Black-White Inequality in Earnings Losses After Job Displacement, 1980-2020

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Abstract:
While social scientists have devoted significant effort to understanding racial economic inequalities, surprisingly little work has examined inequalities in how Black and White workers recover from job loss. Racial inequalities after job loss have not been systematically examined since the mid-1990s, leaving open questions about how economic restructuring and business cycle fluctuations have shaped racial inequalities in post-displacement outcomes. What is more, extant research on racial inequalities in post-displacement outcomes has focused on inequalities among men. I use data from the 1984-2020 Displaced Workers Supplement to the Current Population Survey to offer the first historical accounting of racial inequalities in earnings changes after job displacement since the mid-1990s. I demonstrate that racial inequalities in earnings losses narrow from the 1980s through the 1990s before remaining relatively stable through the mid-2000s. However, racial inequalities in post-displacement outcomes increased substantially during the Great Recession. This trend is mostly limited to men and is largely explained by a combination of Black men's disadvantage in finding new jobs and matching to lower quality jobs after displacement. Further, using Heckman-corrected models, I demonstrate that standard OLS models substantially underestimate racial inequalities in the effect of job displacement on earnings among men due to racial differences in workers' likelihood of finding a new job – accounting for racial differences in selection into reemployment reveals significant racial disparities among men in the effect of displacement on earnings during recessions in the early 1980s, early 1990s and the Great Recession.

Introduction

Job displacement – involuntary job loss resulting from economic conditions beyond the control of an individual worker – is an important dimension of economic precarity that negatively affects workers' short- and long-term economic wellbeing. Displaced workers experience negative health and psychological outcomes, lost earnings due to unemployment, and downward earnings and occupational mobility upon reemployment (Farber 1993; Stevens 1997; Kletzer 1998; Hall 2005; Burgard, Brand, and House 2007; Davis and von Wachter 2011; Brand 2015). In the long-run, job displacement can have negative scarring effects on workers' earnings that persist for up to two decades (Ruhm 1991; Jacobson, LaLonde, and Sullivan 1993; Couch and Placzek 2010; Davis and von Wachter 2011; Schmieder, von Wachter, and Heining 2023). What is more, as the US economy has become increasingly characterized by instability, precarity, and inequality, job displacement has become more disruptive for workers' careers: rates of reemployment, workers' chances of finding full-time work, and earnings recovery after job loss have decreased substantially since the 1980s (Farber 2017).

Perhaps surprisingly, even though social scientists have exerted substantial effort in documenting racial stratification in labor market outcomes such as earnings and employment, racial inequalities in job loss and recovery thereafter have received little attention. Just a few studies have systematically studied racial gaps in rates of job displacement. Fairlie and Kletzer (1996, 1998) show that Black men experience job displacement at a rate 30 percent higher than white men have reemployment rates 30 percent lower. Wrigley-Field and Seltzer (2020) extend this analysis to 2017 and document sharply rising racial gaps in job displacement in recent decades. Even less work has systematically documented historical changes in the racial patterning of recovery after displacement. Previous research has either analyzed a single survey

year of the Displaced Workers Supplement (DWS) to the Current Population Survey (CPS) or pooled observations across survey years to examine racial gaps in the length of unemployment spells, reemployment, and earnings post-displacement (Fairlie and Kletzer 1998; Spalter-Roth and Deitch 1999; Farber 2017). However, no research since Fairlie and Kletzer (1996) has systematically documented historical patterns of racial inequality in recovery after job displacement. Moreover, none of this work has examined racial inequalities in post-displacement outcomes by gender, despite substantial evidence that patterns of racial inequality differ meaningfully between men and women (McCall 2001; Mandel and Semyonov 2016). What is more, previous work on racial and gender inequalities after job displacement has done little to elaborate on the mechanisms or processes that generate such inequalities.

Drawing on queueing models of racial and gender inequality in labor market matching processes (e.g. Thurow 1969; Hodge 1973; Reskin and Roos 1990; Fernandez and Mors 2008), I offer a simple analytical framework to understand how the consequences of job displacement may vary by race and gender over time. I contend that the economic costs of job displacement depend on the characteristics of displaced workers' lost jobs, displaced workers' ability to find new employment, and the quality of displaced workers' new jobs. Broadly, I argue that White workers have more to lose from displacement due to accumulated advantages from their position towards the top of the labor queue – employment in higher-paying jobs, occupations, and industries and raises and promotions within firm internal labor markets. However, I also argue that racial discrimination in hiring disadvantages Black workers in the search for new, high-quality jobs after displacement, leading Black displaced workers to endure longer bouts of unemployment, find reemployment at lower-quality jobs, and ultimately experience larger earnings losses than White workers. In line with previous work finding smaller racial earnings

inequalities among women than men (e.g. Kilbourne et al. 1994; Cancio et al. 1996; Mandel and Semyonov 2016), I anticipate that racial inequalities in the economic costs of job displacement will be lower among women. Through modeling the process of job displacement and recovery thereafter, I demonstrate how and when different forms of racial disadvantage affect racial inequalities by gender in post-displacement outcomes.

Through this same analytical framework, I also argue that previous studies have likely underestimated the true effect of job displacement on earnings inequalities by race and gender because they only examine changes in earnings among displaced workers who have found new jobs. In reality, many displaced workers remain unemployed or exit the labor force entirely when post-displacement earnings are measured. These workers likely differ in meaningful ways from displaced workers who found new jobs, including in how displacement may have affected their earnings potential. Well-documented and persistent patterns of hiring discrimination (see Quillian et al. 2017) suggest that Black displaced workers will be less likely to find new jobs than otherwise similar White displaced workers. If only Black workers with especially high skills or potential earnings are able to find new jobs after being displaced due to hiring discrimination, conventional ordinary least squares (OLS) estimates of Black workers' earnings upon reemployment may be upwardly biased, and consequently produce smaller estimates of racial inequality in the effect of displacement on earnings.

Using data from a sample of workers displaced from full-time jobs taken from the 1984 to 2020 waves of the Displaced Workers Supplement (DWS) to the Current Population Survey (CPS), I show that observed racial inequalities in earnings losses among men narrowed between the 1980s and 2000s before widening dramatically during the Great Recession, while such inequalities among women peaked during the early 1980s and persisted through most of the

1990s before narrowing throughout the 2000s. I find that while White workers experience large earnings losses from displacement because they tend to lose higher quality jobs than Black workers, Black workers typically have greater overall earnings losses than White workers due to their higher rates of reemployment in lower quality part-time jobs and in low-paying occupations and industries. Then, I demonstrate that standard estimates of these inequalities understate the true effects of displacement on earnings by race among men. After correcting for differential selection into reemployment, I show that job displacement has substantially larger negative effects on Black men's earnings than White men's earnings throughout the 1980s, early 1990s, and during the Great Recession. Racial inequalities in the effect of displacement on employment and employment opportunities obscure racial inequalities in the effect of displacement on earnings.

Background

Black-White inequality in job displacement and its consequences

The economic costs of job displacement

Job displacement refers to job loss that can be attributed to economic conditions beyond workers' control and not tied to workers' individual performance, including mass layoffs, plant closures, or employers going out of business (Brand 2015). Displacement does not include job separations due to firing or quits. Job displacement has attracted particular attention from social scientists because it reflects how employers' business decisions, rather than employee performance or individual choices, affect workers' employment insecurity. Job displacement is therefore important to study because it reflects a form of economic precarity that is both largely out of

employees' control and has substantial negative effects on workers' future employment and earnings.

Job displacement has significant negative effects on displaced workers' economic wellbeing. Displaced workers typically experience a period of unemployment after losing their job (Howland and Peterson 1988; Ruhm 1991; Gardner 1995; Farber 2017). On average, displaced workers in the DWS take about 10 to 15 weeks to find a new job after being displaced and only about two-thirds of workers are reemployed by the survey date, which can be up to three years after displacement (Farber 2017). Reemployed displaced workers typically earn less at their new job than at their previous job. Prior work generally suggests that short-run earnings losses amount to 25 to 33 percent and long-run earnings decrease by 10 to 15 percent (Ruhm 1991; Jacobson et al. 1993; Gardner 1995; Fallick 1996; Kletzer 1998; Cha and Morgan 2010; Couch and Placzek 2010; Davis and von Wachter 2011; Farber 2017). However, earnings changes after job displacement vary considerably, with the bottom quartile of displaced workers losing 30 to 50 percent of their earnings and the top experiencing small losses or even modest gains (Schoeni and Dardia 1997; Carrington and Fallick 2017; Lachowska, Mas, and Woodbury 2020).

Racial inequalities after job displacement

There is reason to expect that the consequences of job displacement are generally worse for Black workers than White workers. Cross-sectional analyses show that both the incidence and costs of job displacement are greater for Black workers than White workers. On average, Black workers experience longer spells of unemployment, lower rates of reemployment, and larger earnings losses following job displacement (Moore 1990; Fairlie and Kletzer 1998; Spalter-Roth

and Deitch 1999; Hu and Taber 2005; Farber 2017). Yet, racial inequalities in rates of job displacement and recovery thereafter vary substantially over time.

By most prominent accounts, job displacement and its effect on earnings are highly countercyclical, reflecting broader patterns of macroeconomic and industrial restructuring (Kletzer 1998; Kalleberg 2009; Couch and Fairlie 2010; Davis and von Wachter 2011; Brand 2015; Farber 2017; Couch, Fairlie, and Xu 2023; Schmieder et al. 2023). In the 1980s and early 1990s, racial inequalities in job displacement and post-displacement outcomes were largely tied to how Black and White workers were distributed across jobs that were affected by to economic restructuring. Layoffs during the recession of the early 1980s were largely concentrated among blue-collar workers in industries like manufacturing and construction (Gardner 1995; Farber 1996). Black workers experienced especially high rates of displacement in this era due to their relatively low education and concentration in production jobs (Fairlie and Kletzer 1996, 1998). The early-1990s recession spurred firms to "trim the fat" through downsizing initiatives that affected predominantly White, white-collar middle management positions (Cappelli 1992; Gardner 1995). As firms focused on leaning out, Black workers' disadvantage in reemployment rates narrowed and White workers experienced greater earnings losses than Black workers (Gardner 1995; Fairlie and Kletzer 1996).

