RISING BLACK UNEMPLOYMENT: CHANGES IN JOB STABILITY OR IN EMPLOYABILITY?

M. V. Lee Badgett

This article analyzes the effects of changes in flows into and out of unemployment on the growing gap between black and white unemployment rates in the 1970s and 1980s. Current Population Survey data show that black workers' unemployment inflows increased, suggesting that job instability increased. Declining employment opportunities were also implicated, as black workers left unemployment for a job less often in 1987 than in 1971. White women's situation improved considerably, with lower inflows and higher employment probabilities. Although the effects of declining federal equal employment opportunity (EEO) pressure cannot be detected, these findings are consistent with increasing racial discrimination.

INTRODUCTION

Current political debates over affirmative action policies in the United States raise the question of whether black workers have made economic progress at the expense of white workers. Economists' research on racial differences in wages and incomes has shown that the period of rising relative black incomes ended sometime in the 1970s and fell far short of equality.[1] For black men, the 1970s and 1980s were a time of falling labor force participation and employment.[2] This article focuses on another labor market measure of blacks' economic situation that also shows a pessimistic pattern: black workers' official unemployment rate *increased* relative to white workers' rate throughout the 1970s, and blacks' relative position failed to improve despite the long business cycle upswing of the 1980s (Figures 1a and 1b). Through the 1970s and 1980s, then, evidence

is mixed as to the improvement of black workers' position relative to white workers and as to the sources of any improvement or regression. The analysis here attempts to sort out factors influencing racial differences in unemployment, including antidiscrimination policies, skill mismatches, and job instability.

While the influence of micro-level effects on the unemployment rate cannot be easily or directly measured given available data, such pressures can be translated into macro-level measurements. If these forces—skill mismatches, affirmative action policy, or job instability—have had a major effect on unemployment differentials, then the effects should be evident in the time series and cross-section patterns of the relative probabilities of entering and leaving unemployment. While the analysis of the time series patterns does not constitute a formal statistical test of each specific hypothesis—some of which obviously interact—the analysis does provide a plausibility check as well as identification of changes that need explaining. In this paper, time series measures are constructed for these two components of the unemployment rate in the 1970s and 1980s, as are more detailed cross-sectional measures for 1971 and 1987. In addition to looking for broad changes in the flows in and out of unemployment, the relative contribution of changes in the two flows to the growing unemployment gap can be assessed.

POSSIBLE EXPLANATIONS

Little recent work focusing on racial unemployment differences exists.[3] This paper's approach of using labor market transitions to look at race and gender differences in unemployment is not a new method. But most past studies focus on cross-section results that make longer term changes in labor market forces difficult to detect, or the studies were conducted before the deterioration in black worker's labor force experience was apparent. Older studies[4] often concluded that black workers' higher unemployment rates were due to greater job turnover, largely as a result of holding unstable jobs or jobs that have high quit rates regardless of race. This pattern depends on the reference points, however, especially with regard to gender. For instance, Marston finds that racial differences in women's unemployment rates result from black women's lower probability of moving into employment from either unemployment or from being out of the labor force.[5] Juhn's more recent comparison of black and white men shows that the same pattern was true for black men relative to white men over the 1970s and 1980s, but he does not calculate this pattern's effect on unemployment rate differences.[6]

FIGURE 1a
Unemployment Rates, 1972–1990

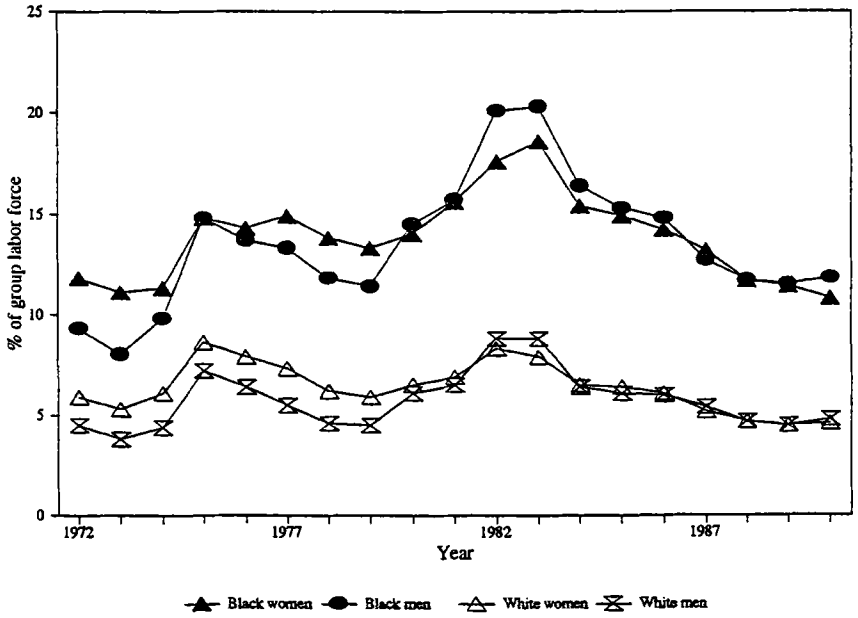
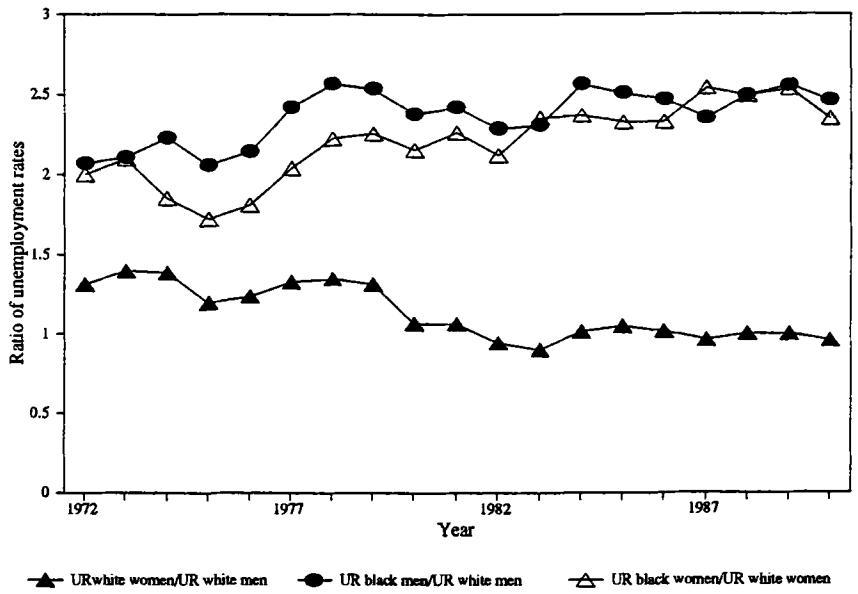


