



National Poverty Center Working Paper Series

#12-01

January 2012

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Sector Employment**

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## **The Great Recession's Impact on African American Public Sector Employment**

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January 10, 2012

### **Abstract**

This study estimates the impact that the recession had on African Americans employed in the public sector. Micro data from the Displaced Worker Survey indicate that even after controlling for personal characteristics and local economic conditions, the difference in the probability of displacement between African American and white public sector respondents increased from zero to a recession gap of 2.8 percentage points, now equaling the private sector gap. The finding suggests that the formal rules that govern public sector layoff decisions ceased to generate race neutral displacement.

The Great Recession generated the largest contraction in total nonfarm employment since World War II. From December 2007 to June 2009, the National Bureau of Economic Research (NBER) defined recession, over 7.4 million (5.4%) jobs were lost, causing the national unemployment rate to jump from 5.0 to 9.5 percent. Men were hardest hit due to the widespread losses in construction and manufacturing. Their unemployment rate climbed from 4.5 to 9.8 percent, compared to an increase of 4.3 to 7.5 percent for women. Women's losses were muted by private sector growth in the education and health services sector.

The deterioration in the labor market status of African Americans, especially men was even worse.<sup>1</sup> African American men started the recession with a jobless rate of 10.0 percent. During the 18-month downturn their unemployment rate almost doubled, peaking at 8.4 percent.<sup>2</sup>

Numerous labor supply, labor demand, and institutional reasons exist as to why African Americans bore the brunt of the recession. They range from labor supply explanations that focus on educational attainment, skills and experience to labor demand problems such as being concentrated in industries and geographic areas that were hardest hit by the downturn. Labor market discrimination also contributed to the disparate impacts.<sup>3</sup> Another explanation for the disparate impacts that has received little attention has been the contraction in public sector employment.

#### *Pressures on State and Local Governments*

During the recession, the budgets of state and local governments came under tremendous pressure. Record declines in tax revenue and large structural budget deficits led to large and widespread budget cuts. Unlike the federal government, each fiscal year,

state and local governments must balance their budgets. They must either cut spending, raise taxes, or a combination of both.

Early in the Great Recession, states tended to rely on across the board and targeted cuts and the tapping of rainy day funds. As the recession deepened, states expanded their use of across-the-board and targeted cuts. They also began to implement fee increases, reductions in local aid, layoffs, and furloughs. Due to the nature of how state budgets are constructed, as the economy began its slow recovery in fiscal year (FY) 2010, even more states chose to use layoffs and furloughs to either reduce or eliminate their budget shortfalls. In FY 2011, the use of layoffs and furloughs began to moderate.

Local governments used similar strategies. From FY 2009 to FY 2011, personnel cuts were the most widely used tools, followed by the delay and cancellation of capital projects. The most common city personnel-related cuts were 1) hiring freezes, 2) salary/wage reductions or freezes, 3) layoffs, 4) early retirements, 5) furloughs, 6) decreased health care benefits, 7) revisions to union contracts, and 8) a decline in pension benefits.

The impact of the type and timing of cuts shows up in the Bureau of Labor Statistics' (BLS) published payroll data. In FY 2008, over 2.2 million private sector jobs were lost, but public sector employment experienced a modest increase. In FY 2009, both sectors contracted. It is important to note that, albeit modestly, the mandate to carry out the decennial census led to continued federal employment growth.

During FY 2010, a twisting occurred between the two sectors. Private sector employment began to expand, while public sector employment began to contract. This pattern continued in FY 2011. The public sector contractions would have been larger if

the variety of state and federal stimulus and emergency packages such as the American Recovery and Reinvestment Act (ARRA) had not been implemented.<sup>4</sup>

#### *Potential Impact on African Americans*

Have the state and local budget cuts had a disparate impact on African Americans? Why might this happen? African Americans comprise a disproportionate share of public sector workers.<sup>5</sup> Public sector employment has historically helped to provide minorities opportunities in the workforce.

The National Urban League's Equality Index illustrates these points. The index consists of five components: economics, health, education, social justice and civic engagement. In 2011, the civic engagement index is the only component that is at parity. In fact, it has been at parity since the League first published the index in 2005. A major reason for parity in the civic engagement index is that African Americans have greater representation in Federal Executive Branch (nonpostal) employment and state and local government employment than whites. If the federal, state, and local cuts have had a disparate impact on African Americans, the civic engagement index could fall from parity, leading to an overall decline in the League's Equality Index.

What should be expected? A priori, the answer is not clear. It lies in the type of public sector jobs that were cut, the relative education and experience of public sector African Americans, and the rules that govern displacement. Further, there is less occupational segregation in the public sector than in the private sector. More African Americans are in occupations that are involved with hiring and firing decisions. This higher stature and the existence of internal labor markets could help to mute or minimize the budget cuts' effects.

### *Methodology and Major Findings*

To explore whether African Americans have been hurt more by public sector cuts, I analyze a variety of sources: published Bureau of Labor Statistics (BLS) data, published EEOC-4 data on state and local employment (full-time, part-time and new hires), and micro data from the 2006, 2008 and 2010 Displaced Worker Surveys (DWS) of the Current Population Survey.

The major findings are as follows:

#### Aggregate BLS Employment Data:

- In 2007, African Americans comprised 14.6 percent of government employment. By 2009, their share had dropped to 14.2 percent of public sector jobs. It remained at 14.2 percent in 2010.
- African Americans in the private sector also experienced a small decline in their share, falling from 10.9 to 10.5 percent. Some of the lost ground was recovered in 2010. Their share ticked up slightly to 10.7 percent.

#### Aggregate EEOC-4 Data:

- The aggregate EEOC-4 data on state and local governments with at least 100 employees indicate that during the recession African Americans expanded their full-time, part-time and new hire shares in the public sector. However, this is largely because they experienced smaller losses than whites.

The DWS evidence contains a very different narrative than the aggregate data.

- Even after controlling for personal characteristics, including industry and occupation at the time of displacement, and local economic conditions, the probability of displacement of public sector African Americans relative to public

sector whites increased from no gap (prior to the recession) to a gap of 2.8 percentage points (during the recession).

- This gap that emerged equals the adjusted private sector black-white displacement gap, which prior to the recession equaled 1.7 and 1.9 percentage points and widened to 2.8 percentage points during the recession.
- Public sector African Americans have a 22 percent lower probability of re-employment relative to white public sector respondents. It exceeds the 16 percentage point gap in the private sector.
- This 22 point disadvantage is solely due to unemployment and not movement out of the labor force.

The paper is organized as follows. Section II describes the macroeconomic context. Section III describes the tools that states utilized to balance their budgets during the recession and weak recovery. Section IV reports evidence from the EEOC-4 files. Section V presents an analysis of micro data from the 2006, 2008 and 2010 Displaced Work Surveys of the Current Population Survey. Section VI concludes the analysis.

### **Macroeconomic Context**

The NBER defined the “Great Recession” as spanning from December 2007 to June 2009. Real Gross Domestic Product contracted by 5.0 percent from the fourth quarter of 2007 to the second quarter of 2009.<sup>5</sup> Nonfarm payroll employment fell by over 7.4 million (5.4 percent). The losses were more than double the average during the last six recessions. The divergence emerged in the seventh to ninth months of the recession, which coincides with the freezing of U.S. financial markets.

