

**Testimony of**

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**Before the**

**House Committee on Energy and Commerce**

**Subcommittee on Commerce, Manufacturing and Trade**

**United States House of Representatives**

**HEARING: Where the Jobs Are: Employment Trends and Analysis**

**Room 2123 Rayburn House Office Building**

**9:30am**

**February 15, 2012**

Thank you, Chairman Bono Mack, Ranking Member Butterfield, and distinguished Members of the Committee. It is a pleasure to appear before you today to discuss the subject "Where the Jobs Are: Employment Trends and Analysis."

My Cornell colleague Lars Vilhuber, Executive Director of the Labor Dynamics Institute, and I have prepared a briefing for you today on the trends in employment and wages that we have constructed from newly-released local labor market data prepared by the U.S. Census Bureau's Local Employment Dynamics federal/state partnership. These data are called the Quarterly Workforce Indicators (QWI).

It is no secret that the recession of 2007-2009 caused enormous displacement and pain in labor markets across the country. As is common in recessions, labor market movements lagged movements in the overall economy. Specifically, most local labor markets began to have substantial recession-related losses of employment in the second half of 2008, well after the recession had begun, and many did not bottom-out until 2010 or later. Many economists recognize that one of the roles a recession plays in the economy is to facilitate the reallocation of employment and capital from businesses that are no longer

profitable to businesses that are more profitable or with better future prospects for profitability. This reallocation activity is masked when one considers only net employment growth, but it is an essential part of the labor market's adjustment and promotes future employment growth.

To focus attention on the gross flows in the labor market and their role in economic reallocation, economists distinguish between movements of individuals (gross worker flows) and those associated with businesses (gross job flows). The gross worker flows are accessions (hiring and recalls) and separations (quits, layoffs, retirements, and firings). The gross job flows are creations (increases in the employment of a given business establishment) and destructions (decreases in employment of a given business establishments). Gross worker and job flows are tied together by a simple arithmetic relation. The difference between accessions and separations must equal the difference between creations and destructions, and both of these differences are equal to the net change in employment between the beginning and ending of the period to which the gross flows apply. We call the difference between employment at the end of the period and employment at the beginning of the period net job growth. It is the net number of new jobs created (or destroyed, if the difference is negative). When net job growth is positive, total employment is increasing.

Both types of gross worker flows are necessary to reallocate individuals to new employment opportunities. The worker reallocation rate measures the overall pattern of worker movements by stating the sum of accessions and separations as a percentage of average employment in the period. Similarly, both types of gross job flows contribute to the reallocation of employment. The job reallocation rate reflects this by stating the sum of creations and destructions as a percentage of average employment in the period.

The worker reallocation rate always exceeds the job reallocation rate. The reason is that there is a natural level of turnover of employees even when a business is neither growing nor shrinking. Some hiring is necessary to replace the employees who separate even when the business is not changing size.

Indeed, if this did not happen, businesses would shrink whenever an employee left. It turns out that this affluence of worker movements is good for the economy. Churning, the excess reallocation rate, measures the difference between the worker and job reallocation rates. Churning is not particularly cyclically sensitive. But in the 2007-2009 recession, churning declined sharply, and has only weakly recovered although there are some promising signs.

The Quarterly Workforce Indicators permit economists to study the dynamics of local labor market adjustments in great detail: geography, industry, age, gender, race, ethnicity, and education can all be controlled and studied separately, or in combination. The briefing that we have prepared for you today shows graphically how the labor market evolved over the period from 2004Q4 to 2010Q4, the latest available data.<sup>1</sup>

The QWIs also permit, for the first time in our national statistical system, the study of the dynamics of longer duration jobs. These jobs are called stable jobs because, in order to be recorded in the data, the job must have lasted at least one full calendar quarter. Statistically, such jobs have an expected length of at least six months. Even more importantly, stable jobs correspond to the intuitive notion of a “good” job—reliable work generating steady earnings. Employment, accessions, separations, job creations, job destructions, and all the reallocation rates can be measured in the QWIs for stable jobs, as well as for all jobs. Stable jobs are also used to produce monthly earnings measures that correspond to the earnings of workers with full-quarter attachment to the labor force.

The beginning quarter of our analysis, 2004Q4, serves as a reference period, chosen because it is approximately midway between the official onset of the 2001 and 2007-2009 recessions. The Census

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<sup>1</sup> It may seem unusual that the current data end in last quarter of 2010, but this occurs because the QWIs are based on administrative reports from the unemployment insurance records of participating states. The data are reported to the Census Bureau six months after the completion of a calendar quarter. The QWIs are released one quarter later. Hence, the data that we are using for this report were released by the Census Bureau in January, 2012, and are based on administrative records through 2011Q1. Many variables in our analysis cannot be computed for 2011Q1 because they require input data from 2011Q2. The latest QWI data can be found on the Census Bureau’s web site at <http://lehd.did.census.gov/led/datatools/qwiapp.html>. The Labor Dynamics Institute at Cornell provides a comprehensive ensemble of all QWI data for all available states, which is also updated every quarter, on the Cornell VirtualRDC at <http://www.vrdc.cornell.edu/qwipu/>.

Bureau does not seasonally adjust the QWIs, so we have focused on the fourth quarter of each year in order minimize the influence of seasonal factors and still show you the latest data. We will be summarizing more than 94 million data points using animated maps of the United States. Each map shows every county in the U.S. for which data are available on a thermal scale that is based on the data for the reference quarter (2004Q4). Counties that are around the median value of a particular indicator for the reference quarter are uncolored (white). Counties that are above the median for the reference quarter are shaded in increasing green intensities. Those that are below the median are shaded in increasing brown intensities. When the labor market is performing at about the same level and distribution as in 2004Q4, the maps show varying intensities of green and brown. When the labor market improves nationally, the maps become primarily green. When the labor market deteriorates nationally, the maps become primarily brown.

