

THE EMERGENCE, PERSISTENCE, AND RECENT WIDENING OF THE RACIAL UNEMPLOYMENT GAP

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Census data show that the ratio of black to white unemployment rates, currently in excess of 2:1, was small or nonexistent before 1940, widened dramatically during the 1940s and 1950s, and widened again in the 1980s. The authors decompose changes in the unemployment gap over the years 1880–1990 to identify the separate contributions of changes in observable worker characteristics and shifts in labor demand. Nearly all of the widening of the gap during the 1940s and 1950s can be attributed to regional shifts of workers and declining demand in markets where black workers were concentrated. After 1970, improvements in the relative educational status of black workers would have narrowed the unemployment gap slightly, but demand shifts adverse to black workers more than canceled out these gains.

The persistent gap between the unemployment rates of whites and African-Americans stands in stark contrast to the narrowing racial gap in earnings during much of the postwar period. While earnings began to converge—most rapidly during the 1960s and 1970s—the ratio of black to white unemployment rates actually grew from rough parity as late as 1940 to approximately 2 to 1 by 1960 and to more than 2 to 1 by 1990. In 1997, the unemploy-

ment rate of black men averaged 2.4 times that of white men (U.S. Bureau of Labor Statistics 1998:88). The debate among labor economists over black economic progress “since Myrdal” (Gunnar Myrdal’s epochal 1944 study of race relations) has focused largely on relative earnings; the growth and persistence of the unemployment rate gap have been relatively neglected and raise serious questions for the optimists’ side of the debate.

In this paper, we examine trends in unemployment among black and white men from 1880 to 1990 using Census Public Use Microdata Samples (PUMS).¹

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¹We focus on male unemployment because dramatic changes in the labor-force participation rates of women, as well as racial differences in participation, pose serious questions about the reliability of unemployment rate trends and comparisons for women.

The PUMS series allows us to carefully document the emergence and subsequent widening of the racial gap in unemployment during the twentieth century. An analysis of long-run changes in black and white unemployment is important for understanding the causes of the current racial disparity in unemployment. Most of the recent work on black/white differences in employment patterns relies on data from the second half of the twentieth century, and thus cannot explain the emergence of the racial unemployment gap between 1940 and 1960. Our PUMS series also allows us to explore the causes of the persistence and further widening of the racial unemployment rate gap in recent decades. The causes of current racial patterns of unemployment are of considerable interest to both academicians and policy makers, yet they remain largely a mystery.

Since Emancipation, African-Americans have made substantial progress in achieving levels of education and job characteristics similar to those of whites. The twentieth century has also witnessed many population shifts, including the Great Migration of blacks from the South to the North and the more recent movement of Americans into the "Sunbelt." Finally, there is extensive evidence of demand shifts away from the types of jobs, measured by industry and skill-level, in which blacks were concentrated in the past two decades (see Holzer 1994 for a review). We examine how these and other important economic changes affected the historical and more recent trends in unemployment among black and white men. Using a time-series variation of the standard Blinder-Oaxaca decomposition, we estimate contributions to the changes in the unemployment rate gap of racial differences in characteristics, such as education, region, and industry. The ways in which these variables affect unemployment rates, as revealed through the decompositions, shed light on a number of competing hypotheses about the causes of the emergence of the racial gap and its persistence over time.

Literature Review

The black-white differential in unemployment rates has been a topic of considerable interest since at least the Great Depression. The 1930 and 1940 Censuses revealed a substantial racial gap in large cities (Ross 1940; Myrdal 1944; Drake and Cayton 1945; Sundstrom 1992). Aggregated to the national level, however, unemployment rates were sometimes lower for blacks than whites early in the century and remained roughly at parity as late as 1940 (Vedder and Gallaway 1992). By 1960 the ratio of black to white unemployment rates was roughly 2, and it remained at that level until around 1980. During the 1980s the ratio expanded again to nearly 2.5.

A number of studies of the unemployment gap have attempted to decompose the differential at a given point in time into the contribution of racial differences in characteristics and an unexplained race effect, often attributed to discrimination. Using occupation-level data, Gilman (1965) found that characteristics could explain roughly half the unemployment gap. In more recent efforts, researchers have used microdata to estimate models of the probability of unemployment and then applied the probability analogue of the standard Blinder-Oaxaca earnings decomposition. In these studies measured worker characteristics explain only 20–40% of the racial unemployment differential (Abowd and Killingsworth 1984; Stratton 1993). Using data from the 1940 Census, Sundstrom (1997) found that workers' characteristics explained only a third of the racial unemployment gap in the northern states, but fully accounted for the differential in the South.

The widening of the gap between black and white unemployment rates during the 1940s and 1950s, coinciding as it did with the Great Migration of blacks out of the agrarian South, suggests that regional and industrial shifts might account for the national trend. Using a simple counterfactual exercise based on white unemployment rates by region and occupation, Vedder and Gallaway (1992) argued that at least

half the increase in the racial gap could be accounted for by blacks shifting from low-unemployment to high-unemployment regions and occupations. Data limitations, however, left open the possibility that other explanatory variables played a significant role and that the contribution of the various factors changed over time. Furthermore, Vedder and Gallaway's technique did not control for region and occupation simultaneously.

An alternative explanation was offered by Cogan (1982), who suggested that the declining demand for labor in southern agriculture explained virtually all of the reduction in employment of young black men during the period 1950-70.² Cogan speculated that many of the workers "released" from agriculture were unable to find jobs in expanding sectors of the economy because of the minimum wage. As we note below, the accounts by Cogan and by Vedder and Gallaway have distinct implications for our decompositions.

Discussions of trends in black unemployment and joblessness since the 1960s have often been framed in terms of supply versus demand shifts in the labor market. A large number of these studies are surveyed in Holzer (1994). Research that emphasizes the impact of relative shifts in labor demand away from locations and industries in which blacks were concentrated includes Wilson (1987), Kasarda (1989), and Cain and Finnie (1990). Welch (1990), on the other hand, argued that supply shifts were more important, at least during the 1970s, because wage changes were relatively favorable to blacks at all percentiles of the wage distribution. Juhn (1992) showed that since the early 1970s falling wages along a stable labor supply function account for most of the reduction in white men's employment

but only about half the reduction in black men's employment. Bound and Freeman (1992) suggested that both adverse demand shifts and changes in supply behavior—including increased criminal activity—account for much of the relative decline in the employment of young black men during the 1980s.³

The debate over demand and supply influences tends to downplay the potential role of discrimination, perhaps reflecting the view that the postwar period has witnessed a decline in discriminatory behavior.⁴ But it is possible that declining wage discrimination actually played a role in the widening unemployment gap. Gilman (1965) hypothesized that employers had a taste for discrimination in both the North and the South, but that social pressures for "equal pay for equal work" were stronger in the North. Indeed, the racial wage differential after controlling for characteristics was much greater in the South than in the North, at least until the 1960s (Donohue and Heckman 1991). According to Becker's (1971) model, if northern employers were not compensated for employing blacks, they would be less likely to hire them. By the same logic, forced reductions in the racial wage differential would increase black unemployment.⁵

Data

This study uses individual data from the Public Use Microdata Samples of the Cen-

²The timing of this demand shift is broadly consistent with Reardon's (1997) recent finding that during the period 1940-90, the largest relative shifts in demand away from black men occurred before 1970. Margo and Finegan (1993), however, noted that the declining employment of black teenagers was partly the continuation of a long-run trend toward increased school attendance.