As a result, the official U.S. unemployment rate almost doubled, increasing from 5.0 to 9.5 percent. A new feature of the recession was the doubling in the number of Americans that were working part-time, but wanted full-time work, and those that dropped out of the labor force, but if offered a job, would take it. When these individuals are added, the resulting more-comprehensive unemployment rate started at 8.8 percent and ended the recession at 16.6 percent.<sup>6</sup>

### *Disparate Impact*

The recession rewrote the rules for its disparate impact on Americans. Men bore the brunt of the recession. Some analysts call the “Great Recession” a “Mancession”. For example, white men and women had similar pre-recession unemployment rates of 4.5 and 4.3 percent. Men’s unemployment rate jumped to 9.8 percent, while the unemployment rate of women only rose to 7.5 percent. Americans with the most education were not immune to joblessness. The college graduate unemployment rate doubled.

### *Sectoral Variation*

Much of this “new” joblessness can be attributed to the sectors that were hit and the fact that Americans were extremely vulnerable to an economic downturn. The largest job losses occurred in construction (19.8%) and manufacturing (14.6%). The only broad industrial sector that added jobs was the education and health services sector. It expanded by 3.3 percent.

There were also other aspects of the economy that made the recession’s impact deeper. Household debt entered the recession at an all time high. The share of Americans that were employed just prior to the recession (December 2007) was similar to its level at the beginning of the November 2001 recovery. Real earnings and income had also been



stagnant over this pre-recession period. Basically, Americans had little cushion to withstand the recession.

### *Impact on African Americans*

One basic recession rule that remained was the outcome that African Americans bore a disproportionate burden of the downturn. The unemployment rates of African Americans were already close to ten percent at the recession's start. By the recession's eighth month, when the crisis moved beyond the finance and construction sectors and became a personal consumption or aggregate demand recession, the African American unemployment rate crossed the ten percent threshold.

### *Macro Trends*

Where is the macroeconomy and labor market headed? The NBER designated June 2009 as the start of the recovery. The recovery can be divided into two segments: jobless and "pothole" recoveries. The problem facing the economy over these two periods has been the slow pace of economic growth. Real GDP growth has not been consistent with robust job creation (e.g., at least 200,000 per month). All of real GDP growth's major components have been slow to recover, but growth in personal consumption, which comprises seventy percent of real GDP, seems to be the primary culprit that is inhibiting job creation.

### *Implications for Unemployment*

More specifically, from June 2009 to February 2010, real GDP grew at a tepid rate of 2.3 percent. During this segment of the recovery, private sector employment continued to fall (1.1 percent decline). With real GDP growth having crossed the 3.0

percent threshold since February 2010, albeit a modest result, private sector job creation began to grow at an anemic 2.6 percent clip.

What do these macro trends mean for U.S. unemployment? In order for the unemployment rate to begin to fall, average monthly job creation must exceed 130,000 to 150,000. This threshold corresponds to the growth needed to accommodate for natural increases in the population and immigration. During the “jobless recovery,” the unemployment rate continued to rise because private sector employment was still contracting at an average monthly loss of 145,000. The unemployment rate continued to rise, peaking at 10.1 percent in October 2009. Since February 2010, the unemployment rate has neither risen nor fallen because average monthly growth equals 138,000, right in the middle of the breakeven point. At this writing, the unemployment rate has remained above 9.0 percent.<sup>7</sup> State and local tax revenues have been slow to recover.

### **State and Local Budget Cutting Methods and Public Sector Employment**

Table 1 summarizes the strategies from FY 2006 to FY 2011 that states used to reduce or eliminate their budget gaps. Although the NBER defined recession did not start until December 2007, two months into FY 2008, states such as Rhode Island and Maine were already taking steps to address their budget gaps.<sup>8</sup> The most common approaches were the use of targeted cuts and rainy day funds. During the recession’s first year, states expanded their use of targeted cuts, rainy day funds, and other remedies. (See the notes in Table 1.) Layoffs, user fees, and agency reorganization became more common.

In FY 2009 (October 2008 to September 2009), states really began to feel the effects of the recession’s impact on their finances. During this fiscal year, 71 percent used targeted cuts, 45 percent tapped their rainy day funds, 43 percent pursued across the

board cuts, 35 percent reduced local aid, one-third used furloughs and layoffs, and 12 percent implemented early retirement and agency reorganization. Only six percent of states chose privatization as a strategy. With respect to local governments, the National League of Cities (2011) reports that two-thirds of city governments surveyed utilized personnel cuts to address budget shortfalls.

Even though the economy began to recover in the second half of FY 2010, revenue shortfalls still required state and local governments to use a variety of fiscal tools to reduce or eliminate their budget gaps. Most notable, are the increased use of layoffs, furloughs, fees, reduced local aid and agency reorganization. City governments' use of layoffs and hiring freezes also increased.

Based on these patterns of behavior, if African Americans experience a disparate employment impact, it will lag the private sector contraction and occur in FY 2009, FY 2010 and FY 2011. These dates correspond to October 2008 to October 2009, (the last part of the recession), October 2009 to October 2010 (the start of the weak recovery), and October 2010 to October 2011 (the pothole recovery).

#### *Public Sector Drag on Employment Growth*

This delayed use of employment cutting strategies is a partial reason why total nonfarm employment has lagged or failed to exceed the key monthly increase of 130,000 to 150,000.<sup>9</sup> Just as private sector employment growth began to reemerge, public sector employment began to contract. Table 2 reports by fiscal year, private and public sector employment. The table shows that in FY 2008 and FY 2009, over 8 million private sector jobs were lost. During these fiscal years, state and local employment expanded, but

starting in FY 2009, state and local government employment contracted by 30,000 and 67,000.

At the state level, the losses were concentrated in general public sector employment. Education continued to expand. At the local level, the losses were also more general: 10,000 in education and 67,000 in general local governments. State and local employment continued to contract in FY 2010 and FY 2011. In these two fiscal years, state and local employment fell by 78,000 and 423,000. For the latter year, the losses were still concentrated in general government, but the losses did accelerate in local education (-226,000).

#### *Public vs. Private Sector Losses*

It is important to note that in percentage terms the losses are smaller than the FY 2008 private sector losses, the first year of the recession. The public sector losses of 1.3 to 1.5 percent are approximately one-quarter of the peak private sector contraction of 5.5 percent. At this writing, it is unclear whether the losses will accelerate in FY 2012, remain in the 1.3 to 1.5 percent range, or become smaller. The outcome will depend on the ability of state and local governments to raise revenue and address the costs of employee-related health care coverage and pensions.

#### *Public Sector Impact on African Americans*

Aggregate BLS data suggests that the public sector budget cuts had a small disparate impact on African Americans. In 2007, African Americans comprised 14.6 percent of government employment. By 2009, the share had dropped to 14.2 percent of public sector jobs. The percentage remained at 14.2 percent in 2010. Numerically, that

rate corresponds to a drop in African American public sector employment from 3.1 million to 3.0 million in 2009 and 2010.

White public sector employment actually increased from 2007 to 2009 (16.6 million to 16.8 million). However, white public sector employment did fall in 2010 to 16.7 million. African Americans in the private sector also experienced a small decline in their share of private sector employment, falling from 10.9 to 10.5 percent. Some of the lost ground was recovered in 2010. The share ticked up slightly to 10.7 percent.

