

Geographically Constrained Job Growth Provides Another Indication of a Sluggish Labor Market Recovery

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“A lack of geographic breadth is another indication of the labor market’s lukewarm recovery... The extent of job growth across the states during the current expansion is similar to that experienced during the ‘jobless recovery’ from the 2001 recession.”

Introduction

Steady, but tepid, job growth has been a hallmark of the current economic recovery. Four years into the expansion, total nonfarm payrolls have increased by an average of only 0.2 percent per quarter, less than half the average pace of job growth experienced during all economic expansions of the last half century.

A lack of geographic breadth is another indication of the labor market's lukewarm recovery. This *Housing Insights* employs a “diffusion index” – a commonly used measure of the extent to which activity is spread across components of a group – to show that job growth during the current recovery has not been as dispersed across the states compared to previous economic expansions. Furthermore, given the strong historical correlation between the national pace of job growth and state employment

diffusion, Fannie Mae’s national employment forecast (included in our monthly economic forecast) suggests that the geographic extent of job growth is unlikely to broaden substantially during the next few years.

In addition to analyzing the geographic breadth of employment growth, this paper examines state employment growth rates and identifies those states that have experienced the fastest job gains during recent recoveries. The pace of state employment gains has been muted during the current recovery. Moreover, unlike other recent expansions when state job-growth leaders were confined to a handful of regions, states with the fastest employment growth have been spread across most regions of the country during the current recovery. The perennial boom states of Nevada and Arizona are notably absent from the list of employment growth leaders, possibly reflecting their struggles to emerge from unusually deep housing and economic recessions.

By adding a geographic dimension to employment data, measures of state job growth dispersion and growth rates provide insights into the robustness of the labor market recovery, which in turn is a key driver of the housing market rebound. Furthermore, such measures provide information that can be used by the housing industry to identify growth opportunities.

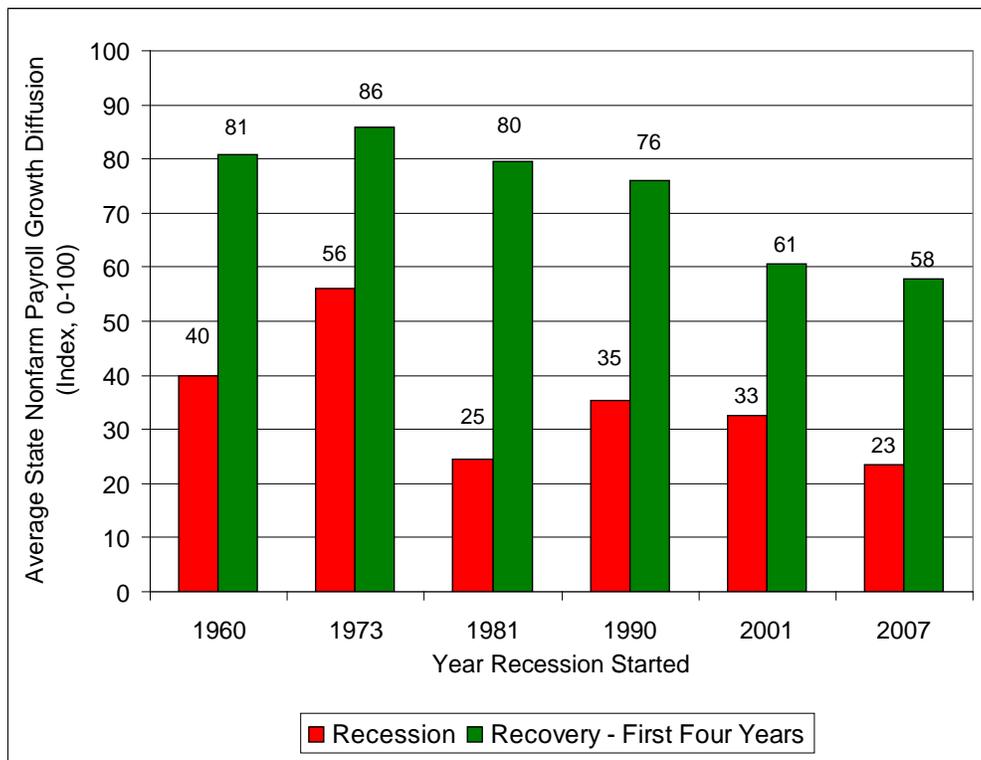
Employment Growth Is Not Extending to as Many States Compared to Previous Expansions

The extent of job growth across the states can be measured using a diffusion index, which ranges from 0 to 100, with values greater than 50 indicating that more states are experiencing job gains than job losses.¹ Exhibit 1 compares the average value of the diffusion index across business cycles.