Since the most recent analyses of racial inequalities in post-displacement earnings (Fairlie and Kletzer 1996, 1998; Spalter-Roth and Deitch 1999), the United States has since undergone significant economic restructuring that may well have reshaped how job displacement affects racial economic inequality. Employment growth has been highly polarized – employment grew in low-paying jobs such as retail and food service, declined in middle-paying jobs characterized by routine tasks like manufacturing production and clerical work, and grew

substantially in high-paying managerial, professional, and technical occupations (Autor, Katz, and Kearney 2006; Autor and Dorn 2013). At the same time, union power further diminished and nonstandard, contingent, and precarious employment relations became more common (Kalleberg 2009; Western and Rosenfeld 2011). Declining employment and job quality in the middle of the occupational distribution had an outsized effect on Black workers, for whom employment in jobs such as manufacturing production or clerical work provided important economic opportunities that were challenging to find elsewhere (Wilson 1996; Acemoglu and Restrepo 2022). Many of these inequalities resulting from economic polarization came to a head during the Great Recession, which led to high rates of displacement, occupational downgrading into service sector jobs, and permanent reductions in employment in industries like manufacturing and construction that tend to provide relatively high quality employment to non-college-educated men, and Black men in particular (Farber 2017; Kalleberg and Von Wachter 2017; Rothstein 2017; Jaimovich and Siu 2020). All told, it is reasonable to expect that racial inequalities in post-displacement economic recovery grew in the 21st century.

Sources of Racial Inequality in the Costs of Job Displacement

Previous work examining racial inequalities in the effects of job displacement has either focused on offering qualitative historical accounts of how broad patterns of macroeconomic restructuring affect racial inequalities (e.g. Wilson 1996) or on producing quantitative estimates of moment-in-time racial inequalities among displaced workers, net of differences on observables (e.g. Spalter-Roth and Deitch 1999). However, little quantitative work has considered the mechanisms underlying racial inequalities in the effects of job displacement or their change over time. Fairlie and Kletzer (1996, 1998) offer an important starting point, using decomposition analyses to

demonstrate that racial inequalities in displacement rates and reemployment rates during the 1980s and early 1990s are explained by a combination of racial differences in occupations and education. Yet, these analyses do not consider racial inequalities in earnings losses or how racial inequalities in reemployment and earnings are related to one another.

In what follows, I draw on matching and queueing models of the labor market to develop an analytical framework to examine the mechanisms driving racial inequalities in the effects of job displacement. I model job displacement and recovery thereafter as a labor market process with distinct inequality-generating mechanisms at each step. Broadly, I argue that Black and White workers' relative disadvantages in an historical period depend on the quality of jobs they lose and their ability to find new, high-quality employment after job displacement. I suggest that White workers generally have more to lose from job displacement due to their employment in higher quality jobs, while Black workers have lower chances of finding new jobs and less to gain from reemployment due to racial discrimination in hiring and wage offers. Unequal selection of Black and White workers out of unemployment and into new jobs plays an important role in shaping observed earnings inequalities among reemployed displaced workers. After elaborating the racial queueing mechanisms underlying post-displacement inequalities, I consider how these inequalities manifest at the intersection of race and gender.

Labor market matching and racialized labor queues

Matching models of the labor market can provide a helpful framework to understand post-displacement inequalities. Labor markets can be described as matching processes where workers leverage their personal resources (e.g. general and specific skills, education, socioeconomic background, social capital, race, or gender) to compete for their most desired jobs and firms offer

wages and benefits to attract their most desired workers. Workers' labor market chances depend on their personal resources, the resources of fellow jobseekers, and the set of available job openings (Sørensen 1977; Jovanovic 1979; Sørensen and Kalleberg 1981; Coleman 1991). Search costs may limit workers' desire to search for better jobs, but it is reasonable to suggest that if better alternatives are available, workers would voluntarily leave their job for a new position. Job displacement is an involuntary separation for workers who have demonstrated a preference to remain at their job rather than search for or move to a new job. By severing workers' connection to their preferred job, job displacement is likely to lead workers to re-sort into jobs with lower compensation.

I draw on queueing theory to consider how Black and female workers may be disadvantaged in this re-sorting process. Queueing theory is a useful framework to understand Black and female workers' disadvantage in labor market matching processes (Hodge 1973; Reskin and Roos 1990; Thurow 1969; Weiss 1980). Queueing theory describes matching processes where firms hoping to fill a job opening rank jobseekers from their most to least preferred (the labor queue) and jobseekers rank jobs in a similar fashion (the jobs queue). Firms attempt to fill a vacancy by making offers down the labor queue until the vacancy is filled. When applied to racial or gender inequality, queueing theory has been used to argue that nonwhite and female workers' relatively poor economic outcomes are explained by firms ranking them relatively low in the labor queue (Hodge 1973; Reskin and Roos 1990; Spalter-Roth and Deitch 1999; Campero and Fernandez 2019). Net of differences between workers, racial or gender differences in workers' position in the labor queue can be interpreted as discrimination by firms.

Racial inequalities in earnings losses due to differences in lost jobs

White displaced workers likely lose higher-quality jobs than Black displaced workers. On average, White workers are employed in higher paying occupations and industries than Black workers (Tomaskovic-Devey 1993; Cotter, Hermsen, and Vanneman 2003; Huffman and Cohen 2004; del Río and Alonso-Villar 2015). These differences in employment may be driven by racial inequalities in human and social capital, but they are likely also driven by employer discrimination (Mintz and Krymkowski 2010; Jardina et al. 2023). There is substantial evidence that employers rank White workers higher in the labor queue, preferring to hire White workers over otherwise similar Black workers (Kirschenman and Neckerman 1991; Fernandez and Fernandez-Mateo 2006; Pager, Western, and Bonikowski 2009; Quillian et al. 2017; Pedulla 2020). Once hired, firms tend to allocate Black employees to more marginal positions with lower responsibility and less opportunity for advancement (Collins 1989, 1993; Tomaskovic-Devey et al. 2006; Hellerstein and Neumark 2008). White workers accumulate more firm-specific skills throughout their tenure with an employer due to racial favoritism in investment in human capital, pay raises, promotions, and other features of internal labor markets (e.g. Maume 1999; Tomaskovic-Devey, Thomas, and Johnson 2005; Castilla 2008).

White workers' relative advantage in matching into high quality jobs and firms, as well as their advantage in accumulating investments in firm-specific human capital, could disadvantage White workers with respect to how their earnings change due to job displacement. Because White workers accumulate advantages from their positions at the top of the labor queue in both internal and external labor markets, and because investments in firm-specific capital are not transferable (Becker 1962; Mincer 1962), they may have more to lose when they are displaced. Indeed, some evidence suggests that White workers experience greater earnings loss after displacement due to lost firm-specific investments in human capital (Addison and Portugal

1989). I expect that White workers' advantages in accumulated specific human capital (proxied by firm tenure), as well as characteristics of their lost job such as occupation and industry, *disadvantage* White workers, relative to Black workers, in earnings recovery after job displacement.

> *Hypothesis 1: Differences in Black and White workers' levels of pre-displacement firm tenure and job characteristics are associated with larger earnings losses for White workers than Black workers after they are reemployed.*

Lost earnings due to racial inequalities in re-sorting in the labor market

Next, I consider how differences in the quality of new jobs obtained by displaced workers shape racial inequality in earnings losses from displacement. Displaced workers' earnings losses are largely explained by moving into jobs that are a worse fit between worker and job (Lachowska et al. 2020). This is consistent with matching models of the labor market – job displacements sever high quality matches and workers are then left to re-sort into their next-best alternative.

The next-best alternatives for displaced Black workers may be markedly worse than for White workers. Prior research has shown that employers tend to rank White workers higher in labor queues than Black workers, giving rise to inequality in the jobs that White and Black workers can access (Hodge 1973; Lieberson 1980; Reskin and Roos 1990; Eliason 1995; Huffman and Cohen 2004; Fernandez and Mors 2008; Kornrich 2009; McTague, Stainback, and Tomaskovic-Devey 2009; Campero and Fernandez 2019). Black workers on average earn less than otherwise similar White workers (Cancio et al. 1996; Neal and Johnson 1996; Huffman and Cohen 2004; Carneiro, Heckman, and Masterov 2005; Fryer, Pager, and Spenkuch 2013; Bloome 2014; Mandel and Semyonov 2016; Bayer and Charles 2018). But, there is substantial between-

firm variation in discrimination (Kline, Rose, and Walters 2022). Some evidence suggests that Black workers tend to sort into relatively non-discriminatory firms, where they are paid wages closer to those of similar White workers than they might be paid at other firms. Job displacement can sever these worker-firm matches, leading Black workers to re-sort into more discriminatory firms (Hu and Taber 2005). If employers rank Black workers lower in the labor queue than otherwise similar White workers, and Black workers are displaced from relatively non-discriminatory firms, Black workers will experience disproportionate losses in earnings and job quality due to job displacement.

> *Hypothesis 2: Differences in the characteristics of the jobs that Black and White workers sort into after being displaced disadvantage Black workers relative to White workers in the effect of job displacement on earnings.*

Reemployment after job displacement and selection bias in estimates of earnings inequality

Standard OLS estimates of racial earnings inequalities examine differences in earnings between employed Black and White workers net of differences on observable pretreatment characteristics. I argue that OLS estimates of racial inequality in earnings losses after job displacement are likely to understate the true effect of displacement on racial earnings inequalities due to Black workers' significant disadvantage in finding new employment after displacement.

Black workers' marked disadvantage in job search suggests that job displacement will lead to longer durations of unemployment, lower probabilities of reemployment for Black workers compared to White workers, and ultimately reemployment in lower quality jobs for Black workers who do become reemployed. In the face of labor market discrimination, Black jobseekers cast a wider net than White jobseekers while also experiencing lower returns to job

search and lower callback rates from job applications (Holzer 1987; Bertrand and Mullainathan 2004; Pager et al. 2009; Fryer et al. 2013; Pager and Pedulla 2015; Quillian et al. 2017; Pedulla and Pager 2019). Discriminating employers hold Black job candidates to a higher standard on observable signals of productivity than White job candidates (Pager et al. 2009; Ritter and Taylor 2011; Gaddis 2015). If discriminating employers hold Black workers to a higher standard than White workers when hiring, then only relatively highly skilled, high-earning Black will be hired after displacement. The remaining pool of unemployed Black displaced workers will then be relatively highly skilled compared to the pool of unemployed White displaced workers. At the same time, the remaining available jobs will be low quality relative to unemployed Black workers' qualifications. It is likely that these workers remain unemployed at least in part because they cannot find a job that pays above their reservation wage. If this is the case, were they to become reemployed, they would experience substantial downward mobility. These selection dynamics would then result in upwardly biased estimates of the effects of displacement on Black workers' earnings (and therefore underestimate Black workers' disadvantage relative to White workers) when only examining earnings among reemployed workers.