### **Evidence from the Aggregate EEO-4 Files**

This section utilizes the 2007 and 2009 full-time, part-time, and new hire data reported to the EEOC by state and local governments to disaggregate the previous patterns by gender, occupation and full-time status. The report “Job Patterns for Minorities and Women in State and Local Government (EEO-4),” contains labor force data from state and local governments with 100 or more employees within the 50 U.S. states and District of Columbia. Agencies are required to provide information on their employment totals, employees' job category and salary by sex and race/ethnic groups as of June 30th in the survey year.

Since 1993 the public sector data has been collected biennially in every odd-numbered year. Thus, a drawback to using the EEOC information is that 2011 data are not available at this writing. As a result, I will not be able to show the lagged impact of the recession and weak recovery's impact on public sector employment. Timing is another limitation. The EEOC June 30<sup>th</sup> reporting period differs from the fiscal year reporting period used in documenting methods for reducing or eliminating state budget gaps.

### *Gender and Occupation Effects on African Americans*

Table 3 reports by gender, occupation, and year, the percent that is African American. Table 4 reports the actual changes. The conclusion to be drawn is that the budget cuts have not seriously eroded the “relative” presence of African Americans in state and local government. In fact, their presence in most full and part-time occupations, and their presence in the new hire pool increased. In 2007 and 2009, African American men comprised 15.0 and 15.6 percent of full-time employment. The share increased because white and African American employment fell 4.7 and 0.7 percent.

The percent of African American males increased in each of the following occupations: professional, administrative support, para-professionals and skilled craft and service maintenance occupations. The major contributors to the share increases were the losses of white men in professional (-32,000), administrative support (-7,370), skilled craft (-15,172), and service/maintenance (-16,846) occupations. African American men experienced sizeable absolute losses in protective service, but they were not large enough to erode their occupation share.

Relative to all women, African American women’s share of full-time state and local employment increased from 22.3 to 23.4 percent. The driver behind this shift is that white women’s employment fell 3.7 percent, while African American women’s employment increased 1.8 percent. African American women gained ground in seven of the eight occupations, with the largest increases in professional, technician, para-professional, administrative support and service occupations. The share gains in professional and technician occupations were due to actual gains combined with white women losing jobs in these occupations. In the other occupations, such as administrative

support, the shares of African American women increased because they did not experience the large absolute percentage contractions that white women faced.

#### *Part-Time Shares*

Shifting to part-time employment, African American men maintained their shares during the recession. Skilled craft is the exception. The percentage of African Americans in this occupation fell from 18.2 percent to 12.5 percent. Almost half of African American men in this occupation lost their job. Positive growth in professional, para-professional, service/maintenance, and administrative support and larger white male losses in these occupations helped prevent African American men from losing shares. African American women's lost presence in part-time protective service (30.7 to 20.1 percent) and skilled craft were countered by increases in service/maintenance, administration support and para-professionals.

Finally, and potentially most telling about the future presence of African Americans in the public sector, Panel C indicates that African American men and women both increased their new hire shares significantly. The percentage of African American males hired in 5 of the 8 occupations grew. African American women increased their presence among the pool of new hires in 7 of 8 occupations. The gains are solely due to smaller absolute percentage declines than white men and women. For example, African American men's share in protective service increased because new white male hires contracted by 24.1 percent and new African American male hires only contracted by 15.2 percent.

#### **Evidence from the 2006, 2008 and 2010 CPS Displaced Worker Surveys**

The EEOC-4 data have several drawbacks. They provide an aggregate portrait for each year. Thus, we can't observe the displacement process. The EEOC-4 analysis does not control for worker characteristics and local labor market conditions that influence the chances of displacement. In an attempt to address these drawbacks, this section presents an analysis of the determinants of displacement and re-employment status by class of worker and race. One limitation of this analysis will be that the samples in a given survey are too small to estimate displacement and re-employment rates by race, gender and class of worker simultaneously.

I use the 2006, 2008, and 2010 Displaced Worker Surveys (DWS) of the CPS. Each survey attempts to capture employee terminations that are the result of employer business decisions. A dislocation, which is unrelated to the performance or choices of the given employee, can have three reasons: plant closing, layoff, or abolition of a job. The 2010 survey window coincides with the Great Recession. In January 2010, interviewees were asked:

“During the last three calendar years, that is, January 2007 through December 2009, did (name/you) lose a job or leave one because: (your/his/her) plant or company closed or moved, (your/his/her) position or shift was abolished, insufficient work or another similar reason?”

For 2006 and 2008, the calendar years correspond to January 2003 through December 2005, and January 2005 through December 2007. Job losers are categorized as respondents who reported a job loss in the three calendar years prior to the survey. Based on this information, I construct an estimate of the three-year job loss rate as the number of reported job losers divided by the number of workers who were either



employed at the survey date or reported a job loss but were not employed at the survey date.

### *The Farber Study*

Using the 2010 DWS, (Farber 2011) provided the most comprehensive estimates of the recession's impact on job displacement.<sup>10</sup> His analysis of the displaced worker surveys from 1984 to 2010 indicated that displacement rates for the 2007 through 2009 period are at record levels. Approximately one in six workers (16 percent) reported a job loss from January 2007 through December 2009. The rate jumped to this level from 8.5 percent in the periods from January 2003 through December 2005 and January 2005 through December 2007.

Farber estimated displacement rates by educational attainment. Workers with college degrees had a lower likelihood of displacement, but even their chances of displacement increased from 2007 to 2009. Older workers (45 to 64 years of age) had displacement rates of approximately 8.0 percent from 2003 to 2007, compared to 9.3 to 10.2 percent for 20 to 24 year olds. The displacement rates jumped to 17.6 percent for 20 to 24 year olds and 14.4 percent for 55 to 64 year olds.

Farber also documents the recession's impact on post-displacement labor force attachment. Post-displacement attachment has shifted from employment to unemployment. In the two three-year (2003-05 and 2005-07) periods prior to the recession (2007 to 2009), the post-displacement employment fraction of the population of displaced workers was 66 percent. In the period covering the recession, the fraction that found employment fell to 47.4 percent. The fraction that was unemployed doubled from

20 percent to 40 percent, while the fraction that exited the labor force remained constant. Farber shows a similar dynamic across categories of educational attainment and age.

### *Extending the Farber Results*

Building on Farber's findings, this section estimates displacement rates and post-displacement labor force outcomes by class of worker and race. I am most interested in comparing public sector African Americans to private sector African Americans, and public sector African Americans to public sector whites. Table 5 reports summary statistics for private sector, federal, state, and local government respondents. During the recession, African American public sector respondents have higher displacement rates than white public sector workers.

Relative to African American private sector respondents, the odds of displacement are much lower for federal workers, the same for state workers, and higher for local workers. These relations held in the surveys prior to the recession. The lower levels of educational attainment and experience (age serves as a proxy) of local government respondents contributes to their higher displacement rate.