³Further evidence of the importance of both supply and demand shifts is presented in Bound and Holzer (1996). They provided evidence that smaller adjustments in the labor supply of less-skilled and black workers exacerbated the negative effects of demand shifts in the 1980s for these groups.

⁴Donohue and Heckman (1991) argued that labor-market tightness coupled with political pressures—including federal equal employment law—reduced discrimination during the 1960s, especially in the South.

⁵Flanagan (1976) suggested that an increase in the expected wage for blacks might have increased labor-force participation, especially among young blacks, leading to at least temporary increases in black youth unemployment rates as the new entrants searched for jobs.

Table 1. Unemployment and Joblessness Rates by Race, 1880-1990 Censuses.

Year	White Men		Black Men		Black/White	
	Rate	N	Rate	N	Difference	Ratio
<i>Unemployment</i>						
1880	3.8%	35,679	3.0%	15,064	-0.7%	0.804
1900	6.1	24,574	6.6	2,778	0.5	1.083
1910	3.3	36,227	3.1	10,229	-0.1	0.963
1940	9.6	34,235	10.8	33,100	1.2	1.127
1950	3.9	33,752	6.9	10,694	3.1	1.798
1960	4.3	33,691	8.5	31,109	4.2	2.000
1970	3.2	31,070	6.3	28,389	3.1	1.960
1980	5.3	31,294	11.1	26,439	5.8	2.080
1990	5.0	31,281	12.3	26,550	7.3	2.446
<i>Joblessness</i>						
1880	8.5%	37,524	6.6%	15,644	1.9%	0.781
1900	9.9	25,610	10.3	2,894	0.5	1.049
1910	7.1	37,707	5.2	10,446	1.9	0.730
1940	14.3	36,112	15.8	35,077	1.5	1.108
1950	9.8	35,959	15.2	11,733	5.4	1.556
1960	9.8	35,767	18.5	34,927	8.7	1.886
1970	10.6	33,630	19.6	33,082	9.0	1.851
1980	14.4	34,595	27.4	32,375	13.0	1.907
1990	14.7	34,913	28.5	32,629	13.8	1.936

Notes: The sample consists of non-school, non-institutionalized men aged 16-64. Unemployment rate calculations exclude workers who are not in the labor force (NILF).

sus of Population for the years 1880, 1900, 1910, and 1940-90. PUMS files are not available for the 1890 and 1930 Censuses, and the 1920 Census did not record employment status. We generate random samples from each PUMS that contain approximately 40,000 individuals of each race where possible. For many of the earlier census years we are limited to selecting fewer than 40,000 black individuals. Further details regarding the samples and variables are provided in Fairlie and Sundstrom (1997), and exact sample sizes are reported in Table 1.

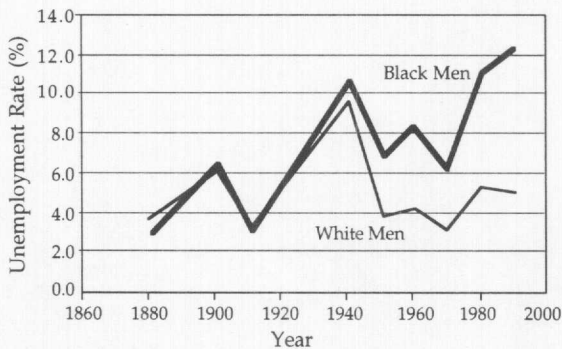
To define labor-market status as consistently as possible across all Censuses, we first exclude institutional inmates (predominantly in correctional facilities or mental institutions) and individuals under the age of 30 who reported attending school. We then assign individuals to three categories: employed, unemployed, and not in the labor force (NILF). We also include only men ages 16-64 in this analysis. Female patterns of unemployment are likely

to differ greatly from male patterns over time, and a detailed analysis of these patterns is beyond the scope of this paper.

The modern definitions of the labor force and employment status were first used in the 1940 Census. Consequently, for the years 1940 to 1990, the definitions of labor force participation and employment are essentially consistent, referring to the person's activities during the week prior to the census survey. For Censuses prior to 1940, labor force participation was determined using responses to questions regarding occupation, class of employment, or both. In general, the analogue to labor force participation in the earlier Censuses is having a "gainful occupation." Although that definition is decidedly vaguer than the modern one, for practical purposes the two appear to be fairly close, at least for men before retirement age.⁶ Given the rela-

⁶The comparability of the old and new labor force definitions has been much debated by economic historians (see Ransom and Sutch 1986; Moen 1987;

Figure 1. Unemployment Rates by Race.



Source: Public Use Microdata Samples, Census of Population.

tively high participation rates for both races early in the century, use of the gainful occupation definition seems unlikely to introduce significant biases into our analysis.

In addition to this difference between the older and more recent Censuses, for the 1880 and 1900 Censuses the only available question on unemployment referred to months unemployed over the preceding calendar year. Thus, individual workers who reported some unemployment during the preceding year could not be categorized unambiguously as either employed or unemployed. For these workers we calculated the proportion of the preceding year out of work, which we then used to estimate the unemployment rate for these years.⁷

Margo 1993b). Some older workers who would today be counted as retired and therefore NILF may have been counted by the census as gainfully employed workers with long spells of unemployment. We follow Margo (1993b) in treating the long-term unemployed as in the labor force. This choice does not appear to have significant consequences for the racial comparison of unemployment rates: we find that the black-white unemployment rate ratio for older workers (46–64) was about the same as it was for younger men during the years 1880–1910.

⁷See Fairlie and Sundstrom (1997) for more details and a check of the procedure using data from the 1910 Census.

Trends in Unemployment, 1880–1990

In this section, we document the long-run trends in unemployment and joblessness among black and white men over a 110-year period. The labor market outcome of primary interest in this paper is unemployment. Consistent with previous studies, we define the unemployment rate as the percentage of the non-school, non-institutionalized labor force who are unemployed. Conditioning on being in the labor force allows us to examine how changes in industrial composition and unemployment within industries have contributed to long-run unemployment trends. In particular, we can explore the effects of the secular decline in agricultural employment over the twentieth century and the shift from goods-producing industries to service-producing industries that has occurred in recent decades. An alternative measure of non-employment is the rate of joblessness, which is defined as the ratio of the unemployed plus NILF to the non-school, non-institutionalized population.⁸ Although this measure does not allow us to examine industry effects, we document and examine the causes of long-run trends in this measure for a comparison to the results for unemployment.

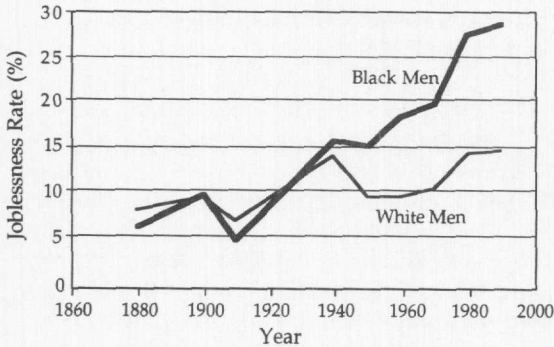
In Figure 1, we present black and white unemployment rates from 1880 to 1990. The estimates, as well as the black/white difference and ratio, are reported in Table 1.⁹ At the national level, there was effectively no racial gap as late as 1910. In 1880 and 1910, in fact, the black unemployment rate was slightly below the white rate. By 1940 a fairly small racial gap had opened up, and it widened significantly by 1950.¹⁰

⁸Rees (1986) and others have argued that joblessness may be more indicative of true unemployment for young men, for whom the distinction between unemployment and NILF may be especially vague.