¹ A diffusion index value of 0 indicates that all states are experiencing job losses, whereas a value of 100 indicates that all states are experiencing job growth. The diffusion index is calculated by first assigning to each state and the District of Columbia a numeric value based on whether it is experiencing growth in total nonfarm payrolls. States experiencing job growth are assigned a value of 1, those experiencing no change are given a value of 0.5, and those experiencing job loss are assigned a value of 0. To derive the diffusion index, the assigned values are averaged and the result is multiplied by 100. (A weighted-average version of the index also was calculated using each state’s total nonfarm payroll employment as the weight. Results for the weighted-average index varied little from those presented here.) For purposes of this analysis, no job change is defined as a quarter-

During the Great Recession, the diffusion index was lower than during any recent economic downturn. (See red bars in Exhibit 1.) The breadth of job growth also has been constrained since the recovery began in June of 2009, with the index averaging just 58, lower than the mean value during the first four years of any recent economic recovery.² (See green bars in Exhibit 1.) Indeed, the dispersion of job growth has lessened across each of the last five expansions. The geographic extent of employment growth during the current expansion has been similar to that experienced during the "jobless recovery" from the 2001 recession.

Exhibit 1. Current Recovery Lags Behind Other Expansions in Geographic Extent of Job Growth



Source: U.S. Bureau of Labor Statistics

The Outlook for Broader Job Growth Is Not Good

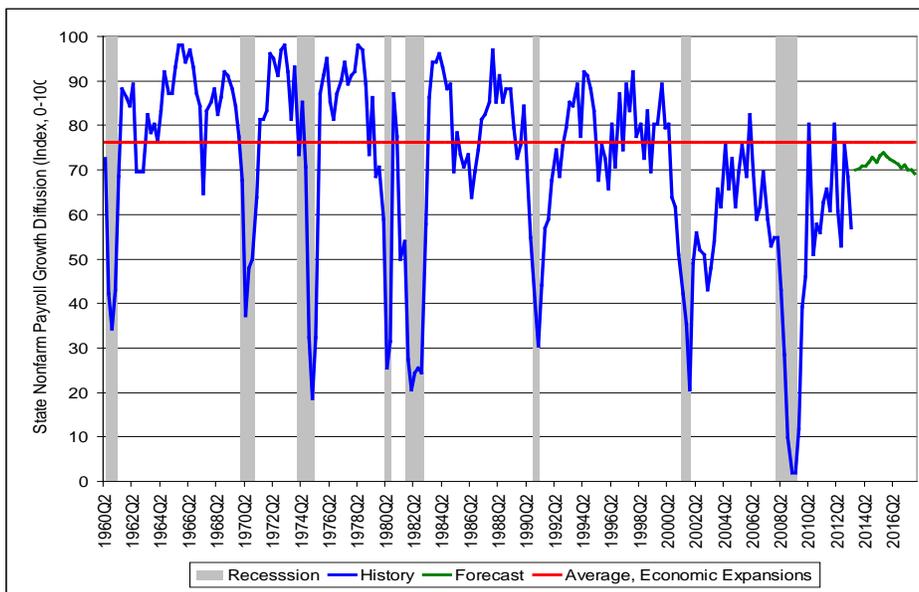
Unfortunately, prospects for substantially broader job growth appear dim. Not surprisingly, the geographic breadth of employment gains is highly correlated with the national pace of job creation.³ Using the historical association between the national job growth rate and the state job diffusion index, as well as the Fannie Mae Economic & Strategic Research Group's national employment forecast, we forecast the future extent of job gains across the states. As shown by the green line in Exhibit 2, we expect the diffusion index to increase somewhat over the next four years but to remain below the average value for recent economic expansions. Whereas the diffusion index approached 100 (all states experiencing growth) during recoveries of the 1960s, 1970s, and 1980s, we expect it will remain at or below 74 for the next several years of the current expansion.

over-quarter change in seasonally adjusted payrolls of between -0.5 percent and +0.5 percent. Note that the diffusion index value does not necessarily indicate the proportion of states experiencing job growth. For example, an index value of 90.2 can be achieved as follows: 41 states with job growth, 10 states with no change, and no states with job losses. (Diffusion index value is $90.2 = [41 \cdot 1.0 + 10 \cdot 0.5] / 51 \cdot 100$.) In this case, the proportion of states experiencing job growth is only 80.4 percent ($41/51 \cdot 100$).

² In Exhibits 1, 3, and 4, the recessions that began in 1969 and 1980 are excluded because the subsequent recoveries lasted fewer than four years.