The summary statistics also report post-displacement labor force status at the time of the survey. Was a displaced respondent employed, unemployed, or not in the labor force? Prior to the recession, African American public sector respondents tended to have lower re-employment rates than white public sector respondents, but sizeable gaps emerged during the recession. For example, African American state and local re-employment rates dropped from over two-thirds in the periods prior to the recession to between 43.2 and 50.6 percent. Compared to private sector African Americans, state and local African Americans have higher re-employment rates.

These comparisons are not fully informative because I have not controlled for the characteristics (e.g., age and educational attainment) of the respondents. For example, local government African Americans are younger and have less education. Their average age is 38, compared to averages that range from 40 to 45 for other public sector and private sector respondents.

Only one-fifth have a BA degree. One-third to one-half of African Americans and whites in federal and state government and the private sector possess BA degrees. Even one-third of whites in local government have BA degrees. This fact will explain why they have higher displacement rates and low re-employment rates. If sizeable differences remain once controls are added, then we might begin to conclude that the rules and human resource policies that govern public sector layoffs changed during the recession, such that African American public sector workers became systematically disadvantaged.

### *Probit Analysis*

To adjust the displacement rate gaps for personal characteristics and local labor market conditions, I estimate probit models where the dependent variable is a dummy variable that equals 1 if the individual experienced displacement, and zero else. Dummy variables for race and ethnicity, class of worker, gender, educational attainment, and marital status are included. Age and the metropolitan area unemployment rate are included in their linear form. A second model, adds detailed information about the industry and occupation at the time of displacement. To assess whether African American public sector workers have higher odds of displacement than white public sector workers, I limit the samples to public sector respondents and re-estimate the probit models.

Table 6 reports black-white gaps (differences) in the probability of displacement. Each row corresponds to a different outcome: displacement, post-displacement employment and unemployment. The standard errors are in parenthesis. For example, row 1 of Panel A reports the unadjusted black-white displacement rate gap. The estimate in the column labeled “All 2006” indicates that African Americans have a 2.0 percentage point higher likelihood of displacement than a white respondent. The difference expands to 2.2 percentage points in the 2008 survey, and increases further to 2.4 percentage points in the 2010 survey.

For public sector respondents, the unadjusted black-white gap was basically zero in 2006 and 2008, but a 3.6 percent gap emerged in 2010. After controlling for personal characteristics the odds that public sector African Americans face displacement relative to public sector whites during the recession falls from 3.6 to 2.8 percent. Panel C shows that even after adding occupation and industry information, a precisely estimated gap of 2.7 percent remains.

#### *Impact of Layoff Rules*

The most troubling feature of this 2.7 percentage point gap is that it is not significantly different from the overall black-white displacement gap of 3.1 percent, which started as a pre-recession adjusted gap of 1.8 and 1.9 percentage points. These findings suggest that the more formal rules of layoff in the public sector ceased to generate race neutral displacement outcomes between blacks and whites in the public sector.

Are the 2.7 to 3.1 percentage point gaps economically meaningful? One way of answering this question is to compare the gap to the average displacement rates of public

sector African Americans. Table 5 reports the average public sector displacement rates of African Americans during the recession as 6.8 percent for federal workers, 9.8 percent for state workers, and 17.5 percent for local workers. Thus, the recession black-white displacement gap of 2.7 percent is 39.7 percent, 27.6 percent, and 15.4 percent, respectively, of the average displacement rates of federal, state, and local public sector African Americans.

Another way to answer this question is to use the estimated relationships from the probit models and the changes in the predictor variables' means from 2006/2008 to 2010 and generate predicted increases in the displacement rate and compare them to the actual change in the displacement rate. An examination of the summary statistics in Table 5 indicates that the metropolitan unemployment rate was the only predictor variable that significantly changed. The average metropolitan area unemployment rate for African American local government respondents increased from 5.6 in 2008 to 9.4 percent in 2010, a 3.8 percentage point increase.

#### *Unemployment Not an Explanation of Differential Displacement*

How much would this 3.8 percentage point increase contribute to the actual increase in the local public sector displacement rate of 5.3 percentage points (12.2% to 17.5%)? The answer is none because the metropolitan area unemployment rate has no impact on the displacement chances of local government respondents. In the 2010 survey, the estimated change in the probability of displacement for a local public sector worker associated with a 1 percentage point increase in the metropolitan area unemployment rate equals 0.0013, with a standard error of 0.0011. The estimated change is basically zero.<sup>11</sup>

#### *Alternative Explanations of Differential Displacement*

Other explanations for the emergence of an unexplained black-white displacement gap need to be explored. For example, the attempts to weaken the collective bargaining power of public sector unions in key states such as Wisconsin, New Jersey, and Ohio are well documented. This erosion in power could raise displacement rates for all public sector workers and have a disparate impact on African Americans if the union can no longer reduce the effects of discrimination. I may also have excluded a characteristic that has become correlated with race and predicts displacement.<sup>12</sup>

What else changed during the recession that might explain the higher public sector African American displacement rate? Table 7 reports that prior to the recession, over 50 percent of public sector displacement was due to the position being abolished. During the recession, the reason for public sector displacement shifted from plant closure to insufficient work. The shift was larger for African Americans. Future work needs to identify whether displacement rules differ when “insufficient work” drives employee cut backs and how this mechanism would have a disparate impact on African Americans.

#### *Post-Displacement Outcomes*

What happens after displacement? Do African Americans have more difficulty obtaining employment? Table 6 reports African American differences in re-employment status. Public sector African Americans face a sizeable re-employment disadvantage relative to white public sector respondents. Unlike the emergence of a displacement rate gap, re-employment for African Americans in the public sector was a major challenge even before the recession.

The existence of a large gap in the 2006 survey, followed by a narrowing in the 2008 survey, and an expansion of the gap in the 2010 survey may be due to the jobless

recovery that developed after the eight-month recession from March 2001 to November 2001. However, this explanation seems unlikely because the private sector re-employment rates in the 2006 survey are considerably lower than in the 2010 survey. An interesting point to note is the symmetry between the employment and unemployment gaps, indicating that there is very little movement out of the labor force. Displaced African Americans and white respondents continue to look for work.

Another important comparison to make is that the black-white re-employment gap among public sector respondents is larger than the black-white re-employment gap among private sector respondents. This needs further investigation particularly in light of this paper's EEOC-4 analysis (Table 3) which suggests that African Americans comprise an increasing share of new hires in state and local governments.

### **Summary and Conclusions**

Numerous studies have documented the costs that the Great Recession has had on American, especially the most vulnerable. However, to date, there has been little focus on how state and local budget cuts affected African American public sector employment opportunities. Why is this important? African Americans comprise a disproportionate share of public sector workers and the public sector has historically helped to provide African Americans opportunities in the workforce.

The civic engagement sub-index of the National Urban League's Equality Index is the only component that is at parity. In fact, it has been at parity since the League first published the index in 2005. A major reason for parity in the civic engagement index is that African Americans have greater representation in Federal Executive Branch (nonpostal) employment and state and local government employment than whites.

*A priori*, it is not clear as to the cut's impact on African American public sector employment. The answer lies in the type of public sector jobs that were cut, the relative education and experience of public sector African Americans, and the rules that govern displacement. The role of public sector unions is important for understanding each of these stories.

African Americans may still face greater risk of displacement than their white peers, but their greater experience and education may help to insulate them from the budget cuts. Further, there is less occupational segregation in the public sector than in the private sector. More African Americans are in occupations that are involved with hiring and layoff decisions. This higher stature and the existence of internal labor markets could help to mute or minimize the budget cuts' effects.