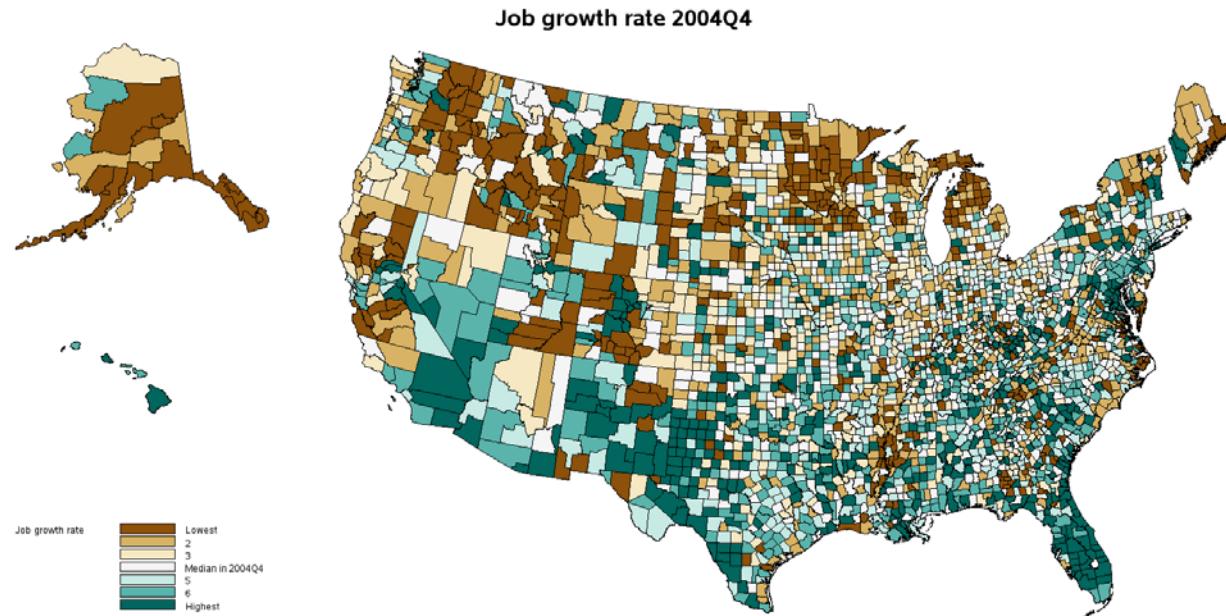
#### ***The Overall Level of Employment and the Net Job Growth Rate***

Figure 1 maps the net growth rate in overall employment over time. The initial labor market picture, from 2004Q4, shows that the highest net employment growth rates at that time were in the South, Southwest, and in the middle Atlantic along the coast. The lowest employment growth rates at that time were in the upper Midwest and Northwest. The rest of the map is a patchwork of light green (mildly higher growth rates) and light brown (mildly lower growth rates). The benchmark is the median county net employment growth in 2004Q4. Areas that are white had median net job growth rates.<sup>2</sup> Now watch the labor market evolve over time (click the figure to launch the animation). Employment growth improves in 2005Q4 (more areas are dark green), slows in 2006Q4 (more of a patchwork of light greens and browns), and improves in some areas and worsens in others by 2007Q4 (the 2007-2009 recession begins officially in December 2007). Then, in 2008Q4, the bottom falls out (vast areas of dark

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<sup>2</sup> There are no QWI data for Massachusetts, New Hampshire, and Washington, DC. Those states and the District of Columbia have joined the Local Employment Dynamics federal/state partnership, but their data were not yet available as of February 12, 2012.

and light brown; very little green of any shade). The situation is not much better in 2009Q4 (the recession officially ended in June 2009), nor in 2010Q4. Over most of the country net employment growth was very substantially lower than it was in 2004Q4 for more than three years from 2007Q4 to 2010Q4.

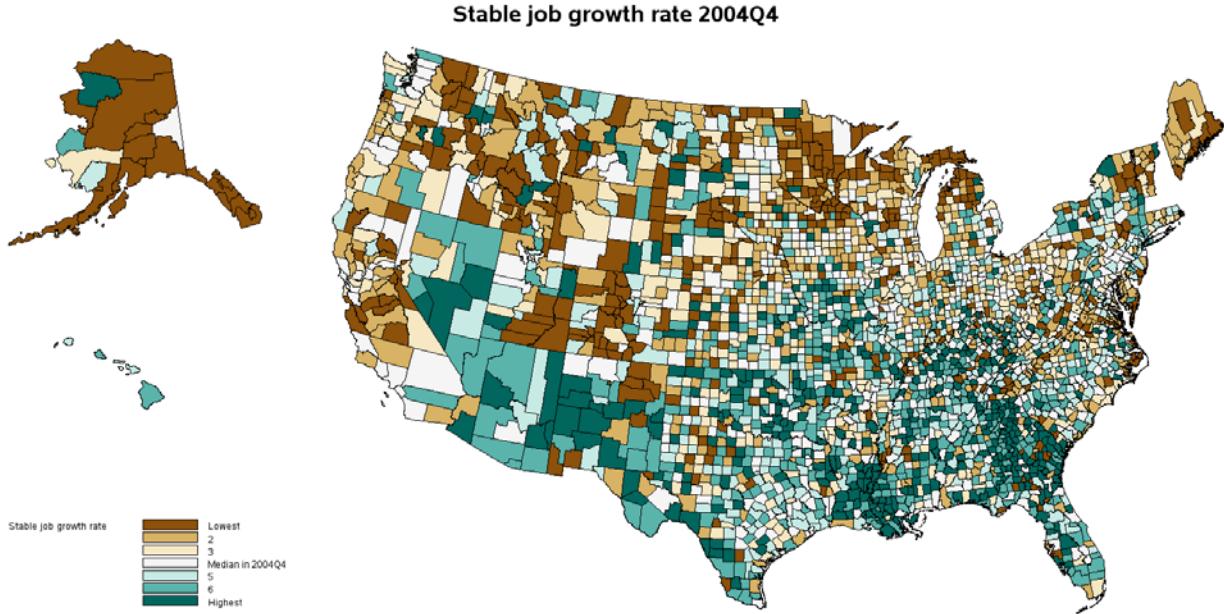


**Figure 1 Animated Map of the Local Job Net Growth Rate  
(Click to play animation. Windows Media Player)**

#### ***The Growth Rate of Stable Jobs and the Earnings of Stable Job Holders***

Stable jobs last at least one full calendar quarter and are expected to last much longer than that statistically. Figure 2 is the animated map of stable job growth rates. At the starting point in 2004Q4, stable jobs grow at rates show mostly gentle local variation. Most of the map is light brown, white, or light green. There are a few large patches of dark green, most notably in the southwest and around the Gulf of Mexico. Watch what happens in Gulf when Katrina strikes before 2005Q4. The dark green becomes a large patch of brown—lots of stable jobs were interrupted by Hurricane Katrina. Otherwise, the labor market is about the same as it was one year earlier. By 2006Q4, stable job growth in the Gulf has largely recovered, and the stable job growth rates in the rest of the country are slightly lower than

