

## Race and the shifting burden of job displacement: 1982-93

*The job displacement rate for blacks converged to that for whites from 1982 to 1993; over the 11-year period, the rate for workers in white-collar occupations, in which blacks were underrepresented, rose, while the rate for blue-collar workers, in which blacks were overrepresented, fell*

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Advances in the relative labor market position of African-American men stagnated in the 1980s, after nearly four decades of steady improvement. The structural change of the early years of the decade was particularly costly: past research shows that black men faced a substantially higher risk of job displacement than white men did during that period.<sup>1</sup> In contrast, this article offers evidence that the black disadvantage in the incidence of job displacement narrowed over the 1980s and vanished by 1992-93.<sup>2</sup> The article documents this important change over the past decade, analyzes its potential causes, and examines trends in two important postdisplacement outcomes: the probability of becoming reemployed and earnings losses.

Based on the Displaced Worker Surveys carried out by the Bureau of Labor Statistics from 1984 through 1994, the analysis presented shows that, over the 1980s and continuing into the 1990s, racial differences in the risk of job displacement narrowed significantly. In the recession of the early 1980s, the displacement rate for black men employed full time was 7.1 percent, 44 percent higher than the white male displacement rate of 4.9 percent. In contrast, during the recession of the early 1990s, the black male displacement rate of 5.1 percent was 19 percent higher than the white rate of 4.4 percent. Both rates then declined during the recovery that followed the 1990-91 recession, with the black rate

declining substantially faster than the white rate. By 1992-93, the black and white displacement rates converged. Although the difference in the rates narrowed over the 1982-93 period, there appears to be no evidence of an improvement in postdisplacement outcomes for blacks relative to whites.

In this article, we use a variation of a special decomposition technique to account for changes between blacks and whites over time in the burden of job displacement. The analysis reveals a number of factors that help explain the narrowing and subsequent reversal of the displacement rates over the 1980s and into the 1990s. The most important one is the decline in black displacement rates relative to white rates within occupations, educational categories, regions of the country, and industries. Another important factor is the partial shift in the burden of job displacement from lower skilled, blue-collar jobs in the 1980s to higher skilled, white-collar jobs in the 1990s, thereby generating a relative improvement for blacks over this period.

### Measuring displacement

As mentioned, the biennial Displaced Worker Survey begun in January 1984 by the Department of Labor is the primary source of data for this article. A special supplement to the Current Population Survey (CPS), the Displaced Worker Survey was designed to identify characteristics

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of displaced workers. The survey was repeated in January of 1986, 1988, 1990, and 1992 and in February 1994. In each survey, individuals in the regular monthly CPS were asked whether they had lost a job anytime during the 5 years preceding the January survey date due to "a plant closing, an employer going out of business, a layoff from which he/she was not recalled, or other similar reasons."<sup>3</sup> If the answer was "Yes," a series of questions followed concerning the old job and period of joblessness.<sup>4</sup> Our analysis sample contains men, 20 years of age and older, displaced from full-time, private sector, nonagricultural wage and salary jobs by a plant closing or relocation, the elimination of a position or shift, or layoff without recall (slack work).<sup>5</sup>

The period over which respondents recall a job displacement is an important issue in our analysis. Recall error arises from the retrospective nature of the question on displacement in which respondents are asked about job losses occurring 1 to 5 years before the survey date.<sup>6</sup> The evidence suggests that the survey seriously understates job loss occurring long before the date the survey was taken. David S. Evans and Linda S. Leighton estimate that only 41.8 percent of actual job displacements which occur in the fifth year prior to the survey date are reported.<sup>7</sup> Their calculation is based on their estimate of a rate of "memory loss" of 17.6 percent per year. Another potential problem with the Displaced Worker Survey is that job displacements which occur in the year prior to the survey date may be overcounted if some of them turn out to be temporary.<sup>8</sup>

A few recent studies address these problems. Henry S. Farber includes sample displacements that occur in the first or second year prior to the survey date, Jennifer M. Gardner includes job losses that occur in the second or third year, and Evans and Leighton recommend including only those losses which occur in the first year.<sup>9</sup> None of them, however, can fully correct for all of the potential problems mentioned. In the next section, we calculate and compare estimates of job displacement using all three of their sample inclusion rules. For each rule, job displacement rates are calculated by dividing the total number of workers who report a displacement in the appropriate period on the Displaced Worker Survey by the total number of at-risk workers during the same period. We calculate the total number of at-risk workers for each year from the CPS Outgoing Rotation Annual Merge files.<sup>10</sup> We use the same age, race, gender, industry, occupation, and hours-worked restrictions to define the at-risk group. The resulting displacement rates represent the average annual probability of being displaced during the specified 1- or 2-year period.

## Results

*Trends in displacement rates.* Chart 1 shows black and white displacement rates from 1981 to 1993, using the three

sample inclusion rules. The top panel graphs displacement rates based on job losses that occurred 2 or 3 years prior to the date of the survey. Therefore, the displacement rates are for the 2-year periods 1981–82, 1983–84, 1985–86, 1987–88, 1989–90, and 1990–91. As is discussed in Evans and Leighton's work, the third year prior to the survey date is likely to suffer substantially from recall bias.<sup>11</sup> Because of this, the estimates in the top panel of the chart may be viewed as lower bounds for black and white displacement rates during each 2-year period. In addition, there is some evidence that the understatement of job loss due to recall bias is larger for blacks than whites, which, if true, could pose a serious problem for our analysis.<sup>12</sup> As expected, the black and white displacement rates, as well as the racial differences using the foregoing rule, are lower than those using the other rules employed.