To explore whether African Americans have been hurt more by public sector cuts, I have analyzed published BLS data, published EEOC-4 data on state and local employment (full-time, part-time and new hires), and micro data from the 2006, 2008 and 2010 Displaced Worker Surveys of the Current Population Survey. The major findings are as follows. According to the aggregate BLS employment data, in 2007, African Americans comprised 14.6 percent of government employment. By 2009, the share had dropped to 14.2 percent of public sector jobs. The percentage remained at 14.2 percent in 2010.

As a point of comparison, African Americans in the private sector also experienced a small decline in their share of private sector employment, falling from 10.9 to 10.5 percent. Some of the lost ground was recovered in 2010. The share then ticked up slightly to 10.7 percent.



The aggregate EEOC-4 data on state and local governments with at least 100 employees indicates that African Americans expanded their public sector presence during the recession. However, this expansion is largely because they experienced smaller losses than whites. Most notable are the losses in protective services that African Americans and whites both experienced.

The DWS evidence contains a very different narrative than the aggregate data. Even after controlling for personal characteristics, including industry and occupation at the time of displacement, and local economic conditions, the probability of displacement of public sector African Americans relative to public sector whites increased from no gap (prior to the recession) to 2.8 percentage points (during the recession). This gap that emerged equals the private black-white displacement gap, which prior to the recession equaled 1.7 and 1.9 percentage points and widened to 2.8 percentage points during the recession.

These findings suggest that the more formal rules of public sector displacement ceased to generate race neutral displacement outcomes between public sector African Americans and whites. Future work needs to examine the actual layoff practices to improve understanding of the emergence of the unexplained black-white public sector displacement gap. For example, the attempts to weaken the collective bargaining power of public sector unions in key states such as Wisconsin, New Jersey, and Ohio are well documented. This erosion in power could raise displacement rates for all public sector workers and have a disparate impact on African Americans if the union can no longer reduce the effects of discrimination. The analysis may have excluded a characteristic that has become correlated with race and predicts displacement.

The source of the higher African American public sector displacement rates during the recession might be due to changes in the reason for displacement. During the recession, the reason for public sector displacement shifted from plant closure to insufficient work, with the shift being larger for African Americans. Future work needs to identify whether displacement rates differ under the insufficient work reason and how that translates into disparate impacts on African Americans.

The chapter concluded with an examination of whether the recession has made it more difficult for African Americans to obtain employment after displacement. Public sector African Americans face a sizeable re-employment disadvantage relative to white public sector respondents. Unlike the emergence of a displacement rate gap, re-employment for African Americans in the public sector was a major challenge even before the recession.

An interesting finding is the symmetry between the employment and unemployment gaps, indicating that there is very little movement out of the labor force. Displaced African Americans and white respondents continue to look for work. Another important comparison to make is that the black-white re-employment gap among public sector respondents is larger than the black-white re-employment gap among private sector respondents. This finding needs further investigation particularly in light of this paper's EEOC-4 analysis which suggests that African Americans comprise an increasing share of new hires in state and local governments.

As in any study the answers to the posed questions raise a new series of questions. What type of jobs are re-employed public sector respondents accepting? If they do find

work, is it in the public or private sector? Are they working full-time or part-time? Are re-employment earnings lower? If so, how much?

Farber reported that in the 2010 survey, job losers that found new jobs earned on average 17.5 percent less in their new jobs. Losers of full-time jobs earnings are on average 21.8 percent less than on the job lost. Are the re-employment earnings of public sector workers the same, or is the gap larger?

The answer depends on whether the new job is in the public or private sector. If the new job is in the public sector, then the stricter pay structure there (e.g., role of unions) may minimize some of the losses that re-employed individuals are experiencing in the private sector. If the new job is in the private sector, representing a sector switch, then the individual may suffer a sector-specific loss in earnings and a loss due to now not having union representation.

Another important issue is whether the new jobs have benefits? This question is a key concern because one of the historical attractions to public sector careers is that the benefits tended to be better than in the private sector. The more supportive benefits serve as an incentive given the public sector's lower average earnings, especially in local government jobs.

The challenge with trying to utilize just the 2010 DWS to answer these new questions is sample size. The number of displaced public sector respondents that found employment is too small to generate any reliable estimated impacts, especially if the focus is on African Americans. Researchers will either need to wait for the next few Displaced Worker Surveys or create their own micro data from surveys of public sector workers.

## ENDNOTES

<sup>1</sup> The unemployment rate of African American women increased from 8.1 to 12.7 percent.

<sup>2</sup> Over the same period, the unemployment rate of African American women increased from 8.1 to 12.7 percent.

<sup>3</sup> EEOC data on the number of receipts and reasonable charges trended upward during the recession. Some of this could also be due to stepped up enforcement by the Obama Administration. However, the data contains an increase in these measures during 2001, the previous recession. The number of receipts was 30,510 (FY 2007), 33,937 (FY 2008), 33,579 (FY 2009), and 35,890 (FY 2010). The number of reasonable charges was 1,016 (FY 2006), 993 (FY 2007), 1,061 (FY 2008), 1,201 (FY 2009), and 1,330 (FY 2010). The number of successful conciliations increased too. The data is compiled by the Office of Research, Implementation and Planning. The data comes from the EEOC office's Integrated Mission System.

<sup>4</sup> Independent estimates conclude that ARRA created or saved 2 to 3 million jobs.

<sup>5</sup> In 2007, African Americans comprised 14.6 percent of the public sector, compared to 11.5 percent of all wage and salary workers.

<sup>4</sup> Industrial Production fell by 17.0 percent.

<sup>5</sup> This measure corresponds to the Bureau of Labor Statistics' U-6 definition of unemployment.

<sup>6</sup> For example, in December 2007, Rhode Island's unemployment rate was already at 6.0 percent. It had been rising steadily from 4.9 percent in March 2007.

<sup>7</sup> In November 2011, the unemployment rate surprisingly fell to 8.6 percent, but the drop was largely due to the continued labor force departure of individuals.

<sup>8</sup> See (Hatch 2004), for an analysis of the public sector employment trends during the 1991-92 and 2001 recessions and their aftermaths. She shows the lagged impact that tax revenue has on the public sector.

<sup>9</sup> Growth above this level accommodates the natural increase in the labor force due to immigration and the labor force entrance of newly minted high school and college graduates.

<sup>10</sup> For previous work that uses the DWS see for example, (Farber 1993, 1997, 1998, 2005), (Podgursky and Swaim 1987), (Kletzer 1989), (Topel 1990), (Gardner 1995), (Neal 1995), (Aaronson and Sullivan 1998), and (Hipple 1999). (Fallick 1996) and (Farber 2004) provide literature reviews of previous research.

<sup>11</sup> The detailed results are available from the author upon request.