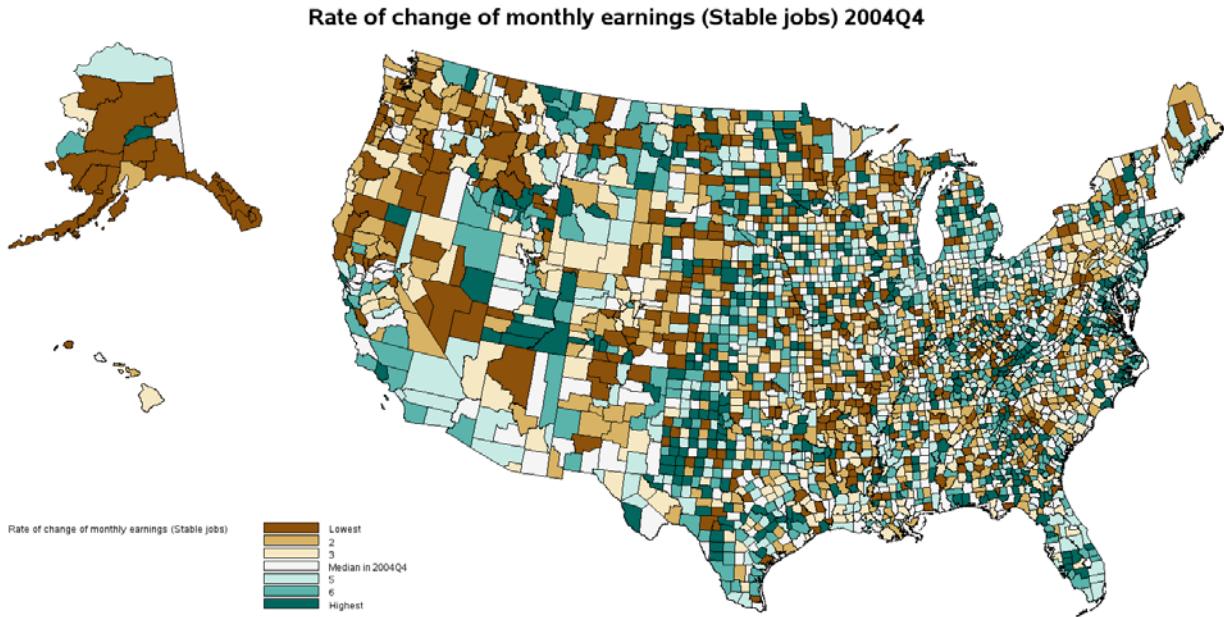
they were the year before (the graph has a stronger brown shade). Further deterioration can be seen in the 2007Q4 map. Then, in 2008Q4 the bottom falls out, and the map goes mostly brown. It continues to be mostly brown in 2009Q4 and 2010Q4. Stable jobs have simply not recovered by 2010Q4 in most of the country.



**Figure 2 Animated Map of the Local Stable Job Growth Rate  
(Click to play animation. Windows Media Player)**

Stable job growth matters because such jobs provide predictable monthly earnings that grow over time at rates that are largely independent of the business cycle. This isn't a profound point. I'm simply saying that a person who has a reliable (read: stable) job can do financial planning and can reasonably expect to have the income that is consistent with the planned consumption even if there is a recession. The bigger risk is losing one's stable job, not suffering a profound earnings cut. Figure 3 provides the animated map of the rate of change of the monthly earnings of stable job holders. You can see that it is just as green in 2010Q4 as it was in 2004Q4, 2007Q4, and 2008Q4, and it is most green in 2009Q4—just after the economy came out of the 2007-2009 recession. The map is brownest in 2005Q4 and 2006Q4. It might seem strange at first, but all the graphic is showing is that those who retained

their stable jobs, did a bit better in 2009Q4 than those who retained their stable jobs in 2004Q4. We already saw in Figure 2 that the growth rate of stable jobs was very low during the period from 2007Q4 on. We'll see in a few minutes that the situation was even worse than those growth rates imply.

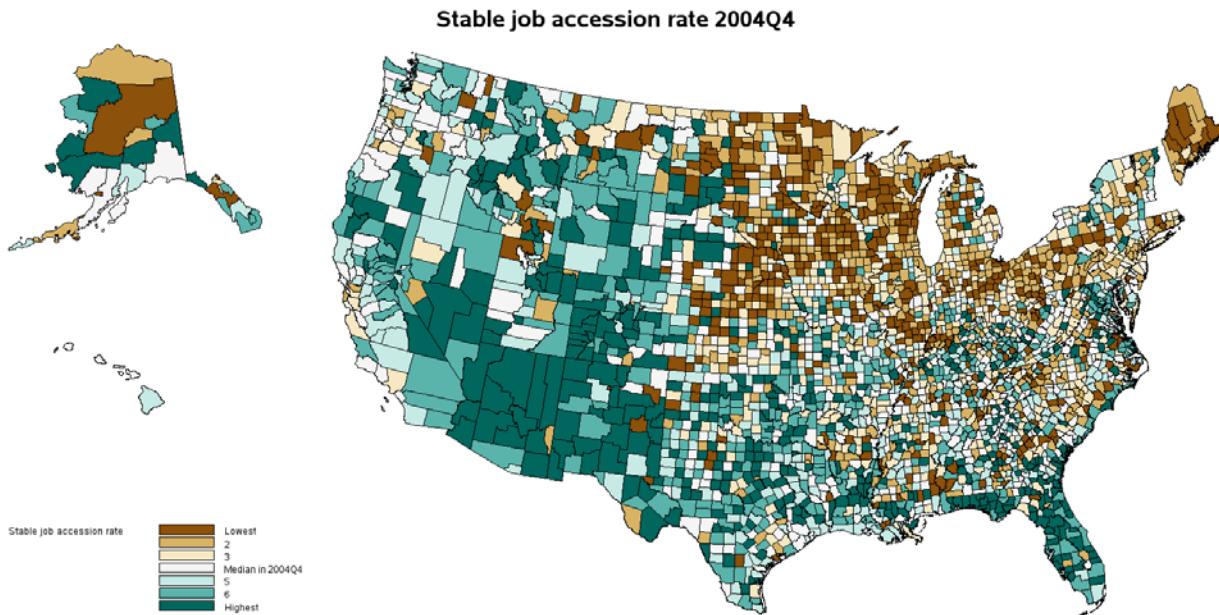


**Figure 3 Animated Map of the Growth Rate of Monthly Earnings of Stable Job Holders**  
(Click to play animation. Windows Media Player)