FIGURE 1b
Unemployment Ratios, 1972–1990



The potential influence of policy and economic change on labor market transitions focuses attention on several possible explanations for black workers' deteriorating unemployment situation, most of which are derived from studies of wage and employment differences. First, the skill mismatch hypothesis blames the decline of manufacturing industries in urban areas for declining employment opportunities among lower-skilled black men.[7] The literature on dislocated workers suggests that such an explanation may also be applicable to black women, even though they have not been employed in manufacturing to the extent that black men have been.[8] With fewer appropriate job opportunities, unemployed black workers may remain unemployed longer. A previous study supports this hypothesis emphasizing the loss of employment opportunities for less-skilled workers, finding that most of the increase in black workers' unemployment between 1971 and 1987 came from higher unemployment for less-educated women and for blue collar men.[9] And Juhn shows that the decline in black men's employment to population ratio (which he calls labor force participation) was concentrated among less-educated black men.[10]

While a mismatch between skills supplied and demanded might lead to a lower probability of leaving unemployment for all less-skilled workers, reasons for a disproportionate impact on blacks are less clear. Thus, a second explanation is related to the impact of federal EEO policy. To the extent that EEO laws and affirmative action, the strong form of EEO policy, significantly increased the demand for black workers, we would expect to see an increasing probability of employment (i.e., increasing flows out of unemployment) for black workers during the period of heaviest enforcement in the 1970s. By the same argument, less effective enforcement of affirmative action policies in the 1980s would have resulted in a relative decline in movements out of unemployment if employers returned to discriminatory practices.[11]

The effect of antidiscrimination policies on relative wage levels could result in the opposite effect, however. If the increase in black relative wages reflects a decline in discrimination and leads black workers to raise their reservation wages, then unemployment durations might actually increase. But recent studies demonstrate that the trend toward higher relative black male earnings was reversed in the late 1970s and 1980s.[12] By the late 1980s, the racial differential in male earnings had returned to the level of the early 1970s. Thus, a more empirically based hypothesis would focus on the effects of black workers' higher wage expectations based on the growth of relative wages in the late 1960s and early 1970s.

This duration-increasing effect also results from the Bulow and Sum-

mers dual labor market model of affirmative action.[13] In their model, increasing black workers' access to efficiency wage-paying primary sector jobs would increase queuing for those jobs, lengthening unemployment spells.

To a lesser extent, white women have had rising relative wages relative to white men[14] and have also benefitted somewhat from affirmative action,[15] providing a point of comparison to assess the EEO/affirmative action hypotheses. In other words, white women's flows in and out of unemployment should demonstrate effects of policy similar to the effect on black workers, providing a point of comparison to assess the EEO effect.

A third set of hypotheses is related to unemployment inflows through job turnover. Affirmative action policies might reduce flows into unemployment from job loss by discouraging employers from discharging black workers for fear of discrimination lawsuits. Also, in a dual labor market model, the inflow rate into unemployment would fall as blacks enter more stable and desirable primary sector jobs. But Dickens and Lang report that the proportion of primary sector jobs in the U.S. economy fell during the 1980s.[16] This suggests that more jobs were being created in the high-turnover secondary sector in the 1980s, and that the inflow rate would rise for black workers who must increasingly hold jobs in that sector.

Most of the previous explanations focus on the role of labor demand in creating unemployment. Of course, in the absence of downwardly flexible wages, an increase in the supply of labor might also push up the unemployment rate. In the most general terms, the fastest growing groups of workers would have the slowest absorption, possibly resulting in longer unemployment spells and higher inflow rates for new labor force entrants and reentrants. Between 1972 and 1987, the black female labor force grew by 67 percent, the fastest rate of growth of the four race-gender groups analyzed here, while the white female labor force grew by 56 percent.[17] On the face of it, this racial difference in women's labor supply growth might be thought to explain why black women's unemployment rose more than white women's. However, this aggregate supply growth differential cannot account for all of the unemployment growth differential since employment growth diverged even more dramatically: black women's employment grew by only 30 percent, while white women's employment grew by 57 percent, motivating this article's analysis of possible differences in labor demand.

Men's declining labor supply makes their increasing unemployment

all the more puzzling in a simple measurement sense. If men, especially black men, are more likely to leave the labor force when unemployed, then their unemployment rate should *fall.* Labor force participation has been falling steadily among men in the two decades under consideration. From 1972 to 1990, the labor force participation rate of black men aged 20 years and over fell from 78.5 percent of the population to 70.1 percent. The decline over the same period for comparable white men was from 82.0 percent to 78.3 percent. If some of those leaving the labor force are discouraged workers—the hidden unemployed—then the official unemployment rate underestimates the severity of employment problems. Thus this paper's findings could be considered as a lower bound on the estimate of the effect of declining employment opportunities on black men's labor market position.

