proportion of working-age nonwhites who hold jobs, divided by proportion of working-age whites who hold jobs.

slower than the growth in the number of persons employed) and 3.37 percent for nonwhites (1.32 percent faster than the growth in the number of persons employed). Assuming no change in the number of whites employed in 1976, an additional 1,218,000 jobs for nonwhites would have been needed to maintain the nonwhite employment ratio at its 1966 level. This would have added 12.3 percent to the number of nonwhite jobholders, or 1.4 percent to the total number of persons employed in 1976.⁹

The failure of the economy to generate enough jobs to absorb the rapid growth in the number of nonwhites of working age is an important demand-side explanation for the relative decline in the nonwhite employment ratio over the 1966–76 time frame. Demand-side considerations may also account for the nonwhite employment ratio remaining relatively low compared to the white employment ratio since 1976. Geographic restructuring of the economy may have eliminated jobs disproportionately held by inner-city blacks, although Welch denied that there is support for this proposition.¹⁰ However, Smith and Welch claimed that changing patterns of international trade during the 1980's operated to reduce the demand for low-skilled labor as U.S. imports of goods produced by low-skilled foreign workers using labor-intensive processes increased.¹¹ This restructuring of labor demand, in their view, disproportionately affected nonwhite workers.

Lora P. Holcombe speculated that the lower likelihood of blacks being employed in the years after the enactment of Title VII might be an unintended result of desegregation in labor markets. She reasoned that, prior to the civil rights movement, blacks tended to work for blacks or in jobs that white workers did not want; with the integration of labor markets in the 1960's came increased interracial competition for jobs and more discrimination against blacks.¹² Although she provided no evidence to support this hypothesis, it is possible that persistent discrimination plays a role in curtailing the demand for nonwhite labor.

One might also point to possible effects of minimum-wage rates in reducing the demand for young, unskilled workers.¹³ Or, as Andrea H. Beller suggested, there may be an inherent tradeoff operating: relative declines in employment may be the price nonwhites have to pay for the relative wage gains they have achieved.¹⁴

On the other side of the demand-supply equation, there are a number of plausible arguments that the relative decline in the nonwhite employment ratio resulted from the labor supply decisions of nonwhites. Welch argued that the labor force participation of black men declined because nonmarket alternatives to employment became relatively more attractive to them.¹⁵ According to this argument, the existence of public assistance programs and illegal activities causes reservation wages to rise, especially among black youth. Further, Smith and Welch claimed that these alternatives made the labor supply of black

males more elastic since 1970 than it was prior to that time, therefore making their labor supply decisions more responsive to variations in the demand for their labor.

Another possible explanation for a decline in the supply of nonwhite labor is that nonwhites chose to invest more in schooling after 1964, expecting that lowered discriminatory barriers in the labor market would increase their returns on educational investment. The narrowing difference between the educational attainment of black men and that of white men from the 1970 to the 1980 census supports this argument.¹⁶ Similarly, expectations that higher wages would accompany the dismantling of discriminatory institutions may have reduced the nonwhite labor supply by leading nonwhite workers to set their reservation wages too high.¹⁷ On the other hand, the observed decline in the employment ratio may simply be a textbook case of the income effect of higher wages dominating the substitution effect, creating a "backward-bending" labor supply curve. Another hypothesis meriting further research is that disproportionate numbers of nonwhites serving in Vietnam may have led to a decline in the supply of nonwhite labor, although presumably, the employment ratio for whites was also reduced as young men became either soldiers or college students after the mid-1960's.

Cyclical patterns in employment

The white and the nonwhite employment ratios each exhibit procyclical behavior. As chart 1 shows, both ratios have tended to rise and fall with the expansion and contraction of the economy, cresting near business cycle peaks (in 1957, 1960, 1969, 1973, 1980, 1981, and 1990) and bottoming out near business cycle troughs (in 1958, 1961, 1970, 1975, 1980, 1982, and 1991). This cyclical performance is not surprising, for in the short run, the denominators of the ratios—the numbers of persons of working age—are largely fixed, while the numerators—the numbers of employed persons—fluctuate with the level of economic activity and the demand for labor. Chart 1 also reveals that nonwhite employment has tended to increase relatively more than white employment has when the economy and the demand for labor have risen and to decline relatively more than white employment has when the economy and the demand for labor have fallen. These patterns reflect the "last-hired, first-fired" syndrome that historically has characterized nonwhite employment.