#### *The Gross Flows of Workers and Jobs: Stable Job Accessions and Creations*

An individual can't enjoy a stable job unless that person is hired into one. The accession rate for stable jobs tells a very dramatic story. As the animation in Figure 4 shows, in 2004Q4 employers were hiring above the median rate for that quarter along the Atlantic coast in the South, along the Gulf coast and in the Southwest. In most of the rest of the country, the rates were either at the median or mildly nearby (light brown, white, and light green). Only the upper Midwest and upper Northeast were the rates substantially below the median. The situation improves substantially in 2005Q4 (much more green), and levels off in 2006Q4 (about the same as in 2004Q4). Then, the stable job accession rate starts to deteriorate markedly in 2007Q4, as the recession starts. By 2008Q4, brown dominates most of the map (worse performance compared to 2004Q4). And in 2009Q4, the country is a sea of dark brown.

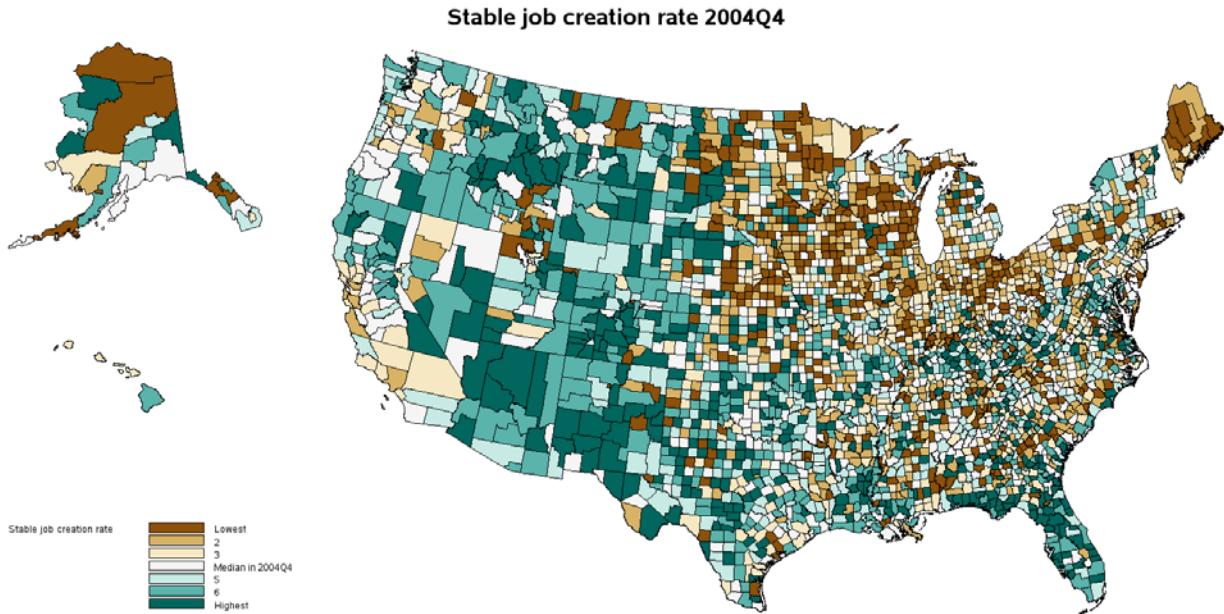
The stable job accession rate has plummeted by this time. Employers are simply not hiring workers and keeping them around very long. The situation has improved by 2010Q4, there is still much more brown (worse performance than the median in 2004Q4). The improvement is a hopeful sign, but there is still a long way to go. From the workers' viewpoint, it remained very difficult to get hired into a stable job in 2010Q4.



**Figure 4 Animated Map of the Local Stable Job Accession Rate**  
**(Click to play animation. Windows Media Player)**

From the employers' viewpoint, the story is very similar. Figure 5 provides an animated map of the stable job creation rate. From 2004Q4 through 2007Q4, employers created stable jobs at rates that were very similar over time with geographic variation that was also stable across the country. Then, in 2008Q4, the stable job creation rate fell in most local markets to levels below the 2004Q4 baseline (preponderance of light brown in the map). In 2009Q4, the employers created scarcely any jobs compared to the rates in 2004Q4 (preponderance of dark brown in the map). The last quarter of 2010 shows some recovery—the stable job creation rates were increasing, and the map shows rates (and thermal color patterns) that are much closer to those of the baseline period. Recovery of the stable job

creation rate is essential to recovery in the labor market. It puts a floor on the stable job accession rate because a growing business must usually hire more than one person into a stable job to create a new one.