Finally, co-worker discrimination models, e.g., Shulman's job competition model,[18] and some job matching models suggest that, aside from their correlation across the business cycle, flows in and out of unemployment are not independent. In a job competition model, unemployed white workers win out in competition for jobs because their employed white counterparts pressure employers to hire white applicants. Thus their outflow rate will exceed black workers' flows out of unemployment. And since more stable primary sector jobs should be more attractive (holding wages equal) and generate more competition, white workers' inflows into unemployment should also be lower. Some job matching models predict that faster separations lead to faster job finding, i.e., higher inflows lead to higher outflows. Although Blanchard and Diamond do not find evidence of such "thick markets" in their estimation of an aggregate matching function, they do not reject the possibility that their data simply cannot pick up such an effect.[19] These two models suggest that changes in flows in and out of unemployment will be related.

Table 1 summarizes the hypotheses and their predictions for changes in flows in and out of unemployment in the 1970s and 1980s.

METHOD

This paper compares the effects of changing flows into and out of unemployment on the ratio of the black unemployment rate to the white unemployment rate. The Current Population Survey (CPS) collects data on workers' employment status and on the duration of unemployment for currently unemployed workers. Comparisons of the stock of unemployed workers across months permits the calculation of estimates of workers'

TABLE 1
Effect of Hypotheses on Black/White Ratio of Flows In and Out of Unemployment

Hypothesis	Effect on inflows 1970's	Effect on inflows 1980's	Effect on outflows 1970's	Effect on outflows 1980's
Skill Mismatch			-	-
EEO/Affirmative Action				
Employment	-	-	+	-
Wages			-	?
Dual labor market/ job turnover	-	+		
Labor Supply	+	+	-	-(women)
			+	+
Job competition	+	+	-	-

net flows in and out of unemployment.[20] These measures differ from the gross flow data from the CPS but capture some of the same movements between labor force states.

The CPS is conducted monthly and asks unemployed workers how long they have been on layoff or looking for work. Those who have been unemployed for less than 5 weeks are counted as newly unemployed in the current month and make up the net inflow of workers into unemployment in month t. To get the net inflow rate (f), the number of newly unemployed (u^{0-4}) in group i at time t is divided by the labor force (n) of that group at time t:

$$(1) \quad f_{it} = u_{it}^{0-4}/n_{it}$$

This measure excludes any workers who became unemployed during the month but left unemployment before the survey date. Thus few movements from one job to another with little or no unemployment in between are accounted for, making f a conservative measure of unemployment inflows or job turnover.

The probability of leaving unemployment combines the probability that an unemployed person will get a job with the probability that she or he will leave the labor force. (The resulting difficulty in interpretation of changes in this measure will be discussed below.) Subtracting off the newly unemployed from the current stock of unemployed workers leaves the number of workers who were also unemployed in the previous month. Dividing this number by the previous month's stock of unemployed gives an estimate of the probability of remaining unemployed. The probability

of *leaving* unemployment will be one minus the probability of remaining unemployed:

$$(2) \quad p_{it} = 1 - (u_{it} - u_{it}^{0-4})/u_{i,t-1}$$

Given these relationships, the unemployment rate (r) can be expressed in terms of the inflows, the growth rate of the labor force (g) and the previous month's unemployment rate:[21]

$$(3) \quad r_{it} = f_{it} + [(1 - p_{it})/1 + g_{it})] * r_{i,t-1} .$$

In a steady state, flows into and out of unemployment are equal, resulting in an unchanging steady state unemployment rate, r*:

$$(4) \quad r_{it}^* = f_{it}/p_{it} .$$

Equations (3) and (4) allow two different simulations of unemployment rates under different sets of assumptions about the behavior of inflows (f) and outflows (p): a dynamic simulation using different monthly values in equation (3) and a steady state simulation using equation (4).

NET FLOW ESTIMATES—TIME SERIES

The outflow probability, p, and the inflow rate, f, for white workers and for "black and other" workers were calculated using published monthly data from *Employment and Earnings.*[22] Figures 2 and 4 chart annual averages of the monthly values of f and p from 1970 through 1990 by race and gender group.

According to Figure 2, the inflow rate for black workers is far higher than that for white workers, regardless of gender. Men have lower inflow rates than do women within racial groups. Average inflows into unemployment rose steadily for black women in the 1970s through 1983, followed by a steady decline to levels in 1990 that were below the 1970 inflow rate. Black men have yet to recover from their inflow rate's steep increase of the mid-1970s through early 1980s. White men's inflow rate trended upward slightly but eventually dropped to levels comparable to the early 1970s. The gradual decline of white women's inflow rate was interrupted only by the 1974–75 and 1982–83 recessions.

Figure 3 charts the ratio of the black to white inflow rates by sex. Inflows for both black men and women rose relative to their white counterparts from 1974 through most of the 1980s. This pattern casts doubt on the hypothesis that affirmative action either increased access to stable