⁹The racial unemployment gaps and trends are similar for all age groups and birth cohorts.

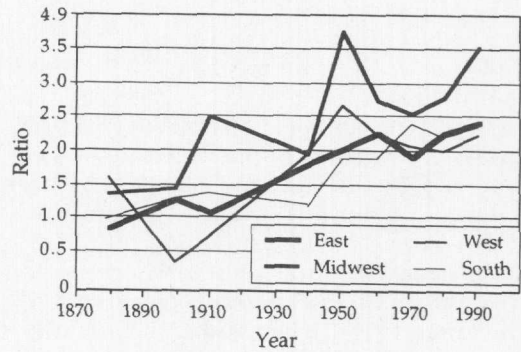
¹⁰We do not count workers on government relief work programs (primarily the WPA) as unemployed in our estimates for 1940. See Margo (1993a) for a summary of the issues regarding their inclusion in the

Figure 2. Joblessness Rates by Race.



Source: Public Use Microdata Samples, Census of Population.

Figure 3. Black/White Unemployment Rate Ratio by Region.



Source: Public Use Microdata Samples, Census of Population.

Published census data from 1930 indicate an unemployment rate somewhat lower for black men than for white men, suggesting that the origins of the racial gap on a national basis can be dated to the Depression era (see Sundstrom 1992; Vedder and Gallaway 1992). From 1950 to 1960, the gap widened again and remained at approximately a 2 to 1 ratio until 1980.¹¹ In the 1980s, the black unemployment rate rose by over 1 percentage point, whereas the white rate decreased slightly. This resulted in a black/white ratio of approximately 2.5 to 1 in 1990. These findings indicate that the relatively high rates of black unemployment have not always existed and that their current trajectory is not one of convergence with white rates.¹²

calculation of unemployment rates for 1940. Including the WPA, the unemployment rates were 14.5 for whites and 17.7 for blacks, which imply a larger racial difference and ratio than those reported in Table 1.

¹¹Although we only report decadal observations of the racial unemployment rate ratio, there is evidence that annual changes in the ratio were small during this period. See Shulman (1991).

¹²The apparent parity between black and white unemployment rates at the turn of the century could be spurious if the Census undercounted unemployment in sectors of the labor force in which blacks were concentrated. In particular, unemployment may have been undercounted in agriculture and among the self-employed. We find, however, that the trend in the racial unemployment gap is not significantly different when we remove agricultural workers or the self-employed from the sample.

In Figure 2, we present black and white joblessness rates (Table 1 reports estimates and black/white differences and ratios). Racial differences in joblessness follow a trend similar to that for differences in unemployment. Again, the racial gap is quite small until the 1940s, and widens to nearly 2:1 by 1960. Since 1950, joblessness appears to have increased secularly for both races, with large jumps in the 1950s and 1970s. The black/white ratio remained fairly constant from 1960 to 1990, whereas the black/white difference rose substantially. Therefore, conditioning on being in the labor force does not alter the timing of the major changes in black/white differences in employment patterns during the twentieth century.

Trends in the racial unemployment gap differed substantially across regions of the country. We report the black/white unemployment rate ratio by region in Figure 3. Within the Midwest, a substantial racial unemployment gap existed as early as 1880 and had widened to more than a 2:1 ratio by 1910. The racial unemployment gap continues to be substantially larger in the Midwest than in other parts of the country to the present day. Within the South, where the large majority of blacks resided before World War II, the racial gap was positive but rather small before 1950, while in the East the gap made a large jump sometime between 1910 and 1940. Estimates from recent decades indicate that black/white

ratios were large and increased from 1980 to 1990 in all regions of the country. Blacks in the Midwest were especially hard hit in the 1980s, ending the decade with an unemployment rate that was nearly 3.5 times the white rate.

These geographical patterns suggest the possibility that some of the widening of the racial gap at the national level could be explained by interregional population shifts—namely, the postwar migration of blacks from the rural South, where both unemployment and the racial gap tended to be lower, to the urban Midwest, East, and West. The decomposition technique discussed below is ideally suited to quantify the importance of this effect.

Decomposition Methodology

To identify the causes of the long-run changes in the gap between black and white unemployment rates, we employ the decomposition methodology used by Smith and Welch (1989) in their study of trends in racial earnings differences. This decomposition is a dynamic generalization of the familiar method of decomposing intergroup differences in a dependent variable into those due to different observable characteristics across groups and those due to different “prices” of characteristics across groups (see Blinder 1973; Oaxaca 1973).

The first step in computing the decompositions is to estimate a linear probability model of the relationship between unemployment, Y , and personal and job characteristics, X , using separate cross-sections for each race and time period,

$$(1) \quad Y_{it}^r = X_{it}^r \beta_{it}^r + \varepsilon_{it}^r,$$

where r indexes the race (B , W), t indexes the census year (1880, ..., 1990), i indexes the individual (1, ..., N_t^r), and ε_{it}^r represents a mean zero disturbance

term.¹³ The form of the linear regression model allows us to express the change in the unemployment rate between two Censuses, $t = 1$ and $t = 2$, as

$$(2) \quad (\bar{X}_2^B \beta_2^B - \bar{X}_2^W \beta_2^W) - (\bar{X}_1^B \beta_1^B - \bar{X}_1^W \beta_1^W).$$

The decomposition of this expression requires first choosing a base year and base race. Following Smith and Welch (1989), we use the earlier census year ($t = 1$) as the base year and whites as the base race. Smith and Welch argued for using the white or majority parameter estimates because these estimates more closely resemble market prices of attributes. Donohue and Heckman (1991), however, noted that the decomposition results presented in Smith and Welch (1989) are somewhat sensitive to the choice of base race. To address this concern for our application, we also calculate decompositions using blacks as the base race and compare results. Using whites as the base race, (2) can be expressed as

$$(3) \quad \begin{aligned} (i) \quad & [(\bar{X}_2^B - \bar{X}_2^W) - (\bar{X}_1^B - \bar{X}_1^W)] \beta_1^W + \\ (ii) \quad & (\bar{X}_2^B - \bar{X}_1^B) (\beta_1^B - \beta_1^W) + \\ (iii) \quad & (\bar{X}_2^B - \bar{X}_2^W) (\beta_2^W - \beta_1^W) + \\ (iv) \quad & \bar{X}_2^B [(\beta_2^B - \beta_2^W) - (\beta_1^B - \beta_1^W)]. \end{aligned}$$

Given the linearity of the decomposition, the separate components can be further decomposed to capture the effects of different subgroups of variables and coefficients. Where possible, we calculate the separate contributions of education, region, and industry.