> *Hypothesis 3: Standard OLS models underestimate Black-White inequality in the effect job displacement on earnings due to racial differences in selection into reemployment.*

Gendered racial inequalities in the consequences of job displacement

While a good deal of research has examined gender inequalities after job displacement (e.g. Maxwell and D'Amico 1986; Madden 1987; Kunze and Troske 2015; Illing et al. 2024), little work has considered how patterns of racial inequality in the effects of job displacement vary by

gender. Research on the gendered patterns of racial earnings inequality finds that racial inequalities in earnings among women are much smaller than among men (Kilbourne et al. 1994; Cancio et al. 1996; Cotter, Hermsen, and Vanneman 1999; Mandel and Semyonov 2016). Women are less racially segregated across occupations than men (Hegewisch et al. 2010). What is more, declining demand for labor in manufacturing and production jobs had a much smaller effect on racial inequalities among women than among men (Wilson 1996; Holzer 1998; Bound and Holzer 2000; McCall 2001). Gendered differences in the effect of macroeconomic restructuring were apparent in the Great Recession, where high levels of displacement in industries such as manufacturing and construction led to massive upticks in unemployment among men while women's unemployment rates rose much less dramatically (Hartmann, English, and Hayes 2010; Sahin, Song, and Hobijn 2010).

Racial inequality in the effects of job displacement may also be lower among women because Black and White women's experiences of displacement are more strongly shaped by their gendered role in family life than by their race. Gender differences in the employment, job search, and earnings effects of displacement appear to be largely driven by women's fertility and childrearing choices. There is strong empirical evidence that mothers experience lower rates of reemployment and larger earnings losses than fathers or individuals without children (Frodermann and Müller 2019; Illing et al. 2024). On the other hand, it is possible that racial differences in family structure and Black women's relatively high rate of single parenthood (see McLanahan and Percheski 2008) may drive Black women to spend less time searching and take lower paying jobs in order to avoid prolonged periods of unemployment. Still, because Black and White women tend to occupy more similar positions in the labor market and face similar

demands from family life, I expect to observe less racial inequality in the effects of job displacement on earnings among women than among men.

Data and Methods

The Displaced Workers Supplement

This study uses data from the 1984 to 2020[1] waves of the Displaced Workers Supplement (DWS) to the Current Population Survey (CPS) obtained from IPUMS (Flood et al. 2023). The DWS records information from individuals who lost their job in the previous several years about their earnings and employment at their lost job and current job. CPS respondents 20 years and older who meet the criteria of a "displaced worker" are included in the sample. The definition of "displaced worker" varies between survey years. In order to make consistent comparisons across survey years, I limit the sample to the most restrictive definition, which defines displaced workers as respondents who lost or left a job due to layoffs or shutdowns within the past three years, were not self-employed, and did not expect to be recalled to work within the next six months. This definition has been in place since 1998 and can be applied back to previous survey years. I limit the sample to Black and White individuals in civilian occupations between the ages of 20 and 64 who lost a full-time job. In line with previous research on displaced workers, I focus on workers displaced from full-time jobs to exclude individuals who are only marginally attached to the labor force (e.g. Fairlie and Kletzer 1996, 1998; Farber 2017). I also drop respondents who are missing data on the analytic variables. All analyses use weights specific to the DWS.

[1] The DWS is fielded biennially in either January or February. The job displacements recorded in the 2020 DWS were not driven by the COVID-19 pandemic, which had a massive effect on job loss beginning in March 2020 (Ansell and Mullins 2021).

Key Variables

Dependent variables

The main outcome variable in this study is the proportional change in respondents' real weekly earnings. *Real weekly earnings* are standardized to year-2000 US dollars. Top-coded values are multiplied by 1.4, as is a standard practice in labor economics (e.g. Lemieux 2006). Following Farber (2017), the *proportional change in real weekly earnings* is calculated as:

$$\Delta \mathrm{W} = \frac{W_1 - W_0}{W_0} \qquad (1)$$

where *W* refers to real weekly earnings. Subscripts 0 and 1 refer to respondents' lost and current jobs, respectively. Proportional earnings changes are preferred to differences in log earnings because the difference in log earnings does not well approximate proportional changes in earnings and it can often overstate how much real earnings change, particularly in a regression framework where the independent variable of interest is a dummy variable (in this case, an indicator for race) (Halvorsen and Palmquist 1980; Blackburn 2007; Farber 2017; Petersen 2017).

Independent variables

Race is coded using an indicator variable for if a respondent is *Black*. *Female* is coded 1 for female respondents. *Married* is coded 1 for all married respondents, regardless of if the spouse is present in the household. *Education* is coded as "less than high school", "high school degree", or "more than high school". Analyses also control for years of *tenure* at the respondent's lost job, *potential experience* (age – years of education – 6), *year of job displacement*, whether the respondent *moved* since displacement, and *Census region* fixed effects. *Industry* is coded using

US Census codes and aggregated to the 1-digit level. Heckman-corrected models model selection into employment using a categorical variable coded 0 if the respondent has no own children in the household, 1 if the respondent has any own children less than 5 years old in the household, and 2 if the respondent has own children all at least 5 years old in the household.

The CPS records respondents' occupation using US Census occupational coding schemes. Between 1984 and 2020, the US Census updated their occupation codes five times. With each change in coding schemes, some occupations disappear, some new occupations appear, some occupations are merged, and others are broken apart. These coding changes make it difficult to examine occupations over time. To address this inconsistency, I use a standardized occupational coding scheme developed by David Dorn (Dorn 2009; Autor and Dorn 2013) and subsequently used in numerous economic studies of occupations and inequality. The Dorn occupation codes provide a balanced panel of occupations that are consistently defined across US Census occupation coding schemes, allowing analysts to make consistent comparisons within and between occupations over time. These codes result primarily from aggregating detailed occupation codes. These analyses control for Dorn *occupation* codes aggregated to the 1-digit level.

Analytic approach

Time periods

For each set of analyses, respondents are divided into eight time periods corresponding to periods of economic recession and expansion in the US (1980-1982, 1983-1989, 1990-1991, 1992-2000, 2001, 2002-2007, 2008-2009, 2010-2020). These periods follow business cycle dating provided by the National Bureau of Economic Research (NBER 2024).

Decomposition of racial inequality in change in earnings

Hypotheses 1 and 2 predict that while White workers are disadvantaged by their pre-displacement job characteristics, Black workers are disadvantaged by the quality of jobs they sort into after displacement. I examine the extent to which racial differences in the jobs workers are displaced from versus the jobs they re-sort into explain racial inequalities in the effect of displacement on earnings. I conduct a Kitagawa-Oaxaca-Blinder decomposition (Kitagawa 1955; Blinder 1973; Oaxaca 1973) of the Black-White gap in earnings change. Following Neumark (1988), I estimate the decomposition as follows:

$$\Delta W^W - \Delta W^B = [\bar{X}^W - \bar{X}^B]\beta^* + [\bar{X}^W(\beta^W - \beta^*) + \bar{X}^B(\beta^* - \beta^B)] \quad (2)$$

where ΔW represents proportional changes in weekly earnings between lost and current jobs and its superscripts W and B refer to White and Black. $\bar{X}^W$ and $\bar{X}^B$ refer to race-specific average characteristics. β^W and β^B refer to race-specific coefficients and β^* refers to coefficients from a pooled model. I use coefficients from a pooled model as the reference coefficient because discrimination can affect how both White and Black workers are treated in the labor market. The decompositions are estimated net of year of job loss fixed effects. Separate decompositions are run for men and women in each period.

The first component of the decomposition is the "explained" component. It describes how racial differences in average characteristics such as job tenure, occupation, or industry affect racial inequality in how earnings change after job displacement. The second component describes how racial differences in coefficients contribute to differences in outcomes. This second component is the "unexplained" component and is often interpreted as evidence of discrimination.

Earnings regressions

To assess Hypothesis 3, I examine how estimates of Black-White inequality in the effect of job displacement on earnings differ between standard OLS models and models that correct for selection into reemployment. First, I follow standard approaches to modeling earnings inequalities following job displacement by regressing proportional earnings changes ΔW on *Black* and a set of covariates X:

$$\Delta \mathrm{W}_i = \beta_0 + \beta_1(\mathrm{Black}_i) + X\gamma + \epsilon_i \quad (3)$$

I first run a naïve regression model that only controls for year of job displacement. Then I add additional covariates including marital status, education, potential experience, tenure at lost job, occupation and industry of lost job, whether the respondent moved since losing their job, and Census region fixed effects. I run separate models in each period for men and women.

Estimates of β_1 from the naïve model reflect racial inequality in earnings losses from job displacement among individuals who lost their job in the same year. Estimates of β_1 from the model with added covariates describe racial inequality in earnings losses, net of differences on pre-displacement characteristics. Differences between estimates from the naïve and added-covariates models reflect the extent to which differences on pre-displacement characteristics affect racial inequality in earnings losses among reemployed displaced workers.

Hypothesis 3 predicts that estimates of Black workers' disadvantage relative to White workers (β_1) are upwardly biased due to differential patterns of selection into reemployment. To test this hypothesis, I estimate another set of models that use a Heckman correction (Heckman 1979) to address bias stemming from missing data on earnings for respondents who are unemployed at the time of the survey. Hypothesis 3 is supported if Heckman-corrected estimates

of the Black-White gap in earnings losses from displacement are more negative than standard OLS estimates.

The Heckman correction requires modeling selection into employment using at least one variable that predicts employment (relevance) but does not directly affect earnings (exclusion restriction). Selection is modeled using a categorical variable that denotes whether a respondent has no children in the household, has at least one child in the household less than five years old, or has children in the household who are all older than five. Number and age of children are commonly used to model selection into employment in Heckman-style models (e.g. Heckman 1974; Angrist and Evans 1998). The number of children in the household, particularly young children, changes the value of and demands on parents' time and consequently their decision regarding labor market participation. At the same time, number of children is unlikely to have an effect on firms' wage offers, and therefore serves as a valid instrument satisfying the exclusion restriction. The Heckman correction, instrument validity, and first-stage coefficients and diagnostics are presented in Appendix 1. Appendix 2 presents a set of models examining racial inequalities in the probability of reemployment and in the duration of job search in order to assess the underlying claim that Black displaced workers are disadvantaged in reemployment relative to otherwise similar White displaced workers.

Results

Descriptive Statistics

Unweighted descriptive statistics from the DWS samples in each period are presented in Table 1. The sample is about 11 percent Black and 40 percent female, with more Black and female respondents in more recent years. The percentage of displaced workers who were married

declined from 62 percent in the early 1980s to 53 percent in the 2010s. Average educational attainment among displaced workers rose substantially since the 1980s, as did average potential labor market experience and firm tenure at workers' lost jobs. Rates of reemployment are strongly countercyclical, sitting between 53 and 59 percent during recessionary periods and rising to 65 to 70 percent during expansionary periods. Earnings losses follow a similar pattern. The average proportional change in earnings among workers displaced during recessions ranges from -10 percent (1980 to 1982) to -14 percent (2008-2009). During expansionary periods, the average change in proportional earnings is smaller and ranges from -2 percent (2010 to 2020) to -6 percent (1983 to 1989).