FIGURE 2
Monthly Unemployment Inflow Rate
Annual Average

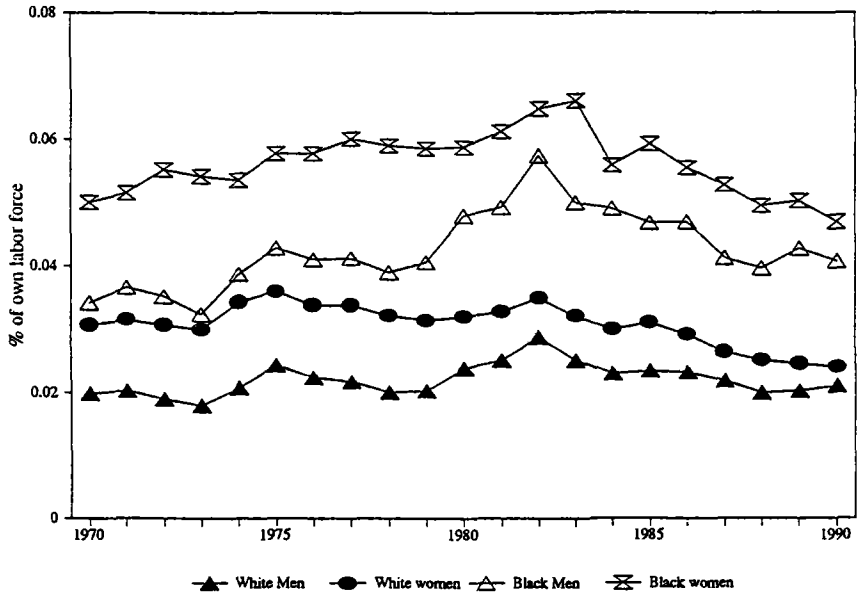
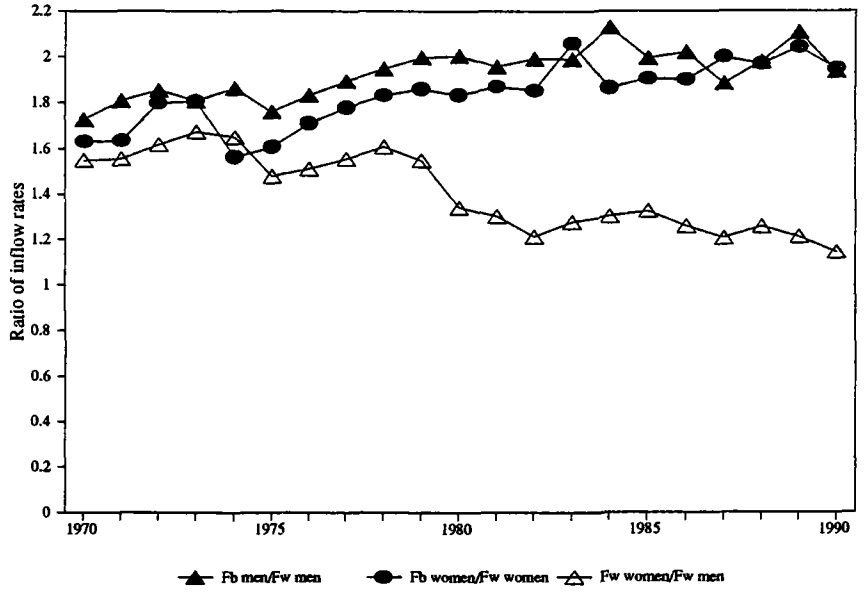


FIGURE 3
Ratio of Inflow Rates
Compared by Sex and to White Men



primary sector jobs or led to fewer discharges of black workers. Both the relative and absolute decline in white women's inflows indicate aggregate-level improvements, possibly resulting from antidiscrimination policy. And in the 1980s, when affirmative action enforcement was relatively low, the relative flow measures unexpectedly stabilized for black workers and continued to improve for white women.

Figure 4 shows that, as a whole, women are more likely than men to leave unemployment since this probability measure combines the probability of leaving the labor force with the probability of getting a job. Within gender groups, white workers are more likely than black workers to leave unemployment in a given month, but the difference narrows during downswings. As the outflow probability varied over the business cycle, both the peaks and troughs were lower in the late 1970s and early 1980s than they were in the early 1970s for all groups. This absolute drop for all four groups suggests that other general economic forces were more important in determining the length of an unemployment spell. (By 1989, the outflows for all groups had at least recovered to their 1979 levels but not to 1970 levels.)

Figure 5 plots the ratios of the outflow probabilities. The stability of the ratio throughout the 1970s, the period of heaviest EEO/affirmative action enforcement, implies that affirmative action had little or no effect on the relative demand for black workers at an aggregate level. Black workers' probability of leaving unemployment fluctuated around 90 percent of white workers' probability for the past two decades. White women had a period of higher outflows relative to white men in the mid-1980s, i.e., *after* EEO and affirmative action pressure dropped off. Increasing reservation wages or queuing for primary sector jobs could have resulted in the apparent lengthening of unemployment durations implied by Figure 4, however, but only if those hypotheses are applied to all workers.

The relative flows, both in and out of unemployment, were changing over the last two decades, but the temporal flow patterns provide little support for the simple EEO/affirmative action hypotheses that changes in enforcement would have hurt black workers in the 1980s, not in the 1970s as we observed. To sort out the potential influence of the other hypotheses on changes in the unemployment rates and in the racial differential, two different methods will be used. The first panel of Table 2 presents the simulated steady state unemployment rates using equation (4), and the second panel presents the results of the dynamic simulations using equation (3). The reference points, 1971 and 1987, were chosen for comparability with the cross-section data taken from March of 1971 and