<sup>12</sup> I estimated additional models that included the strategies that states used in FY 2008 and FY 2009 to the probit models in Table 6. The previous conclusions are robust to their addition to the model. In the 2010 model, the layoff strategy is the only strategy that is measured with precision. The estimated partial derivative of 0.011 indicates that states that used layoff strategies in FY 2008 and FY 2009 to address their budget gaps, have displacement rates that are 1.1 percentage points higher than states that did not use layoffs. The displacement rate for the sample of respondents is 13.49 percent. All other estimated partial derivatives are small and not measured with precision. The signs make sense. For example, early retirement, privatization, and reorganization each have negative signs. Under early retirement strategies, older and more expensive workers are replaced with younger and cheaper workers. For privatization, the negative sign suggests that the potentially displaced workers are re-hired as contractors. Agency reorganization probably just reallocates workers in the same agency or another agency. The partial derivatives for fees, across the board cuts, targeted cuts, lower state aid, rainy day funds, and other tools do not exceed 0.0045. Again, each partial is not measured with precision. The fact that these estimated partial

are zero is consistent with an explanation that these strategies either raises funds or find non-employment related ways to balance the budget.

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**Table 1: Methods for Reducing or Eliminating State Budget Gaps  
(Percent of States)**

<b>FY</b>	<b>Fees</b>	<b>Layoffs</b>	<b>Furloughs</b>	<b>Early Retirement</b>	<b>Across the Board Cuts</b>	<b>Targeted Cuts</b>
2006	0%	2%	2%	2%	2%	<b>6%</b>
2007	4%	2%	2%	0%	2%	2%
2008	4%	6%	2%	2%	12%	<b>18%</b>
2009	24%	31%	33%	12%	43%	<b>71%</b>
2010	47%	53%	43%	12%	53%	<b>67%</b>
2011	28%	40%	38%	12%	40%	<b>68%</b>

  

<b>FY</b>	<b>Reduce Local Aid</b>	<b>Reorganize Agencies</b>	<b>Privatization</b>	<b>Rainy Day Funds</b>	<b>Other</b>
2006	2%	2%	2%	<b>6%</b>	<b>6%</b>
2007	0%	0%	0%	2%	<b>8%</b>
2008	2%	4%	2%	16%	<b>18%</b>
2009	35%	12%	6%	45%	45%
2010	43%	27%	6%	37%	57%
2011	32%	24%	10%	18%	60%

Notes: Assorted years of “The Fiscal Survey of States”, A Report by the National Governors Association and the National Association of State Budget Officers, Washington, DC, [www.nasbo.org](http://www.nasbo.org). Notes: Based on data from National Governor Association’s Fiscal Survey of States. The NGA obtains the information from the National Association of State Budget Officers. “Other” methods include higher education related fees (7), court related fees (9), and transportation/motor vehicle related fees (8), and business related fees (6), salary reductions (9), cuts to state employee benefits (13), lottery expansion (4), gambling/gambling expansion (4), and other (15). Specific methods covered by the “other” category are reported in “Notes to the Tables” in each report. For example, in FY11, other actions in Illinois include tax amnesty payments of \$266 million and in New Jersey changes in available tax credits. The numbers in parenthesis refer to the number of states that used these methods in FY11.



**Table 2: Public Employment by Level and Type**  
(In Thousands, except for Change Percent)

<b>Panel A:</b>	<b>State</b>					<b>Local</b>		
<b>Month- Year</b>	<b>Total Nonfarm</b>	<b>Private</b>	<b>Government</b>	<b>Federal</b>	<b>All State</b>	<b>Education</b>	<b>All Local</b>	<b>Education</b>
Oct-06	136,506	114,438	22,068	2,731	5,097	2,308	14,240	7,950
Oct-07	137,772	115,470	22,302	2,734	5,132	2,325	14,436	8,028
Oct-08	135,804	113,245	22,559	2,773	5,186	2,363	14,600	8,096
Oct-09	129,505	106,971	22,534	2,845	5,156	2,378	14,533	8,087
Oct-10	130,015	107,713	22,302	2,847	5,146	2,394	14,309	7,980
Oct-11	131,588	109,579	22,009	2,821	5,078	2,404	14,110	7,861
Nov-11	131,708	109,719	21,989	2,817	5,073	2,406	14,099	7,855
<b>Panel B: FY Change in Number</b>								
FY07	1,266	1,032	234	3	35	17	196	78
FY08	-1,968	-2,225	257	39	54	38	164	69
FY09	-6,299	-6,274	-25	72	-30	15	-67	-10
FY10	510	742	-232	2	-10	16	-224	-107
FY11	1,573	1,866	-293	-26	-68	11	-199	-119
<b>Panel C: FY Change in Percent</b>								
FY07	0.90%	0.90%	1.10%	0.10%	0.70%	0.74%	1.40%	0.98%
FY08	-1.40%	-1.90%	1.20%	1.40%	1.10%	1.63%	1.10%	0.85%
FY09	-4.60%	-5.50%	-0.10%	2.60%	-0.60%	0.63%	-0.50%	-0.12%
FY10	0.40%	0.70%	-1.00%	0.10%	-0.20%	0.66%	-1.50%	-1.32%
FY11	1.20%	1.70%	-1.30%	-0.90%	-1.30%	0.45%	-1.40%	-1.49%

Notes: Author's tabulations from the BLS Current Employment Statistics Survey, [www.bls.gov](http://www.bls.gov).

**Table 3: The African American Share of State and Local Employment  
by Occupation and Gender, 2007 and 2009**

	<b>Men</b>		<b>Women</b>	
<b>Panel A: Total Full-Time</b>	<b>2007</b>	<b>2009</b>	<b>2007</b>	<b>2009</b>
<b>Officials/Admin</b>	9.0%	9.2%	15.3%	15.4%
<b>Professionals</b>	11.0%	11.7%	18.5%	19.8%
<b>Technicians</b>	11.5%	11.9%	20.9%	21.6%
<b>Protective Service</b>	13.7%	13.8%	33.1%	33.5%
<b>Para-Professionals</b>	24.1%	26.9%	28.7%	30.7%
<b>Admin Support</b>	17.7%	18.8%	19.6%	20.6%
<b>Skilled Craft</b>	14.8%	15.3%	27.1%	26.1%
<b>Service/Maintenance</b>	26.9%	28.1%	39.2%	40.5%
<b>Total Full Time</b>	15.0%	15.6%	22.3%	23.4%
<b>Panel B: Total Part-Time</b>				
<b>Officials/Admin</b>	7.1%	7.0%	10.3%	9.6%
<b>Professionals</b>	10.1%	10.7%	11.1%	11.4%
<b>Technicians</b>	9.6%	9.6%	13.8%	13.9%
<b>Protective Service</b>	10.4%	9.8%	30.7%	20.1%
<b>Para-Professionals</b>	16.8%	18.0%	17.5%	18.2%
<b>Admin Support</b>	15.6%	16.4%	14.7%	15.9%
<b>Skilled Craft</b>	18.2%	12.5%	16.2%	10.8%
<b>Service/Maintenance</b>	15.1%	15.9%	16.7%	18.4%
<b>Total Part Time</b>	13.8%	14.1%	15.9%	15.8%
<b>Panel C: New Hires</b>				
<b>Officials/Admin</b>	9.1%	11.1%	14.0%	16.1%
<b>Professionals</b>	11.6%	14.4%	19.2%	20.5%
<b>Technicians</b>	12.7%	15.1%	21.2%	25.0%
<b>Protective Service</b>	15.9%	17.5%	35.9%	36.0%
<b>Para-Professionals</b>	24.9%	28.6%	31.6%	32.4%
<b>Admin Support</b>	16.0%	17.9%	18.7%	19.2%
<b>Skilled Craft</b>	16.2%	16.3%	21.4%	25.8%
<b>Service/Maintenance</b>	30.2%	30.5%	43.6%	42.6%
<b>Total New Hires</b>	17.8%	19.3%	24.7%	25.7%

Notes: Author's calculations from the EEOC-4 State and Local reports for 2007 and 2009. Equal Employment Opportunity Commission State and Local Government Information (EEO-4). The entries for African American men are the percent of all men. The entries for African American women are relative to all women. This includes Asians, Latinos and Indians.