[[Table 1 about here]]

Figure 1 shows trends in proportional changes in earnings among displaced workers by race and gender. Black men experience earnings losses about 4 percentage points smaller than White men in the early 1980s, earnings losses about 6 percentage points larger through the rest of the 1980s, and very similar earnings losses through 2001. In the mid-2000s, White men's earnings declined more than Black men after displacement. For workers who lost their jobs during the Great Recession, Black men experienced earnings losses about 14 percentage points larger than White men. This gap narrows but is still present in the 2010s. Black female displaced workers experienced earnings losses around 19 percentage points greater than White female displaced workers in the early 1980s. This gap closed throughout the rest of the 1980s. White women experienced much larger earnings losses than Black women from 1990 to 1991. Through the rest of the 1990s, Black women lost more in earnings than White women. The race gap among women reversed again in 2001. For the remainder of the 2000s and 2010s, Black women lost more in earnings than White women.

[[Figure 1 about here]]

Decomposition of earnings changes: old jobs and new jobs

How do differences in the quality of Black and White workers' lost and new jobs contribute to observed inequality in earnings changes following job displacement? While Hypothesis 1 proposes that racial differences in pre-displacement jobs should *reduce* racial inequality in the effect of displacement on earnings, Hypothesis 2 predicts that differences in post-displacement jobs should *increase* racial inequality. I examine the extent to which each of these dynamics contributes to racial inequalities in the effect of displacement on earnings through a decomposition of Black-White inequality in the proportional change in earnings among reemployed displaced workers.

Results from the decomposition analyses for male workers are presented in Table 2 and for female workers in Table 3. Each column in these tables represents a separate decomposition analysis for DWS respondents who lost jobs in the years indicated in the column label. The top section of the table reports average Black and White proportional changes in earnings. The row labeled "Difference" reports the difference between White and Black workers' average proportional change in earnings. The row labeled "Explained" describes the component of that difference that is attributable to differences in Black and White workers' values on covariates used in the decomposition. Values can be interpreted as how much the gap would change if Black workers had the same characteristics as White workers. The "Unexplained" component reflects how much the gap would change if Black and White workers had the same coefficients, i.e. if they received the same returns to education, experience, etc. The explained and unexplained components are then further decomposed in the second and third panels of the table. In the

"Explained" section of the table, individual cells describe how much the Black-White gap in how displacement effects on earnings would change under the counterfactual where Black workers had the same average value on that covariate as White workers (e.g. if Black workers had the same average educational attainment as White workers). Cells in the "Unexplained" section of the table describe how the gap proportional changes in earnings would change in the counterfactual where Black and White workers have the same coefficient on a covariate (e.g. if an additional year of experience had the same effect on earnings for Black and White workers).

I first examine trends among male displaced workers (Table 2). Consistent with Hypothesis 1, differences in the firm tenure, occupations, and industries of Black and White men's lost jobs reduce inequality in post-displacement earnings changes. The large negative values reported in the row labeled "Occupation and industry (lost job)" indicate that if Black men's lost jobs followed the same occupational and industrial distribution as those of White men, racial inequalities in earnings losses would be even greater. Point estimates for the lost job occupation and industry component of the decomposition are negative in every period except 2001, and significant from 1983 to 1989, 1992 to 2000, and 2010 to 2020. Excluding jobs lost in 1990, 1991, and 2001, where observed racial differences in earnings losses were effectively zero, racial inequality in lost earnings after job displacement would be 15 to 100 percent larger if Black men lost the same jobs as White men. Trends in the effect of differences in firm tenure follow a similar pattern beginning in 1992. From 1992 to 2000 and from 2002 onwards, equalizing Black and White men's average firm tenure would exacerbate Black men's earnings losses following displacement and widen racial gaps in post-displacement earnings losses among men.

[[Table 2 about here]]

In line with Hypothesis 2, the explained component of the decomposition corresponding to men's current jobs' occupation, industry, and full-time status is positive in every period. These values indicate that if Black male displaced workers sorted into the same new jobs as White male displaced workers, the Black-White gap in proportional change in earnings after job displacement would shrink. Instead, because Black male displaced workers become reemployed in lower-quality jobs than White male displaced workers, they experience greater earnings losses upon reemployment. Excluding extreme values from 1990 to 1991 and 2001, racial differences in the occupations, industries, and full-time status of men's new jobs after displacement explain between 30 and 100 percent of observed racial inequality in proportional earnings changes after job displacement. Altogether, these results strongly support the expectation that, among men, White workers have more to lose at their pre-displacement jobs, but Black workers lose more earnings overall because they find relatively low-quality employment post-displacement.

[[Table 3 about here]]

Patterns among female displaced workers are somewhat ambiguous (Table 3). There are relatively few periods where racial differences in experience, tenure, lost job characteristics, or current job characteristics explain a statistically significant proportion of observed racial inequalities in earnings losses after job displacement. For the most part, signs on estimates from the decomposition align with predictions from Hypotheses 1 and 2. Racial differences in the occupation and industry of women's lost jobs tend to reduce inequalities in earnings losses from job displacement, while racial differences in new jobs' occupation and industry tend to exacerbate racial inequalities. The effect of racial differences in job tenure at workers' lost job and the full-time status of workers' new jobs is not consistent across time periods for female

displaced workers. Overall, there is weaker evidence in support of Hypotheses 1 and 2 among women.

Earnings regressions and selection into reemployment

OLS estimates of racial inequality in earnings changes

Table 4 and Figure 2 present estimates of the Black-White gap in workers' percent change in earnings after job displacement for men and women. In Table 4, the columns labeled "OLS" contain estimates of the Black coefficient from OLS models controlling only for year of job displacement fixed effects (Model 1) and models with additional controls adjusting for racial differences in observable demographic characteristics, human capital, lost job characteristics, whether respondents moved after displacement, and region fixed effects (Model 2).

From the unadjusted OLS models, we see that in most periods, Black-White inequality in proportional changes in earnings is not statistically significant. Among men who lost their jobs between 1983 and 1989, Black men experienced earnings losses about 6 percentage points greater than White men. The Black-White gap in earnings losses after job displacement expands significantly during the Great Recession. From 2008 to 2009, earnings losses among displaced Black workers who found new jobs were 14 percentage points greater than for otherwise similar displaced White workers. Trends among women follow a different pattern. Black women experience significantly greater proportional losses in earnings than White women during the recession of the early 1980s (19 percentage points) but also during expansionary periods from 1992 to 2000 (8.4 percentage points) and 2010 to 2020 (8 percentage points).

Among men from 1990 onwards, including controls for pre-displacement characteristics results in more negative point estimates of racial inequality in proportional change in earnings

after job displacement. This pattern is consistent with Hypothesis 1, which suggests that White displaced workers are disadvantaged in earnings losses due to their pre-displacement characteristics. Net of these pre-displacement characteristics, White men's advantage in earnings changes after job displacement grows. Among women, point estimates of the Black-White gap in proportional earnings changes become more negative during all expansionary periods (1983 to 1989, 1992 to 2000, 2002 to 2007, and 2010 to 2020) and during the Great Recession. Point estimates become more positive during recessions in 1980 to 1982, 1990 to 1991, and 2001. These results suggest that differences in pre-displacement characteristics often disadvantage White displaced workers, but in some cases they may work in the opposite direction.

Selection into reemployment

Estimates of racial inequality in the effect of job displacement on earnings from OLS models only capture changes in earnings among displaced workers who found a new job and were reemployed at the time of the survey. In discriminating labor markets where labor queues are ordered by both skill and race, firms hire White workers who are less qualified that Black workers. This selection process results in a population of unemployed displaced workers where unemployed Black workers are more skilled than unemployed White workers. Reemployment into the remaining set of available jobs is therefore likely result in significant downward mobility for unemployed Black workers. If these dynamics hold, examining earnings changes only among reemployed workers would upwardly bias estimates of racial inequality in the effect of displacement on earnings. Analyses of racial inequalities in reemployment rates and job search duration presented in Appendix 2 are consistent with this argument. Across all periods, for men

and women, Black displaced workers are much less likely to find new jobs and spend much longer looking for new jobs than otherwise similar White displaced workers.

Under these selection dynamics, Hypothesis 3 predicts that standard OLS estimates underestimate racial inequalities in the effect of job displacement on earnings. To fully capture the effects of displacement on earnings, I estimate the effect of displacement on earnings for all displaced workers, including those who are not currently employed using, Heckman-corrected models.

[[Figure 2 about here]]

Estimates of racial differences in the effect of displacement on earnings among men change substantially after accounting for differential patterns of selection into reemployment (Table 4, "Heckman"). Compared to OLS estimates, Heckman-corrected models estimate much larger racial inequality in earnings losses among men following job displacement during recessions. While OLS models estimate no racial inequality in earnings losses in the early 1980s, Heckman models estimate that earnings losses among Black men are 20 percentage points larger than for White men. Similarly, during the recession in the early 1990s, Heckman models estimate a gap in lost earnings of 18 percentage points while OLS models estimate no difference in lost earnings. Estimates of racial inequality in earnings losses during the Great Recession are also much larger in the Heckman-corrected model (46 percentage points) than in the OLS model (21 percentage points). Heckman models also estimate a gap of 5 percentage points in lost earnings ($p<0.10$) among men from 1983 to 1989. The large racial differences among men in the effect of displacement on earnings revealed by the Heckman model suggest that the relationship between job displacement, earnings, and race operates largely through men's differential selection into reemployment, particularly in slack labor markets during recessionary periods. Findings from the

Heckman model indicate that during these periods, Black men who have not found a new job would earn substantially less than White men were they to find a new job.

Among women, there are fewer differences in OLS and Heckman-corrected estimates of racial inequalities in earnings losses after job displacement. The main difference is that among women who lost their jobs between 1980 and 1982, the Heckman-corrected results suggest that if all displaced workers had become reemployed, Black women would have experienced earnings losses 28 percentage points greater than White women. The Heckman model also estimates a Black advantage in proportional earnings changes ($p<0.10$) for women who lost their jobs between 1990 and 1991.