³ The Pearson correlation coefficient between the percent change in national total nonfarm payrolls and the state job growth diffusion index is 0.95. The correlation coefficient ranges from -1.0 to 1.0, with greater values indicating stronger positive linear associations between national employment increases and state job growth diffusion.

Exhibit 2. Geographic Extent of Job Growth Expected to Remain Below the Norm for Past Recoveries



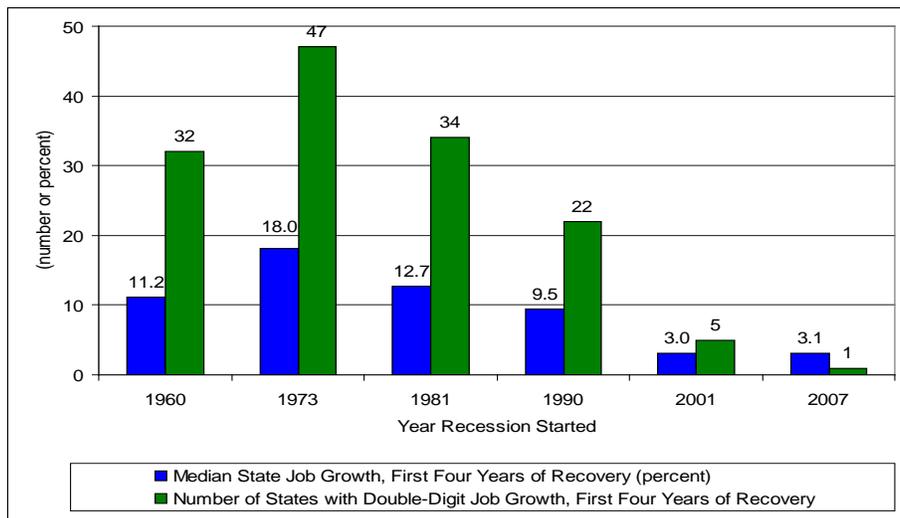
Sources: U.S. Bureau of Labor Statistics, ESR forecast

State Job Growth Rates Are Subdued and Growth Leaders Are Dispersed

Although the diffusion index provides a useful summary measure of the geographic extent of employment growth, it does not provide information on the pace of state job gains. This section analyzes state job growth rates and job growth leadership during the first four years of recent expansions.⁴

Consistent with the subpar pace of national job growth, the state median job growth rate has been subdued during the current economic expansion. Since the beginning of the national economic recovery, the median cumulative employment increase for states has been only 3.1 percent, roughly on par with typical state job growth after the 2001 recession, but less than a third of the pace witnessed during other recent recoveries. (See blue bars of Exhibit 3.)

Exhibit 3. State Job Growth Rates Have Slowed in Recent Recoveries



Source: U.S. Bureau of Labor Statistics

⁴ For each expansion, job growth is measured from the onset of the national recovery, as designated by the National Bureau of Economic Research.



In addition, the current economic expansion has produced fewer fast-growing states than other recoveries. As shown by the green bars in Exhibit 3, only one state – North Dakota – has achieved a double-digit percentage job increase after four years of recovery from the Great Recession. In sharp contrast, nearly every state had achieved double-digit growth at the same point during recovery from the 1973 recession.

Diffuse job growth leadership also distinguishes the current recovery from past expansions. (See Exhibit 4 below.) In the current expansion, the 10 fastest growing states (identified by dark brown shading in Exhibit 4) are spread across 7 of the 9 Census Divisions. In other recent recoveries, the 10 fastest growing states were contained within no more than 5 Divisions.

The maps of Exhibit 4 also reveal a loss of job growth leadership from the Mountain Division, which comprises AZ, CO, ID, MT, NM, NV, UT, and WY. Whereas the Mountain Division was home to 7 of the 10 fastest job growth states during the expansions of the 1990s and 2000s, it contains only three – CO, ID, and UT – during the present recovery. Possibly reflecting labor market reverberations of the housing bust, Arizona and Nevada are notably absent from the current list of states with the fastest job growth. The current recovery is the only economic expansion of the last five that has not counted both of these perennial job growth leaders among the top 10 states.

Why Is the Geography of Labor Market Recovery Important?

By adding a geographic dimension to employment data, measures of state job growth dispersion and growth rates provide an indication of the robustness of the labor market recovery, which in turn is a key driver of healing in the housing market. Furthermore, the slowdown in state job growth rates and the geographic diffusion of the fastest-growing states might mean that regional lenders or homebuilders who focus on traditional boom areas such as the Mountain West might not receive an outsized boost from the current economic recovery. Conversely, players with nationwide scopes might be in the best position to benefit from the recovery's far-flung job growth hotspots. Similarly, uneven labor market recovery across the states suggests the benefits of housing finance mechanisms of nationwide extent.