**Table 4: 2007 to 2009 Change in State and Local Public Employment  
by Occupation, Race and Gender**

<b>Panel A: Men</b>				
<b>Occupation</b>	<b>White</b>		<b>Black</b>	
	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>
<b>Total Full-Time</b>	<b>-113,637</b>	<b>-4.70%</b>	<b>-3,592</b>	<b>-0.70%</b>
<b>Officials/Admin</b>	-11,800	-5.90%	-817	-3.70%
<b>Professionals</b>	-32,199	-6.00%	332	0.40%
<b>Technicians</b>	-15,056	-7.10%	-1,196	-3.60%
<b>Protective Service</b>	-13,342	-1.80%	-2,361	-1.70%
<b>Para-Professionals</b>	-1,852	-2.90%	2,774	10.70%
<b>Admin Support</b>	-7,370	<b>-9.00%</b>	-264	<b>-1.10%</b>
<b>Skilled Craft</b>	-15,172	-5.00%	-1,165	-1.80%
<b>Service/Maintenance</b>	-16,846	-6.60%	-895	-0.70%
<b>Total Part-Time</b>	<b>-15,389</b>	<b>-3.70%</b>	<b>-1,945</b>	<b>-2.50%</b>
<b>Officials/Admin</b>	387	2.30%	10	0.70%
<b>Professionals</b>	2,579	6.50%	704	13.30%
<b>Technicians</b>	-1,664	-6.90%	-189	-6.30%
<b>Protective Service</b>	-3,840	-6.00%	-1,084	-12.90%
<b>Para-Professionals</b>	-2,405	-4.00%	672	4.60%
<b>Admin Support</b>	682	<b>1.40%</b>	617	<b>5.50%</b>
<b>Skilled Craft</b>	-4,050	-18.90%	-2,774	-49.60%
<b>Service/Maintenance</b>	-7,078	-5.30%	99	0.40%
<b>Total New Hires</b>	<b>-63,740</b>	<b>-26.80%</b>	<b>-12,112</b>	<b>-18.90%</b>
<b>Officials/Admin</b>	-2,025	-17.50%	27	2.10%
<b>Professionals</b>	-13,767	-29.10%	-459	-6.10%
<b>Technicians</b>	-4,927	-27.30%	-354	-10.80%
<b>Protective Service</b>	-18,932	-24.10%	-2,746	-15.20%
<b>Para-Professionals</b>	-1,986	-18.80%	-260	-5.70%
<b>Admin Support</b>	-4,565	<b>-32.50%</b>	-831	<b>-23.10%</b>
<b>Skilled Craft</b>	-6,796	-28.70%	-1,535	-27.70%
<b>Service/Maintenance</b>	-10,742	-31.30%	-5,954	-29.50%

Notes: Author's calculations from the EEOC-4 State and Local reports for 2007 and 2009. Equal Employment Opportunity Commission State and Local Government Information (EEO-4), 2007 and 2009 Employment Summary by Job Category, Summary by Job Category, Geographic Area.

**Table 4 cont.: 2007 to 2009 Change in State and Local Public Employment  
by Occupation, Race and Gender**

<b>Panel B: Women</b>				
<b>Occupation</b>	<b>White</b>		<b>Black</b>	
	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>
<b>Total Full-Time</b>	<b>-65,933</b>	<b>-3.70%</b>	<b>11,066</b>	<b>1.80%</b>
<b>Officials/Admin</b>	-1,214	-1.10%	-28	-0.10%
<b>Professionals</b>	-6,774	-1.10%	12,257	7.20%
<b>Technicians</b>	-1,274	-1.00%	1,154	2.70%
<b>Protective Service</b>	-5,722	-4.30%	-2,555	-3.10%
<b>Para-Professionals</b>	-7,109	-4.40%	3,232	3.90%
<b>Admin Support</b>	-40,788	<b>-7.70%</b>	-3,033	<b>-1.90%</b>
<b>Skilled Craft</b>	207	1.40%	-175	-2.80%
<b>Service/Maintenance</b>	-3,259	-5.00%	214	0.40%
<b>Total Part-Time</b>	<b>-14,135</b>	<b>-2.90%</b>	<b>-5,127</b>	<b>-4.60%</b>
<b>Officials/Admin</b>	747	6.60%	-58	-4.00%
<b>Professionals</b>	3,388	3.60%	969	7.00%
<b>Technicians</b>	-137	-0.50%	-44	-0.80%
<b>Protective Service</b>	-3,261	-12.50%	-7,205	-52.00%
<b>Para-Professionals</b>	-4,121	-4.00%	328	1.30%
<b>Admin Support</b>	-6,187	<b>-4.80%</b>	371	<b>1.40%</b>
<b>Skilled Craft</b>	154	1.50%	-804	-36.90%
<b>Service/Maintenance</b>	-4,718	-5.20%	1,316	6.20%
<b>Total New Hires</b>	<b>-60,750</b>	<b>-28.90%</b>	<b>-20,029</b>	<b>-22.40%</b>
<b>Officials/Admin</b>	-1,738	-22.60%	-85	-5.80%
<b>Professionals</b>	-14,645	-22.40%	-1,591	-8.30%
<b>Technicians</b>	-3,387	-21.20%	-137	-2.50%
<b>Protective Service</b>	-6,915	-33.50%	-4,639	-30.50%
<b>Para-Professionals</b>	-4,781	-21.20%	-2,570	-18.50%
<b>Admin Support</b>	-25,455	<b>-40.10%</b>	-7,034	<b>-36.60%</b>
<b>Skilled Craft</b>	-654	-30.70%	-72	-10.40%
<b>Service/Maintenance</b>	-3,175	-25.40%	-3,901	-27.30%

Notes: Author's calculations from the EEOC-4 State and Local reports for 2007 and 2009. Equal Employment Opportunity Commission State and Local Government Information (EEO-4), 2007 and 2009 Employment Summary by Job Category, Summary by Job Category, Geographic Area.