FIGURE 4
Monthly Unemployment Outflow Probabilities
Annual Average

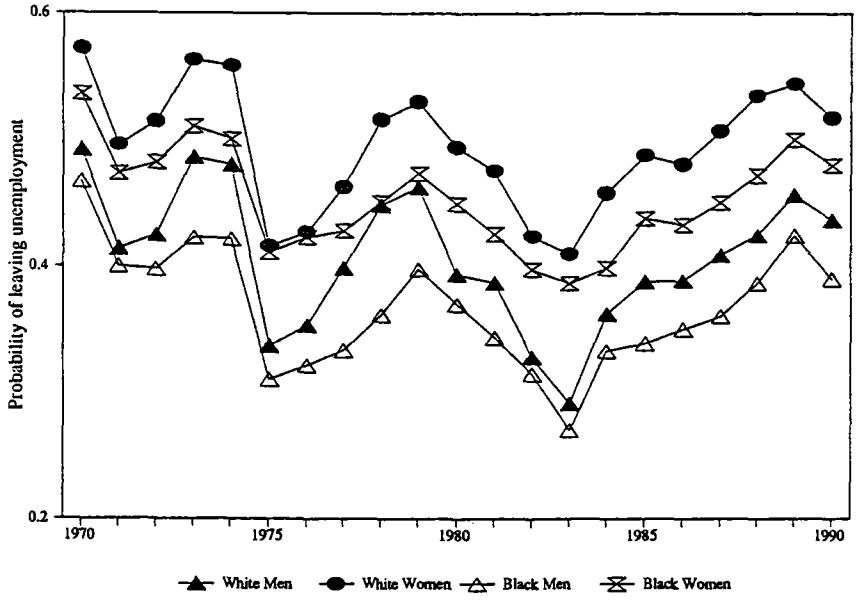
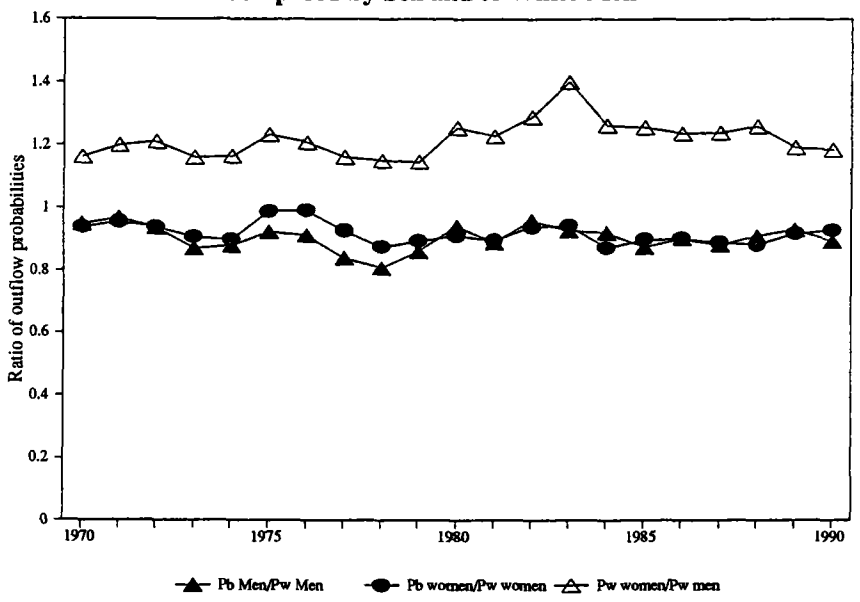


FIGURE 5
Ratio of Outflow Probabilities
Compared by Sex and to White Men



1987 (two similar points on the seasonal and business cycles). In each panel, the first row presents either the implied steady state unemployment rate or the actual unemployment rate (in the dynamic simulation panels). The second row holds inflows constant at their average 1971 level and calculates the unemployment rate with varying levels of the outflow probability. The third row reverses the procedure, holding the outflow probability constant and allowing the inflow rate to vary. The seventh column gives the percentage change in the unemployment ratio that can be attributed to the change in the flow allowed to vary.

The results are similar for both kinds of simulations. In the steady state simulations, changes in outflows and inflows both account for roughly half of the increase in the black female unemployment rate (.9 percentage points): allowing only the outflow probability to change (it decreases) raises the rate from 10.9 percent to 11.3 percent, and allowing the inflow rate to rise (while holding outflows constant) increases the rate from 10.9 percent to 11.4 percent. For white women, the increase in the outflow probability only reduces the unemployment rate by .2 percentage points, while the fall in the inflow rate pushes the unemployment rate down from 6.5 percent to 5.3 percent, or 80 percent of its total drop. The only difference in the dynamic simulations is that the influence of changing outflow probabilities is clearly stronger than the influence of changes in the inflow rate for black women. But even if falling outflow probabilities contribute more to the increase in unemployment among black women, the growing ratio of black to white women's unemployment rates—from 1.7 to 2.3—is clearly driven by the divergence of their inflow rates in both simulations.

The results for male workers are similar: rising inflow rates account for more of the increase in the unemployment rate in all simulations. For black men, both rising inflows and falling outflows contributed a substantial part of the increase in the black male unemployment rate. The outflow probability changed so little for white men that the change in the inflow rate accounted for virtually all of the increase in the white male unemployment rate. The racial *divergence* in outflow probabilities, however, played an important role in the increase of men's racial unemployment ratio from 1.9 to 2.1. The relative increase in black male inflows does contribute up to 33 percent of the increase in the ratio if we use the dynamic simulations, however.

In summary, the time series data argue against the EEO/affirmative action hypotheses implying that changes in policy drove the racial wedge between white unemployment and black unemployment. First, the outflow probability patterns suggest that an affirmative action-induced in-

TABLE 2
Simulated Average Annual Unemployment Rates

	Black & Other		White		Ratios		% chg.
	1971	1987	1971	1987	1971	1987	in rat.
WOMEN:							
Average inflow rate (f_t)	.051	.053	.032	.026	1.6	2.0	
Average outflow prob. (p_t)	.466	.451	.495	.511	.9	.9	
Steady state simulations							
Unemp. rate (f_t/p_t)	10.9	11.8	6.1	5.1	1.7	2.3	
inflows constant (f_{71}/p_t)	10.9	11.3	6.5	6.3	1.7	1.8	16.7
outflows constant (f_t/p_{71})	10.9	11.4	6.5	5.3	1.7	2.2	83.3
Dynamic simulations							
Actual unemp. rate	10.8	11.7	6.3	5.2	1.7	2.3	
inflows constant** (f_{71}, p_t)	10.7	11.5	6.3	6.2	1.7	1.8	16.7
outflows constant** (f_t, p_{71})	10.9	11.2	6.4	5.4	1.7	2.1	66.7
MEN:							
Average inflow rate (f_t)	.037	.041	.020	.022	1.9	1.9	
Average outflow prob. (p_t)	.399	.365	.414	.417	1.0	0.9	
Steady state simulations							
Unemp. rate (f_t/p_t)	9.3	11.2	4.8	5.3	1.9	2.1	
inflows constant (f_{71}/p_t)	9.3	10.1	4.8	4.8	1.9	2.1	100.0
outflows constant (f_t/p_{71})	9.3	10.3	4.8	5.3	1.9	1.9	0.0
Dynamic simulations							
Actual unemp. rate	9.1	11.5	4.9	5.4	1.9	2.1	
inflows constant** (f_{71}, p_t)	9.2	10.0	5.0	5.0	1.8	2.0	66.6
outflows constant** (f_t, p_{71})	9.4	10.4	5.0	5.3	1.9	2.0	33.3

*Gives percentage of the change in ratio of unemployment rates accounted for by the simulation. Totals will not necessarily add up to 100%.