Charts 3 and 4 provide a further perspective on the greater cyclical variability of nonwhite employment. Chart 3 shows the percent changes in white and nonwhite employment from cyclical trough to cyclical peak for each of the seven economic expansions in the 1954–93 period. In all but one instance, the percent increase in the number of nonwhites holding jobs was greater than the percent increase in the number of whites holding jobs. The lone exception, the 1980–81 expansion, was the shortest of the seven, a fact that may help

Chart 3. Percent change in number of persons employed in expansions, 1954-90

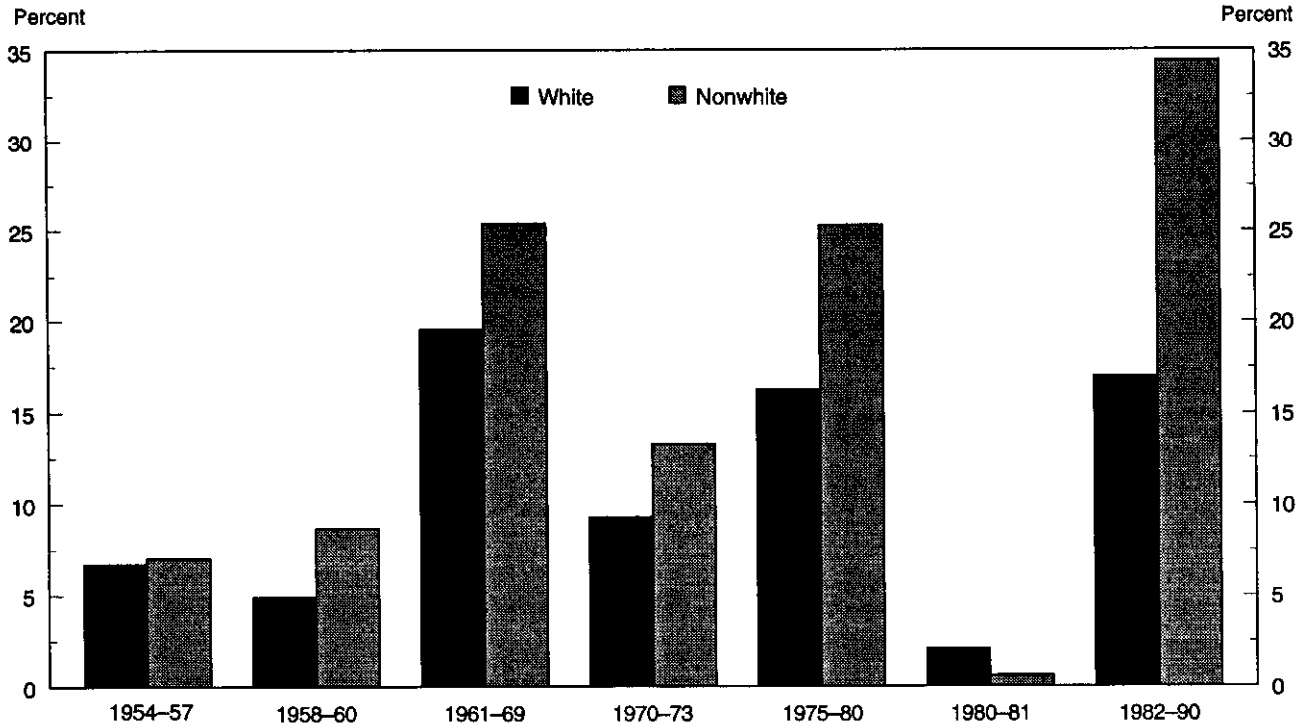
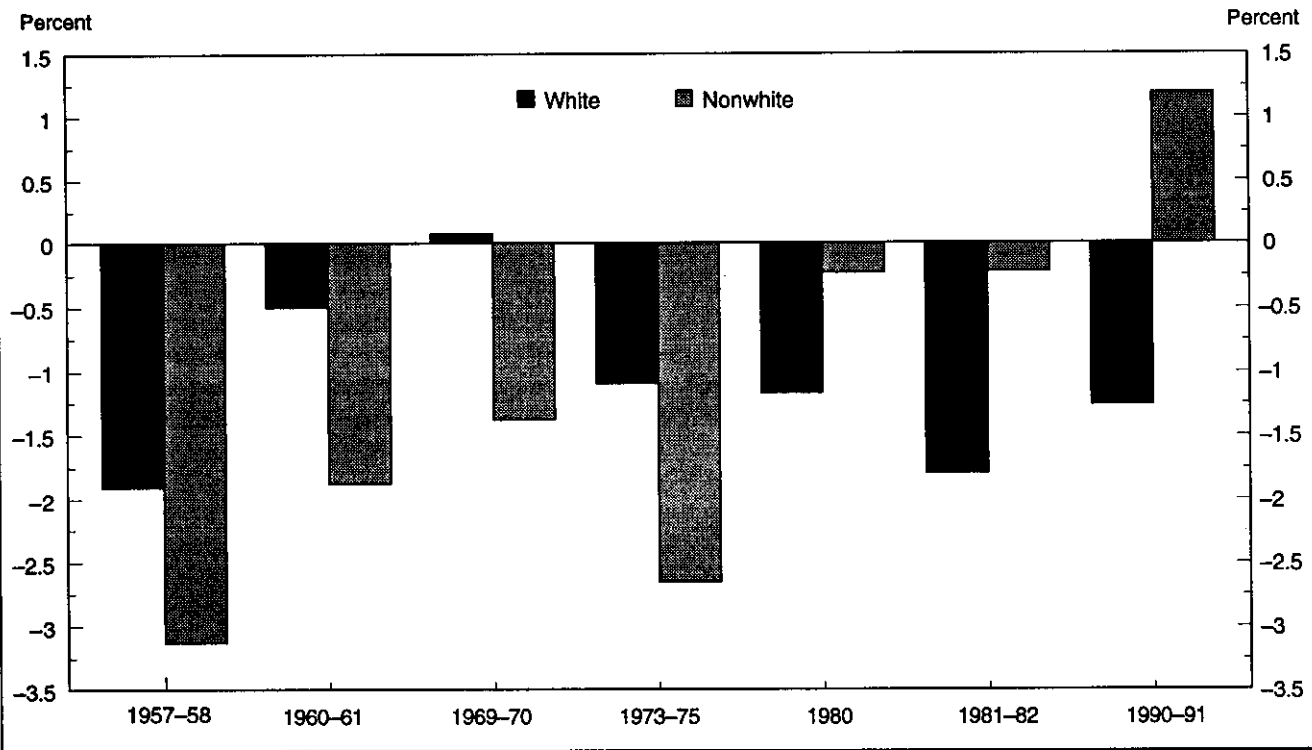