The components of the decomposition can be interpreted as follows, using the effects of region as an illustration. (i) The “Characteristics Effect” is positive if blacks relative to whites move into high unemployment regions of the country. (ii) The “Characteristics-Race Interaction” is positive if blacks relative to whites move into regions that have large racial unemployment rate gaps. Part of this component may be due to the effect of blacks moving to areas of the country that have high levels of

¹³We use a linear probability model instead of a logit or probit model because of the continuous nature of our measure of unemployment in 1880 and 1900.

employment discrimination. (iii) The "Coefficients-Race Interaction" is positive if blacks are overrepresented in the regions of the country that have increasing white unemployment rates. This term in the decomposition partly captures the effect of demand shifts away from "black" regions of the country.¹⁴ (iv) The "Coefficients Effect" is positive if the racial unemployment rate gap is increasing for blacks and whites who live in similar regions of the country.¹⁵ A large portion of this component is likely to be due to the effect of unmeasurable factors, making it difficult to interpret. To summarize, components (i)–(iii) can be thought of as the portion of the change in the racial unemployment gap that is "explained" either by changing measurable characteristics or by race-neutral changes in how those characteristics are correlated with unemployment, while (iv) represents an unexplained residual.

Results

The decomposition estimates that we present in this section allow us to explore the causes of the emergence, persistence, and recent widening of the black/white gap. Before turning to the decompositions themselves, we briefly discuss the linear probability estimates upon which the decompositions are based. We then present the results for our basic decomposition model in some detail, followed by brief discussions of additional estimates that adjust for the level of unemployment and decompose changes in the racial joblessness gap.

The basic analysis variables used in our estimates and decompositions include education (or literacy), region, industry, and "control" variables for age, marital status, and presence of children under 18.¹⁶ Not all variables are available in each year: literacy is available only for the years 1880–1910, whereas educational attainment is available only from 1940 on; industry dummies are not available before 1910. The set of variables actually used in obtaining the coefficients for each decomposition was restricted to the intersection of the sets of variables available in the two years. For example, the OLS regressions for 1940 that are used in the 1910–40 decomposition do not include the education dummies. For most years, the unemployment rates and gaps from our estimating samples are similar to those from the full samples presented in Figure 1.¹⁷

The OLS parameter estimates for the probability of unemployment generally

¹⁶Unfortunately, we cannot include measures of urban or central city status, because the definitions are not consistent across Censuses. In 1960 and 1970, for example, the PUMS samples do not reveal metropolitan status for a large number of states or parts of states, including some with large black populations, such as Maryland and Mississippi (Ruggles and Sobek 1995:C–29). We also exclude occupation because of the difficulty of distinguishing between the agricultural industry and the farming occupation.

¹⁷There are a few exceptions. The black and white unemployment rates in 1940 and the black rates in 1980 and 1990 are much lower for the estimating samples. For these groups, the unemployed have a much higher probability of not reporting an industry, which excludes them from the samples used in the decompositions and leads to an understatement of unemployment rates. A partial explanation of this pattern is that industry was unknown or simply not counted for many of the long-term unemployed. In the 1990 Census data, for example, industry is automatically reported as missing for any worker who had been unemployed since 1984. Although these sample restrictions lead to an underestimate of unemployment in some years, the basic magnitude and pattern of change over time in the racial gap are captured by our sample. Furthermore, the decomposition results presented below are not dramatically altered when the unrestricted sample is used and the industry variables are dropped (details are available from the authors). This is also apparent in the decompositions for joblessness, which exclude industry variables.

¹⁴The interpretation of (iii) as the effect of a demand shift is most appropriate for the decompositions using whites as the base race, since whites are the large majority in most markets and their unemployment shifts thus reflect general market conditions.

¹⁵The interpretation of this term for specific subsets of variables is problematic, because it is sensitive to the choice of excluded category. Therefore, we only report the total contribution of this component for all of the variables.

have reasonable signs.¹⁸ The point estimates suggest that the relationship between age and unemployment tended to be U-shaped. The probability of being unemployed was lower for men who had children present, who were literate, or who had at least a high school education. These results are consistent across races and census years. The results for region and industry are less consistent, although in most years since the turn of the century the probability of unemployment for white men was typically lower in the South than elsewhere, higher for workers in the construction industry, and lower for workers in public administration.¹⁹

¹⁸Tables of the linear probability model coefficient estimates for each year, as well as sample means of the variables, are available in Fairlie and Sundstrom (1997). Although it is well known that OLS provides consistent parameter estimates when a discrete dependent variable is used (see Maddala 1983, for example), we compare our coefficient estimates to the average derivatives from a logit model for 1910 to 1990 (recall that our dependent variable is continuous in 1880 and 1900). For all years and both races, we find that the two estimation methods provide similar estimates. Simple regressions of the OLS coefficient estimates on the logit average derivatives yield slope coefficients that range from 0.88 to 1.18 for whites and 0.78 to 1.03 for blacks. Furthermore, the R-squares for these regressions are generally above 0.9.

¹⁹Although our principal interest is in explaining the changes over time in the unemployment gap, the coefficient estimates we obtain can be used to examine the sources of the racial gap at each point in time using the standard Blinder-Oaxaca decomposition. These static decompositions are presented in the appendix. For the years 1960–90, racial differences in our independent variables explain about 15–25% of the racial unemployment gap using the white coefficients, somewhat less using the black coefficients. For earlier years, even less of the gap is usually explained, and the results are sensitive to the choice of base race. Using CPS data from 1990, Stratton (1993) found that about 20% of the racial unemployment gap can be explained when the white coefficients are used, as compared with our 15% for the same year. Her decomposition using the black coefficients explains rather more of the gap (40%) than does ours. Abowd and Killingsworth (1984) reported that about 33% of the unemployment gap in their 1976 data was explained by their included variables.

Basic Decomposition

Tables 2 and 3 report the decomposition of the change in the racial gap for every pair of consecutive census years, using whites and blacks as the base race, respectively.²⁰ The first two rows in each table report the black-white gap in the initial census year and the change in the racial gap between the two census years.²¹ Separate contributions for education (or literacy), region, and industry are reported when available. The term “controls” refers to the contribution of the variables for age, marital status, and presence of children under 18. The last two rows in each table summarize the results for each two-year comparison by reporting the sum of the “explained” components (i-iii) for all the variables, the residual or “unexplained” component (iv), and the total net change in the gap. We discuss the results for four broad time periods: 1880–1910, 1910–40, 1940–60, and 1960–90. The discussion focuses on the results using whites as the base race, but we note the results using blacks as the base race where they differ substantially.

1880–1910. At the beginning of this 30-year period the black unemployment rate was roughly a half percentage point lower than the white rate; however, this slight advantage disappeared by the end of the period. The change in the gap in favor of whites during this period is the result of a full percentage point increase in the gap from 1880 to 1900 and a small decrease in the gap during the first decade of the twentieth century. The racial gap is always de-

²⁰The “black-base race” decompositions reported in Table 3 substitute β_1^B for β_1^W in (i), $(\bar{X}_2^W - \bar{X}_1^W)$ for $(\bar{X}_2^B - \bar{X}_1^B)$ in (ii), $(\beta_2^B - \beta_1^B)$ for $(\beta_2^W - \beta_1^W)$ in (iii), and \bar{X}_2^W for \bar{X}_2^B in (iv) in (3).