Conclusions

Job displacement is a highly disruptive event that has significant negative consequences for workers' short- and long-run economic wellbeing. While social scientists have devoted considerable attention to understanding racial inequalities in other economic outcomes, surprisingly little work has examined racial inequalities in job displacement and its consequences. This paper makes three major empirical contributions towards that end. First, I offer the first systematic investigation of trends in Black-White inequality in the effect of displacement on earnings for the first time since Fairlie and Kletzer's analyses of job displacement in the 1980s and 1990s (Fairlie and Kletzer 1996, 1998). Second, I present the first analyses of differences in men and women's patterns of racial inequality in economic recovery from job displacement. Third, I develop an analytical framework of job displacement as an inequality generating process that allows me to examine the roles of inequality in lost jobs, job search, and new jobs in shaping racial inequalities in earnings losses from displacement.

Building on applications of queueing theory to inequalities in individual labor market processes (e.g. hiring) (Hodge 1973; Reskin and Roos 1990; Fernandez and Mors 2008), I consider how sequences of career processes characterized by racialized labor queues – hiring into initial jobs, investment into firm-specific capital and career advancement within those jobs, and hiring again after losing a job – shape racial inequalities after job displacement.

I argue that due to their advantages in labor market matching and firm internal labor markets, White workers have more to lose from being displaced. Conversely, due to Black workers' relative disadvantage in the labor queues, I argue that Black job seekers have less to gain after being displaced. In line with this argument, I show that White workers experience significant and disproportionate earnings losses relative to Black workers because they are displaced from higher quality jobs on average. I also show that net of differences in pre-displacement individual and job characteristics, Black displaced workers are consistently less likely to find a new job, those who do find new jobs spend much longer searching, and the new jobs they enter are much lower quality than those found by otherwise similar displaced White workers. These results highlight how the cascading negative effects of job displacement are amplified for Black workers. Prolonged exposure to unemployment results in significant lost earnings, and even among those who find new jobs, earnings losses relative to White workers can be substantial.

Heckman-corrected analyses reveal how this cumulative process of racial stratification in the economic consequences of job displacement leads us to underestimate Black male worker's disadvantage relative to White men in earnings losses after job displacement. Characterized by intense hiring and wage discrimination (Hu and Taber 2005; Fryer et al. 2013; Quillian et al. 2017), I show that the job search and hiring process for displaced workers selects strongly in

favor of White men. Results from the Heckman-corrected models suggest that the Black men who do find new jobs after displacement lose much less from job displacement compared to those who remain unemployed. Among displaced workers who do find new jobs, Black men often experience similar or just slightly larger earnings losses than White men. But, if all men who remain unemployed after job displacement were to find new jobs, results from the Heckman-corrected models of male displaced workers estimate much larger racial gaps in earnings losses and find significant racial gaps during recessions in the early 1980s, early 1990s, and the Great Recession. These results underscore a crucial connection between racial inequalities in job loss and transitions to unemployment and exit from the labor force (Fairlie and Kletzer 1998; Ritter and Taylor 2011; Wrigley-Field and Seltzer 2020) and earnings loss after job displacement, suggesting that racial differences in patterns of job search and reemployment after job displacement lead standard analyses of changes in observed earnings to greatly underestimate racial inequalities in the effect of job displacement on earnings upon reemployment.

Analyses by period reveal that racial inequalities in the effect of job displacement are also tied to macroeconomic fluctuations. During recessions, the negative effect of job displacement is much larger for Black men than White men. In slack labor markets, White men appear to be significantly advantaged over Black men in job search. Consistent with theories of racialized labor queues, when few good jobs are available to displaced workers due to poor labor market conditions, vacancies in good jobs are disproportionately filled by White men. Many Black men remain unemployed, but they would be significantly downwardly mobile if they were to take a new job. These racial inequalities in job search and sorting after job displacement may be exacerbated by economic restructuring characteristic of recessions: in recessions from the 1970s through the Great Recession, employment at the top and bottom of the earnings distribution

tended to remain flat or grow while reductions in employment in middle-paying routine manual jobs (e.g. manufacturing production or clerical work) account for 89 to 145 percent of aggregate job loss during these recessionary periods (Jaimovich and Siu 2020). Downward mobility of Black male displaced workers may accelerate during recessions due to shrinking employment opportunities in middle-paying jobs in manufacturing production and other blue-collar occupations (Wilson 1996; Autor et al. 2006; Acemoglu and Restrepo 2022). Racial inequalities among male displaced workers may have been especially severe during the Great Recession due to massive and permanent reductions in employment in middle-paying routine jobs (Kalleberg and Von Wachter 2017; Rothstein 2017; Hershbein and Kahn 2018; Jaimovich and Siu 2020).

Among women, a Black disadvantage in earnings loss is only observed during periods of expansion in the 1990s and 2010s after adjusting for differences on observables. It is possible that recessions have an outsized effect on racial inequalities among men because aggregate employment effects are largely confined to routine jobs where male workers are concentrated. Indeed, the Great Recession had its greatest effect on industries with disproportionately male workforces, leading to larger increases in unemployment among men than among women (Hartmann et al. 2010; Sahin et al. 2010). As a result, racial inequalities in earnings losses among displaced female workers are not significant during the Great Recession and point estimates also do not meaningfully differ from the years immediately before the recession.

Last, this study provides some more analytical leverage to understand patterns of racial and gender discrimination in the labor market. Job displacement is largely exogenous to individual workers' traits. Unlike firings or voluntary quits, layoffs, plant closings, and the like are driven by organizational and macroeconomic factors that are not connected to individual workers' performance or productivity (e.g. plant closings or layoffs due to declining product

demand), providing analysts with a quasi-exogenous source of variation in workers' exposure to the labor market (Madden 1987; Brand 2015). Wage changes and other economic inequalities observed among displaced workers therefore offer an opportunity to examine racial and gender discrimination in the labor market. Discrimination is most apparent in the labor market matching process, where White men and women are consistently much more likely to find new jobs than Black men and women, and they find new jobs much more quickly. These results are consistent with well documented patterns of racial discrimination in hiring (Pager et al. 2009; Quillian et al. 2017) and job search (Fryer et al. 2013; Pager and Pedulla 2015; Pedulla and Pager 2019). They also point to prolonged periods of unemployment as an important dimension of racial stratification among men and women the labor market, and, combined with results from the Heckman-corrected earnings regressions, highlight how racial disparities in the selection process for reemployment mask large racial inequalities in the effect of displacement on earnings.

While these analyses provide novel and up-to-date insights into the dynamics underlying racial inequalities following job displacement, they are not without limitations. First, the structure of DWS data only allows analysts to observe short-run consequences of job displacement. Displaced workers in the DWS supplement lost their jobs a maximum of three years prior to the survey date, therefore precluding analysts from studying the long-term effects of job displacement. Future research should investigate racial and gender differences in long-term scarring from job displacement. Second, these analyses do not directly examine how other dimensions of job quality change with job displacement. While displacement leads to racial inequalities in unemployment, job search, and in some cases earnings, I do not show whether similar racial inequalities manifest in hours, schedule variability, job tasks, and other nonmonetary dimensions of job quality. Future research may be interested in examining whether

job quality moves in tandem with earnings, or if some earnings inequalities are mitigated by compensating differentials. Last, these analyses do not consider whether racial inequalities in unemployment and earnings are at all offset by other sources of income such as unemployment insurance. While social welfare supports have the potential to ease the burden of job displacement, large and persistent racial inequalities in unemployment insurance uptake (Gould-Werth and Shaefer 2012; Kuka and Stuart 2021; Skandalis, Marinescu, and Massenkoff 2022) suggest they may not alleviate racial inequalities from job displacement.

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Tables

Table 1. Descriptive statistics of analytic sample

	1980-1982	1983-1989	1990-1991	1992-2000	2001	2002-2007	2008-2009	2010-2020
Black	11.26	11.15	10.79	10.3	11.4	11.59	12.33	12.28
Female	36.51	37.66	38.49	42.73	40.15	42.51	37.26	40.89
Married	61.76	60.42	59.15	57.94	55.83	56.04	53.12	53.17
Children under 5	0.26	0.24	0.22	0.22	0.2	0.2	0.18	0.16
Education								
Less than HS	22.62	17.66	12.1	8.15	6.99	6.23	5.31	4.08
High school	47.71	47.13	41.83	36.52	34.64	34.42	34.86	28.4
More than HS	29.67	35.2	46.07	55.33	58.37	59.35	59.82	67.52
Potential experience	17.35	17.72	18.61	19.87	20.63	21.95	22.55	22.99
Tenure (lost job)	4.53	4.84	4.88	5.35	5.11	5.63	5.61	5.55
Currently employed	59.02	63.83	58.36	72.89	64.44	69.57	53.12	66.57
Moved since displacement	19.2	16.31	15.09	16.12	11.71	13.82	12.1	12.13
Years since displacement	2.43	1.82	1.73	1.82	1.72	1.82	1.81	1.74
Weekly earnings (year-2000 dollars, lost job)	534.14	559.36	603.33	666.77	788.16	755.55	743.9	771.66
Weekly earnings (year-2000 dollars, current job)	463.37	501.18	504.3	603.51	643.35	648.05	630.04	700.27
Proportional change in earnings	-0.10	-0.06	-0.11	-0.03	-0.12	-0.08	-0.14	-0.02
N	1901	9817	3141	9046	2289	6231	3594	6060

Table 2. Decomposition of Black-White inequality in proportional change in earnings (men)