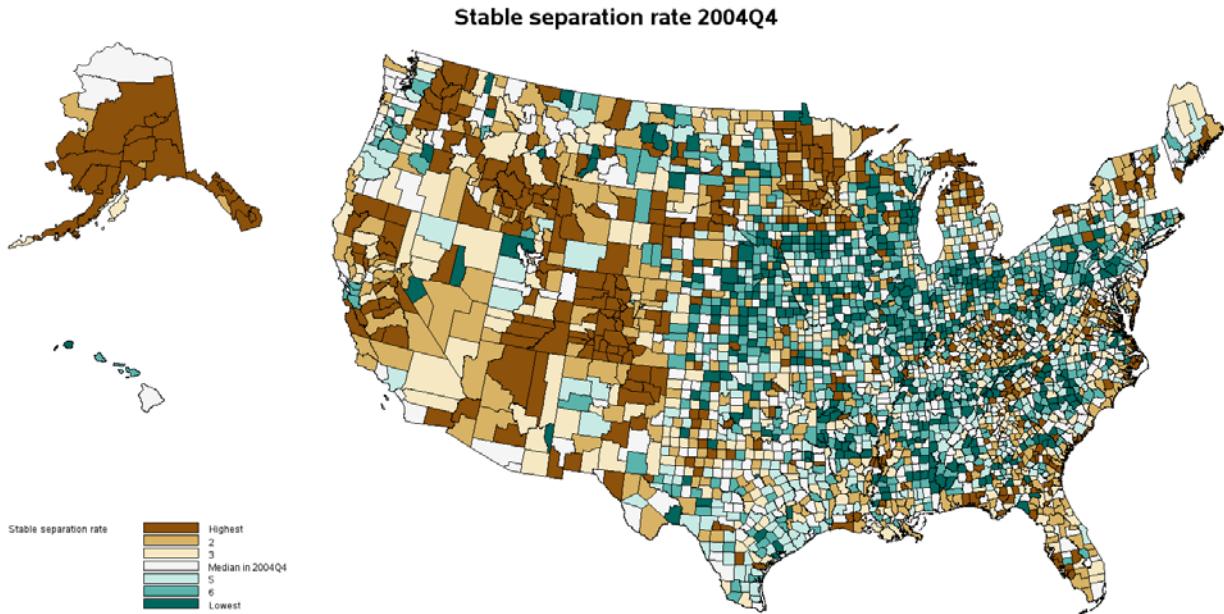


**Figure 5 Animated Map of the Local Stable Job Creation Rate**  
**(Click to play animation. Windows Media Player)**

#### ***The Gross Flows of Workers and Jobs: Stable Job Separations and Destructions***

Pay very close attention to the information in Figure 6, which shows the pattern of separations from stable jobs (worker flows) and Figure 7, which shows the pattern of stable job destructions (job flows), again with reference to the situation in 2004Q4. In order to make these figures comparable to the other figures in this briefing, the graphs get greener when the separation and job destruction rates go down, not up. They get browner when the separation and job destruction rates increase, not decrease. This is because separations and job destructions have the opposite effect on net employment growth from accessions and job creations. All other factors constant, if separations decline then employment grows, and similarly for job destructions.

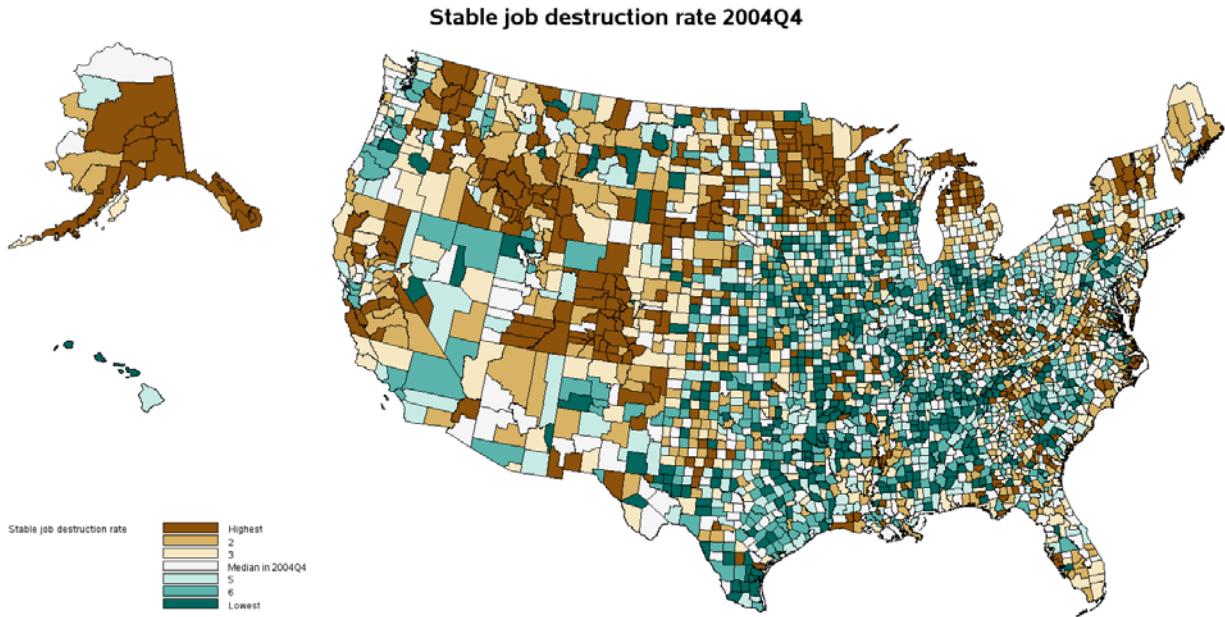
Your eyes are not tricking you. The greenest year in Figure 6 is 2009Q4, right after the recession ended, other years have a mix of brown and green that is quite similar to the reference period 2004Q4. What happened? Separations did indeed slow down during the recession, implying that, from a worker flow viewpoint, much more of the decline in stable employment was due to reduced hiring than increased separations. Other data, primarily from the Current Population Survey and the Job Openings and Labor Turnover Survey, show that the decline in separations occurred because of a decline in quits, while the rate of firing actually increased. Nevertheless, from a worker flow accounting viewpoint, the decline in stable job employment was primarily due the massive decline in stable job accessions documented above.



**Figure 6 Animated Map of the Local Stable Job Separation Rate  
(Click to play animation. Windows Media Player)**

Stable job destructions, as shown in Figure 7, also did not rise precipitously during the recession, although they did rise somewhat after the recession, as shown by the fact that 2010Q4 has more brown shading than the other years. As we saw with the worker flows, it was the precipitous decline in job

creations, and not a large rise in job destructions, that brought about the massive decline in stable jobs that occurred during the recession.