²¹Note that the sum of the 1900 gap (0.512) and the change in the gap from 1900 to 1910 (–0.597) does not equal the reported 1910 gap (–0.355). There is also a slight discrepancy between the sum of the 1910 gap and the 1910–40 change and the 1940 gap. These discrepancies arise because the 1910 and 1940 samples differ for each decomposition due to missing values for needed variables.

defined here as the black rate minus the white rate; thus the total 30-year change appears in Table 2 as an increase in the racial gap even though there was a reduction in the absolute magnitude of the racial difference. Positive (negative) changes in the racial gap should be interpreted as disadvantageous (advantageous) for blacks regardless of the sign of the initial racial gap.

The results from our decompositions using whites as the base race suggest that literacy plays an important role in explaining the trend in the racial unemployment rate gap. During these years black literacy rates improved relative to white rates: the literacy rate for blacks in our sample rose from 38.2% in 1880 to 71.9% in 1910, whereas the literacy rate for whites rose only 1.9 percentage points from its 1880 level of 93.2%. This trend, coupled with the negative relationship between literacy and unemployment, resulted in the characteristics effect for literacy narrowing the unemployment gap by about 1 percentage point over the thirty-year period (-0.486 for 1880-1900 plus -0.517 for 1900-1910). Rising black literacy during this period was a consequence of increasing school attendance by successive cohorts of black children, as well as some increases in literacy for young adults (see Margo 1990).

Working in the opposite direction, the racial unemployment gap seems to have been greater for the literate than for the illiterate, as indicated by the positive values of the characteristics-race interaction for these years (0.622 and 0.478). This suggests the possibility that literate blacks faced more discrimination in hiring practices than illiterate blacks, a finding consistent with historical evidence on wage differentials and occupational segregation. Wright (1986), for instance, noted that in the South at the turn of the century there was little evidence of wage discrimination against unskilled blacks, but that black workers were effectively barred from higher-paid jobs in many industries.²²

In contrast to the effects of literacy, regional differences did not play an important role during this period. The estimated contributions of these variables are small. Overall, the net effect of changing characteristics and demand shifts accounts for all of the increase in the racial gap from 1880 to 1900 and most of the decrease in the gap from 1900 to 1910.

Although the findings for literacy are suggestive, they are not robust when we change the base race to blacks. An examination of the literacy effects for 1880-1900 and 1900-1910 in Table 3 shows that they are generally much weaker than those in Table 2. The estimates of (i) and (iii) are smaller because the coefficients on literacy are smaller in the black equations, and the estimates of (ii) are smaller because whites experienced a much smaller improvement in literacy during this period. The sensitivity of the results to the choice of base race makes it difficult to draw strong conclusions about the forces changing the racial unemployment gap at the turn of the century.

1910-40. Lacking data from the 1920 and 1930 Censuses, we are left with a 30-year gap covering a dramatic period in the country's economic and racial history. In 1940 the labor market was still suffering the effects of the Great Depression, with unemployment rates 5 to 6 percentage points higher than they had been 30 years earlier. The black unemployment rate was slightly lower than the white rate in 1910, but notably higher in 1940, with the consequence that the racial gap widened by about 1.6 percentage points.

Migration of blacks out of the rural South to northern urban centers began in earnest during World War I and the 1920s. The South accounted for 86.0% of the black work force in 1910, but only 75.4% in 1940. The positive effects (i) and (ii) for region in Tables 2 and 3 suggest that northward migration of blacks contributed modestly

²²An alternative explanation would be that due to racial differences in school quality, the average literate black may have been less educated and less profi-

cient at reading than the average literate white (see Margo 1990 on differences in school quality and quantity in the South).

Table 2. Unemployment Rate Decompositions.

Component	1880- 1900	1900- 1910	1910- 1940	1940- 1950	1950- 1960	1960- 1970	1970- 1980	1980- 1990
Black-White Gap (Initial Year)	-0.691	0.512	-0.354	1.189	3.000	4.002	2.839	5.173
Total Change in Gap	1.204	-0.597	1.543	1.811	1.002	-1.163	2.334	0.322
<i>Decomposition Estimates</i>								
(i) Characteristics Effect								
Controls	0.026	-0.150	0.035	0.052	0.098	0.083	0.060	0.273
Literacy/Education	-0.486	-0.517		0.143	0.032	-0.050	-0.127	-0.190
Region	-0.005	-0.013	0.039	0.356	0.097	0.048	0.018	-0.127
Industry			0.303	-0.004	0.063	0.040	-0.107	-0.164
(ii) Characteristics-Race Interaction								
Controls	-0.010	-0.036	-0.015	0.078	-0.057	-0.001	0.348	0.063
Literacy/Education	0.622	0.478		0.041	-0.058	0.110	-0.212	-0.059
Region	-0.024	0.001	0.275	0.501	0.237	0.229	-0.008	-0.377
Industry			-0.168	0.372	-0.006	-0.014	-0.055	-0.123
(iii) Coefficients-Race Interaction								
Controls	0.049	-0.016	0.054	0.102	0.039	-0.004	0.006	-0.254
Literacy/Education	0.788	-0.785		-0.197	0.227	-0.287	0.517	0.140
Region	0.013	-0.114	-1.089	0.452	0.375	-0.304	0.085	0.208
Industry			0.355	0.097	-0.034	0.028	-0.078	0.041
(i+ii+iii) Explained	1.475	-0.585	-0.211	1.991	1.013	-0.121	0.446	-0.568
(iv) Unexplained	-0.271	-0.012	1.754	-0.180	-0.011	-1.042	1.889	0.891

Notes: The sample consists of non-school, non-institutionalized men aged 16-64 in the labor force. See text for a complete description of each component of the decomposition.

to the widening unemployment gap. The effect of migration, however, was dwarfed by the effect of a regional demand shift that was highly favorable to blacks (estimate of -1.089 for [iii]). This effect is even stronger in the results using blacks as the base race (estimate of -2.727 in Table 3). The regional demand shift is readily explained by the fact that the South recovered more rapidly from the Depression than did other regions, and thus between 1910 and 1940 unemployment rose by much less in the South, where most blacks were still concentrated (see Wallis 1989).

The movement of blacks across industries, especially out of agriculture, also contributed to the emergence of the gap. The adverse impact of this shift was lessened somewhat because these jobs had a lower unemployment rate gap. Finally, the estimate of (iii) for industry in Table 2 (0.355) suggests that there was a shift in demand away from the industries in which blacks

were employed during this period, although this result is not observed when the base race is changed.

The effects of migration, changes in industry, and demand shifts nearly cancel each other out during this period; consequently, factors that we have not identified account for the net increase in the gap. However, this does not imply that the effects described above are not important for understanding the change that occurred in the racial gap during this critical period in U.S. history. For example, if the regional demand shift that was favorable for blacks had not occurred (all else equal), there would have been an increase in the racial unemployment rate gap of more than 2.5 percentage points instead of the actual increase of slightly more than 1.5 percentage points.

1940-60. These decades witnessed a dramatic widening of the racial unemployment gap. For whites, the unemployment rate

Table 3. Unemployment Rate Decompositions: Black Base Race.

