

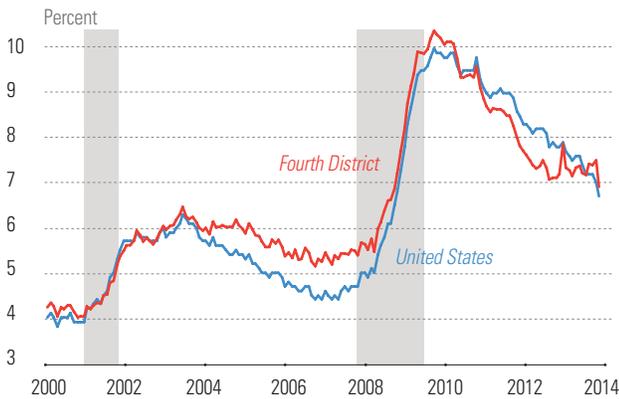
STATE OF THE REGION

As of April 30, 2014



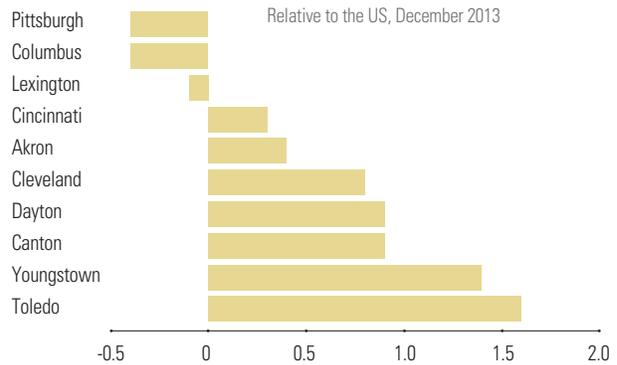
The Federal Reserve Bank of Cleveland serves the Fourth Federal Reserve District, which comprises Ohio, western Pennsylvania, eastern Kentucky, and the northern panhandle of West Virginia. In 2013, the pace of recovery in the region's labor market began to lag the nation's. Research suggests that employment performance is linked to educational attainment, and that a region's longer-run economic prospects are tied to the value of their workers' skill levels.

Figure 1. Our region's unemployment rate rose above the nation's in 2013



Note: Grey shading indicates a recession.
Source: Bureau of Labor Statistics.

Figure 2. At the end of 2013, only three of the region's MSAs had unemployment rates lower than the nation's



Source: Bureau of Labor Statistics.

2013 developments in the Fourth District's labor market

The pace of recovery in the Fourth Federal Reserve District's labor market slowed in 2013, while the nation's picked up, according to the most recently available data. This is a shift, as the District's unemployment rate had been below the national average for much of the recovery. Time will tell for sure which patterns will persist, as one of the biggest challenges in assessing recent regional or local employment performance is that the data are often subject to sizeable revisions.

At the end of 2012, the District's unemployment rate, at 7.2 percent, was more than half a percentage point lower than the US average of 7.8 percent. Only a few months prior, the District's unemployment rate was almost a full percentage point lower than the national average. But by the end of 2013, the District could no longer boast the better unemployment rate: During the year, the nation's unemployment rate fell 1.2 percentage points to 6.7 percent, while the District's fell only 0.3 percentage points to 6.9 percent (figure 1).

Changes in unemployment rates across the District's metropolitan statistical areas (MSAs) during 2013 show, like the District itself, less-robust improvement in labor market conditions. Of the 19 MSAs located at least partly in the District, nine are among the nation's 100 most populous. These nine, which we will call the District's major MSAs, accounted for almost 70 percent of its employment in 2013. At the end of 2012, unemployment rates for seven of the nine major MSAs were less than the national average.

However, a year later, this was true for only three of them—Columbus, Pittsburgh, and Lexington. For the two MSAs that had higher unemployment rates than the US at the end of 2012—Toledo and Youngstown—these changed from being 0.1 and 0.2 percentage points higher than the US average at the time, respectively, to more than a percentage point above it by December 2013 (figure 2).

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We see similar patterns in another survey that tracks employment. At the end of 2012, the District had seen slightly stronger cumulative employment gains during the recovery than the US, but because US employment grew at a rate that was about twice as fast as that in the District in 2013, this was no longer true by the end of last year. A few District MSAs kept pace with the nation. For instance, Columbus and Cincinnati experienced employment growth of about 1.5 percent in 2013, close to the national growth rate of roughly 1.7 percent. Akron grew faster than that at about 2.1 percent. But two metro areas in the District experienced outright employment declines: Pittsburgh's employment fell slightly in 2013, while Dayton's declined almost a full percent.

Differences in employment growth across the District's metro areas

To help understand what might be behind the District's recent employment performance, we take a longer look back. Shorter-term fluctuations often obscure longer-term drivers of employment growth differences, and it's important to identify these longer-term drivers because they will likely remain meaningful as the recovery continues. As a result, we will consider employment changes during the entire recovery to this point, from mid-2009 to the end of 2013.