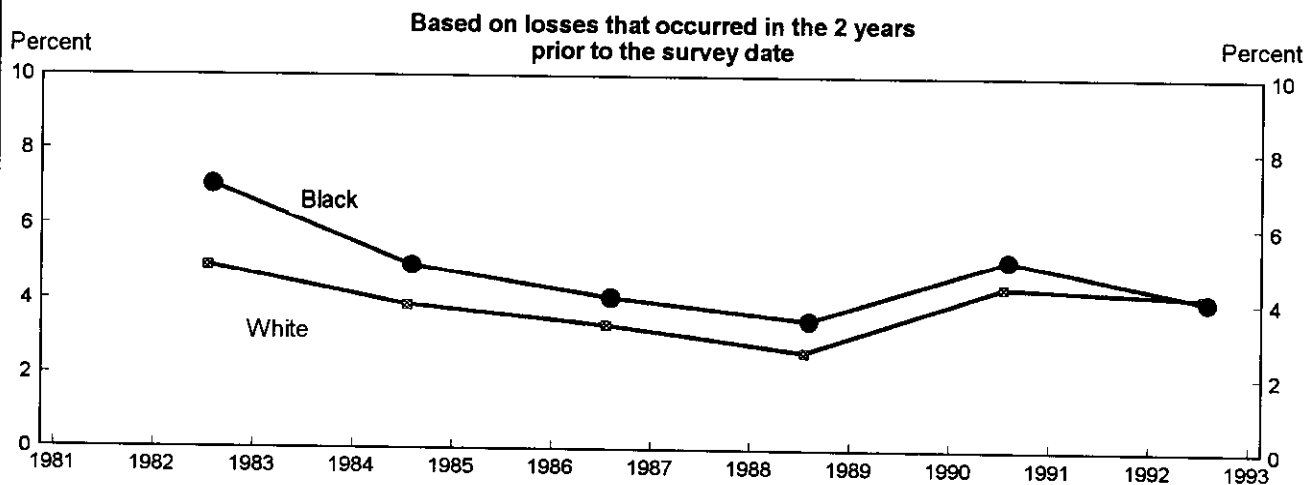
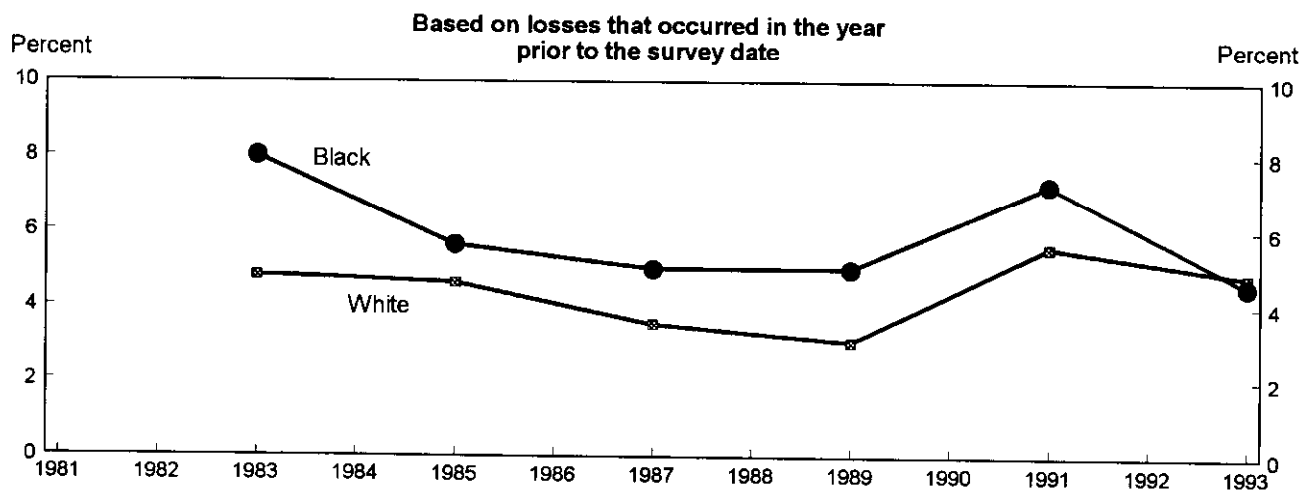
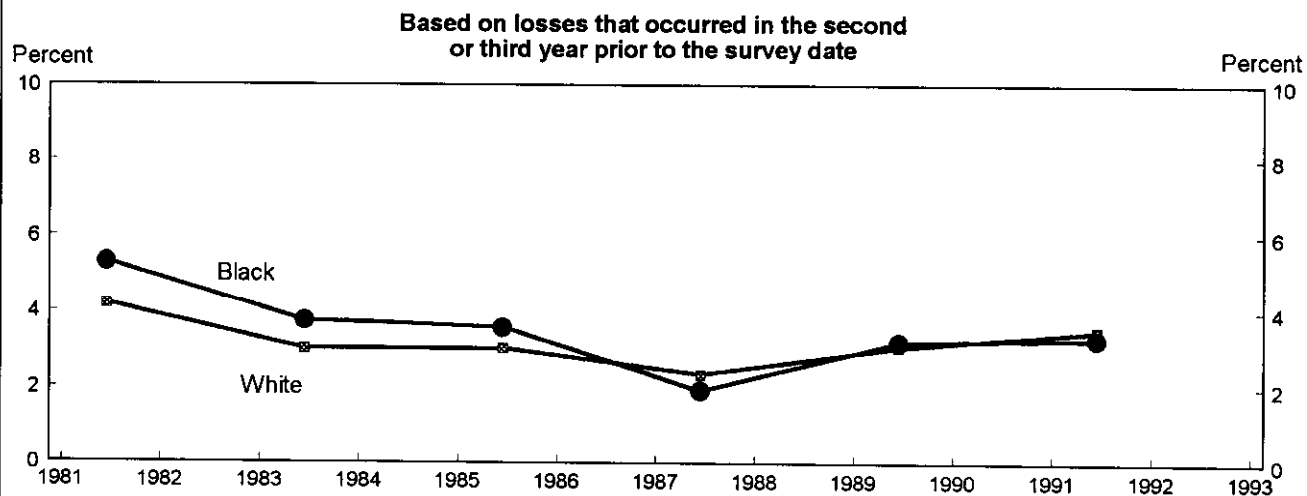
In the middle panel, we include displacements that occurred in the year prior to the date of the survey. (Hence, the displacement rates are for 1983, 1985, 1987, 1989, 1991, and 1993.) The estimated displacement rates and racial differences are much higher than the rates and differences using the other two inclusion rules. We view these estimates as upper bounds for the displacement rates and racial differences during the period.

In the bottom panel, we include job displacements that occurred in the 2 years preceding the date of the survey (so that the displacement rates are for 1982–83, 1984–85, 1986–87, 1988–89, 1990–91, and 1992–93). We believe that this is the best method for estimating racial differences in displacement rates. By including only job losses that occur in the 2 years prior to the date of the survey, we reduce the possibility that different levels of recall bias for blacks and whites will seriously contaminate our estimates of racial differences in job displacement. Furthermore, the overstatement of permanent job displacement that results from counting potentially temporary job displacements in the year before the date of the survey is mitigated by averaging the 2 years.

Although the choice of inclusion rule is important for estimating levels of black and white displacement rates and the racial difference in each year, it is less important for describing the general trends in these measures. The three panels of chart 1 are similar in this respect. The main exception is that the black-white difference is negative between 1987 and 1989 in the top panel, whereas it is positive in the other two panels. We next describe the trends for black and white men using the sample of displacements that occurred within 2 years of the survey date (panel 3). We also use this sample in the remaining analyses set forth in the article.

