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Author(s): Bruce Western and Becky Pettit
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INCARCERATION AND RACIAL INEQUALITY IN MEN'S EMPLOYMENT

BRUCE WESTERN and BECKY PETTIT*

To estimate employment-population ratios for black and white men with an adjustment for incarceration—a factor overlooked by most research on employment inequality—the authors combine data from surveys of prisons and jails with data from the Current Population Survey. This adjustment significantly reduces estimated employment rates for African Americans, young workers, and young high school dropouts. The authors find that employment among young black male high school dropouts steadily declined between 1982 and 1996 despite periods of very low unemployment in the labor market as a whole. Standard labor force data, which include no incarceration data, understate black-white inequality in employment among young dropouts by about 45%.

In the mid-1990s, two remarkable conditions influenced the employment opportunities of young unskilled men in the United States. First, the unemployment rate fell to its lowest level in thirty years—around 4.5% by the summer of 1998 (Bureau of Labor Statistics 1998). Second, the incarceration rate had risen to the highest level in U.S. history, with more than 1.5 million men, disproportionately minorities, detained in American prisons and jails (Bureau of Justice Statistics, June 1997). Although research on racial inequality in employment often considers market conditions like the unemployment rate, the effect of incarceration on labor allocation is usually ignored.

Research on minority employment often relies on labor force data like the Current Population Survey (CPS) that exclude institutional populations from the sampling frame. These studies have reported a persistent gap in joblessness between black

Extracts of the data for analysis are available from the authors upon request. Contact Bruce Western at Department of Sociology, 2-N-2 Green Hall, Princeton University, Princeton, NJ 08544-1010.

3

and white men that dates at least from the late 1960s (Wilson, Tienda, and Wu 1995; Bound and Freeman 1992). Some researchers also found that racial inequality in employment increased among young unskilled men in the 1970s and 1980s (Lichter 1988; Bound and Freeman 1992). Despite these findings, high incarceration rates among black men suggest labor force surveys overestimate the incidence of employment and underestimate employment inequality.

This paper studies racial inequality in male employment by including prison and jail inmates in estimates of employment-population ratios. Because incarceration rates are highest among youth at the fringes of the labor market, the analysis focuses on young high school dropouts. Our analysis combines labor force surveys with aggregate incarceration figures and microdata from correctional facilities.

Employment and Incarceration

Household surveys showing recent employment trends indicate rising joblessness among young black men through the 1970s and 1980s. Although research with household surveys neglects the impact of incarceration on labor inactivity, a few studies of census data have incorporated institutionalized populations in measures of joblessness. Some analysts have also focused specifically on the link between prisons and the labor market.

While male labor force participation has generally fallen since 1970, employment declines have been especially severe among young black men with little education. (For a review of the literature, see Moss and Tilly [1991].) For example, examining patterns of underemployment in urban areas, Lichter (1988) found that black men aged 18–29 experienced relatively sharp increases in unemployment and discouragement from the labor force between 1975 and 1982. Bound and Freeman's (1992) study of employment-population ratios between 1973 and 1989 showed that black-white employment inequality grew fastest for young high school dropouts.

Despite reports of rising racial disparity in employment among unskilled men, it is likely that the trend is underestimated. Research on recent developments in employment has relied substantially on the CPS and similar survey data (for example, Mare and Winship 1984; Lichter 1988; Bound and Freeman 1989; Wilson et al. 1995; Darity and Myers 1998, Chap. 5). Because the CPS is drawn from a population of households, those institutionalized in penal or mental facilities and nursing homes are excluded from the sampling frame. Consequently, the steep rise in joblessness among black men due to imprisonment is not reflected in the survey data.

Institutionalized populations are covered in the census, and a few studies of census data have examined the impact of incarceration on joblessness. Using data from the five censuses conducted between 1940 and 1980, Welch (1990) observed that incarceration rates increased threefold over that period among young men with less than 12 years of schooling. By 1980, incarceration contributed 9.5 percentage points to joblessness among young unskilled black men, compared to just 2.5 percentage points among young unskilled whites (see also Smith and Welch 1989:549).