Chart 4. Percent change in number of persons employed in recessions, 1957-91



explain the relatively small gain in nonwhite employment. Chart 4 shows the percent changes in white and nonwhite employment from cyclical peak to cyclical trough for each of the seven economic contractions in the period covered by the data. In the first four contractions, nonwhites fared much worse than whites. In the three most recent episodes, nonwhites fared *better* than whites, and in the 1990–91 recession, the number of nonwhites holding jobs actually increased.

Some may see differences in white and nonwhite employment variability across business cycle expansions and recessions as evidence of discrimination against nonwhite workers. However, the differences may result instead from real or perceived productivity differences between the two groups. For both whites and nonwhites, the probability of employment increases with the number of years of education, a measurable worker characteristic that employers can use as a proxy for productivity.¹⁸ The drive for profits leads employers always to prefer more productive workers to less productive ones (at a given wage rate). When the economy and total employment are expanding, more productive workers are hired before less productive workers are; when the economy and total employment are contracting, less productive workers are laid off before more productive workers are. Therefore, given that nonwhite workers average fewer years of schooling than white workers do, and given the expectation that each individual worker's employment stability over the business cycle is directly related to his or her productivity, we hypothesize that the relative employment ratio of nonwhite to white workers should vary directly with the rate of change in the number of persons employed (a good proxy for both the rate of change in economic activity and the demand for labor).¹⁹

The educational attainment of black men increased relative to that of white men between 1970 and 1980, as noted earlier. To the extent that this narrowing of the educational gap has continued, for other nonwhites as well as blacks, and for women as well as men, we hypothesize that the relative employment ratio of nonwhites to whites should be less sensitive in recent years to the rate of change in the number of persons employed than in earlier periods.