**Table 5: Survey Summary Statistics from the Displaced Worker Survey****Panel A: Private and Federal**

<b>Variable</b>	<b>Private Sector</b>				<b>Federal Government</b>			
	<b>White</b>		<b>African American</b>		<b>White</b>		<b>African American</b>	
	<b>2008</b>	<b>2010</b>	<b>2008</b>	<b>2010</b>	<b>2008</b>	<b>2010</b>	<b>2008</b>	<b>2010</b>
Layoff = 1	0.031	0.070	0.052	0.101	0.047	0.060	0.038	0.068
Post-Disp. Employed = 1	0.734	0.713	0.532	0.393	0.853	0.781	0.821	0.604
Post-Disp. Unemployment = 1	0.262	0.284	0.468	0.603	0.137	0.192	0.179	0.396
Post-Disp. NILF = 1	0.004	0.003	0.000	0.004	0.010	0.027	0.000	0.000
Search Duration	20.387	33.509	24.457	33.611	15.610	18.835	23.441	44.036
Unemployment Duration	18.732	29.677	20.201	33.611	14.376	16.506	21.765	38.331
Male = 1	0.615	0.598	0.487	0.480	0.435	0.424	0.373	0.350
Age	45.851	45.179	43.723	43.202	43.387	43.643	41.564	42.154
College Graduate = 1	0.475	0.482	0.302	0.334	0.572	0.593	0.403	0.392
Some College = 1	0.285	0.302	0.374	0.323	0.255	0.237	0.316	0.293
Widowed = 1	0.013	0.013	0.018	0.019	0.017	0.012	0.005	0.010
Divorced = 1	0.139	0.106	0.119	0.214	0.120	0.112	0.157	0.101
Separated = 1	0.015	0.019	0.055	0.054	0.010	0.017	0.045	0.060
Never Married = 1	0.166	0.175	0.322	0.319	0.218	0.212	0.334	0.380
Metro Area Unemployment Rate	5.255	8.981	5.278	8.874	5.465	9.129	5.541	8.981

Notes: See end of table.

**Table 5 cont.: Survey Summary Statistics from the Displaced Worker Survey**

**Panel B: State and Local Government**

Variable	White				African American			
	State		Local		State		Local	
	2008	2010	2008	2010	2008	2010	2008	2010
Layoff = 1	0.037	0.058	0.092	0.144	0.042	0.098	0.122	0.175
Post-Disp. Employment = 1	0.894	0.771	0.789	0.590	0.792	0.506	0.678	0.432
Post-Disp. Unemployment = 1	0.064	0.205	0.195	0.392	0.208	0.494	0.314	0.552
Post-Disp. NILF = 1	0.042	0.025	0.016	0.018	0.000	0.000	0.008	0.017
Search Duration	15.953	23.819	19.127	32.237	21.384	33.699	22.083	35.631
Unemployment Duration	13.528	21.622	16.077	28.569	16.653	29.973	20.933	33.931
Male = 1	0.387	0.394	0.532	0.527	0.339	0.370	0.484	0.475
Age	43.758	43.887	40.536	40.970	43.745	43.368	38.400	38.568
College Graduate = 1	0.553	0.561	0.320	0.327	0.454	0.365	0.170	0.204
Some College = 1	0.244	0.233	0.322	0.322	0.302	0.276	0.337	0.347
Widowed = 1	0.015	0.015	0.013	0.014	0.013	0.028	0.021	0.016
Divorced = 1	0.114	0.102	0.119	0.117	0.135	0.159	0.111	0.106
Separated = 1	0.013	0.016	0.018	0.020	0.043	0.046	0.050	0.046
Never Married = 1	0.158	0.155	0.261	0.268	0.308	0.318	0.433	0.455
Metro Area Unemployment Rate	5.771	9.580	5.664	9.469	5.704	9.650	5.642	9.438

Notes: Author's tabulations from the 2006, 2008 and 2010 Displaced Worker Surveys of the Current Population Survey. The sample includes all individuals that are between 20 and 64 years of age at the time of the survey. The summary statistics for 2006 are available upon request. They are not shown because they are quite similar to the 2008 summary statistics.

**Table 6: The Black-White Difference in the Probability of Displacement and Post-Displacement Employment Status**

<b>Dependent Variable</b>	<b>All</b>			<b>Public Sector Only</b>		
<b>Panel A: Unadjusted</b>	<b>2006</b>	<b>2008</b>	<b>2010</b>	<b>2006</b>	<b>2008</b>	<b>2010</b>
Layoff	0.0200 (0.0038)	0.0218 (0.0038)	0.0239 (0.0045)	0.0102 (0.0072)	0.0021 (0.0070)	0.0363 (0.0098)
Post-Displacement Employment	-0.1419 (0.0219)	-0.1261 (0.0216)	-0.1503 (0.0171)	-0.2661 (0.0704)	-0.0916 (0.0710)	-0.2563 (0.0543)
Post-Displacement Unemployment	0.0914 (0.0188)	0.1096 (0.0194)	0.1406 (0.0173)	0.2201 (0.0676)	0.1168 (0.0718)	0.2653 (0.0542)
<b>Panel B: Adjusted #1: Gender, Age, Education, Marital Status, Area Unemployment Rate</b>						
Layoff	0.0166 (0.0049)	0.0194 (0.0049)	0.0275 (0.0059)	0.0098 (0.0075)	-0.0058 (0.0068)	0.0284 (0.0105)
Post-Displacement Employment	-0.0911 (0.0245)	-0.1112 (0.0245)	-0.1476 (0.0210)	-0.2414 (0.0876)	-0.0713 (0.0846)	-0.2083 (0.0634)
Post-Displacement Unemployment	0.0978 (0.0242)	0.1188 (0.0242)	0.1472 (0.0210)	0.2035 (0.0827)	0.0996 (0.0843)	0.2180 (0.0631)
<b>Panel C: Adjusted #2: Occupation and Industry Dummy Variables Added</b>						
Layoff	0.0175 (0.0049)	0.0187 (0.0049)	0.0312 (0.0060)	0.0083 (0.0066)	-0.0062 (0.0063)	0.0266 (0.0096)
Post-Displacement Employment	-0.0904 (0.0253)	-0.1167 (0.0254)	-0.1592 (0.0220)	-0.2843 (0.1360)	-0.2052 (0.1258)	-0.2188 (0.0719)
Post-Displacement Unemployment	0.0972 (0.0250)	0.1257 (0.0252)	0.1595 (0.0220)	0.2883 (0.1317)	0.2774 (0.1408)	0.2338 (0.0719)

Notes: Author's calculations of the 2006, 2008 and 2010 micro data files of the Current Population Survey's Dislocated Worker Survey. Entries are the discrete change (difference) in the probability of an outcome between non-Latino African Americans and non-Latino whites. The estimates come from probit models that include dummy variables for Latino and other races. Non-Latino whites are the excluded group. The Adjusted #1 models control for gender, age, educational attainment, marital status, and the metropolitan area unemployment. The Adjusted #2 models add dummy variables for occupation and industry. Standard errors are in parenthesis.

**Table 7: The Reason for Displacement by Class of Worker**

	Public			Private		
	Plant or Company Closed or Moved	Insufficient Work	Position or shift Abolished	Plant or Company Closed or Moved	Insufficient Work	Position or shift Abolished
<b>Panel A: All</b>						
2006	0.179	0.229	0.592	0.432	0.349	0.219
2008	0.096	0.364	0.541	0.361	0.397	0.242
2010	0.065	0.405	0.529	0.261	0.535	0.204
<b>Panel B: African American</b>						
2006	0.249	0.226	0.524	0.369	0.382	0.248
2008	0.092	0.417	0.491	0.349	0.443	0.208
2010	0.066	0.488	0.446	0.274	0.543	0.184
Notes: Author's calculations of the 2006, 2008 and 2010 micro data files of the Current Population Survey's Dislocated Worker Survey.						