Other research has claimed that the U.S. penal system can be viewed as a type of labor market institution that systematically influences men's employment. Thus jail time has been widely found to reduce employment and earnings after release (Witte and Reid 1980; Freeman 1991; Waldfogel 1994; Sampson and Laub 1993; Western and Beckett 1999). Closer to our approach here, a few studies have also combined incarceration and labor force data to develop adjusted measures of joblessness. Jancovic (1977) calculated an unemployment statistic that included the incarcerated population for the period 1926–74. Western and Beckett (1999) showed that the apparent large gap between male unemployment rates in Europe and the United States is substantially closed when prison and jail inmates are counted among the jobless; low U.S. male unemployment in the mid–1990s, they concluded, was partly

an artifact of a high incarceration rate. Finally, Freeman (1996) argued that incarceration conceals significant long-term unemployment in the U.S. labor market, matching long-term open unemployment abroad.

The following analysis extends this work by calculating adjusted employment-population ratios for the period 1982–96. Earlier estimates of incarceration-adjusted unemployment rates have often relied on untestable assumptions about inmates' post-release labor market behavior (for example, Jancovic 1977; Western and Beckett 1999; Katz and Krueger 1999). By focusing on employment-population ratios, the current analysis makes no such assumption. Instead, the object here is to estimate the distribution of employment with more accurate population counts than standard labor force data allow. Employment-population ratios are particularly important for describing the labor force situation of marginalized groups of working age. Discouraged workers who have ceased to look for employment are captured in the jobless count. For our purposes, the ratio usefully describes the degree of economic independence in highly institutionalized populations.

Method

Our analysis reports series of employment-population ratios for men aged 18 to 65, aged 20 to 35, and aged 20 to 35 with less than 12 years of schooling. Separate series are constructed for blacks and whites. To obtain these estimates, we combine labor force data from the March CPS (Bureau of the Census 1982–96) with aggregate data on penal populations from the Bureau of Justice Statistics (BJS). These aggregated series are available only for blacks and whites, not for specific age and education groups. Microdata from correctional surveys are used to estimate proportions of inmates in our three age-education categories.

CPS employment rates depend on two quantities. In a given year, CPS survey weights can be used to provide a count of the employed labor force, E, and the (non-institutional) nonemployed, N. The nonemployed include the unemployed and respondents who are not in the labor force. CPS employment-population ratios are then given by

$$(1) \qquad e_1 = \frac{E}{E + N}.$$

More accurate employment rates adjust for incarceration. The total incarcerated population consists of two groups: (1) prison inmates, housed in state and federal facilities for periods generally longer than a year, and (2) jail inmates awaiting trial or serving short sentences. Aggregate data from the BJS provide counts of the prison and jail populations, P and J, for the period 1982–96. The number of prisoners, P, is obtained from reports of each state department of corrections, the District of Columbia, and the Federal Bureau of Prisons. The jail population, J, is estimated with an annual survey based on a sampling frame drawn from a Census of Jails conducted at five-year intervals (Gilliard and Beck 1998:9–11). With these figures, an incarceration-adjusted employment-population ratio is given by

$$(2) \qquad e_2 = \frac{E}{E + N + P + J}.$$

Data are available for blacks and whites, so simple measures of inequality, such as the black-white ratio of e_1 or e_2, can also be calculated. The aggregate data do not distinguish Hispanics, so they are included among both race categories. Other analysis (not reported here) that excludes Hispanics yields results qualitatively identical to those presented below.

The employment concept used here follows the census. The employed include paid employees, those in unpaid work in family business, the self-employed, and civilians with a job but not at work. It may be objected that many inmates derive small incomes from prison work programs, and thus should be counted as employed. In 1995 about 65% of state and Federal inmates participated in such programs (BJS August 1997:14). However, the census employment concept counts prison and jail

Table 1. Census and Estimated Male Employment-Population Ratios, 1980 and 1990.

	Whites			Blacks		
Group	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)
Aged 18–65						
1980 (C)	83.2	82.9	.3	70.2	68.4	1.8
1980 (E)	83.4	—	—	68.2	—	—
1990 (C)	83.5	82.7	.8	69.6	65.4	4.2
1990 (E)	82.7	82.0	.7	67.4	63.6	3.9
Aged 20–35						
1980 (C)	85.4	84.9	.5	72.2	69.1	3.1
1980 (E)	83.5	—	—	69.2	—	—
1990 (C)	86.2	85.0	1.2	71.6	65.4	6.2
1990 (E)	84.6	83.5	1.2	69.2	63.3	5.9
H.S. Dropouts Aged 20–35						
1980 (C)	78.0	76.4	1.6	61.7	56.5	5.2
1980 (E)	76.6	—	—	61.0	—	—
1990 (C)	76.6	73.4	3.2	53.5	44.4	9.1
1990 (E)	77.7	73.4	4.3	48.4	37.2	11.2