The research presented here provides new information on the geography of labor market recovery following the Great Recession. Given that housing markets tend to be more aligned with metropolitan statistical area boundaries than state boundaries, additional insights could be gained from future research that assesses the dispersal of job growth across metropolitan areas.

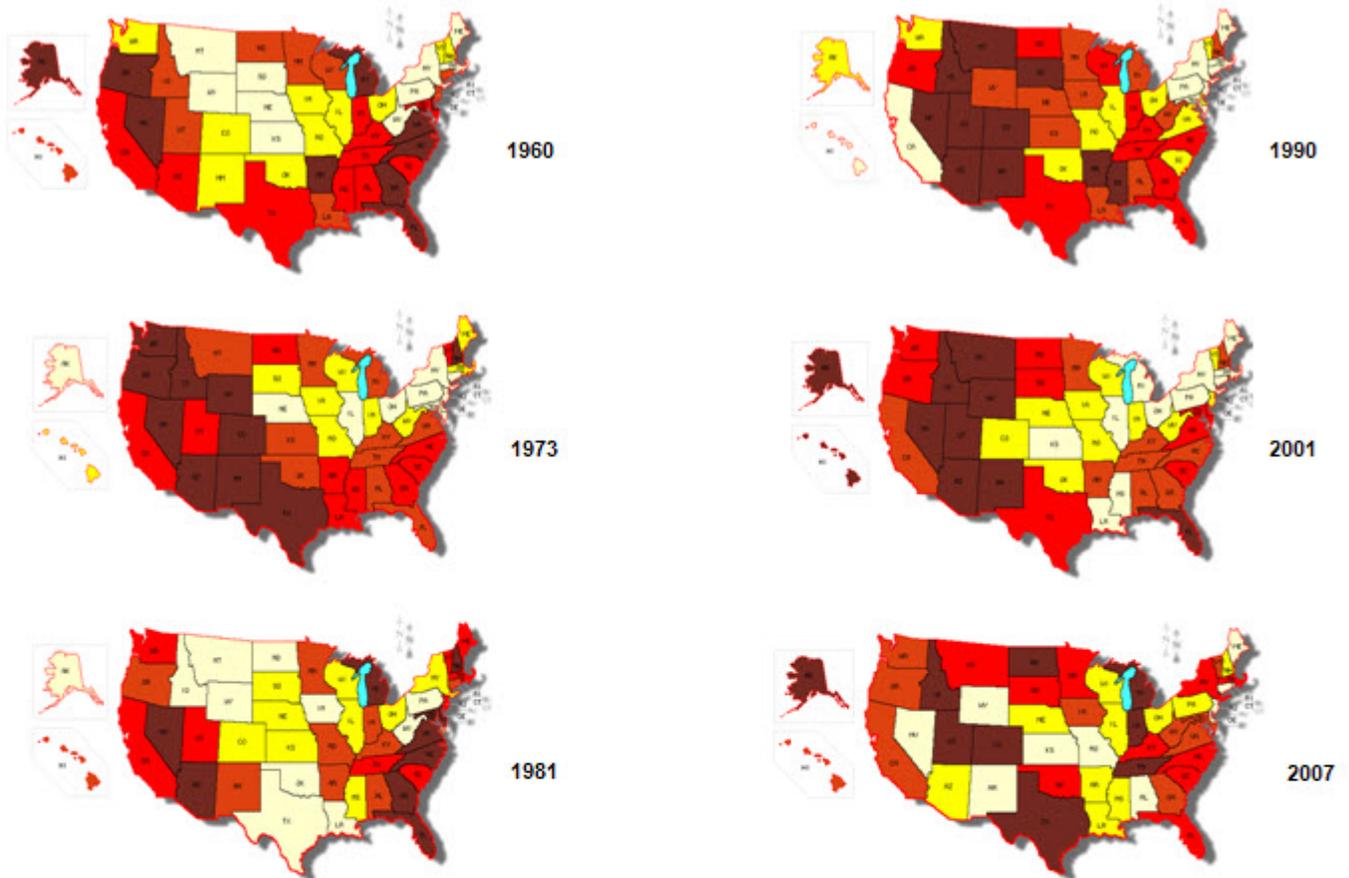
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Exhibit 4. Fastest Growing States Are Regionally Dispersed in the Current Recovery

AZ and NV Are Noticeably Absent from the List of Fastest Growers



●	Top
●	Second
●	Third
●	Fourth
●	Bottom

Payroll Employment Growth Rate Quintile
(Through Four Years of Recovery)

Year to right of map indicates onset of recession.
Source: U.S. Bureau of Labor Statistics