In the slack labor market period of the early 1980s (1982–83), both black and white displacement rates were at their highest levels during any period covered by our study.<sup>13</sup> The black displacement rate was 7.1 percent, compared with the

**Chart 1. Displacement rates for men, by race, 1981-93**



white rate of 4.9 percent, implying a racial gap of 2.2 percentage points (or 43.9 percent). During this slack period, a startling 1 out of every 14 full-time black men lost their jobs each year. The long period of strong labor markets from 1984 to 1989 steadily reduced the incidence of job displacement among both black and white men, with black men experiencing a larger reduction. Still, the black displacement rate remained significantly higher than the white rate. Clearly, the 1980s were a decade in which black men were at a substantially higher risk of losing their jobs than were white men.

The recession in the early 1990s brought a return to slack labor markets in the U.S. economy. The economic downturn resulted in an increase in both the black and the white displacement rate, although not to the levels observed for 1982–83. Black men experienced a slight decline in job displacement relative to white men in this period. For 1990–91, the black rate was 5.1 percent, compared with a white rate of 4.4 percent. This difference of 0.7 percentage point was slightly lower than the 0.9-percentage-point difference for the period 1984–89.<sup>14</sup> The racial difference continued to decline in the 1990s. Both black and white displacement rates fell in 1992–93 as the labor market began to improve, with the black rate declining substantially faster than the white rate. The different rates of change in job displacement resulted in a black displacement rate of 4.0 percent and a white rate of 4.1 percent in the 1994 survey. The change from a decade earlier is remarkable: the racial gap first narrowed and then reversed sign (although the gap is not statistically different from zero at the  $\alpha = .05$  level).

Two observations clearly stand out from this trend analysis. First, black and white displacement rates were markedly different in 1982–83 and converged steadily over the sample period to absolute convergence in 1992–93.<sup>15</sup> Second, the black displacement rate decreased substantially relative to the white rate between the two slack labor market periods (1982–83 and 1990–91) and between the two strong labor market periods (1984–89 and 1992–93). This result suggests that even after controlling for overall conditions in the labor market, black men were at a lower risk of experiencing job displacement relative to white men in the early 1990s than they were in the 1980s.

This same pattern is found across age groups. Up to this point, we have only analyzed racial trends in aggregate displacement rates. In table 1, we report black and white displacement rates and the black-white difference in the displacement rate by age groups for each of the 2-year periods in our sample. The patterns for the various age groups are similar to the patterns for the aggregate rates. All age groups experienced a decline in the racial gap in the displacement rate from the slack labor market period in the 1980s to the slack period in the 1990s. Although the racial gap fluctuated for each age group over the period of sustained growth in the 1980s, it

**Table 1** Job displacement rates of men by race and age, Displaced Worker Survey, 1984–94

[In percent, except for sample size]

Race and age	Year of survey and years covered					
	1984	1986	1988	1990	1992	1994
	1982–83	1984–85	1986–87	1988–89	1990–91	1992–93
<b>White:</b>						
Total ....	4.9	3.9	3.3	2.6	4.4	4.1
20–24 .....	6.6	4.5	3.8	2.7	5.8	4.3
25–34 .....	5.8	4.3	3.7	2.8	4.3	4.0
35–44 .....	3.9	3.8	3.2	2.6	4.3	4.2
45–54 .....	3.6	3.3	2.7	2.1	3.9	4.0
55–64 .....	4.0	2.8	2.7	2.8	4.2	4.4
Sample size .....	103,263	107,005	105,836	102,260	103,862	97,519
<b>Black:</b>						
Total ....	7.1	4.9	4.1	3.5	5.1	4.0
20–24 .....	10.5	6.0	3.8	5.1	6.4	5.2
25–34 .....	8.0	6.3	5.1	4.1	5.2	4.3
35–44 .....	5.0	4.7	3.0	2.8	5.1	4.4
45–54 .....	6.2	2.1	4.0	2.0	4.8	3.2
55–64 .....	4.6	2.8	2.9	2.5	3.2	1.3
Sample size .....	8,522	9,339	9,826	9,465	9,573	8,873
<b>Black-white difference:</b>						
Total ....	2.2	1.1	.7	.9	.7	-.1
20–24 .....	3.9	1.4	.0	2.4	.6	.9
25–34 .....	2.1	2.0	1.4	1.3	.9	.2
35–44 .....	1.1	.9	-.1	.1	.8	.3
45–54 .....	2.6	-.2	1.3	-.1	.9	-.8
55–64 .....	.7	.0	.2	-.4	-1.0	-3.1

NOTE: Samples include men aged 20–64 working full time in nonagricultural private sector industries. The displacement rate is defined as the percentage of at-risk workers experiencing job displacement in the specified period. All calculations use cps final sampling weights.

experienced a fairly steady convergence over the sample period and a decline from the strong labor market period in the 1980s to the strong period in the 1990s. These results demonstrate that the improvement in the average probability of job displacement among blacks relative to whites from the 1980s to the 1990s was not isolated within a few age groups.

*Explaining the trends.* There is growing concern that the high-skilled jobs which were relatively safe from job displacement in the 1980s are no longer safe in the 1990s. A number of studies have shown that white-collar and college-educated workers bore a greater burden of job loss during the 1990–91 recession than in earlier recessions.<sup>16</sup> In this section, we examine the roles that racial differences in job characteristics and the changing nature of job displacement played in reducing the racial gap in the black-white displacement rate from the 1980s to the 1990s. We focus our attention on occupation, although we replicate our analyses using region, education, and industry.

We examine points in time with roughly similar business

cycle conditions. We compare the slack labor market period in the 1980s (1982–83) with the slack period in the 1990s (1990–91) and the strong labor market period in the 1980s (1984–89) with the strong period in the 1990s (1992–93).

We start by defining the aggregate displacement rate for race  $i$  in time  $t$  as  $ES_t^i DR_t^i$ , where  $ES_t^i$  is a row vector of  $J$  occupational employment shares and  $DR_t^i$  is a column vector of  $J$  occupational displacement rates.<sup>17</sup> The change between time 1 and time 2 in the racial displacement rate gap can be expressed as

$$(ES_2^B DR_2^B - ES_2^W DR_2^W) - (ES_1^B DR_1^B - ES_1^W DR_1^W).$$

One method of decomposing this change is to rewrite it as the sum of the following four terms:

$$(1) \quad \left[ (ES_2^B - ES_2^W) - (ES_1^B - ES_1^W) \right] DR_1^W,$$

$$(2) \quad (ES_2^B - ES_1^B)(DR_1^B - DR_1^W),$$

$$(3) \quad (ES_2^B - ES_2^W)(DR_2^W - DR_1^W),$$

$$(4) \quad ES_2^B \left[ (DR_2^B - DR_2^W) - (DR_1^B - DR_1^W) \right].$$

This decomposition is a modification of a technique previously used to identify the determinants of the convergence in the black-white wage gap over the second half of the 20th century.<sup>18</sup>

The first term measures the effect of converging or diverging black and white occupational distributions. (Thus, we label the term “employment share effect.”) The second term measures the effect of the interaction between the change over time in the occupational distribution and the racial difference in displacement rates within occupations at a given point in time (the employment share interaction). The third term measures the effect of the interaction between the racial difference in occupational distributions and the change over time in displacement rates within occupations (the displacement rate interaction). This term will be large if, for example, blacks are overrepresented in the types of occupations that experienced large decreases in displacement rates, or if they are underrepresented in the types of occupations that experienced large increases in displacement rates. Finally, the last term measures the effect of converging or diverging black and white displacement rates within occupations (the displacement rate effect).