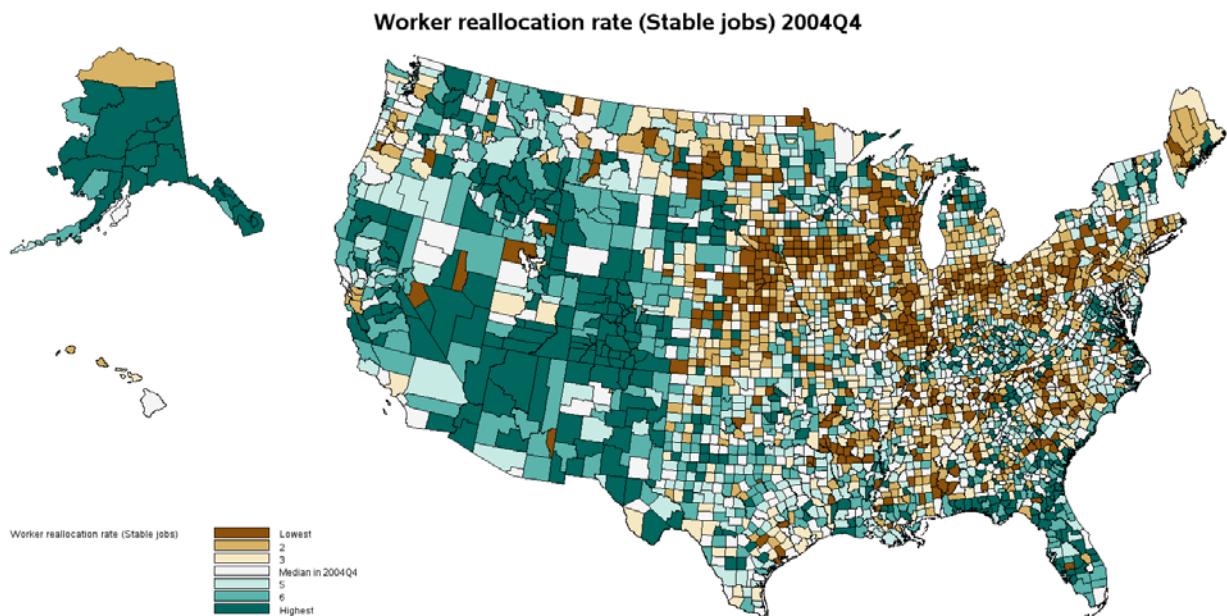
**Figure 7 Animated Map of the Local Stable Job Destruction Rate**  
**(Click to play animation. Windows Media Player)**

#### ***Worker, Job and Excess Reallocation Rates***

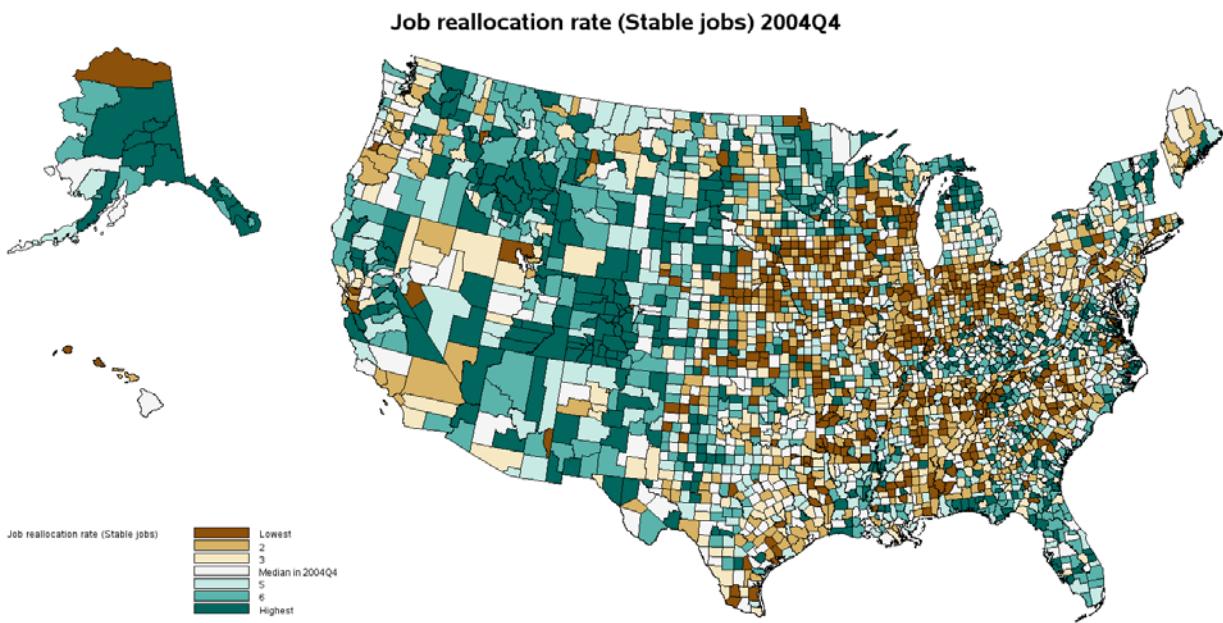
Figures 8, 9 and 10 display the stable job worker, job and excess (churning) reallocation rates. Reallocation rates are somewhat counterintuitive. The worker reallocation rate for stable jobs is the sum (not the difference) of the accession and separation rates for stable jobs. The job reallocation rate is the sum of the stable job creation and destruction rates. Finally, the stable job excess reallocation rate (churning) is the difference between the worker and job reallocation rates.

Figures 8 and 9 demonstrate that both the worker and job reallocation rates fell during the recession, with the declines in the worker reallocation rate being deeper. These two rates are not usually cyclically sensitive, although that view is based primarily on the job reallocation rate for manufacturing, which is the only reallocation rate for the U.S. that has been followed for decades. But look closely at Figure 10. The consequence of the worker reallocation rate falling more during the