Component	1880- 1900	1900- 1910	1910- 1940	1940- 1950	1950- 1960	1960- 1970	1970- 1980	1980- 1990
Black-White Gap (Initial Year)	-0.691	0.512	-0.354	1.189	3.000	4.002	2.839	5.173
Total Change in Gap	1.204	-0.597	1.543	1.811	1.002	-1.163	2.334	0.322
<i>Decomposition Estimates</i>								
(i) Characteristics Effect								
Controls	0.007	-0.172	0.029	0.058	0.076	0.069	0.058	0.450
Literacy/Education	0.086	-0.035		0.147	0.051	-0.022	-0.132	-0.173
Region	-0.059	0.162	0.242	0.855	0.261	0.305	0.035	-0.345
Industry			0.227	0.205	0.089	0.063	-0.141	-0.219
(ii) Characteristics-Race Interaction								
Controls	0.009	-0.015	-0.009	0.071	-0.034	-0.014	0.350	-0.114
Literacy/Education	0.050	-0.004		0.037	-0.077	0.039	-0.208	-0.076
Region	0.031	-0.174	0.072	0.001	0.073	-0.028	-0.025	-0.159
Industry			-0.092	0.163	-0.032	-0.037	-0.021	-0.068
(iii) Coefficients-Race Interaction								
Controls	0.045	0.052	0.044	0.120	0.174	0.148	0.026	-0.016
Literacy/Education	0.248	-0.004		0.061	-0.042	-0.013	0.430	0.139
Region	0.234	-0.916	-2.727	0.863	0.613	-0.177	-0.171	0.286
Industry			-0.223	0.146	-0.064	0.081	-0.150	-0.079
(i+ii+iii) Explained	0.614	-1.217	-2.438	2.729	1.086	0.486	0.052	-0.374
(iv) Unexplained	0.589	0.620	3.981	-0.917	-0.085	-1.649	2.282	0.696

Notes: See notes to Table 2.

decreased substantially between 1940 and 1950 and increased moderately between 1950 and 1960. Blacks, on the other hand, experienced a smaller decrease in unemployment between 1940 and 1950 and a substantial increase between 1950 and 1960. The net result was an increase in the racial gap of nearly 3 percentage points.

Migration and adverse regional demand shifts explain the bulk of the increase in the racial gap during this period. As a result of the postwar Great Migration, the proportion of the black work force residing in the South decreased by 17.2 percentage points between 1940 and 1960, compared to a slight increase of 1.2 percentage points for whites. The characteristics effects (i) of the decomposition show that blacks were moving into relatively high-unemployment regions (values of 0.356 and 0.097 for 1940-50 and 1950-60, respectively). The characteristics-race interaction (ii) for region is even stronger, indicating that the receiving

regions of the Great Migration were regions with larger racial unemployment rate gaps. Finally, regional demand shifts explain another percentage point of the increase.²³

Taken together, migration and regional demand shifts account for more than two-thirds of the widening of the gap between 1940 and 1960. The net effects of education and industry, on the other hand, were modest. Our results lend some support to

²³These results are largely robust when we change the base race, although a comparison of Tables 2 and 3 indicates that when blacks are used as the base race, the characteristics effect (i) of region tends to be strengthened, while the characteristics-race interaction (ii) is weakened. Thus the results using blacks as the base race suggest that the principal impact of migration was that blacks moved into regions of high unemployment, rather than regions with a larger racial gap.

the Vedder and Gallaway (1992) account, which attributed much of the widening gap to the shift of black workers into high-unemployment regions and occupations. We find, however, that the primary effect of migration was that black workers moved into *large-gap* regions rather than merely high-unemployment regions. In addition, we provide evidence that regional demand shifts adversely affected blacks across both decades. That is, unemployment was increasing in the regions in which blacks happened to be concentrated. We view this finding as consistent with Cogan's (1982) account. While Cogan focused on the adverse effects of demand shifts on young blacks, we find that the effect appears to have been large enough for the other age groups to have significantly widened the racial gap generally.

1960-90. The racial gap narrowed during the tight market conditions of 1970 and then widened, ending up roughly 1.5 percentage points greater in 1990 than in 1960. The decompositions presented in Table 2 identify some of the factors that influenced these trends. Convergence in the educational attainment of blacks and whites tended to reduce the racial unemployment rate gap in each of these decades, just as it contributed toward wage convergence. Not only was the unemployment rate lower for more-educated workers, but the negative estimates of the characteristics-race interaction in the 1970s and 1980s indicate that the relative educational gains made by blacks placed them in the types of jobs that had lower racial unemployment rate gaps. Blacks with higher education levels may have benefited more than less-educated blacks from the anti-discrimination and affirmative action policies instituted in the mid-1960s. The total effect of educational convergence, however, was not large. Holding all else equal from 1960 to 1990, the relative changes in education would have decreased the racial unemployment rate gap by only 0.53 percentage points.

The decomposition estimates also provide evidence that black/white differences in regional and industrial distributions lessened the racial gap in recent decades. In

particular, the net movement of blacks to the South in the 1980s and the growing similarity of white and black industrial distributions in the 1970s and 1980s helped to reduce the gap. Again, the sum of these effects was small.

Finally, our decomposition estimates partially confirm recent findings that "the demand for labor has clearly shifted away from the industries, geographic areas, and skill levels in which blacks have traditionally been concentrated" (Holzer 1994:706). In particular, the impact on the gap of rising unemployment among the less-educated shows up in the positive estimates of the coefficients-race interaction for education during the 1970s and 1980s. The effects of demand shifts by region were smaller, and were essentially nonexistent by industry. Overall, changes in the demand for labor resulted in less than a one percentage point increase in the racial unemployment rate gap during these two decades.²⁴

On balance, rather little of the net increase in the racial unemployment gap after 1960 can be explained by the decompositions; the unexplained component (iv) is large, and works in the direction of widening the gap substantially after 1970. Still, the increase in the gap would have been even larger in the absence of the relative educational improvements and regional changes made by blacks, and it would have been smaller without the adverse demand shifts that occurred during the past two decades.

Discussion

Our analysis of over 100 years of census data suggests three generalizations about trends in the racial unemployment rate gap. First, relative black gains in literacy and education have tended to narrow the gap over the course of the century: unemployment rates have been systematically

²⁴All of the results discussed for this period are similar when blacks are the base race (Table 3).

higher for the less-educated. At the turn of the century, the effect of educational convergence was offset by the fact that the racial gap was larger among the more educated (literate); this pattern has been reversed in recent decades. Overall educational convergence worked toward narrowing the gap after 1970; however, these effects were swamped by the negative effects of demand shifts away from less-educated workers during this period.

Second, the substantial widening of the racial unemployment gap during the post-war period was strongly associated with the Great Migration of blacks out of the rural South. Our analysis suggests that the regional move had a greater effect than did an industrial shift out of agriculture. In part, unemployment rates were systematically higher for both races in the North. But more important quantitatively was the larger racial gap in the North. The reasons for this larger gap remain obscure (see Sundstrom 1997). One possibility is that black workers' wages in northern cities adjusted with a lag to the increase in labor supply, resulting in disequilibrium unemployment, as in the Todaro model of labor markets in less-developed countries (see Todaro 1969; Hatton and Williamson 1992). In spite of the greater unemployment risk, black workers continued migrating because of the large regional wage differential—not only were wages higher in the North for both races, but the racial gap in wages was substantially smaller in the North as well.²⁵ A contributing factor may have been that pressures for “equal pay” between the races in the North shifted the locus of discrimination there from wages to employment decisions (Gilman 1965).