Table 2 gives estimates of each of these terms for the decomposition of the change in the black-white displacement rate gap from 1982–83 to 1990–91 (slack labor markets) and

**Table 2. Decomposition of the change in the black-white displacement rate gap into contributions from the occupational distribution, 1982–83 to 1990–91 and 1984–89 to 1992–93**

Black-white displacement rate gap and method of decomposition	1982–83 to 1990–91		1984–89 to 1992–93	
	Percentage points	Percent of total	Percentage points	Percent of total
Black-white displacement rate gap:				
Total change ....	-1.6	...	-1.0	...
Base period .....	2.2	...	.9	...
Final period .....	.6	...	-.1	...
Method 1:				
Employment share effect .....	-.1	7.7	-.1	5.0
Employment share interaction .....	.0	2.5	.0	.0
Displacement rate interaction .....	-.4	26.7	.0	2.5
Displacement rate effect .....	-1.0	63.1	-.9	91.8
Method 2:				
Employment share effect .....	-.1	9.1	-.1	5.7
Employment share interaction .....	.0	1.1	.0	.0
Displacement rate interaction ....	-.9	55.0	.2	-19.5
Displacement rate effect .....	-.5	34.8	-1.1	113.8

NOTE: Samples include men aged 20 to 64 working full time in nonagricultural private sector industries. The displacement rate is defined as the percentage of at-risk workers experiencing job displacement in the specified period. All calculations use cps final sampling weights. See text for definition of each method.

from 1984–89 to 1992–93 (strong labor markets). Method 1 uses the preceding equations to calculate each of the terms, and method 2 uses a different weighting scheme to calculate each.<sup>19</sup> Method 2 is equally as valid as method 1 and is presented in order to furnish additional estimates for the decomposition. Table 3 reports the black and white displacement rates and employment shares for each occupation, as well as the periods for which the decompositions are carried out.

For both the slack labor market and strong labor market comparisons, there was a large decrease in the black-white displacement rate gap. The gap decreased by 1.6 percentage points from 1982–83 to 1990–91 and by 1.0 percentage point from 1984–89 to 1992–93.<sup>20</sup> The employment share effect and the employment share interaction are small in all of the decompositions and thus do not explain much of the changes. The reason these terms are small is that the racial distributions of employment shares across occupations did not change substantially over time. (See table 3.) This finding suggests that the interesting terms in the decompositions are the last two.

**Table 3. Displacement rates and employment shares by race and occupation, Displaced Worker Survey, 1984-94**

(In percent, except for sample size)

Race and occupation	Years covered			
	1982-83	1984-89	1990-91	1992-93
<b>Displacement rates</b>				
<b>White:</b>				
Total .....	4.9	3.3	4.3	4.1
White collar .....	3.2	2.5	3.3	3.4
Skilled blue collar ..	6.1	3.8	6.0	5.1
Semiskilled blue collar .....	7.3	4.3	5.1	4.4
Service .....	3.6	2.9	3.3	5.1
<b>Black:</b>				
Total .....	7.1	4.1	5.0	4.0
White collar .....	4.2	3.4	5.3	3.6
Skilled blue collar ..	8.0	4.7	5.6	2.9
Semiskilled blue collar .....	9.1	4.8	4.7	5.0
Service .....	4.3	2.6	4.0	3.3
<b>Black-white difference:</b>				
Total .....	2.2	.9	.6	-.1
White collar .....	1.0	.9	2.0	.2
Skilled blue collar ..	1.9	.9	-.4	-2.2
Semiskilled blue collar .....	1.8	.5	-.4	.7
Service .....	.7	-.3	.7	-1.8
<b>Employment shares</b>				
<b>White:</b>				
White collar .....	47.0	47.5	49.0	49.6
Skilled blue collar ..	25.3	25.0	23.8	23.3
Semiskilled blue collar .....	23.2	23.0	22.6	22.4
Service .....	4.6	4.5	4.7	4.8
Sample size .....	103,263	315,461	103,862	97,519
<b>Black:</b>				
White collar .....	23.9	26.6	28.5	30.4
Skilled blue collar ..	19.2	18.8	18.0	16.6
Semiskilled blue collar .....	43.0	41.0	39.4	37.7
Service .....	14.0	13.7	14.2	15.3
Sample size .....	8,522	28,630	9,573	8,873

Note: Samples include men aged 20 to 64 working full time in nonagricultural private sector industries. The displacement rate is defined as the percentage of at-risk workers experiencing job displacement in the specified period. All calculations use cps final sampling weights. Total displacement rates reported in tables 3, 4, and 5 may differ for some categories due to missing values for occupation.

For the change between the two slack periods (1982-83 to 1990-91), the displacement rate interaction and the displacement rate effect are both large. The large displacement rate interaction suggests that, relative to the white occupational distribution, the black distribution was not as negatively affected by the slack period in the 1990s as it was by the slack period in the 1980s. In large part, this was due to the higher probability of blacks being employed in semi-skilled blue-collar and service occupations and the lower

probability of blacks being employed in white-collar occupations, compared with whites.<sup>21</sup> Displacement rates declined dramatically between the two slack periods in semiskilled production jobs for both whites and blacks. Furthermore, white-collar occupations experienced an increase in displacement rates for both blacks and whites, therefore reducing the black-white gap. The increase in the white-collar displacement rate stands in contrast to declining rates in all other occupations; this is consistent with previous research demonstrating that the recession in the early 1990s affected white-collar workers much more than did the recession in the early 1980s.

The large displacement rate effect also explains much of the change in the black-white displacement rate gap: a substantial portion of the reduction in the gap is due to a convergence in black and white displacement rates within occupations. The estimates of the black-white gap reported in table 3 are useful for identifying rates of convergence for each occupation. In blue-collar occupations, the racial gap not only declined, but actually changed sign. That is, in 1982-83, black men in these occupations experienced substantially higher displacement rates than white men, but in 1990-91, black men in those same occupations were at a slightly lower risk of being displaced than whites were. In contrast, the racial difference in displacement rates in white-collar occupations increased over this period: both black and white workers faced a greater risk of displacement in the second recession, with the risk for blacks increasing relative to that for whites.