Note: Census figures are indicated by *C;* estimates are indicated by *E.* Only the 1980 census identifies prison and jail inmates for the calculation of e_2. The 1990 census figures for e_2 include all those institutionalized. Census employment rates are calculated from the 5% Public Use Microdata Samples (Census of Populations and Housing 1980, 1990).

inmates as not in the labor force. Work programs are chiefly designed by prison authorities ostensibly for rehabilitation, not remuneration, and program participation is not competitively allocated. Unlike their counterparts in the open labor market, inmates are not covered by minimum wage, fair labor standards, or other labor legislation. Prison work program participants thus qualitatively differ in economic status from persons employed in the conventional labor force. Given that employment is measured to determine the distribution of economic independence and opportunity, it seems appropriate to exclude prison work program participants from the job count.

Our interest focuses on e_1 and e_2 for specific age and education groups. The CPS microdata readily provide estimates of e_1 for, say, high school dropouts aged 20–35. To adjust for the penal population, microdata from surveys of prisons and jails can be used to calculate the proportion of inmates within a given age-education category. Proportions obtained from correctional surveys are multiplied by counts of the total penal population to estimate num-

bers of inmates with specified demographic characteristics. We then use these estimated counts to calculate incarceration-adjusted employment-population ratios. (The Appendix provides further details.)

Census data for 1980 and 1990 can help check the quality of the estimates (Table 1). Employment rates for the noninstitutional population, e_1, are slightly higher in the census than in the CPS. The discrepancy may be due to small differences between the two survey instruments. The census asks directly about employment, whereas the CPS first obtains information about respondents' main activity. For the incarceration-adjusted figure, e_2, the census directly counts the institutionalized population. However, only the 1990 codes distinguish prison and jail inmates from other institutionalized groups. We report census figures for e_2, including only convicts for 1980 but all those institutionalized for 1990. Because the incarceration adjustment underestimates the whole institutional population, estimates of e_2 do not exactly match 1990 census figures. Still, in 1980, incarceration accounted for a majority of

Table 2. Men in Prison or Jail by Race, Age, and Education (Thousands), 1982–1996.

Year	All	Aged 18–65		Aged 20–35		H.S. Dropouts Aged 20–35	
		Whites	Blacks	Whites	Blacks	Whites	Blacks
1982	596.0	325.1	263.1	212.7	190.8	127.1	125.4
1983	611.8	331.8	272.0	216.5	197.5	128.2	129.5
1984	644.8	351.7	284.4	231.1	205.1	135.1	133.3
1985	701.4	382.7	309.8	252.8	221.7	145.9	142.6
1986	789.7	417.6	342.4	278.7	243.2	158.6	154.3
1987	805.2	439.0	356.3	292.5	249.2	170.8	158.2
1988	887.3	469.2	407.4	315.4	280.5	187.8	176.7
1989	1,001.2	518.0	472.8	349.4	320.3	212.5	200.7
1990	1,087.9	545.0	508.8	364.6	340.6	226.5	213.0
1991	1,139.5	566.7	551.0	374.6	364.4	238.3	228.0
1992	1,204.7	598.0	580.3	393.9	383.5	251.0	240.1
1993	1,269.8	627.1	624.0	409.4	411.9	262.5	259.1
1994	1,367.6	669.1	677.5	436.1	447.2	280.2	281.8
1995	1,466.7	728.7	713.5	475.5	471.0	305.4	296.7
1996	1,545.3	767.7	751.7	504.0	496.8	322.6	312.2

Sources: Unpublished data supplied by the BJS, and authors' estimates (see text).

institutionalized young dropouts and working-age black men. Census and estimated incarceration effects ($e_1 - e_2$) for 1990 generally disagree by less than three-tenths of a percentage point.

Discrepancies between census figures and estimates are largest for young black dropouts. Census employment rates exceed the estimates by 5 to 7 points. This discrepancy may be due not only to the more permissive wording of the census employment question, but also to greater sampling variability for small subgroups or an undercount of young black men in the CPS. Although estimates of employment among young black dropouts may be biased downward, the estimated incarceration effects differ from the census figure by only about 2 percentage points.