Evidence for testing these two hypotheses is presented in table 2, which shows the results of regressing the 12-month change in the relative employment ratio against the 12-month percentage change in the number of persons employed. These results, which are for the period January 1954 to December 1993 and the three subperiods of 1954–65, 1966–76, and 1977–93, firmly support the basic hypothesis that the relative employment ratio of nonwhites to whites is a direct function of the rate of change in the number of persons employed. The coefficients attached to the independent variable carry the expected sign and very high *t*-ratios for all three subperiods, as well as for the 1954–93 period as a whole.

The evidence for the corollary hypothesis, that the rela-

Table 2. Change in relative employment ratio of nonwhites to whites as a function of change in total employment

Statistic	1954–93	1954–65	1966–76	1977–93
Constant term	-1.1875	-0.9989	-2.1771	-0.8196
X-coefficient .....	.4328	.5376	.4985	.4094
Standard error .....	.0419	.0868	.0675	.0544
<i>t</i> -ratio	10.3255	6.1903	7.3856	7.5217
<i>R</i> squared .....	.1862	.2277	.2956	.2188
Standard error of the estimate	1.4413	1.6174	1.1274	1.2644
Number of observations	480	144	132	204
Degrees of freedom	478	142	130	202

tive employment ratio should be less sensitive in recent years to the rate of change in the number of persons employed than in earlier periods, is inconclusive. As hypothesized, the coefficient attached to the independent variable for the most recent subperiod (0.41) is smaller than it is for either of the other two subperiods (0.54 and 0.50), but the differences are not sufficiently large, in terms of their standard errors, to force rejection of the null hypothesis.

USING MONTHLY DATA for 1954 through 1993, this article compares the behavior of the ratio of the number of persons employed to the number of persons aged 16 or older in the non-institutionalized population for whites and for nonwhites over four decades and seven business cycles. If racial inequality in the job market has been reduced, the data should reveal that nonwhites are “catching up” to whites in two ways: (1) the nonwhite employment ratio has trended upward relative to the white employment ratio, and (2) the cyclical behavior of the nonwhite ratio has more closely paralleled the cyclical behavior of the white ratio over more recent business cycles than in earlier ones.

The findings herein with regard to the secular behavior of the nonwhite employment ratio are largely consistent with those of other studies, at least insofar as the 1954–93 period as a whole is concerned. However, as the monthly data reveal, there are three distinct subperiods within the 40 years examined in this article: 1954–65, 1966–76, and 1977–93. Almost all of the secular decline in the nonwhite employment ratio relative to the white employment ratio occurred during the 1966–76 subperiod. During the other two subperiods, the nonwhite and white employment ratios tended to move in an essentially parallel manner, and in 1993, the chances of a nonwhite of working age having a job actually were higher than they were in 1980. There also is evidence of a change in the “last-hired, first-fired” syndrome that has characterized nonwhite employment. Although the evidence is not conclusive, the data indicate that in recent years the relative employment ratio of nonwhites to whites has been less sensitive to the rate of change in the number of persons employed than in earlier periods. □

Footnotes

¹ James P. Smith and Finis R. Welch, "Black Economic Progress after Myrdal," *Journal of Economic Literature*, June 1989, pp. 519-64; see especially pp. 521-22.

² Noting that the racial wage gap narrowed as rapidly in the 20 years before 1960 as during the 20 years afterward, Smith and Welch assert that the role of affirmative action in raising the relative earnings of blacks was marginal (p. 555). This assessment is challenged by John J. Donohue III and James Heckman, who claim that black economic progress after 1965 resulted largely from Federal civil rights policy. (See John J. Donohue III and James Heckman, "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks," *Journal of Economic Literature*, December 1991, pp. 1603-43, especially p. 1641.) Donohue and Heckman argue that net migration from the South ended in the early 1960's and that reduced labor market discrimination, by raising the relative rewards to education, can account for education's contribution to black economic progress after the passage of civil rights legislation.