We next turn to analyzing the change in the racial gap between the two periods of strong labor markets (1984-89 to 1992-93). Over this time frame, the decompositions demonstrate that the bulk of the change in the gap was due to converging displacement rates in most occupations. Here, the displacement rate effect explains essentially all of the change in the racial gap. This is apparent in significant reductions in the black-white displacement rate for all occupation categories except the semiskilled blue-collar category. The other terms are small, the displacement rate interaction in part because there was an increase in the displacement rates in white-collar occupations (in which blacks are underrepresented) and in service occupations (in which blacks are overrepresented), which had counteracting effects.

We also decompose changes in the black-white displacement rate gap using education and region. We discuss these results and report black and white displacement rates and employment shares for education and region in tables 4 and 5.<sup>22</sup>

The estimates reported in table 4 demonstrate the well-known fact that, on average, black men have substantially lower levels of education than white men. This difference in education may have contributed to the decline in the racial displacement rate gap in the 1990s. In general, across similar labor

**Table 4. Displacement rates and employment shares by race and education, Displaced Worker Survey, 1984-94**

[In percent, except for sample size]

Race and education	Years covered			
	1982-83	1984-89	1990-91	1992-93
<b>Displacement rates</b>				
White:				
Total .....	4.9	3.3	4.3	4.1
Non-high school graduate .....	6.9	4.5	5.7	5.0
High school graduate .....	5.5	3.6	4.2	4.3
Some college .....	4.7	3.2	5.4	4.6
College graduate ..	2.8	2.1	3.2	3.1
Black:				
Total .....	7.1	4.1	5.0	4.0
Non-high school graduate .....	7.2	4.7	5.0	3.3
High school graduate .....	7.4	4.3	4.5	4.6
Some college .....	6.7	4.1	6.5	3.7
College graduate ..	5.5	2.1	5.2	3.7
Black-white difference:				
Total .....	2.2	.9	.7	-.1
Non-high school graduate .....	.3	.2	-.7	-1.8
High school graduate .....	1.9	.7	.2	.3
Some college .....	2.0	.9	1.1	-.9
College graduate ..	2.7	.0	1.9	.6
<b>Employment shares</b>				
White:				
Non-high school graduate .....	14.6	12.4	10.3	8.7
High school graduate .....	41.2	41.2	40.8	37.2
Some college .....	19.9	20.8	21.8	26.9
College graduate ..	24.3	25.6	27.1	27.3
Sample size .....	103,263	315,461	103,862	97,519
Black:				
Non-high school graduate .....	30.3	23.5	19.6	17.0
High school graduate .....	42.4	45.3	47.3	43.1
Some college .....	18.1	20.0	21.0	26.8
College graduate ..	9.3	11.3	12.1	13.1
Sample size .....	8,522	28,630	9,573	8,873

NOTE: Samples include men aged 20 to 64 working full time in nonagricultural private sector industries. The displacement rate is defined as the percentage of at-risk workers experiencing job displacement in the specified period. All calculations use cps final sampling weights. Total displacement rates reported in tables 3, 4, and 5 may differ for some categories due to missing values for occupation.

market conditions, displacement rates among college graduates were higher and displacement rates among men with less than a high school diploma were lower in the 1990s than in the 1980s. The combination of these two trends partly contributed to the reduction in the black-white gap across both the slack and the strong market periods; this effect, however, is not large. The

displacement rate interaction is relatively small for the change across each pair of periods.<sup>23</sup> Across both periods, most of the change in the racial gap is explained by the displacement rate effect. In every educational category, black men experienced reductions in their likelihood of being displaced relative to white men in the 1990s. Perhaps most surprising, among non-high school graduates, black men had substantially lower displacement rates than did white men.

Table 5 shows considerable variation in displacement rates across regions of the country for each of the periods in the sample. This is not surprising, given the known regional differences in the impact of the business cycle. Combined with the observation that blacks had a different geographical distribution than whites did, the variation in displacement rates across regions may explain part of the relative improvement in black displacement rates in the 1990s. Overall, the results indicate that almost all of the change in the racial gap between the two slack periods is due to the large reductions in the difference in displacement rates in the Midwest, South, and West. In 1990-91, during a slack labor market, black displacement rates were basically the same as white displacement rates in the South and the West. The large decline in the displacement rate in the South and the overrepresentation of blacks in that region partly contributed to the decline in the racial gap. This was counterbalanced somewhat by a declining displacement rate in the Midwest, where blacks were underrepresented.

The results of decomposing the change in the racial gap between the two strong labor market periods are similar. Most of the convergence of the black and white displacement rates between the two periods is due to large decreases in the difference in the rates in the Midwest, South, and West. This provides evidence that the substantial declines in black displacement rates relative to white rates that occurred in the 1990s were not limited to only part of the country. In 1992-93, the Midwest was the only region in which black displacement rates remained higher than white rates.

*Trends in postdisplacement outcomes.* There is a large body of literature analyzing the consequences of job displacement. These studies find that for many workers, adjusting to permanent job loss can be difficult, with low probabilities of reemployment, long durations of joblessness, and sizable earnings losses.<sup>24</sup> In this section, we examine what happened to those workers who lost their jobs over the sample period, focusing on whether there are any important racial differences in outcomes. We utilize two measures of postdisplacement outcomes in our analysis: the probability of reemployment and the change in weekly earnings from the predisplacement job to the postdisplacement job (conditional on reemployment).

We use the reemployment rate, defined as the percent of displaced workers who are employed on the date of the survey, to summarize racial differences in the probability of be-

coming reemployed after job displacement.<sup>25</sup> We calculate reemployment rates for black and white men who reported a job loss within the 2 years previous to each occasion on which the Displaced Worker Survey was taken. Chart 2 displays reemployment rates by race for each survey year in the sample. Over the entire sample period, black men who were displaced had significantly lower reemployment rates than their white counterparts.<sup>26</sup> Although black and white reemployment rates differed notably over the 1980s and 1990s, they generally followed the same trend over the business cycle. As expected, both rates were low in slack labor market periods and high in strong labor market periods.

Perhaps most importantly, chart 2 demonstrates that the difference between the black and white rates declined slowly, but steadily, over the sample period. White reemployment rates were 20.8 percentage points, or 54.3 percent, higher than black rates in 1982-83. By 1992-93, the rate for whites had dropped to 14.1 percentage points, or 25.3 percent, higher than the black rate. These results suggest that black displaced workers had a harder time becoming reemployed than did white men in every period in the sample, but there was a small relative improvement over time.