Results

Table 2 reports aggregate incarceration data with estimated counts of inmates based on the correctional microdata. The well-known rise in the total penal population is clearly indicated. African-American representation increased over the period, with blacks accounting for just under half of all

male convicts by the mid–1990s. The age and educational level of the inmate population remained relatively stable. About two-thirds of all inmates were under age 35, and about half of those young inmates had less than a high school education. Note, however, that these figures conceal growth in incarceration of Hispanics. When additional estimates of ethnicity are introduced, the estimated proportion of non-Hispanic whites declines both in the male correctional population as a whole and among young high school dropouts.

Incarceration rates illustrate the prevalence of imprisonment and the racial disparity that characterizes it (Table 3). When Census Bureau population projections are considered, the figure of 1.5 million male inmates represents an incarceration rate of around 1,600 per 100,000 adult men by 1996. African-American men were between 5 and 7 times more likely than white men to be in prison or jail. Remarkably, more than 10% of all young black men and more than a third of all young unskilled black men were in prison or jail on an average day in 1996.

Tables 4 and 5 combine penal and labor force data to report employment-popula-

Table 3. Percentage of Black and White Men in Prison or Jail by Age and Education, 1982–1996.

Year	Aged 18–65		Aged 20–35		H.S. Dropouts Aged 20–35	
	Whites	Blacks	Whites	Blacks	Whites	Blacks
1982	.54	3.60	.83	5.52	3.54	15.37
1983	.54	3.64	.84	5.54	3.59	14.67
1984	.57	3.57	.89	5.68	3.62	14.46
1985	.62	3.95	.97	5.99	3.88	16.13
1986	.66	4.26	1.05	6.35	4.22	17.83
1987	.69	4.37	1.11	6.47	4.39	18.85
1988	.73	4.88	1.20	7.21	4.75	20.08
1989	.80	5.48	1.34	8.07	5.43	21.99
1990	.84	5.78	1.41	8.57	5.59	23.12
1991	.86	6.13	1.45	9.09	6.08	25.70
1992	.91	6.34	1.55	9.49	6.61	25.82
1993	.94	6.68	1.64	10.12	7.00	29.75
1994	.99	7.03	1.73	10.74	7.26	31.29
1995	1.07	7.27	1.92	11.35	8.30	34.84
1996	1.12	7.49	2.05	12.18	7.39	36.30

Sources: Unpublished data supplied by the BJS, and authors' estimates (see text).

tion ratios for working-age and young men. For whites, the first two columns of these tables contrast the CPS data, e_1, with figures that add the incarcerated population, e_2. In the working-age population as a whole, white incarceration only subtracts about half a percentage point from the employment-population ratio. Neither the mean difference between e_1 and e_2 nor the difference between linear trends in the two series is statistically significant. Standard labor force data thus provide an accurate measure of employment among working-age white men.

In contrast, the incarceration adjustment is relatively large for working-age black men, contributing to a statistically significant difference in means. By the mid–1990s, the penal population reduced conventional black male employment rates by 5 percentage points. As a result, the incarceration-adjusted employment rate for working-age blacks in 1996 was lower than any standard employment rate between 1982 and 1996.

The impact of incarceration on joblessness was almost twice as large for young men as for all working-age men. For whites, this adjustment makes little difference, lowering the conventional employment rate by just 2 points by 1996. For young black men,

accounting for the penal population produces a large adjustment to CPS employment rates: the 1996 CPS underestimates joblessness among young black men by more than 8 percentage points.

The impact of incarceration on employment rates becomes much larger when we focus on young unskilled men (Table 6). For young white dropouts incarceration subtracts, on average, around 4 percentage points from the CPS figures. When we look at just the noninstitutional population, e_1, it seems that employment recovered strongly after the recession of the early 1990s, but when inmates are included in the employment-population ratio, e_2, the labor market recovery appears much weaker. By the end of the observation period in 1996, the incarceration effect among young unskilled white men was about as large as the effect for the working-age population of African-American men.

Results for young black male dropouts are especially striking. Incarceration reduces the employment-population ratio by an average of 11 percentage points—a strongly significant difference between the two employment series. The incarceration adjustment shows that in every year between 1982 and 1996, fewer than half of all

Table 4. Unadjusted and Incarceration-Adjusted
Employment-Population Ratios, Men Aged 18–65, by Race, 1982–1996.