Finally, adverse shifts in the demand for less-skilled labor contributed to the racial

gap in the years 1970–90, although they fail to fully explain the persistence and widening of the gap. Over time, one would expect labor markets to adjust to such changes in demand through wage adjustments or changes in supply (for example, new entrants acquiring more education), but such adjustments may occur with a considerable lag. Blanchard and Katz (1992), for example, showed that unemployment rates adjust with a long lag to regional shifts in labor demand.

Additional Estimates: Adjusting for the Level of Unemployment

An important difficulty arises in our application of the decomposition methodology to unemployment rates that is much less relevant for studies of earnings differences: namely, unemployment is subject to significant fluctuation through time. The estimates of black and white unemployment rates reported in Table 1 provide evidence of how the size of the black/white gap may depend on this fluctuation. Our goal is to understand changes over time in the underlying racial unemployment gap, given similar national labor-market conditions. Therefore, we perform a simple correction for the business cycle in our decompositions as a sensitivity check.

If the national business cycle affects the probability of unemployment for all labor force participants by an equal amount (independent of their characteristics), then the effects of the cycle will show up only in our estimate of the intercept, and thus contribution (iv), the unexplained portion. If the business cycle, instead, has an effect on the probability of unemployment that is proportional to the level of unemployment for that subgroup of the labor force, then all of the components of the decomposition may be affected. This “proportional effects” model can be represented by

$$(4) Y_{it} = X_{it}'\lambda_t\beta_i^* + \varepsilon_{it}$$

where λ_t is a business-cycle scalar and β_i^* are the “true” parameters. The decomposition terms in (5.3) should be based on estimates of β_i^* and not the coefficient estimates from

²⁵Donohue and Heckman (1991) estimated that, controlling for education and experience, the earnings deficit of black men residing in the South in 1963 was approximately 33%, compared with around 17% outside the South.

Table 4. Unemployment Rate Decompositions Adjusted for Unemployment Levels.

Component	1880- 1900	1900- 1910	1910- 1940	1940- 1950	1950- 1960	1960- 1970	1970- 1980	1980- 1990
Adjustment Factor (Initial Year)	1.245	0.764	1.519	0.596	1.271	1.114	1.438	0.894
Black-White Gap (Initial Year)	-0.861	0.391	-0.538	0.709	3.813	4.458	4.083	4.625
Total Change in Gap	1.252	-0.514	1.248	3.105	0.645	-0.375	0.542	0.590
<i>Decomposition Estimates</i>								
(i) Characteristics Effect								
Controls	0.032	-0.115	0.053	0.031	0.125	0.093	0.086	0.244
Literacy/Education	-0.605	-0.395		0.085	0.041	-0.055	-0.183	-0.170
Region	-0.006	-0.010	0.059	0.212	0.123	0.054	0.026	-0.114
Industry			0.460	-0.002	0.080	0.045	-0.153	-0.147
(ii) Characteristics-Race Interaction								
Controls	-0.013	-0.028	-0.022	0.046	-0.072	-0.001	0.501	0.056
Literacy/Education	0.775	0.365		0.024	-0.074	0.123	-0.306	-0.053
Region	-0.030	0.001	0.418	0.298	0.301	0.255	-0.011	-0.337
Industry			-0.255	0.222	-0.008	-0.016	-0.080	-0.110
(iii) Coefficients-Race Interaction								
Controls	0.034	-0.085	0.118	0.201	-0.004	0.133	-0.258	-0.199
Literacy/Education	0.223	-0.416		0.328	0.144	-0.131	0.214	0.176
Region	0.415	-0.730	-0.285	-0.218	0.516	-0.502	0.341	0.168
Industry			0.541	0.008	-0.037	0.039	-0.025	0.021
(i+ii+iii) Explained	0.826	-1.412	1.086	1.236	1.135	0.036	0.152	-0.463
(iv) Unexplained	0.426	0.898	0.162	1.869	-0.490	-0.411	0.390	1.053

Notes: See notes to Table 2. The coefficients used in these decompositions are equal to the original coefficients multiplied by the reported adjustment factor (see text for more details).

the original linear probability model, β_t .

To estimate β^* for each census year, we need estimates of λ_t . We first assume that there exists an aggregate baseline unemployment rate, \bar{Y} , that does not have a cyclical component, and thus does not change over time (that is, $\bar{X}_t \beta_t^* = \bar{Y}$ for all t). Then, we can estimate λ_t from

$$(5) \quad \lambda_t = \bar{Y}_t / \bar{Y},$$

where \bar{Y}_t is the aggregate unemployment rate in time t . We next use β_t / λ_t to estimate β_t^* . In practice, we use the mean white unemployment rate over the entire set of census years in our sample as the baseline unemployment rate, \bar{Y} . This adjustment has the effect of holding the white unemployment rate at its mean level over time while varying the black unemployment rate to maintain the observed ratio of black to white unemployment rates in each year.

In Table 4, we report estimates of (3) that adjust for the level of unemployment. The initial year adjustment factor is reported in the first row of the table. Our adjustment has a large effect on the reported changes in the gap for some of the periods. For example, the increase in the gap from 1940 to 1950 is 1.294 percentage points larger after the adjustment. This estimate of the change in the gap essentially captures the increase in the black/white ratio, which was larger than the increase in the black/white difference for this period.

Our estimates of (i) and (ii) in (3) are equal to the original estimates multiplied by the adjustment factor $1/\lambda_t$, where λ_t is the adjustment factor for the initial census year in the decomposition. In most years, these adjustment factors are not extremely large, and thus our estimates of (i) and (ii) remain qualitatively similar to the unad-

justed estimates in Table 2. There are, however, some important changes in our estimates of (iii) and (iv).

For the period from 1880 to 1910, the estimates of (iii) for literacy and region shift around, but the net effects of demand shifts for these variables over the entire period were fairly similar to the original estimates. The adjusted estimates provide slightly different findings for the impact of regional and industrial demand shifts from 1910 to 1940. Once we scale the white unemployment level down, the dramatic Depression unemployment levels in the North no longer play such a large role. Instead, the adjusted estimates suggest a larger role for the demand shift away from "black" industries, which was largely due to increased unemployment in agriculture during this period. Using the adjusted estimates, most of the increase in the racial gap between 1910 and 1940 is explained by changing worker characteristics and demand shifts.

For the period from 1940 to 1960, the main changes in our estimates are an increased share of the change in the gap explained by the demand shift away from less educated workers and a smaller part explained by the demand shift away from the South.²⁶ Overall, the decompositions continue to explain most of the widening of the gap during these two decades. Finally, our findings for 1960 to 1990 are not substantively different for the effects of demand shifts when we adjust for the unemployment level. Therefore, our results for the 1970s and 1980s do not appear to be overly sensitive to controlling for the high level of total unemployment in 1980.

Additional Estimates: Joblessness Decompositions

A comparison of Figures 1 and 2 shows that the racial gap in joblessness followed the same long-run trend as the unemployment rate gap. There is the possibility, however, that the factors explaining the long-run trends in these two measures differ in important ways.