**Simulations calculated from monthly CPS data using equation (3) from text using either constant inflows (f_{71}) or constant outflows (p_{71}):

$$r_t = f_t + [(1 - p_t)/(1 + g_t)] * r_{t-1}$$

Source: *Employment and Earnings,* various issues.

crease in labor demand was not visible at the macro-level for black workers and white women. Second, the patterns are consistent with an increase in the reservation wage or increased queuing for *all* groups in the 1970s and early 1980s. And third, relative inflow rate patterns in Figure 3 show that any effect of EEO/affirmative action on discharges or on access to more stable jobs went to white women and not to black men and women. The time series data do support the declining primary sector argument in that inflows rose for all groups (except for white women) in the 1970s and failed to return to 1970s levels for men by the late 1980s. Finally, the simulations suggest that most of the divergence in unemployment rates by race within gender groups stems from a racial divergence in one flow: inflows for women, and outflows for men. Thus, the explanations for rising relative black unemployment must clearly be consistent with these changes and the different patterns by gender.

NET FLOWS—CROSS-SECTION DATA

A more detailed breakdown of the flow measures is necessary to assess more directly the hypotheses concerned with skill mismatches, increased job instability, job competition, and thick markets. CPS data from March of 1971 and of 1987 are used in these cross-sectional comparisons.

The detailed cross-section data also have the advantage of allowing the separation of black workers from the "black and other" group. The last two columns of Table 3 reveal a much larger inflow increase for black workers once they are separated from other racial groups—a 1.2 percentage point increase for black women and a one percentage point increase for black men. White women's inflow rate shows a slightly larger decrease and white men's a larger increase when comparing March data than in the annual averages of Table 2.

Divergence of inflow rates caused most of the widening gap between black women and white women. For black women, increases in job quits and in reentrants both account for approximately one half of the inflow rate increase.[23] Small declines in newly unemployed job losers and reentrants account for the fall in white women's inflow rate. Although differences in outflow probabilities pushed black men's unemployment up relative to white men's, rising inflow rates increased both groups' unemployment rates. Both black men and white men experienced close to a .5 percentage point increase in the inflow rate of job losers. Rising inflows from black male new entrants pushed black men's rate up even more.

Cross-tabulations of inflows by education (also in Table 3), reveal that the total inflow rate (in the last two columns) for the group of workers with less than 12 years of education rose in all race-gender groups. High school graduates' inflows increased for all groups except for white women. College graduates' inflow rates improved or at least showed virtually no deterioration. Unemployed reentrants and new entrants account for most of the increase in inflows in the lowest education category for all four race-gender groups. Higher job loss rates among men pushed up the inflow rate at all education levels. Quits increased among non-college graduate black women and in the non-high school graduates of other race-gender groups.

The increased unemployment among less-educated new entrants suggests that they are less likely to move from school or other non-labor market activities into a job, indicating a drop in job opportunities for low-skilled new workers. The importance of both job loss (for men) and

TABLE 3
Detailed Inflow Rates for March 1971 and 1987

	Job losers		Job Leavers		Re-entrants		New Entrants		TOTAL	
	1971	1987	1971	1987	1971	1987	1971	1987	1971	1987
Black:										
Women	.014	.013	.004	.011	.019	.025	.008	.008	.045	.057
Men	.015	.020	.003	.004	.009	.008	.005	.010	.032	.042
White:										
Women	.008	.007	.005	.005	.011	.008	.004	.004	.028	.024
Men	.008	.012	.002	.003	.005	.004	.002	.002	.017	.021
By education:										
Black women:										
< 12	.019	.009	.007	.011	.019	.037	.012	.026	.057	.083
12 yrs.	.009	.020	.001	.018	.022	.022	.003	.003	.035	.063
Some Col	.011	.010	.000	.006	.019	.023	.000	.004	.030	.049
Col Grad	.005	.002	.004	.005	.006	.003	.011	.000	.026	.010
Black men:										
< 12	.017	.024	.002	.007	.009	.016	.007	.029	.035	.076
12 yrs.	.014	.020	.006	.002	.005	.004	.000	.002	.024	.028
Some Col.	.009	.021	.004	.004	.022	.010	.008	.003	.043	.039
Col Grad	.000	.005	.000	.004	.008	.000	.000	.000	.008	.009
White women:										
< 12	.011	.015	.006	.009	.012	.021	.010	.002	.039	.047
12 yrs.	.008	.009	.005	.005	.010	.007	.001	.000	.024	.021
Some Col	.005	.004	.005	.006	.016	.009	.003	.000	.029	.019
Col Grad	.002	.003	.004	.002	.004	.003	.000	.000	.010	.008
White men:										
< 12	.012	.019	.003	.006	.007	.012	.004	.009	.026	.047
12 yrs.	.008	.015	.002	.003	.002	.002	.000	.000	.012	.020
Some Col	.007	.010	.004	.002	.008	.004	.002	.004	.021	.017
Col Grad	.002	.003	.001	.001	.002	.002	.000	.002	.005	.005

Note: "Black" does *not* include "& other"
Source: Calculated from CPS tapes using equation (1): $f_{ijt} = u_{ijt}{}^{0-4}/n_{ijt}$ where n_{ij} is the labor force for race i and (where appropriate) education subgroup j.

quits (for black women) suggests that the quality of jobs held by less-educated workers decreased, i.e., that more of those workers had secondary sector jobs or lost primary sector jobs in 1987.