	Whites			Blacks		
Year	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)
1982	79.1	78.7	.4	62.6	60.4	2.3
1983	77.3	76.8	.4	59.8	57.7	2.2
1984	80.2	79.7	.4	60.9	58.7	2.2
1985	81.0	80.5	.5	63.6	61.1	2.5
1986	80.5	80.0	.5	66.4	63.6	2.8
1987	81.4	80.8	.6	66.5	63.6	2.9
1988	82.2	81.6	.6	66.0	62.8	3.2
1989	83.1	82.4	.7	68.2	64.5	3.7
1990	82.7	82.0	.7	67.4	63.6	3.9
1991	80.7	80.0	.7	65.8	61.8	4.0
1992	80.2	79.5	.7	63.4	59.4	4.0
1993	80.5	79.7	.8	63.7	59.5	4.3
1994	80.1	79.3	.8	64.2	59.7	4.5
1995	81.5	80.6	.9	67.3	62.4	4.9
1996	81.6	80.7	.9	64.5	59.6	4.8
Mean Difference			.64 (.08)			3.48 (.00)
Trend Difference			.04 (.38)			.21 (.12)

Notes: The trend difference is obtained by fitting straight lines to the e_1 and e_2 series and taking the difference of the slope coefficients. Bootstrap p-values for difference-of-means and difference-of-trends are in parentheses.

young black male high school dropouts held jobs. The downward trend in employment-population ratios is also significantly steeper once we account for the inmate population. While the e_1 series that excludes prison and jail inmates indicates a strong recovery from the recession of the early 1990s, incarceration-adjusted employment rates suggest there was no enduring recovery in the employment of young black high school dropouts. The fraction of the population with jobs was lower in 1996 than in any earlier year of the series. According to the estimates, less than a third of all young unskilled black men held jobs in 1996, despite very low unemployment in the labor market as a whole.

Because these incarceration effects for young dropouts are large, adjustments for the penal population also significantly influence estimated racial inequality in employment. Figure 1 illustrates this idea by plotting the ratio of white to black employment rates among young male dropouts for e_1 and e_2. Smooth lines indicate trends in employment ratios. The actual white-black ratios for e_1 and e_2 are plotted as points.

The solid line shows racial inequality measured by the CPS employment series, e_1. This series indicates that black-white inequality in employment among young dropouts increased until about 1990, and then leveled off. A sharply different picture is given by the e_2 series, which shows that inequality in employment rates grew very rapidly, once incarceration is taken into account. In 1982, a young unskilled white man was about 50% more likely to hold a job than was a young unskilled black man. By 1996, young white high school dropouts were more than twice as likely to hold jobs as were their African-American counterparts. The lower panel of the figure reports the percentage difference between the e_1 and e_2 inequality series. Stan-

Table 5. Unadjusted and Incarceration-Adjusted
Employment-Population Ratios, Men Aged 20–35, by Race, 1982–1996.

	Whites			Blacks		
Year	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)
1982	79.7	79.0	.7	61.3	57.9	3.4
1983	77.1	76.5	.7	58.7	55.5	3.3
1984	81.5	80.7	.7	62.2	58.7	3.5
1985	82.3	81.5	.8	64.0	60.2	3.8
1986	82.8	81.9	.9	66.2	62.0	4.2
1987	83.5	82.6	.9	66.0	61.8	4.3
1988	84.1	83.0	1.0	68.5	63.6	4.9
1989	85.5	84.4	1.2	70.3	64.7	5.7
1990	84.6	83.5	1.2	69.2	63.3	5.9
1991	81.9	80.7	1.2	65.7	59.7	6.0
1992	81.0	79.8	1.3	63.8	57.8	6.1
1993	81.9	80.6	1.3	65.8	59.2	6.7
1994	81.9	80.5	1.4	66.3	59.1	7.1
1995	83.5	81.9	1.6	71.0	62.9	8.1
1996	83.4	81.6	1.7	66.6	58.5	8.1
Mean Difference			1.10 (.04)			5.40 (.00)
Trend Difference			.07 (.32)			.36 (.049)

Notes: See notes to Table 4.

dard labor force figures increasingly understate racial inequality in employment among young disadvantaged men. By 1996, labor force measures based on the CPS underestimate racial inequality in employment among young high school dropouts by about 45%.