In Table 5, we report the decomposition of changes in the racial gap in the joblessness rate, using whites as the base race. The estimates do not control for industry because we now include individuals who are not in the labor force (NILF) and thus did not report an industry. Although the percentage-point changes in the gap and contributions tend to be larger than those for unemployment, the signs and relative magnitudes of the contributions are generally similar to those we find for unemployment. Improvements in black literacy at the turn of the century, for instance, have the same offsetting effects on joblessness that they were found to have on unemployment: literate individuals were more likely to be working, but the racial gap was also larger for the literate. The joblessness gap increased by about 7 percentage points between 1940 and 1960, and about half of this change is explained by the combined effects of migration (effects i and ii for region) and regional demand shifts. The importance of regional effects in the increase of the racial gap thus holds for joblessness as well as unemployment. Finally, while relative black educational gains helped narrow the gap after 1970, these gains were largely offset by an adverse shift in demand (rising unemployment) among the less-educated. As we find for unemployment, the net increase in joblessness in recent decades was caused by factors we have not accounted for here.

Conclusions

Compared with changes in black-white earnings differences, the evolution of the racial unemployment gap has received relatively little attention from economists, al-

²⁶The demand shift against the less educated in 1940-50 found here, along with the large positive unexplained component (iv), are somewhat at odds with recent research on wages, which suggests that the less skilled benefited from wage compression both within and between groups during the 1940s (see Goldin and Margo 1992; Margo 1995).

Table 5. Joblessness Rate Decompositions.

Component	1880- 1900	1900- 1910	1910- 1940	1940- 1950	1950- 1960	1960- 1970	1970- 1980	1980- 1990
Black-White Gap (Initial Year)	-1.869	0.521	-1.932	1.538	5.424	8.693	8.995	13.025
Total Change in Gap	2.390	-2.476	3.470	3.886	3.270	0.302	4.029	0.316
<i>Decomposition Estimates</i>								
(i) Characteristics Effect								
Controls	0.324	-0.452	0.052	0.072	0.574	0.343	0.392	0.413
Literacy/Education	-0.768	-0.687		0.257	0.037	-0.022	-0.578	-0.289
Region	0.029	0.019	0.150	0.334	-0.024	-0.151	-0.036	-0.025
(ii) Characteristics-Race Interaction								
Controls	-0.099	-0.024	-0.145	0.142	-0.043	0.169	0.633	0.046
Literacy/Education	1.045	0.654		0.110	0.126	0.049	-0.578	-0.364
Region	-0.018	-0.030	0.263	1.039	0.436	0.243	-0.036	-0.496
(iii) Coefficients-Race Interaction								
Controls	-0.153	-0.095	-0.132	0.289	-0.047	-0.008	-0.546	-0.590
Literacy/Education	0.855	-0.845		-0.417	0.770	0.122	1.306	0.465
Region	0.020	-0.110	-0.502	0.934	0.596	-0.438	0.075	0.125
(i+ii+iii) Explained	1.235	-1.569	-0.314	2.761	2.425	0.308	0.632	-0.715
(iv) Unexplained	1.155	-0.907	3.784	1.125	0.845	-0.006	3.127	1.058

Notes: See notes to Table 2.

though black unemployment is of potent concern to social scientists and policy analysts. Recent attempts to explain racial unemployment differences using cross-sectional data have met with limited success. In this paper, we have placed the racial unemployment gap in long-run perspective, documenting its emergence and exploring some of its historical causes.

We demonstrate that a dynamic approach can contribute to our understanding of the major changes in the racial unemployment gap over the 1880-1990 period. Our findings suggest that the roots of the current unemployment gap are largely to be found in the 1940s and 1950s, when regional shifts in the economy reduced the demand for labor in the South relative to other areas and led black workers to move to the urbanized North, where unemployment tended to be higher. The racial unemployment gap created by these changes has proven to be a persistent feature of U.S. labor markets. Our analysis shows that improvements in the education of recent (post-1970) cohorts of black workers relative to whites would have had the anticipated effect of narrowing the gap, but these gains were

modest in size and were more than offset by demand shifts adverse to black workers. Furthermore, substantial unexplained changes in the probability of being unemployed by race worked in the direction of exacerbating the unemployment gap, rather than narrowing it, after 1970.

Using census microdata from 1880 to 1990, we have been able to identify the causes of the emergence of the racial unemployment gap and explore the effects of demographic changes and demand shifts during recent decades. Our analysis of these data, however, does not provide a complete explanation for the persistence and recent widening of the black/white unemployment rate gap. Some important potential culprits that are not easily accounted for using the census data are government interventions in the labor market (such as the minimum wage and unemployment insurance), changes in the locus of discrimination away from explicit wage differentials to biased hiring and layoff decisions, weakened enforcement of antidiscrimination laws, and the effects of crime and family structure on black men residing in impoverished urban areas.

APPENDIX

STATIC UNEMPLOYMENT RATE DECOMPOSITIONS

Component	1880	1900	1910	1940	1950	1960	1970	1980	1990
Black Unemployment Rate	3.075	6.648	2.771	9.051	6.689	8.210	6.100	10.418	10.436
White Unemployment Rate	3.766	6.136	3.077	7.862	3.689	4.208	3.261	5.245	4.940
Black-White Gap	-0.692	0.512	-0.305	1.189	3.000	4.002	2.839	5.174	5.496
<i>Method 1: Decompositions Using White Coefficients</i>									
(i) Contribution from Racial Differences in Characteristics: $(\bar{X}^B - \bar{X}^W)\beta^W$									
Controls	-0.014	0.057	-0.130	0.054	0.208	0.346	0.425	0.490	0.509
Literacy/Education	1.274	1.575	0.082	0.714	0.660	0.919	0.582	0.972	0.922
Region	-0.834	-0.829	-0.411	-1.530	-0.722	-0.250	-0.506	-0.403	-0.322
Industry			-0.671	-0.165	-0.073	-0.044	0.024	-0.160	-0.284
Total	0.426	0.803	-1.131	-0.927	0.073	0.970	0.525	0.899	0.825
(ii) Unexplained $(\beta^B - \beta^W)\bar{X}^B$									
Total	-1.118	-0.291	0.825	2.116	2.928	3.032	2.314	4.275	4.671
<i>Method 2: Decompositions Using Black Coefficients</i>									
(i) Contribution from Racial Differences in Characteristics: $(\bar{X}^B - \bar{X}^W)\beta^B$									
Controls	-0.007	0.095	-0.069	0.076	0.254	0.504	0.721	0.805	1.238
Literacy/Education	-0.222	0.105	0.145	0.635	0.843	0.852	0.861	1.159	1.125
Region	-1.018	-0.698	-1.193	-3.697	-1.978	-1.105	-0.976	-1.112	-1.171
Industry			-0.454	-0.470	-0.119	-0.095	0.049	-0.241	-0.538
Total	-1.248	-0.498	-1.570	-3.457	-1.000	0.157	0.655	0.610	0.653
(ii) Unexplained: $(\beta^B - \beta^W)\bar{X}^W$									
Total	0.556	1.010	1.264	4.646	4.001	3.845	2.185	4.563	4.843

Note: The sample consists of non-school, non-institutionalized men aged 16-64 in the labor force.

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