For workers who were reemployed on the date of the survey, we can examine the change in earnings that is associated with job loss. The Displaced Worker Survey contains information only on a person's usual predisplacement weekly earnings, with no information available on predisplacement hourly wages. Therefore, we use the difference between the pre- and postdisplacement weekly earnings.<sup>27</sup> With this measure, we include only those workers reemployed on the date of the survey (and for whom postdisplacement earnings are observed).<sup>28</sup> One important limitation of such a measure is that it does not account for how earnings would have risen on the old job if the worker had not been displaced.<sup>29</sup>

Our measure of the change in earnings is equal to the difference between the logarithm of weekly earnings for the postdisplacement job and the logarithm of weekly earnings for the predisplacement job. This difference is approximately equal to the percent change in earnings resulting from job displacement for reemployed workers. Chart 3 displays the average change in the logarithm of earnings by race for each survey year in the sample period. The two curves generally follow the business cycle, being lower (exhibiting large losses) in slack periods and higher (showing small losses) in strong periods. Note that there is no clear direction for the black-white difference; it is negative and large in 1982-83, 1984-85, and 1990-91, positive and large in 1992-93, and positive, but small, in 1986-87 and 1988-89.<sup>30</sup> Thus, there does not appear to be any indication that black reemployed workers experienced larger losses in earnings relative to whites in the 1990s than in the 1980s.<sup>31</sup>

**Table 5. Displacement rates and employment shares by race and region, Displaced Worker Survey, 1984-94**

[In percent, except for sample size]

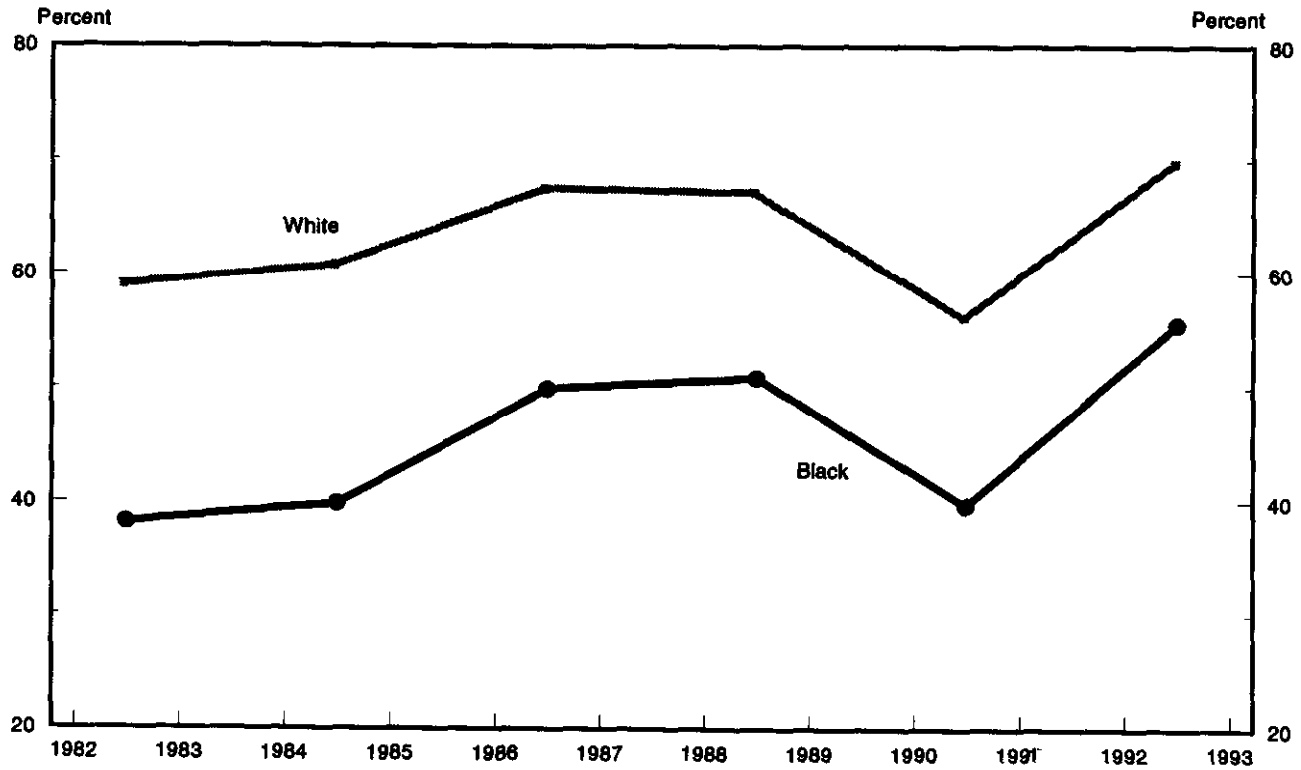
Race and region	Years covered			
	1982-83	1984-89	1990-91	1992-93
<b>Displacement rates</b>				
<b>White:</b>				
Total .....	4.9	3.3	4.4	4.1
North .....	4.0	2.5	4.9	4.7
Midwest .....	4.9	3.1	3.4	3.4
South .....	5.3	3.6	4.5	3.7
West .....	5.4	3.9	5.0	5.3
<b>Black:</b>				
Total .....	7.1	4.1	5.1	4.0
North .....	5.1	3.6	6.8	4.7
Midwest .....	6.3	4.8	3.2	4.7
South .....	7.9	3.9	5.2	3.5
West .....	7.9	5.3	5.3	4.6
<b>Black-white difference:</b>				
Total .....	2.2	.9	.7	-.1
North .....	1.1	1.1	1.9	.0
Midwest .....	1.4	1.7	-.2	1.2
South .....	2.6	.3	.6	-.2
West .....	2.6	1.4	.3	-.7
<b>Employment shares</b>				
<b>White:</b>				
North .....	24.3	23.4	22.4	21.7
Midwest .....	28.2	28.3	28.7	29.3
South .....	29.8	30.8	30.9	31.0
West .....	17.7	17.5	18.0	17.9
Sample size .....	103,263	315,461	103,862	97,519
<b>Black:</b>				
North .....	19.9	18.4	17.8	17.8
Midwest .....	17.8	18.0	18.4	17.8
South .....	52.8	54.6	55.2	56.7
West .....	9.6	9.0	8.7	7.7
Sample size .....	8,522	28,630	9,573	8,873

NOTE: Samples include men aged 20 to 64 working full time in nonagricultural private sector industries. The displacement rate is defined as the percentage of at-risk workers experiencing job displacement in the specified period. All calculations use cps final sampling weights. Total displacement rates reported in tables 3, 4, and 5 may differ for some categories due to missing values for occupation.