Patterns of inequality can also be placed in the context of general labor market conditions. To explore the association between the prevalence of employment and general labor market indicators, we plot the employment-population ratios for young male dropouts against unemployment rates for all civilian workers (Figure 2). In this case, we report 100 minus the employment percentage, providing a general measure of joblessness. For whites, joblessness among young unskilled men generally fell with the overall unemployment rate. Low unemployment through the mid-1990s coincided with greater employment opportunities at the margins for white workers. This pattern holds regard-

less of incarceration adjustments. For young black men with less than a high school education, the flat regression line indicates that the chances of employment were largely independent of overall unemployment, excluding consideration of the incarcerated population. When prison and jail inmates are included in the labor force statistics, joblessness among disadvantaged young black men rose even as unemployment dropped to a thirty-year low in 1996. Improvements in the job prospects of young disadvantaged minority men during the 1990s economic expansion were thus overshadowed by the rise in incarceration.

Discussion

Although these results indicate that incarceration has had a large influence on the economic opportunities of disadvantaged minority men, the analysis only partially describes how the criminal justice

Table 6. Unadjusted and Incarceration-Adjusted Employment-Population Ratios, Men Aged 20–35 with Less Than High School Education, by Race, 1982–1996.

Year	Whites			Blacks		
	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)	Unadjusted (e_1)	Adjusted (e_2)	Incarc. Effect (e_1-e_2)
1982	69.7	67.2	2.5	52.8	44.6	8.1
1983	66.8	64.4	2.4	47.1	40.2	6.9
1984	71.9	69.3	2.6	45.8	39.2	6.6
1985	74.6	71.7	2.9	51.6	43.3	8.3
1986	72.8	69.7	3.1	51.2	42.1	9.1
1987	75.8	72.5	3.3	49.0	39.8	9.2
1988	76.2	72.6	3.6	52.0	41.6	10.4
1989	80.0	75.6	4.3	49.7	38.8	10.9
1990	77.7	73.4	4.3	48.4	37.2	11.2
1991	72.6	68.2	4.4	41.2	30.6	10.6
1992	70.7	66.1	4.7	46.7	34.7	12.1
1993	73.0	67.9	5.1	45.4	31.9	13.5
1994	73.2	67.9	5.3	44.3	30.4	13.8
1995	75.6	69.4	6.3	45.2	29.5	15.8
1996	76.3	70.7	5.6	46.0	29.3	16.7
Mean Difference			4.03 (.00)			10.89 (.00)
Trend Difference			.27 (.13)			.65 (.00)

Notes: See notes to Table 4.

system influences labor market inequality. Incarceration figures understate the reach of the penal system because many offenders receive noncustodial sentences. While roughly 1.5 million men were incarcerated in 1995, approximately 3 million were on parole or probation (Maguire and Pastore 1997:502). These forms of supervision do not prevent labor market participation, but they may still influence employment opportunities. A growing research literature shows that criminal conviction in itself negatively affects employment and earnings (Lott 1990; Waldfogel 1994; Nagin and Waldfogel 1993). In addition, by focusing on inmates' incapacitation from labor market participation, we ignore post-release effects (see Western and Beckett 1999). To fully account for the impact of the penal system on labor market inequality, research should therefore include the effects of noncustodial supervision and the employment experience of convicts after release.