	1980-1982	1983-1989	1990-1991	1992-2000	2001	2002-2007	2008-2009	2010-2020
White Δ prop earnings	-0.0939***	-0.0260**	-0.103***	-0.00211	-0.103***	-0.0739***	-0.116***	-0.00283
Black Δ prop earnings	-0.0534	-0.0819**	-0.0996+	0.0236	-0.108**	-0.0134	-0.259***	-0.0346
Difference (ΔWhite-ΔBlack)	-0.0404	0.0558+	-0.00321	-0.0257	0.00558	-0.0605	0.143**	0.0318
Explained	-0.00768	0.0306*	-0.00931	-0.0249	0.0186	0.0259	-0.0376	-0.00209
Unexplained	-0.0328	0.0252	0.00610	-0.000811	-0.0130	-0.0865+	0.180***	0.0339
				Explained				
Marital status	0.00274	0.00161	0.00222	-0.00334	-0.00137	0.00621	-0.000531	0.00284
	(+6.78%)	(+2.89%)	(+69.16%)	(-13.00%)	(-24.55%)	(+10.26%)	(-0.37%)	(+8.93%)
Education	-0.00457	-0.00251	0.00216	-0.00371	0.00212	0.00436	-0.00329	-0.00158
	(-11.31%)	(-4.50%)	(+67.29%)	(-14.44%)	(+37.99%)	(+7.21%)	(-2.30%)	(-4.97%)
Potential experience	-0.00119	-0.00182	-0.00590	-0.00857**	-0.000117	-0.00743*	-0.0122*	-0.00916*
	(-2.95%)	(-3.26%)	(-183.80%)	(-33.35%)	(-2.10%)	(-12.28%)	(-8.53%)	(-28.81%)
Years tenure (lost job)	0.00480	0.00606	0.000385	-0.00712*	0.00604	-0.00887**	-0.0106*	-0.00907**
	(+11.88%)	(+10.86%)	(+11.99%)	(-27.70%)	(+108.24%)	(-14.66%)	(-7.41%)	(-28.52%)
Occupation and industry (lost job)	-0.0219	-0.0197**	-0.0143	-0.0260***	0.00140	-0.0120	-0.0221	-0.0174*
	(-54.21%)	(-35.30%)	(-445.48%)	(-101.17%)	(+25.09%)	(-19.83%)	(-15.45%)	(-54.72%)
Occupation and industry (current job)	0.0273	0.0330***	0.0172	0.0203*	0.0322	0.00488	0.0193+	0.0271**
	(+67.57%)	(+59.14%)	(+535.83%)	(+78.99%)	(+577.06%)	(+8.07%)	(+13.50%)	(+85.22%)
Full-time (current job)	0.00770	0.0172**	0.0125	0.00225	0.0205	0.0156*	0.0251*	0.00941
	(+19.06%)	(+30.82%)	(+389.41%)	(+8.75%)	(+367.38%)	(+25.79%)	(+17.55%)	(+29.59%)
Moved	0.000618	-0.00190	0.000918	0.000615	0.000250	0.000167	0.000754	-0.00000733
	(+1.53%)	(-3.41%)	(+28.60%)	(+2.39%)	(+4.48%)	(+0.28%)	(+0.53%)	(-0.02%)
Region fixed effects (current)	-0.00496	-0.00336	-0.0234+	-0.00691	-0.0157	0.00891	-0.0236	0.000875
	(-12.28%)	(-6.02%)	(-728.97%)	(-26.89%)	(-281.36%)	(+14.73%)	(-16.50%)	(+2.75%)
Year job loss fixed effects	-0.000245	0.000227	-0.00359	-0.00104	0	0.000348	-0.00169	-0.000125
	(-0.61%)	(+0.41%)	(-111.84%)	(-4.05%)	(0.00%)	(+0.58%)	(-1.18%)	(-0.39%)
				Unexplained				
Marital status	-0.0203	-0.0452	0.218+	-0.0149	-0.0370	0.0194	-0.00263	0.0225
	(-50.25%)	(-81.00%)	(+6791.28%)	(-57.98%)	(-663.08%)	(+32.07%)	(-1.84%)	(+70.75%)
Education	-0.120	0.0493	0.146	0.0150	-0.307	-0.211	0.113	-0.138
	(-297.03%)	(+88.35%)	(+4548.29%)	(+58.37%)	(-5501.79%)	(-348.76%)	(+79.02%)	(-433.96%)
Potential experience	-0.386+	0.0376	0.0430	-0.0925	-0.109	0.0133	-0.210*	-0.162+
	(-955.45%)	(+67.38%)	(+1339.56%)	(-359.92%)	(-1953.41%)	(+21.98%)	(-146.85%)	(-509.43%)
Years tenure (lost job)	0.0937	-0.00272	-0.170*	0.0642+	-0.0779	0.00769	-0.0462	0.0614*
	(+231.93%)	(-4.87%)	(-5295.95%)	(+249.81%)	(-1396.06%)	(+12.71%)	(-32.31%)	(+193.08%)
Occupation and industry (lost job)	-0.00760	-0.000727	1.617+	-0.290	-0.496	0.475	0.412	0.554*
	(-18.81%)	(-1.30%)	(+50373.83%)	(-1128.40%)	(-8888.89%)	(+785.12%)	(+288.11%)	(+1742.14%)
Occupation and industry (current job)	0.678	-0.0713	0.652	0.242	0.661	-0.109	-0.0233	-0.0139
	(+1678.22%)	(-127.78%)	(+20311.53%)	(+941.63%)	(+11845.88%)	(-180.17%)	(-16.29%)	(-43.71%)
Full-time (current job)	-0.272	-0.0924	0.220	0.0608	-0.209	-0.148	-0.0946	0.0600
	(-673.27%)	(-165.59%)	(+6853.58%)	(+236.58%)	(-3745.52%)	(-244.63%)	(-66.15%)	(+188.68%)
Moved	-0.105*	-0.00206	0.0694+	-0.00205	0.0451	-0.0253	-0.00273	-0.0222
	(-259.90%)	(-3.69%)	(+2161.99%)	(-7.98%)	(+808.24%)	(-41.82%)	(-1.91%)	(-69.81%)
Region fixed effects (current)	-0.0181	0.174	0.285	-0.436**	0.0379	-0.441**	0.247	-0.185
	(-44.80%)	(+311.83%)	(+8878.50%)	(-1696.50%)	(+679.21%)	(-728.93%)	(+172.73%)	(-581.76%)
Year job loss fixed effects	-0.0415	0.101	0.119**	0.0496	0	-0.0794	-0.0949	0.00835
	(-102.72%)	(+181.00%)	(+3707.17%)	(+193.00%)	(0.00%)	(-131.24%)	(-66.36%)	(+26.26%)
Constant	0.148	-0.0238	-3.190*	0.103	7.631***	-0.484	-0.358	-1.474*
	(+366.34%)	(-42.65%)	(-99376.95%)	(+400.78%)	(+136756.27%)	(-800.00%)	(-250.35%)	(-4635.22%)
N	762	3974	1130	3867	892	2545	1190	2418

Note: +p<0.10 *p<0.05 **p<0.01 ***p<0.001; robust standard errors; all models adjusted for year of job displacement fixed effects. Family structure includes marital status and number of children.

Table 3. Decomposition of Black-White inequality in proportional change in earnings (women)

	1980-1982	1983-1989	1990-1991	1992-2000	2001	2002-2007	2008-2009	2010-2020
White Δ prop earnings	-0.0994**	-0.0833***	-0.136***	-0.0478***	-0.168***	-0.107***	-0.167***	-0.0182
Black Δ prop earnings	-0.279***	-0.108***	-0.0245	-0.128***	-0.0770	-0.146***	-0.210***	-0.0937**
Difference (ΔWhite-ΔBlack)	0.180*	0.0250	-0.112	0.0798**	-0.0910	0.0381	0.0435	0.0755*
Explained	0.205*	-0.0159	0.0260	0.0130	0.000218	0.0117	0.00866	-0.0304
Unexplained	-0.0254	0.0408	-0.138	0.0668*	-0.0912	0.0264	0.0348	0.106*
				Explained				
Marital status	0.0103	-0.000940	0.00204	0.00126	0.000730	-0.00173	0.00706	-0.000547
	(+5.72%)	(-3.76%)	(+1.82%)	(+1.58%)	(+0.80%)	(-4.54%)	(+16.23%)	(-0.72%)
Education	0.0287	0.000645	0.00392	-0.00116	-0.00191	-0.000933	0.00188	-0.0142
	(+15.94%)	(+2.58%)	(+3.50%)	(-1.45%)	(-2.10%)	(-2.45%)	(+4.32%)	(-18.81%)
Potential experience	0.0112	-0.00678*	0.000354	-0.00209	0.000758	-0.00324	-0.00980+	-0.00834+
	(+6.22%)	(-27.12%)	(+0.32%)	(-2.62%)	(+0.83%)	(-8.50%)	(-22.53%)	(-11.05%)
Years tenure (lost job)	0.00104	0.00595*	0.0115+	-0.00536+	0.00181	0.00434	0.0000158	-0.00402
	(+0.58%)	(+23.80%)	(+10.27%)	(-6.72%)	(+1.99%)	(+11.39%)	(+0.04%)	(-5.32%)
Occupation and industry (lost job)	0.00984	-0.0153+	0.0201	-0.00656	-0.0295	-0.00444	0.00666	-0.0352*
	(+5.47%)	(-61.20%)	(+17.95%)	(-8.22%)	(-32.42%)	(-11.65%)	(+15.31%)	(-46.62%)
Occupation and industry (current job)	0.0509	0.0173+	-0.0182	0.0296***	0.0151	0.0211*	0.0179	0.0230+
	(+28.28%)	(+69.20%)	(-16.25%)	(+37.09%)	(+16.59%)	(+55.38%)	(+41.15%)	(+30.46%)
Full-time (current job)	0.0640*	-0.00152	-0.0253	-0.00456	0.0153	0.00476	-0.0244	0.00960
	(+35.56%)	(-6.08%)	(-22.59%)	(-5.71%)	(+16.81%)	(+12.49%)	(-56.09%)	(+12.72%)
Moved	0.00143	-0.000138	-0.00467	-0.00218	0.00349	-0.000462	0.00862	0.00113
	(+0.79%)	(-0.55%)	(-4.17%)	(-2.73%)	(+3.84%)	(-1.21%)	(+19.82%)	(+1.50%)
State fixed effects (current)	0.0392	-0.00318	0.00977	-0.00647	-0.00220	-0.00628	-0.0110	0.0206
	(+21.78%)	(-12.72%)	(+8.72%)	(-8.11%)	(-2.42%)	(-16.48%)	(-25.29%)	(+27.28%)
Year job loss fixed effects	-0.00195	0.000393	-0.00167	-0.00384	0	0.000446	-0.00187	-0.0111
	(-1.08%)	(+1.57%)	(-1.49%)	(-4.81%)	(0.00%)	(+1.17%)	(-4.30%)	(-14.70%)
				Unexplained				
Marital status	-0.0556*	-0.0155	0.140	-0.0235	0.00215	0.000445	0.0740+	-0.00454
	(-30.89%)	(-62.00%)	(+125.00%)	(-29.45%)	(+2.36%)	(+1.17%)	(+170.11%)	(-6.01%)
Education	-0.0869	0.145+	0.0962	-0.0714	-0.193	0.0374	0.109	-0.187
	(-48.28%)	(+580.00%)	(+85.89%)	(-89.47%)	(-212.09%)	(+98.16%)	(+250.57%)	(-247.68%)
Potential experience	-0.0662	0.0834+	0.0699	0.0122	0.115	-0.245*	0.188	-0.00434
	(-36.78%)	(+333.60%)	(+62.41%)	(+15.29%)	(+126.37%)	(-643.04%)	(+432.18%)	(-5.75%)
Years tenure (lost job)	-0.519***	-0.0499	0.0621	-0.0196	-0.0130	0.0361	-0.109+	0.0213
	(-288.33%)	(-199.60%)	(+55.45%)	(-24.56%)	(-14.29%)	(+94.75%)	(-250.57%)	(+28.21%)
Occupation and industry (lost job)	-0.304	0.219	0.522	-0.246	0.163	0.589*	-2.279***	0.504
	(-168.89%)	(+876.00%)	(+466.07%)	(-308.27%)	(+179.12%)	(+1545.93%)	(-5239.08%)	(+667.55%)
Occupation and industry (current job)	1.423***	0.534*	-0.191	-0.242	0.789	-0.303	0.820+	-0.489+
	(+790.56%)	(+2136.00%)	(-170.54%)	(-303.26%)	(+867.03%)	(-795.28%)	(+1885.06%)	(-647.68%)
Full-time (current job)	0.553***	-0.0401	0.200	-0.00535	-0.00992	-0.104	-0.00973	-0.00113
	(+307.22%)	(-160.40%)	(+178.57%)	(-6.70%)	(-10.90%)	(-272.97%)	(-22.37%)	(-1.50%)
Moved	-0.0698	0.000871	0.0983+	-0.000748	0.0184	-0.0230	0.00682	0.00819
	(-38.78%)	(+3.48%)	(+87.77%)	(-0.94%)	(+20.22%)	(-60.37%)	(+15.68%)	(+10.85%)
State fixed effects (current)	-0.410	0.311	-0.746+	0.224*	-0.00704	-0.0863	0.376	-0.290*
	(-227.78%)	(+1244.00%)	(-666.07%)	(+280.70%)	(-7.74%)	(-226.51%)	(+864.37%)	(-384.11%)
Year job loss fixed effects	-0.651***	0.0802	-0.111	0.0208	0	0.101	-0.0397	-0.0705
	(-361.67%)	(+320.80%)	(-99.11%)	(+26.07%)	(0.00%)	(+265.09%)	(-91.26%)	(-93.38%)
Constant	0.266	-0.380	-1.761	0.645+	0.466	0.655	1.507+	0.643
	(+147.78%)	(-1520.00%)	(-1572.32%)	(+808.27%)	(+512.09%)	(+1719.16%)	(+3464.37%)	(+851.66%)
N	359	2292	703	2727	583	1790	719	1615