The increase in black female reentrants, which accounts for a large part of the divergence of black and white women's inflow rates, is harder to interpret. If much of the reentrant inflow into unemployment is made up of workers who lost their last jobs, then job instability may be significantly higher than indicated by the inflow rates of job losers. If rising reentrant flows indicate an increase in unemployed black workers' propensity to leave the labor force, then the outflow probability measurement overestimates the probability of leaving unemployment for a job (discussed further below). Rising inflows of black entrants might be the result of a growing labor supply, but the supply of white women also grew rapidly without an increase in these flows, further suggesting differential labor demand shifts.

Overall, the detailed inflows provide evidence of decreasing job stability for less-educated workers, but they could also reflect diminished employment opportunities for those same workers. Outflow probabilities should also reflect this skill pattern if skill mismatches are an important source of unemployment. Because of data limitations, the level of detail available for inflow rates is not possible for the outflow probabilities. By using the steady state assumption, however, outflow probabilities can be estimated for the education subgroups using equation (4). Table 4 gives the implied outflow values, which provide weak support for the hypothesis that employment opportunities are declining for less-skilled workers: of those workers with no more than a high school degree, only black female high school graduates and white men have a higher outflow probability in 1987. Curiously, outflows fall for all groups' college graduates, perhaps because unemployed college graduates are queuing for the smaller number of stable jobs implied by the rising inflow rates.

Separating the outflow measure into the probability of leaving unemployment for a job from leaving the labor force requires additional data. In spite of the well-known problems with the gross flow data from the CPS, these data are the only data available that both match the measurements considered earlier in terms of definition, sample, and time period and provide a way to split the outflow probability into its two components. Unfortunately, this can only be done at a highly aggregated level.

If reporting errors in these data have not changed significantly between 1971 and 1987, then the transition probabilities in Table 5 suggest that employment opportunities have fallen for black women and men but have risen for white women. This means that relatively constant outflow probabilities disguise an important shift in the measure's two components. For black workers, the probability of leaving unemployment for a job fell by 36 percent, while the probability of an unemployed white woman finding a job rose by 69 percent. Thus, black women's declining probability of leaving unemployment, identified previously as a major reason for their rising unemployment rate, was clearly dominated by the fall in movements from unemployment to employment when comparing March 1971 and March 1987. Similarly, the divergence in outflows between black and white men that drove their unemployment rates apart was due to black men's declining flows into employment.

Neither of the labor force participation trends that are clear in stock data for the black population—increasing participation for black women and decreasing participation for black men—are evident in the flow data. According to Table 5, the probability of moving from unemployment to

TABLE 4
Estimated Steady State Outflow Probabilities by Education Group

	Black		White	
	1971	1987	1971	1987
WOMEN:				
< 12	.471	.417	.429	.392
12 yrs.	.357	.406	.444	.389
Some Col	.370	.386	.460	.452
Col Grad	.481	.196	.385	.381
MEN:				
< 12	.376	.351	.325	.373
12 yrs.	.296	.246	.273	.303
Some Col	.336	.336	.368	.327
Col Grad	1.000	.180	.238	.208

Note: Probabilities calculated by solving equation (4) using group unemployment rates from Table 1 as steady state rate and inflow rates from Table 3.

not in labor force rose for black women and fell for white women. DeBoer and Seeborg[24] find that *declining* movements in and out of the labor force account for much of the fall of the total female unemployment rate relative to the male rate. The findings of this study suggest that the DeBoer and Seeborg result reflects the high proportion of white women in the female labor force and may not be true of black women. Further research will be necessary to reveal the reasons for the apparent rise in black women's movements into and out of the labor force.

Overall, the more detailed data support both the declining low-skill employment opportunities hypothesis and the increasing job instability hypothesis. Further research with detailed micro-level data will be necessary both to clearly establish a skill-biased pattern in movements from unemployment into employment and to control for other factors determining job stability, however.

PUTTING THE PIECES TOGETHER

As noted earlier, EEO and affirmative action had little discernable impact on racial differences in macro-level unemployment components, either when policy enforcement was at its peak or when it dropped off dramatically during the Reagan administration. Taken alone, the declining employment opportunities hypothesis has support when applied to

TABLE 5
Transition Probabilities* from Gross Flow Data

	U to E		U to N	
	1971	1987	1971	1987
Black & Other				
Women	.208	.132	.303	.331
Men	.295	.189	.197	.178
White				
Women	.199	.255	.300	.255
Men	.293	.289	.144	.130

Source: Author's calculations from unadjusted, unpublished gross flows data from the Bureau of Labor Statistics.
*Probability that a person in state i (U or E) in February will be in state j (U, E, or N) in March, where U is unemployment, E is employment, and N is not in labor force.

black men, whose unemployment gap rose because flows out of unemployment declined relative to white men. That hypothesis cannot completely explain the relative deterioration of black women's unemployment rate, though, recalling the simulations in Table 2 that pointed to the importance of diverging inflow rates in explaining the rise in black women's unemployment rate relative to white women's. The job instability argument can account for much of the increase in absolute unemployment levels of men and in the relative rates of black women, but it cannot explain the disproportionate impact of those forces on black workers.

The job competition and job matching hypotheses provide a way of relating changes in the two flows. The "thick markets" variant of job matching models predicts faster job finding when job turnover rates are higher. The average inflow rate for all workers was 2.7 percent in both 1971 and 1987, and the average outflow probabilities were .447 in 1971 and .445 in 1987. In other words, workers as a whole were entering and leaving unemployment at about the same rate in both years. If jobs had been strictly segregated by race, then we would expect black workers' higher inflows to result in faster outflows. Jobs are not completely segregated, of course, but as this article clearly shows, the distribution of the flows shifted dramatically across race and gender groups as those for whom turnover increased the most—black men and women—also faced *lower* job finding rates.