These findings also have wide-ranging implications for other research on racial inequality in the labor market. Because incarceration rates are high for poor minorities, empirical studies should consider the powerful and racially disparate selection effects of prison and jail. If the mechanisms that influence the risk of incarceration also shape economic opportunities, reliance on labor force surveys drawn from the noninstitutional population may be subject to significant selection biases. While these selection effects were relatively small until the mid-1980s, the data reported here suggest that prison and jail may be withholding as much as 20% of potential workers in some sections of the labor force. If "bad risks" in the labor market are under-observed among blacks, but not whites, standard analyses may underestimate the level of racial inequality. For instance, recent research shows that the earnings gap between black and white men declined be-
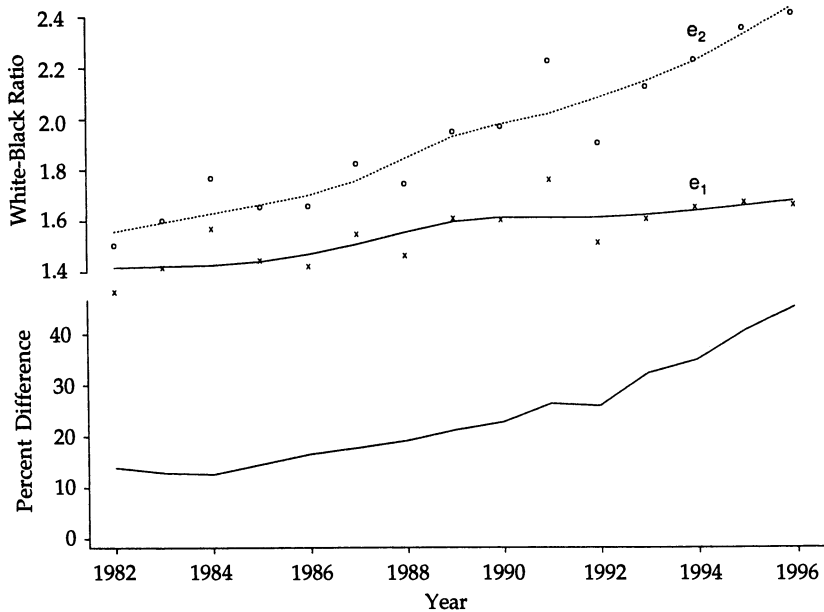
Figure 1. Racial Inequality in Employment: Young Unskilled Men, 1982–1996.
(The upper panel shows the white-black ratio of e_1 and e_2. The lower panel
shows the percent difference in white-black ratios for e_1 and e_2.)

tween 1991 and 1995 (Darity, Myers, and Chung 1998). Our research suggests that declining racial disparity may not be due to relative improvement. Instead, incarceration may truncate the lower tail of the black earnings distribution, providing the appearance of improved labor market opportunities.

More generally, the economic inequality highlighted in this paper is invisible in standard data sources. Even though we find that the penal system is a significant source of economic disadvantage, prison and jail inmates have no status in official employment statistics. Given historically high rates of incarceration in the 1990s, household surveys like the CPS could usefully obtain the prior incarceration status of respondents. Such information would provide unique estimates of the prevalence of incarceration in the context of a large-scale household survey. In addition, these data would significantly assist research on the labor market effects of incarceration. Census codes should also be revised to distinguish

prison inmates from other categories of institutionalized respondents. A detailed coding scheme such as that used in the 1980 census would provide an accurate measure of the contribution of incarceration and other sources of institutionalization to joblessness. Similarly, the BJS could usefully report incarceration rates for age, race, and education groups. With detailed incarceration rates, correctional and labor force data could be transparently combined. In short, recognizing the economic—not just the criminological—status of the penal population raises basic challenges to how economically important populations are defined and counted.

In sum, these results suggest that the penal system has a pervasive influence on the life chances of disadvantaged minorities. We have found that employment patterns cannot be understood without reference to the growth of incarceration. Although typically the preserve of criminology, incarceration appears to shape aspects of inequality that are of tradi-
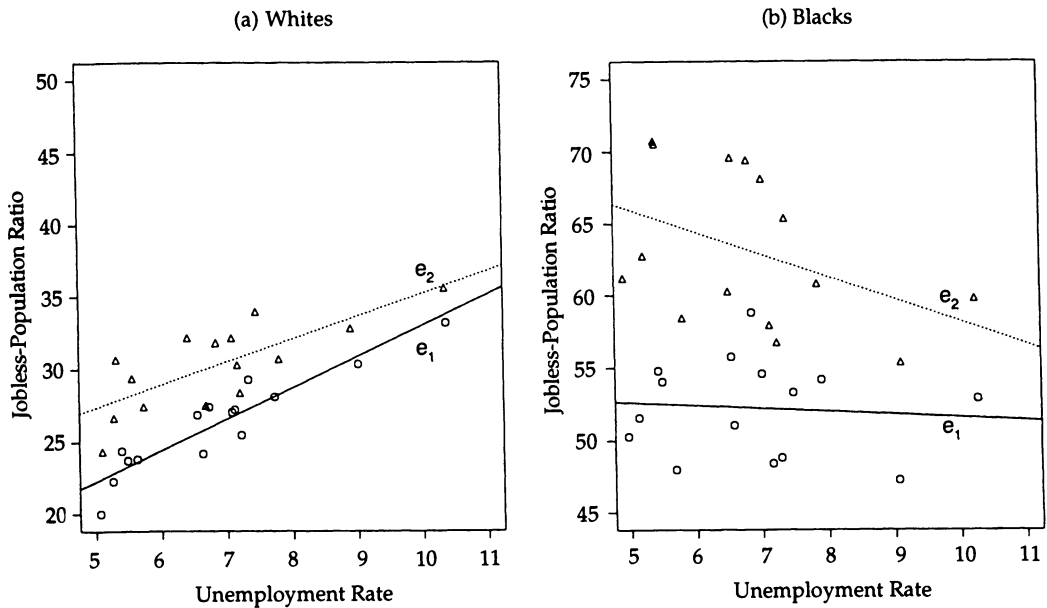
(a) Whites