Note: +p<0.10 *p<0.05 **p<0.01 ***p<0.001; robust standard errors; all models adjusted for year of job displacement fixed effects. Family structure includes marital status and number of children.

Table 4. Racial inequality in proportional change in earnings after job displacement

	Men			Women		
	OLS (1)	OLS (2)	Heckman	OLS (1)	OLS (2)	Heckman
1980-1982	0.0414	0.0501	-0.198*	-0.187*	-0.0504	-0.277**
1983-1989	-0.0565*	-0.0541+	-0.0495+	-0.0244	-0.0388	-0.0290
1990-1991	0.000533	-0.0302	-0.178*	0.110	0.126	0.147+
1992-2000	0.0254	-0.0131	-0.0105	-0.0841**	-0.100***	-0.0955***
2001	-0.00558	-0.0191	-0.0142	0.0910	0.105	-0.117
2002-2007	0.0616	0.0561	-0.0148	-0.0399	-0.0461	-0.0347
2008-2009	-0.144**	-0.212***	-0.455***	-0.0455	-0.0506	-0.0516
2010-2020	-0.0330	-0.0415	-0.0389	-0.0776+	-0.0942*	-0.0905
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	Yes	No	Yes	Yes

Note: +p<0.10 *p<0.05 **p<0.01 ***p<0.001; robust standard errors. Coefficients are the marginal effect of race (reference=white) on change in proportional earnings obtained from OLS models without (1) and with (2) controls and from Heckman-corrected models. All models controls for year of job loss fixed effects. Additional controls include marital status, educational attainment, potential experience, years tenure (lost job), occupation (lost job), industry (lost job), moved since job displacement, and Census region fixed effects. Heckman selection equation includes a categorical variable indicating whether respondent has 0 children in household, at least one child under 5 years old in household, or children only 5 years or older in household.

Figures

Figure 1. Unadjusted proportional changes in earnings

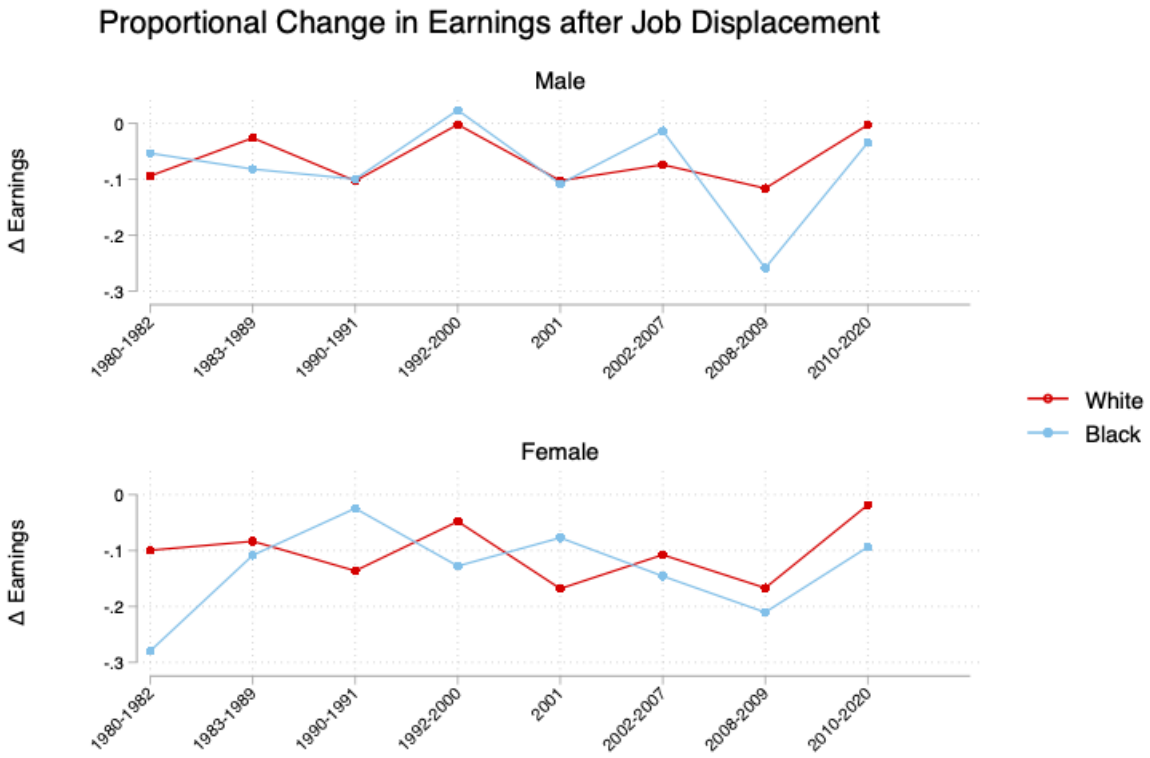
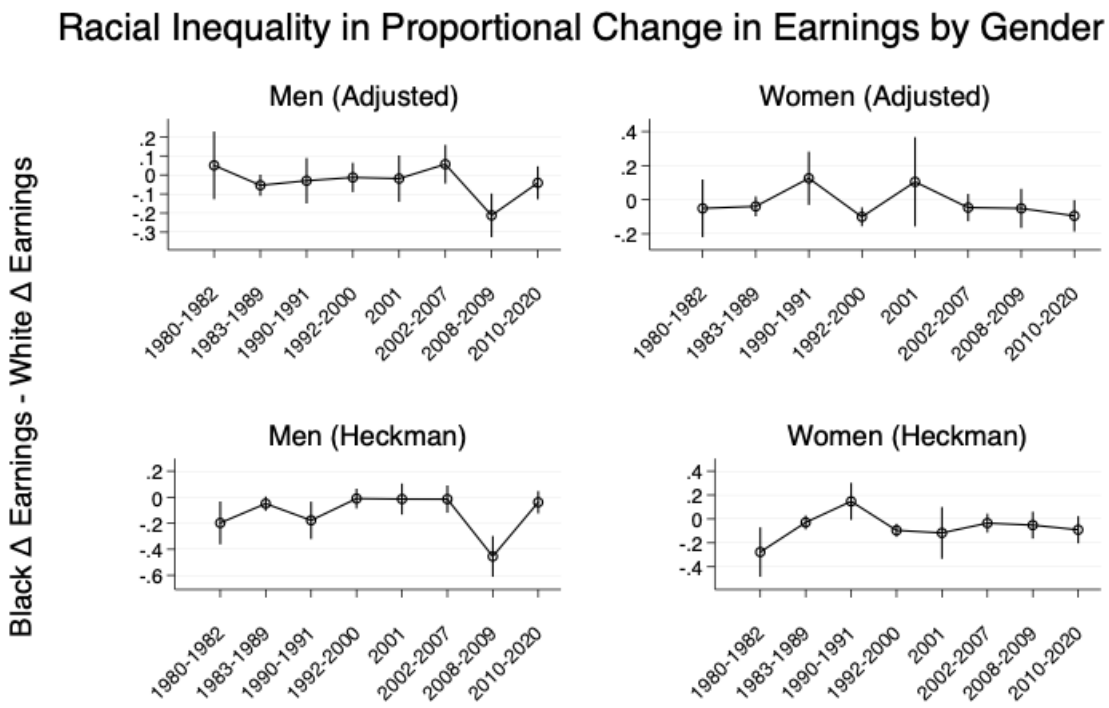


Figure 2. Racial inequality in proportional change in earnings by gender



Appendix 1: Heckman Correction

Analyses in this paper are concerned with identifying the effect of race (x) on the proportional change in real weekly earnings (y) among displaced workers. One important source of endogeneity to address in analyses of the effect of race on earnings is selection bias. Selection bias refers to censorship of the dependent variable due to nonrandom selection into the sample. Nonrandom selection into the sample can be due to decisions made by the analyst or by the unit of observation. In this case, I am concerned with what Heckman (1979) refers to as bias from "self-selection" of individuals into the sample of workers with observable earnings after job displacement vis-à-vis their decision to become reemployed. I am interested in estimating the effect of job displacement on earnings for all displaced workers. But selection into reemployment is nonrandom. It is very likely that individuals who become reemployed after job displacement differ meaningfully from individuals who remain unemployed. They may differ, for example, in earnings potential, reservation wages, or available job opportunities. Therefore, standard OLS estimates of the association between race and change in earnings after job displacement likely to not generalize to the population of displaced workers because they only estimate that association for the subset of displaced workers who find new jobs. The effect of race on earnings changes after job displacement for individuals who remain unemployed likely differs meaningfully from these estimates.