To identify the factors that have driven employment changes during this period, one place to start is with some of the key issues that were important in the recession. The boom and bust in housing prices, for example, was arguably a precipitating cause of the recession, and differences in the declines of residential real estate values led to differences in the severity of employment losses across America's MSAs. Another example is the manufacturing sector, which was hard hit during the recession, especially the transportation equipment subsector. The Labor Department reported that transportation equipment "lost the greatest number of jobs in manufacturing and accounted for a disproportionate share of the jobs lost in durable goods" production. In fact, the severity of the recession forced two of the three major American automakers to restructure. Both manufacturing and motor-vehicle-related production—a key component of the transportation equipment subsector—have above-average concentrations in the District.

During the recession (essentially 2008 through the middle of 2009), these two factors—changes in an area's housing prices and its manufacturing intensity—did indeed explain a fair amount of the variation in employment changes across the nation's major MSAs. Together, they accounted for about 25 percent of the variation in the 150 most populous metro areas. Both factors were measured before the recession, so the direction of causality is assumed to be from these factors to employment changes during the recession, not the other way around.

Within the District, home-price appreciation before the recession was relatively modest. For the 10 District MSAs that rank among the nation's 150 largest, nominal increases in home prices from 2000 to 2007 ranged from roughly 20 percent (Canton) to 36 percent (Pittsburgh), a fairly narrow band, which was well below the median increase

(almost 50 percent) for this set of 150 metro areas. For context, consider that about 20 percent of these metro areas actually saw their home values more than double during this period. Across all of these major American MSAs, larger prior home-price increases predicted larger employment declines during the recession. However, this was not true in the Fourth District, partly because home-price increases in the 10 major District MSAs were fairly modest and closely clustered.

What mattered more in the District were differences in manufacturing intensity. Historically, the District has been home to many types of manufacturing. In fact, some of its cities are still associated with the materials they became known for producing around the turn of the century—glass in Toledo, rubber in Akron, steel in Pittsburgh. Aerospace production has been and continues to be important in the District, as does automotive production, in which Ohio ranks second nationally.

Many of the District's MSAs remain above average in the share of their workers devoted to the manufacturing sector. Of the 10 we will consider, eight had a higher fraction of employment in manufacturing than the national average of about 10 percent in December 2007. The exceptions were Columbus (8.0 percent) and Pittsburgh (8.6 percent). The most manufacturing-intensive MSA among these 10 was Canton (17.5 percent). In the District, as in all 150 major MSAs, higher manufacturing intensity in December 2007 was associated with larger employment declines during the recession.

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Interestingly, while these two variables are important in explaining employment changes during the recession, they are not statistically significant predictors of employment changes during the recovery. However, when we examine a third variable in conjunction with the other two, the third one — educational attainment — is statistically significant, and thus a partial explanation for employment changes that

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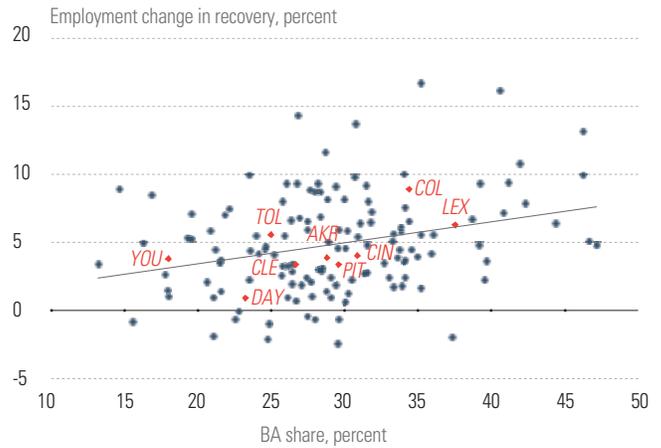
have taken place during the recovery. Specifically, MSAs that had higher rates of adults holding undergraduate degrees in 2010 tended to experience stronger employment gains during the recovery. Indeed, within the District, places like Lexington and Columbus, which have high shares of adults with bachelor's degrees (BAs), have also seen some of the strongest employment gains during the recovery (figure 3).

The value of human capital

To be sure, we need to be careful when interpreting this result: In a simple statistical model that includes BA attainment, prior home prices, and manufacturing intensity, there remains a fair amount of unexplained variation in employment changes across metro areas during the recovery. Nevertheless, this correlation is consistent with other evidence on what drives income and employment growth in subnational economies over the longer term, such as Cleveland Fed research from 2005 on education and innovation. This study highlights human capital—whether measured directly as educational attainment or indirectly through local patent production—as a key driver of these differences throughout the better part of the twentieth century. More recently, other research has shown that areas known as “brain hubs” have tended to post especially strong employment growth, while manufacturing centers have tended to struggle. For District MSAs, it seems likely that their economic prospects will be tied to the value of their workers' skill levels. We have evidence of this over the longer term, but that relationship is also apparent in this recovery.

All data cited in this essay are as of April 2014.

Figure 3. MSAs with higher BA attainment experienced stronger employment gains during the recovery



AKR: Akron
 CIN: Cincinnati
 CLE: Cleveland
 COL: Columbus
 DAY: Dayton
 LEX: Lexington
 PIT: Pittsburgh
 TOL: Toledo
 YOU: Youngstown

Source: Bureau of Labor Statistics.