(b) Blacks

Figure 2. Scatterplots and Regression Lines of Unemployment in the Civilian Labor Force and 100 Minus the Employment-Population Ratio for Male High School Dropouts Aged 20–35. (The e_1 series is indicated by circles and e_2 by triangles.)

tional interest to stratification researchers. It seems likely that status attainment, school-to-work transitions, and family structure all are influenced, perhaps even routinely, by the penal system in the current period of high incarcera-tion. From this perspective, the usual list of institutional influences on social stratification—schools, the family, and social policy—should be expanded to consider the coercive redistribution of life chances through incarceration.

Appendix
Estimating Group-Specific Employment Rates

Consider subgroup i, such as those aged 18–65 or high school dropouts aged 20–35. Counts for the employed, E_i, and nonemployed, N_i, can be obtained from the CPS. This gives a group-specific employment-population ratio:

$$e_{1i} = \frac{E_i}{E_i + N_i} \ .$$

However, annual incarceration figures for this subgroup are not available. To find the subgroup prison and jail populations, P_i and J_i, we estimate the proportion of prison and jail inmates in subgroup i using the Survey of Inmates of Local Jails (1978, 1983, 1989), the Survey of Inmates of State Correctional Facilities (1979, 1986, 1991), and the Survey of Inmates of Federal Correctional Facilities (1991). For men aged 18–65, the adjustment of aggregate figures is very small. The correctional surveys show that more than 96% of male inmates fall within this age range, and there are no strong racial differences in the age structure of the inmate population.

The adjustment for young dropouts is much larger. Table A1 summarizes the correctional survey data and reports proportions, p_i and j_i, of those in prison and jail. The proportions can then be used to calculate adjusted employment-population ratios:

$$e_{2i} = \frac{E_i}{E_i + N_i + p_i P + j_i J} \ .$$

Because correctional surveys are not available every year, the missing proportions are imputed by interpolation or, in the case of Federal inmates, by 1991 proportions for all years. Although this introduces error into estimates of the subgroup population of inmates, the proportions are fairly stable over time, suggesting that measurement error due to imputation is likely to be small. This strategy assumes that the composition of the penal population did not change greatly between 1991 (the last year for which correctional surveys are available) and 1996 (the last year for which we report labor force data).

There may also be error in the incarceration-adjusted employment ratio, e_2, because the measurement of inmate populations and the collection of labor force data occur at different times of the year. Jail figures are estimates for June 30, and the prison population is given by a count at year's end. Jail figures are likely to show greater seasonality, because detention times are relatively short and admission rates are relatively high. However, midyear estimates of the jail population between 1990 and 1995 differ from the average daily population by only about 1% (BJS June 1997b:22). This suggests the midyear jail population provides a good estimate of the March jail population, when CPS data are collected.

Table A1
Details of Data from Surveys of Prison and Jail Inmates, 1979–1991

Year	Survey	Sample Size	Aged 18–65 (percent)	Aged 20–35 (percent)	H.S. Dropouts Aged 20–35 (percent)
1978	SILJ	3,689	96.4	65.4	36.2
1979	SISCF	9,142	98.6	71.9	50.0
1983	SILJ	3,992	98.3	68.7	38.6
1986	SISCF	11,556	98.9	69.2	43.9
1989	SILJ	4,036	97.8	66.8	36.5
1991	SISCF	11,163	98.5	63.8	44.1
1991	SIFCF	4,991	98.8	44.5	22.2

Note: SIIJ is the Survey of Inmates of Local Jails; SISCF is the Survey of Inmates of State Correctional Facilities; SIFCF is the Survey of Inmates of Federal Correctional Facilities (BJS October 1993, May 1994, October 1994, February 1997a, February 1997b, February 1997c, June 1997a).

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