The Heckman correction (Heckman 1979) is a statistical procedure designed to correct for selection bias and estimate the effect of x on y for the entire population of interest – in this case, for all displaced workers, regardless of their current employment status. The procedure uses a control function approach. We are interested in modeling Y_i^* (proportional change in weekly earnings for *all* displaced workers) as a function of covariates X_i:

$$Y_i^* = X_i\beta + \varepsilon_i$$

However, Y_i^* is only observed among reemployed displaced workers (E=1):

$$Y_i = \begin{cases} Y_i^* \text{ if } E = 1 \\ \cdot \text{ if } E = 0 \end{cases}$$

Selection into reemployment can be modeled using a probit regression:

$$P(E_i = 1|Z) = \Phi(z_i\gamma)$$

where Z is a set of explanatory variables that predict selection into reemployment. Under the assumption that the error terms are jointly normal, Y_i can be modeled as:

$$(Y_i|E = 1) = X_i\beta + \rho\sigma_\varepsilon\lambda(Z_\lambda)$$

where ρ is the correlation between the error terms the equations modeling workers' likelihood of finding reemployment and workers' earnings and λ is the inverse Mills ratio evaluated at Z_λ. Including the inverse Mills ratio λ estimated from the selection equation in the earnings model allows analysts to estimate the effect of X on Y net of selection bias if selection variables Z are valid instruments. Therefore, Z must 1) be a strong predictor of selection E (relevance) and 2) have no direct effect on the outcome Y (exclusion restriction).

I use a categorical variable describing the presence and ages of own children in respondents' household as the instrument Z. The variable is coded as 0 if respondent has no own children in the household, 1 if the respondent has any own child less than 5 years old in the household, and 2 if the respondent has own children in the household who are all at least 5 years old. Presence, number, and age of children in the household are often used to model selection into employment in Heckman-style models (e.g. Heckman 1974; Angrist and Evans 1998). Table A1 presents coefficient estimates on this variable from the selection equations. Athrho is the inverse hyperbolic tangent transformation of the correlation between the error terms in the selection and earnings equations, and significant values indicate that there is nonrandom

selection into the sample. Strong significant associations between the selection variable and employment suggest the variable is a relevant instrument in predicting employment.

A1.1 Coefficients on selection variables from Heckman selection equation

				Men				
	1980-1982	1983-1989	1990-1991	1992-2000	2001	2002-2007	2008-2009	2010-2020
Children (reference=no children)								
Any children < 5 years old	0.203*	0.0669	-0.121	0.105	0.304*	0.0645	0.100+	-0.0369
Children in HH all older than 5	0.0644	0.231***	-0.0940+	0.130*	0.186+	0.0329	0.0108	0.176**
Athrho	1.938***	-0.0629*	1.851***	-0.0317	-0.0731	2.099***	2.194***	-0.0403
				Women				
	1980-1982	1983-1989	1990-1991	1992-2000	2001	2002-2007	2008-2009	2010-2020
Children (reference=no children)								
Any children < 5 years old	-0.281+	-0.348***	-0.556***	-0.326***	-0.0838*	-0.312**	-0.419**	-0.0258
Children in HH all older than 5	0.0598	0.0370	0.0887	0.133*	0.0881	0.0488	0.0235	0.0843***
Athrho	1.609***	-0.125***	-0.189***	-0.0828*	16.74***	-0.107***	0.0133	15.78***

The exclusion restriction cannot be directly tested empirically. However, it seems unlikely that firms' wage offers would be influenced by individual workers' household composition.

Appendix 2. Racial Inequalities in Reemployment and Job Search

Hypothesis 3 predicts that racial differences in patterns of reemployment after job displacement upwardly bias estimates of Black workers' post-displacement earnings and bias estimates of racial inequalities in the effect of displacement on earnings towards zero. If White workers are hired over otherwise similarly qualified Black workers, there will remain a large pool of relatively highly skilled Black workers who remain unemployed. These workers may remain unemployed because they cannot find a job that pays above their reservation wage. Were they to become reemployed, it is possible that they would experience substantial downward mobility because hiring discrimination diminishes the quality of their available options for new jobs. In what follows I test the claim that Black displaced workers are disadvantaged in reemployment and job search relative to similar White displaced workers.

Methods

Reemployment

I use linear probability models to examine how Black and White displaced workers differ in their probability of being reemployed at the survey date. I run separate analyses for men and women for each period. I specify linear probabilities models of being employed as:

$$P(\mathrm{Emp}_i) = \beta_0 + \beta_1(\mathrm{Black}_i) + X\gamma + \epsilon_i \qquad (4)$$

Emp_i is a binary indicator for whether the respondent is employed at the time of survey. X represents a vector of control variables including marital status, education, potential experience, tenure at lost job, occupation and industry of lost job, whether the respondent moved since losing their job, year of job displacement, and region fixed effects.

Job search

Racial inequalities in job search for men and women are modeled using Cox proportional hazards models specified as follows:

$$h(t;z) = h_0(t)exp(\delta \text{Black}_i + X\beta) \quad (5)$$

where time is defined in weeks of unemployment after job displacement and failure is defined as obtaining any new job. δ describes the Black-White difference in the expected logarithm of the hazard of becoming reemployed. Exponentiated coefficients are reported and describe the ratio of Black and White hazards of reemployment. X represents the same vector of control variables as above including individual characteristics, lost job characteristics, and region and year fixed effects.

Results

Evidence that Black workers are less likely to find work than otherwise similar White workers would be consistent with racialized labor queues and selection patterns that would produce a downward bias in estimates of racial inequality in earnings after job displacement. First, I assess whether Black displaced workers are less likely to find reemployment than similar White displaced workers. Tables A2.1 and A2.2 present estimates of racial inequalities in the probability of reemployment and the duration of job search, respectively, among male and female displaced workers. Across all outcomes and time periods, we see that Black men and women are consistently disadvantaged in job search compared to their White counterparts. Reemployment rates for Black men and women are typically 10 to 15 percentage points lower than for White men and women. Racial inequalities in reemployment rates were also much larger for men and women during recessions in the early 1980s and 1990s and among men during the

Great Recession. Inequalities in job search duration show similar patterns. Raw differences in number of weeks unemployed and in estimates from Cox proportional hazards models are also consistent with racialized labor queues, indicating that racial inequalities in job search among men and women persist even after adjusting for differences on observables. For both men and women, large racial inequalities in job search duration attenuated somewhat between the 1980s and mid-2000s. Among men, these inequalities grew during the Great Recession while inequality among women continued to decline. Strong and persistent inequalities in reemployment among similar Black and White workers are consistent with selection patterns that would underestimate the disproportionate negative effect of job displacement on Black workers' earnings.

A2.1. Re-employment rates by race and gender

				Men			
	Unadjusted			Adjusted			
Year displaced	White	Black	Difference	White	Black	Difference	N
1980-1982	0.663	0.411	-0.252***	0.662	0.416	-0.246***	1207
1983-1989	0.670	0.537	-0.133***	0.666	0.564	-0.103***	6120
1990-1991	0.621	0.456	-0.165***	0.618	0.475	-0.144**	1932
1992-2000	0.763	0.643	-0.120***	0.762	0.652	-0.110***	5181
2001	0.666	0.570	-0.0957+	0.665	0.574	-0.0907+	1370
2002-2007	0.706	0.641	-0.0649*	0.705	0.646	-0.0591*	3582
2008-2009	0.535	0.356	-0.178***	0.535	0.355	-0.180***	2255
2010-2020	0.687	0.608	-0.0792*	0.687	0.608	-0.0793**	3582
Year fixed effects	Yes			Yes			
Controls	No			Yes			
				Women			
	Unadjusted			Adjusted			
Year displaced	White	Black	Difference	White	Black	Difference	N
1980-1982	0.540	0.302	-0.237***	0.541	0.290	-0.251***	694
1983-1989	0.645	0.523	-0.122***	0.646	0.522	-0.124***	3697
1990-1991	0.625	0.472	-0.153***	0.625	0.472	-0.153***	1209
1992-2000	0.720	0.633	-0.0878***	0.719	0.638	-0.0812**	3865
2001	0.647	0.518	-0.129*	0.648	0.515	-0.133**	919
2002-2007	0.680	0.542	-0.138***	0.679	0.548	-0.131***	2649
2008-2009	0.548	0.449	-0.0992*	0.549	0.446	-0.103*	1339
2010-2020	0.655	0.628	-0.0269	0.652	0.641	-0.0110	2478
Year fixed effects	Yes			Yes			
Controls	No			Yes			

Note: +p<0.10 *p<0.05 **p<0.01 ***p<0.001; robust standard errors. Coefficients are the marginal effect of race (reference=white) on employment status obtained from linear probability models. All models control for year of job loss fixed effects. Additional controls include gender, marital status, educational attainment, potential experience, years tenure (lost job), occupation (lost job), industry (lost job), moved since job displacement, and Census region fixed effects.

A2.2. Racial inequality in time to reemployment by gender

	Men					Women				
	Avg. Weeks Unemployed (White)	Avg. Weeks Unemployed (Black)	Cox PH (1)	Cox PH (2)	N	Avg. Weeks Unemployed (White)	Avg. Weeks Unemployed (Black)	Cox PH (1)	Cox PH (2)	N
1980-1982	39.12	53.15	0.727***	0.758**	1129	39.97	63.52	0.620***	0.580***	633
1983-1989	21.43	29.24	0.723***	0.716***	6089	25.61	33.94	0.734***	0.707***	3616
1990-1991	55.69	59.52	0.779**	0.787*	2087	58.12	61.43	0.796*	0.732**	1253
1992-2000	28.47	33.64	0.776***	0.776***	7215	32.67	35.43	0.857***	0.844***	5178
2001	28.37	34.86	0.756**	0.747**	1873	30.15	35.21	0.793**	0.781**	1209
2002-2007	28.38	35.91	0.816***	0.822***	5153	31.75	45.37	0.664***	0.624***	3645
2008-2009	44.56	52.88	0.644***	0.641***	3357	44.89	52.43	0.787**	0.766**	1967
2010-2020	30.86	41.54	0.751***	0.713***	5966	32.97	36.15	0.871**	0.856**	4053
Year fixed effects			Yes	Yes				Yes	Yes	
Controls			No	Yes				No	Yes	

Note: +p<0.10 *p<0.05 **p<0.01 ***p<0.001; robust standard errors. Exponentiated coefficients on indicator variable for race (reference=white) obtained from Cox proportional hazards models. All models control for year of job loss fixed effects. Additional controls include gender, marital status, educational attainment, potential experience, years tenure (lost job), occupation (lost job), industry (lost job), moved since job displacement, and Census region fixed effects.