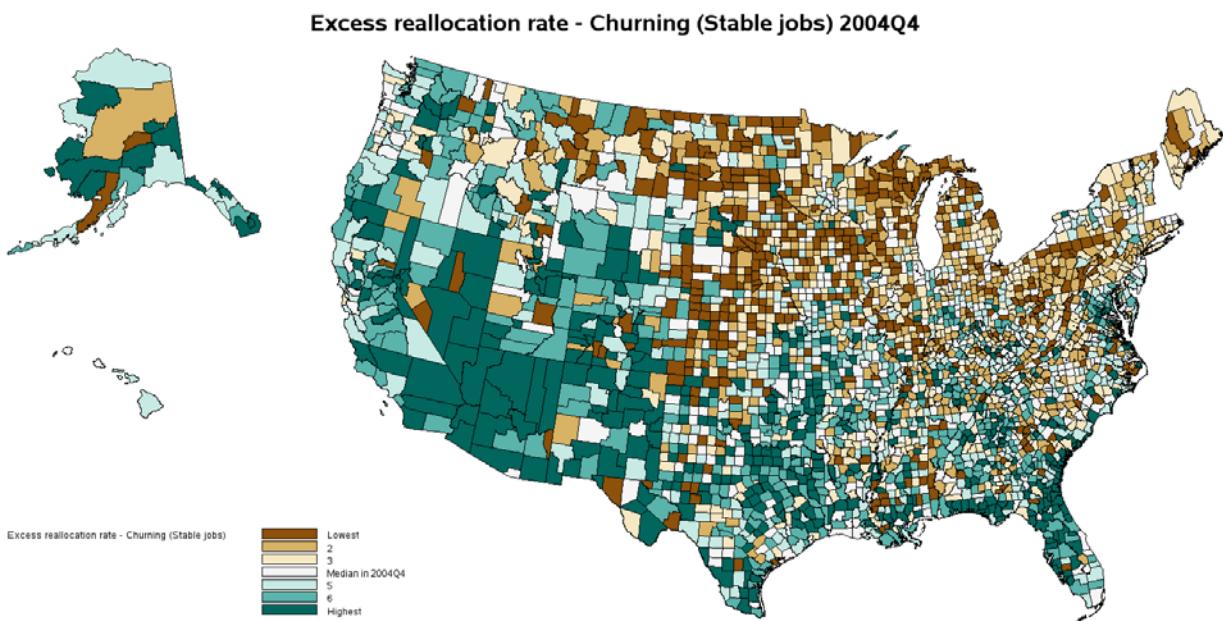
recession than the job reallocation rate, and across many local labor markets, was that churning fell precipitously. Even in 2010Q4 it is very low in many local labor markets (light and dark brown) compared to its level in 2004Q4. Churning is the grease that keeps labor markets flexible and able to adapt to changing conditions. In the U.S., workers and employers both rely on churning to speed adjustments and to allow individual workers to find good matches with employers. The substantial decline in churning that has continued even after the recession has ended is very likely an important contributor to the slow recovery of the labor market.



**Figure 8 Animated Map of the Local Worker Reallocation Rate (Stable Jobs)**  
**(Click to play animation. Windows Media Player)**



**Figure 9 Animated Map of the Local Job Reallocation Rate (Stable Jobs)**  
**(Click to play animation. Windows Media Player)**



**Figure 10 Animated Map of the Local Excess Reallocation Rate—Churning (Stable Jobs)**  
**(Click to play animation. Windows Media Player)**

## **Conclusion**

I have attempted in this testimony to describe and analyze what happened in the U.S. labor market both spatially and temporally from 2004Q4 to 2010Q4, the latest date for which the Census Bureau source data, the Quarterly Workforce Indicators, are complete enough to do the analysis. More recent data are released every quarter. Some labor market indicators, like the unemployment rate, which is released within weeks of being collected, suggest that this market is finally picking up. Some of the QWIs, following along with much greater delays, support this view. We are waiting to see if the stable job accession rate will continue to improve, since it has a long way to go in most parts of the country before it returns to its pre-recession levels. The stable job destruction rate, on the other hand, while not declining precipitously in most local labor markets during the recession, shows signs of increasing in 2010Q4 data. If this continued throughout 2011, the labor market could stay in its lack-luster state for much longer.

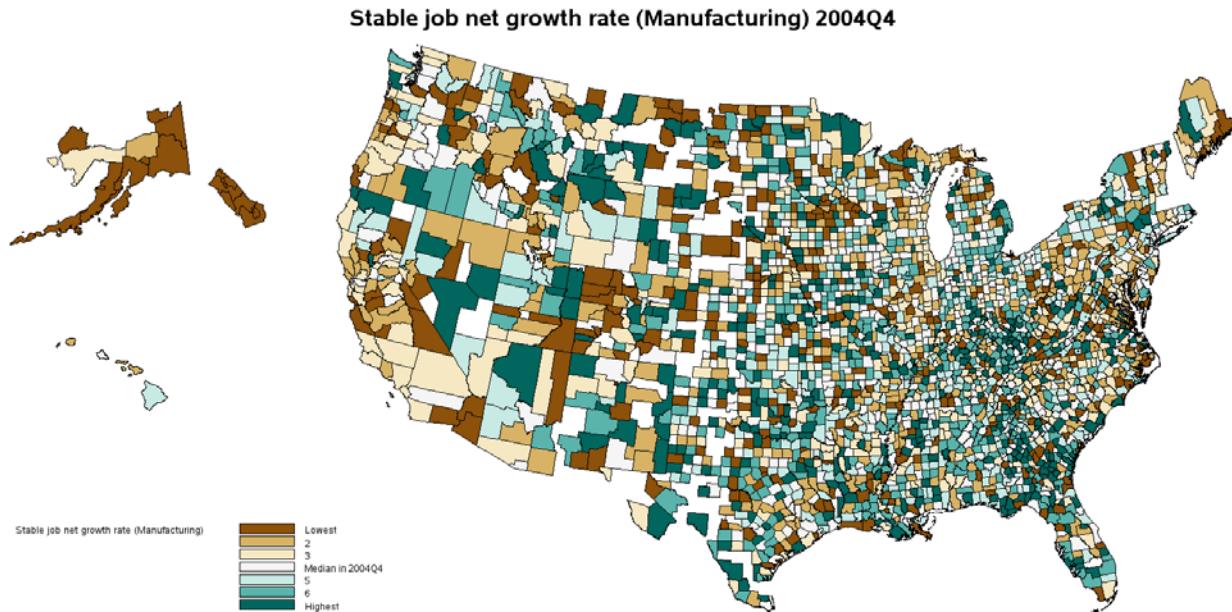
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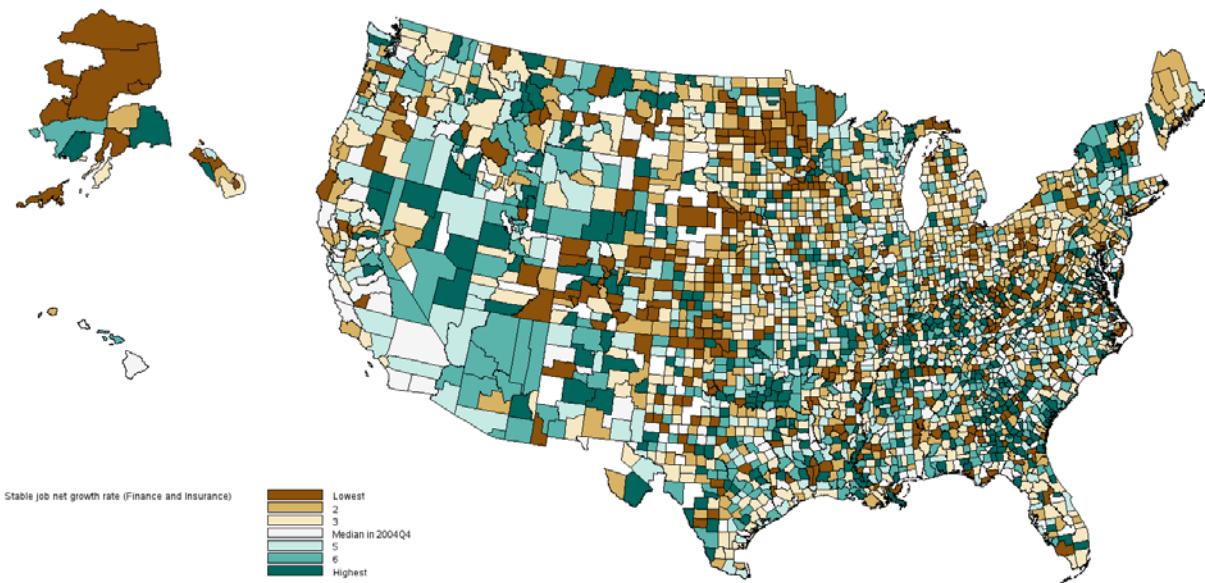
## **Appendix: Additional Animated Maps**