The job competition hypothesis can account for the combination of

patterns: As unemployment rose after the oil shock in the mid-1970s, white workers competed more fiercely and successfully (given their employed white allies) for jobs and were therefore able to find work more easily than black workers. Those jobs with lower turnover probabilities were the most desirable to white workers, who were disproportionately hired into those jobs. According to this hypothesis, new job creation and higher turnover of black workers would create opportunities for other workers, which apparently went to white women. Both macroeconomic conditions and EEO policy would be important to this argument, interacting to influence both the incentives for and constraints on firms' and workers' actions. While antidiscrimination policy was not effective in raising black workers' relative probability of leaving unemployment (see Figures 4 and 5), the decline in enforcement when primary sector employment was shrinking may have altered black workers' access to primary sector jobs, affecting the underlying components of unemployment outflows and inflows.

These results suggest at least two directions for future empirical work. One direction is to search for evidence of mechanisms by which white workers can exert influence over firms' hiring decisions, resulting in hiring practices that favor white workers in both the private and public sectors. The importance of social networks, the role of unions, and white workers' legal challenges to affirmative action plans are all possible suspects. A second important direction would be to consider how gender interacts with race in discrimination, i.e., in the non-productivity-based ordering of the queue of unemployed workers. For instance, white women's increasing contribution to family incomes may reduce white male discrimination against white women, who could be wives or daughters, more rapidly than against black men or women.[25]

Future research could help flesh out the deficiencies in the design and enforcement of past antidiscrimination policy, as persistent racial differentials in flows from unemployment into jobs highlights a continuing need for firm-level policies aimed at promoting racial equality. Promoting stabilizing policies such as on-the-job or formal training in what have traditionally been secondary jobs—including the burgeoning category of part-time, temporary, and contractual employment—would contribute to reducing unemployment, particularly for black workers. But race neutral policies designed to stabilize employment will help black workers only if their access to new and more attractive jobs is maintained. To make a dent in the historically stubborn unemployment differential, access must be thought of in terms of quality as well as quantity of jobs.

NOTES

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1. See John Bound and Richard B. Freeman "Black Economic Progress: Erosion of the Post-1965 Gains in the 1980's?" in *The Question of Discrimination,* Steven Shulman and William Darity, Jr., (eds.) (Middletown, CT: Wesleyan University Press, 1989); John H. Donohue and James Heckman, "Continuous Versus Episodic Change: The Impact of Civil Rights Policy on the Economic Status of Blacks," *Journal of Economic Literature,* XXIX (December 1991).

2. Gerald D. Jaynes, "The Labor Market Status of Black Americans: 1939–1985," *The Journal of Economic Perspectives,* 4 (4) (1990), 9–24.

3. Some recent work does examine racial differences in male teenage unemployment rates, e.g., Harry J. Holzer, "Black Youth Nonemployment: Duration and Job Search," in *The Black Youth Employment Crisis,* Richard B. Freeman and Harry J. Holzer (eds.) (Chicago: The University of Chicago Press, 1986).

4. Robert Hall, "Turnover in the Labor Force," *Brookings Papers on Economic Activity,* 3 (1972); Stephen T. Marston, "Employment Instability and High Unemployment Rates," *Brookings Papers on Economic Activity,* 1 (1976); Clair Vickery, "The Impact of Turnover on Group Unemployment Rates," *Review of Economics and Statistics,* 59 (November 1977).

5. Marston, op. cit.

6. Chinhui Juhn, "Decline of Male Labor Market Participation: The Role of Declining Market Opportunities," *The Quarterly Journal of Economics* (February 1992), 79–121.

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10. Juhn, op. cit.

11. Jonathan Leonard, "The Impact of Affirmative Action Regulation and Equal Employment Law on Black Employment," *Journal of Economic Perspectives,* 4 (Fall 1990).

12. See Bound and Freeman, op. cit.; Donohue and Heckman, op. cit.

13. Jeremy I. Bulow and Lawrence H. Summers, "A Theory of Dual Labor Markets with Application to Industrial Policy, Discrimination, and Keynesian Unemployment," *Journal of Labor Economics,* 4 (1986).

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16. William T. Dickens and Kevin Lang, "Why It Matters What We Trade: A Case for Active Policy," in *The Dynamics of Trade and Employment,* Laura D. Tyson,

William T. Dickens, and John Zysman (eds.) (Cambridge, MA: Ballinger Publishing Co., 1988).

17. Labor force percentages and labor force participation rates are from *Economic Report of the President* (Washington: United States Government Printing Office, 1991).

18. Steven Shulman, "Competition and Racial Discrimination: The Employment Effects of Reagan's Labor Market Policies," *Review of Radical Political Economics,* 16 (4) (1984); Shulman, "Racial Inequality and White Employment: An Interpretation and Test of the Bargaining Power Hypothesis," *The Review of Black Political Economy,* 18 (Winter 1990), 5–20.

19. Olivier Jean Blanchard and Peter Diamond, "The Beveridge Curve," *Brookings Papers on Economic Activity,* 1 (1989).

20. These measurements were created and used most extensively by Michael R. Darby, John Haltiwanger, and Mark Plant, "Unemployment Rate Dynamics and Persistent Unemployment Under Rational Expectations," *American Economic Review,* 75 (4) (1985).

21. For derivation of equations (3) and (4), see Darby, et al., op. cit., or Badgett, op. cit.

22. Separate data on black workers was not published until 1983. The distinction between "black" and "black and other" has become more important in recent years. In March 1971, for instance, blacks made up 90% of the black and other group. By March 1987, however, blacks were only 78.2% of black and other. Unless otherwise noted, "black" will actually refer to the "black and other" group.

23. If reentrants are less committed to the labor force, they may also be less committed to employment, suggesting that the rise in reentrant unemployment and in quits might be related.

24. Larry DeBoer and Michael C. Seeborg, "The Unemployment Rates of Men and Women: A Transition Probability Analysis," *Industrial and Labor Relations Review,* 42 (3) (1989).

25. For a broader discussion of this hypothesis, see M. V. Lee Badgett and Rhonda M. Williams, "The Changing Contours of Discrimination: Race, Gender, and Structural Economic Change," in *Understanding American Economic Decline,* David Adler and Michael Bernstein (eds.) (Cambridge: Cambridge University Press, forthcoming, 1994).