³ Gerald D. Jaynes, "The Labor Market Status of Black Americans: 1939-1985," *Journal of Economic Perspectives*, Fall 1990, pp. 9-24, especially pp. 13, 15; see also Finis Welch, "The Employment of Black Men," *Journal of Labor Economics*, vol. 8 (1990), pp. S26-S74, especially pp. S26-S31. Welch defines a person's being active in the labor market as being neither employed, unemployed, nor in school.

⁴ Leslie S. Stratton, "Racial Differences in Men's Unemployment" *Industrial Relations and Labor Relations Review*, April 1993, pp. 451-63, especially p. 463. Lora P. Holcombe, "Demographic Factors Affecting the Black/White Unemployment Differential," *International Journal of Manpower*, vol. 8 (1988), pp. 23-31, especially p. 29, expresses a similar conclusion.

⁵ The employment ratio is not an all-encompassing measure of economic well-being. It tells us the proportion of the population aged 16 and older that has jobs. It does not tell us whether the jobs are part time or full time, whether they are white collar or blue collar, or whether they pay poorly or pay well. The main advantage of the employment ratio is the fact that data on both of its components—the number of persons who are employed and the number of persons aged 16 and older—are available monthly for nonwhites and whites over the period of interest.

⁶ For the period since 1972, when data for blacks alone have been available, the employment ratio for blacks alone and that for the larger group of nonwhites exhibit similar patterns.

⁷ Although the beginning and ending years of the three subperiods can be associated with certain political or economic events, they were chosen by inspection of the patterns in chart 2, not by some systematic approach.

⁸ In considering possible causes of the downturn in the relative employment ratio in the 1966-76 subperiod, it is important to emphasize that the nonwhite share of the total number of persons employed actually increased during this subperiod. In fact, the nonwhite share of the number of jobholders increased in 26 of the 40 years covered in this article. All of the year-to-year declines in the nonwhite share of persons employed are associated with

economic slowdowns, a point discussed later in the article.

⁹ Similarly, in 1993, an additional 803,000 jobs would have been needed to return the nonwhite employment ratio to its 1966 level. This would have added 4.9 percent to the number of nonwhite jobholders, or 0.7 percent to the number of persons employed in 1993.

¹⁰ Welch, "Employment of Black Men," pp. S57-S58.

¹¹ Smith and Welch, "Black Economic Progress," p. 559.

¹² Holcombe, "Factors Affecting Black/White Unemployment," p. 30.

¹³ Increases in the minimum-wage rate would affect white and nonwhite unskilled workers alike and would disproportionately affect nonwhites only if the share of workers earning the minimum wage was larger for nonwhites than for whites. Because of the relatively low educational attainment of nonwhites and the relationship between educational attainment and earnings, this almost certainly is the case.

¹⁴ Andrea H. Beller, "The Economics of Enforcement of an Antidiscrimination Law: Title VII of the Civil Rights Act of 1964," *Journal of Law and Economics*, October 1978, pp. 359-80, especially p. 378.

¹⁵ Welch, "Employment of Black Men," p. S29. See also Smith and Welch, "Black Economic Progress," pp. 550-51. Welch argues that illegal activities are attractive because the sequence of receiving benefits and then suffering the costs imposed is the reverse of that which obtains in the case of schooling. In documenting the activities of black men who are not active in the labor force, Welch notes that they are more likely than both whites and blacks who are active in the labor force to be institutionalized, to be living alone or in some arrangement other than a husband-and-wife household, and to be receiving public assistance or living with someone who does (p. S28).

¹⁶ Welch, "Employment of Black Men," p. S62.

¹⁷ This argument is made by Jaynes, "Labor Market Status of Black Americans," p. 22.

¹⁸ See, for example, Holcombe, "Factors Affecting Black/White Unemployment," p. 25; or Stratton, "Racial Differences," p. 456. These studies, like others that use decennial census data, are based on comparisons of whites with blacks, not with nonwhites. Also, Stratton's analysis is focused on comparisons of black males with white males. Presumably, their findings are applicable to the combined-sex, nonwhite-white comparisons made in this article.

¹⁹ The expectation that the relative employment ratio varies directly with the rate of change in the number of persons employed assumes that the denominators of both employment ratios are fairly stable in the short run, so that fluctuations in the relative employment ratio result primarily from fluctuations in the ratio of nonwhite to white employment or in the nonwhite share of total employment.