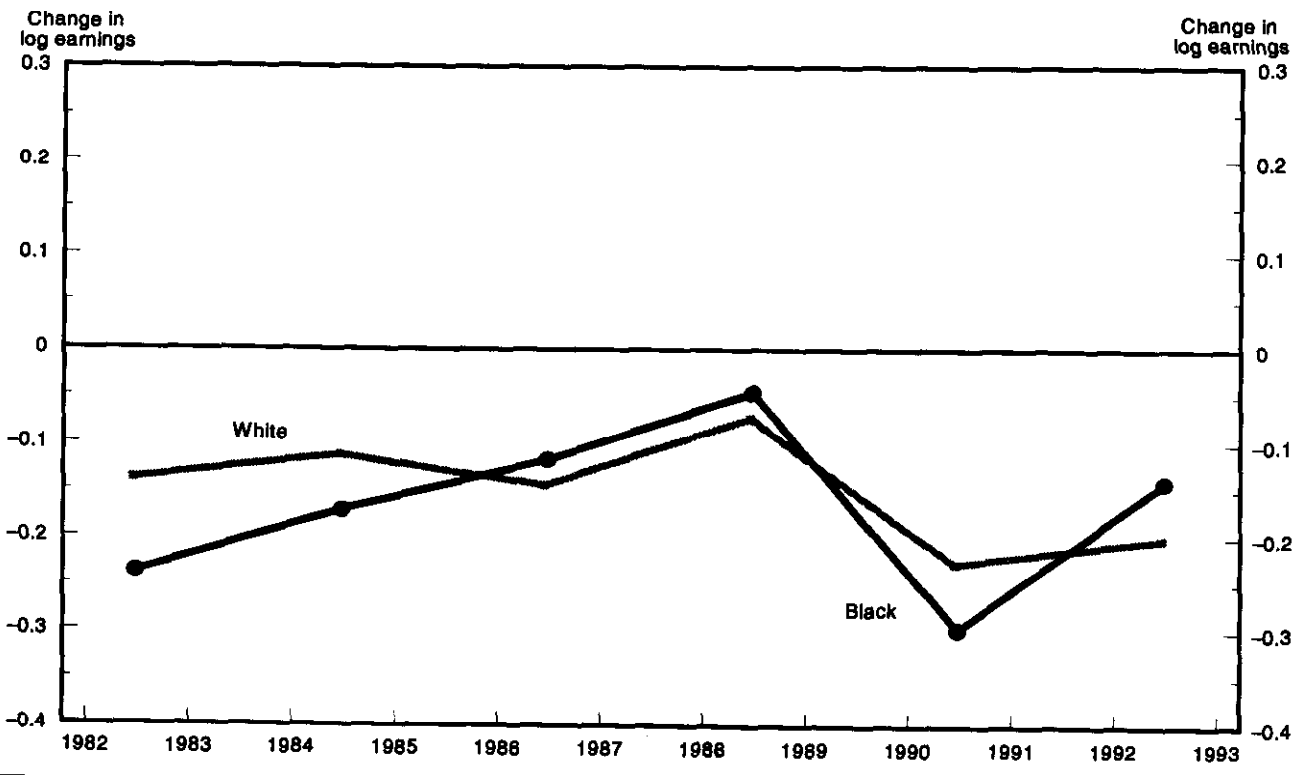
OVER THE PAST DECADE, the burden of job displacement has shifted between black and white men. In 1982-83, the black displacement rate was 2.15 percentage points (43.9 percent) higher than the white rate. Over the 1980s and into the early 1990s, there was a steady convergence of the incidence of displacement between blacks and whites. In 1992-93, the black displacement rate was actually 0.11 percentage point lower than the white rate. The observation that black men experienced such a large improvement in their likelihood of job loss stands in contrast to worsening relative outcomes in other economic measures over the same period.



**Chart 2. Reemployment rates for men, by race, 1982-93**



**Chart 3. Average change in the logarithm of weekly earnings of men, by race, 1982-93**



The characteristics of job displacement were notably different in the 1990s than in the 1980s. Perhaps the most important difference was that white-collar workers were at a higher risk of losing their jobs in the 1990s than they were in the 1980s. At the same time, semiskilled blue-collar workers experienced a substantial reduction in their likelihood of job loss in the slack labor market period of the 1990s, compared to their dramatic job losses of the early 1980s. These trends, combined with the underrepresentation of black men in white-collar occupations and overrepresentation of black men in semiskilled blue-collar occupations, contributed to the decline in the black-white displacement rate gap in the 1990s.

Although racial differences in occupational distributions had an important effect, a substantial part of the decline in the aggregate racial gap was due to large reductions in the racial

displacement rate gaps within occupations. This becomes evident especially when we examine the change between strong labor market periods. When we consider the roles of education, region, and industry, we find that there were large decreases in the displacement rate gap within most categories. These findings suggest that, in general, black men experienced an improvement relative to white men from the 1980s to the 1990s in the risk of permanent job loss. The decline in the probability of job displacement for blacks relative to whites was not confined to only a few types of jobs, sectors of the economy, or regions of the country.

The relative and absolute decline in displacement rates for black men is an improvement in their labor market situation. Our view of this improvement, however, is tempered by our finding that, relatively speaking, black postdisplacement outcomes remained largely unchanged over the decade. □

## Footnotes

<sup>1</sup> See Robert W. Fairlie and Lori G. Kletzer, "Why Did So Many African-American Men Lose Their Jobs in the 1980's? An Analysis of Black/White Differences in Job Displacement," working paper no. 330, University of California, Santa Cruz, CA, March 1995; Lori G. Kletzer, "Job displacement, 1979-86: how blacks fared relative to whites," *Monthly Labor Review*, July 1991, pp. 17-25; *Equal Employment Opportunity: Displacement Rates, Unemployment Spells, and Reemployment Wages by Race*, GAO/HEHS-94-229rs (General Accounting Office, September 1994); and Jennifer M. Gardner, "Worker displacement: a decade of change," *Monthly Labor Review*, April 1995, pp. 45-57.

<sup>2</sup> We focus our analysis on men, following the emphasis on the same in the recent literature on the economic status of black Americans.

<sup>3</sup> In the 1994 survey, the recall period was shortened to 3 years.

<sup>4</sup> For further details on the Displaced Worker Survey, see the following articles in the *Monthly Labor Review*: Paul O. Flaim and Ellen Sehgal, "Displaced workers of 1979-83: how well have they fared?" June 1985, pp. 3-16; Francis W. Horvath, "The pulse of economic change: displaced workers of 1981-85," June 1987, pp. 3-12; Diane E. Herz, "Worker displacement in a period of rapid job expansion: 1983-87," May 1990, pp. 21-33, and "Worker displacement still common in the late 1980's," May 1991, pp. 3-9; and Jennifer M. Gardner, "Recession swells count of displaced workers," June 1993, pp. 14-23, and "Worker displacement."

<sup>5</sup> We limit the analysis to full-time workers in order to study job displacement among workers who are strongly attached to the labor force. The criteria for eligibility for the sample are similar to those used by the Bureau of Labor Statistics in various articles reporting on job displacement. One major difference, however, is that we do not exclude workers who have less than 3 years of tenure on their predisplacement job. Because of small sample sizes of black displaced workers in each year, we use the full distribution of predisplacement job tenure. This approach is common among recent empirical studies of job displacement. (See, for example, Henry S. Farber, "The Incidence and Costs of Job Loss: 1982-91," *Brookings Papers: Microeconomics* 1993, vol. 1 (Washington, The Brookings Institution, 1993), pp. 73-132; and Michael Podgursky, "The industrial structure of job displacement: 1979-89," *Monthly Labor Review*, September 1992, pp. 17-25.)

<sup>6</sup> The overlapping coverage of years of displacement by the survey, with some years covered two or three times, poses an additional problem.

<sup>7</sup> See David S. Evans and Linda S. Leighton, "Retrospective Bias in the Displaced Worker Surveys," *Journal of Human Resources*, vol. 30 (1995), pp. 386-96. Robert Topel, "Specific Capital and Unemployment: Measuring the Costs and Consequences of Job Loss," *Carnegie-Rochester Conference Series*

on *Public Policy*, vol. 33 (1990), pp. 181-214, and Farber, "Job Loss: 1982-91," also provide discussions of retrospective bias in the Displaced Worker Survey.

<sup>8</sup> See Gardner, "Worker displacement," for a discussion of this issue.

<sup>9</sup> These studies exclude workers displaced during the survey month.

<sup>10</sup> These files, available from the National Bureau of Economic Research, provide an estimate of total annual employment that is based on average monthly employment over the entire year. Using data on employment from all 12 months of the calendar year provides the best estimate of the actual number of individuals who are at risk of displacement during any given year.

<sup>11</sup> Evans and Leighton estimate that 61.6 percent of actual displacements which occurred in the third year prior to the survey date are reported in the Displaced Worker Survey.

<sup>12</sup> See Evans and Leighton, "Retrospective Bias," for estimates of the size of this understatement.

<sup>13</sup> Our labeling of 1982-83 as a slack period relies on those years having high unemployment compared with later years. (The unemployment rate was 9.7 percent in 1982 and 9.6 percent in 1983.) The National Bureau of Economic Research dates the recession of the early 1980s differently, with the peak in economic activity in mid-1981 and the trough in mid-1982. Throughout our analysis, we label slack and strong labor markets as periods of relatively high and low unemployment, respectively.

<sup>14</sup> The two differences are not statistically different from each other at the  $\alpha = .05$  level.

<sup>15</sup> The two alternative methods of calculating displacement rates also demonstrate that the racial gap was large in the early 1980s and vanished in the early 1990s (although the convergence was less steady).

<sup>16</sup> See Erica Groshen and Donald R. Williams, "White- and Blue-Collar Jobs in the Recent Recession and Recovery: Who's Singing the Blues?" *Economic Review*, vol. 28, no. 4 (1992), pp. 2-12; Farber, "Incidence and Costs of Job Loss"; and Lori G. Kletzer, "White Collar Job Displacement, 1983-91," *Proceedings of the 47th Annual Meeting of the Industrial Relations Research Association* (Madison, WI, Industrial Relations Research Association, January 1995).

<sup>17</sup> For each combination of  $i$  and  $t$ , the elements of  $ES_t^i$  sum to 1.

<sup>18</sup> James P. Smith and Finis Welch, *Closing the Gap* (Santa Monica, CA, Rand Corporation, 1986), and 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, use the technique to estimate the effect of education on the rate of racial convergence in wages. In their studies, the decomposition uses mean levels of characteristics and ordinary least squares coefficient estimates. Our translation views employment shares (ES's) as the mean levels of characteristics ( $X$ 's) and displacement rates (DR's) as the coefficients ( $\beta$ 's).

<sup>19</sup> In method 2, we replace  $DR_1^W$  with  $DR_1^B$  in equation (1) and  $ES_2^B$  with  $ES_2^W$  in equation (4) and adjust equations (2) and (3) appropriately.

<sup>20</sup> Both changes in the racial gap are statistically significant at the  $\alpha = .05$  level.

<sup>21</sup> In this analysis, we define white-collar occupations as managerial and professional specialty occupations and technical, sales, and administrative support occupations. Semiskilled blue-collar workers include operators, fabricators, and laborers, and skilled blue-collar occupations include precision production, craft, and repair occupations.

<sup>22</sup> Decompositions by industry would be less informative than the results for occupational, educational, and regional categories, because black men and white men did not differ substantially in their industrial distribution during the sample period. See Fairlie and Kletzer, "Why Did So Many African-American Men Lose Their Jobs."

<sup>23</sup> The displacement rate interaction explains 18.3 percent and 23.2 percent of the total change in the racial gap from 1982-83 to 1990-91, using methods 1 and 2, respectively. For the change from 1984-89 to 1992-93, it explains 6.2 percent and 33.0 percent of the change, using the respective methods.

<sup>24</sup> See Bruce C. Fallick, "A Review of the Recent Empirical Literature on Displaced Workers," mimeo. (Federal Reserve Board, 1994), and *Industrial and Labor Relations Review*, forthcoming; and Lori G. Kletzer, "What Have

We Learned about Job Displacement?" working paper no. 333 (Santa Cruz, CA, University of California, April 1995), for reviews of this literature.

<sup>25</sup> Because a person's labor market status is ascertained only on the date of the survey, our reemployment rate is technically an employment rate. Workers who were displaced, reemployed, and then unemployed again on the date of the survey were counted as unemployed. Thus, our measure of employment on the date of the survey understates the true reemployment rate.

<sup>26</sup> See Fairlie and Kletzer, "Why Did So Many African-American Men Lose Their Jobs," for an analysis of the causes of the racial difference in reemployment rates for the period 1982-91. We do not examine causality in this article because of the small size of the sample of black men.

<sup>27</sup> Predisplacement earnings are adjusted by the personal consumption expenditures deflator (1987 = 100) for the year in which the displacement took place, and reemployment earnings are adjusted using the deflator for the year prior to the survey year. (The Displaced Worker Survey is conducted in January.)

<sup>28</sup> The sample we use to calculate changes in earnings following displacement is representative neither of all displaced workers nor of all reemployed displaced workers. The racial difference in changes in earnings is likely to be larger in the representative sample.

<sup>29</sup> A control group of nondisplaced workers is needed to calculate these losses; see Louis Jacobson, Robert LaLonde, and Daniel Sullivan, *The Costs of Worker Dislocation* (Kalamazoo, MI, W. E. Upjohn Institute for Employment Research, 1993).

<sup>30</sup> See Fairlie and Kletzer, "Why Did So Many African-American Men Lose Their Jobs," for an analysis of the causes of the racial difference in the mean of the changes in the logarithm of earnings for the period 1982-91. For this period, the mean of the changes in the logarithm of earnings was -0.177 for blacks and -0.143 for whites.

<sup>31</sup> The same general conclusion is reached if we use the median of the changes in the logarithm of earnings.