This appendix contains maps of the stable job net growth rate for four NAICS sectors that figured prominently in the recession of 2007-2009: Manufacturing, Finance and Insurance, Wholesale and Retail Trade, and Construction.



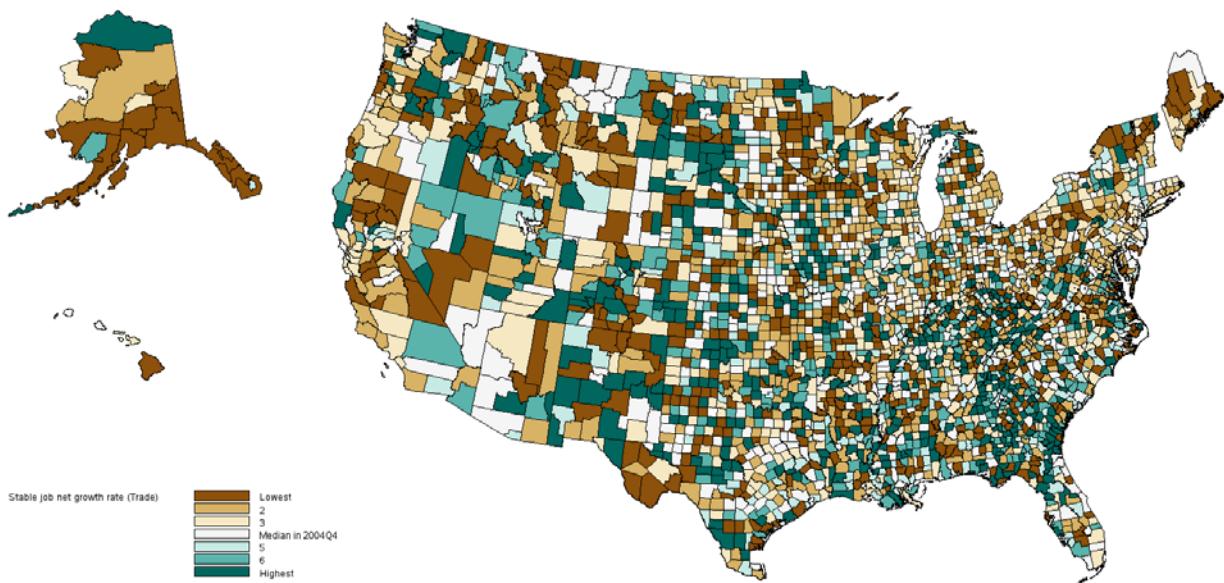
**Appendix Figure 1 Animated Map of the Local Stable Job Net Growth Rate for Manufacturing**  
(Click to play animation. Windows Media Player)

**Stable job net growth rate (Finance and Insurance) 2004Q4**



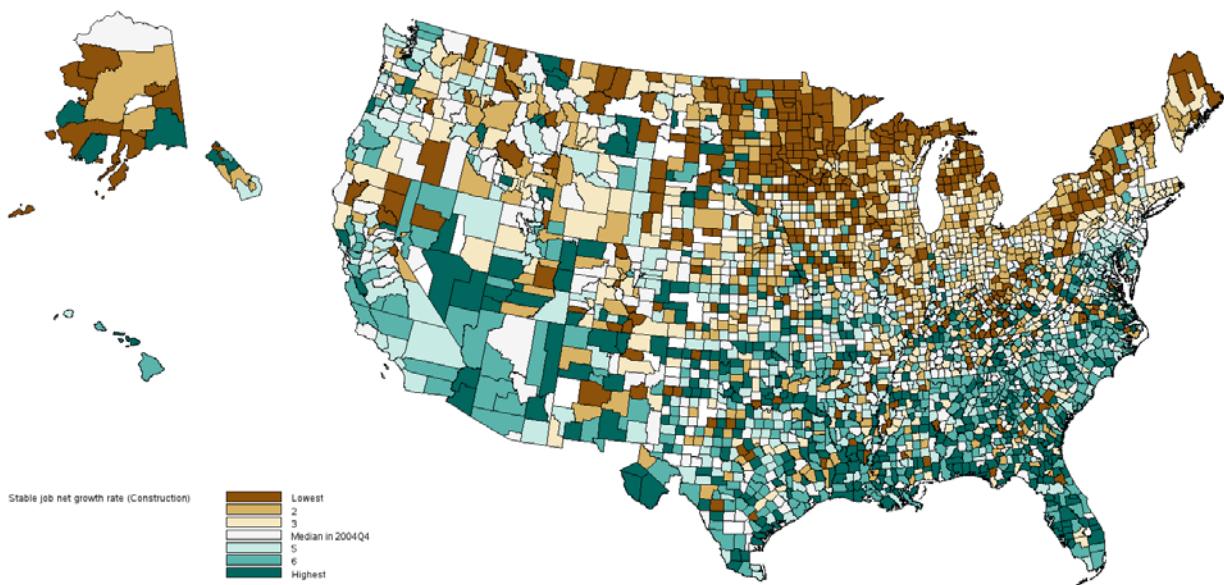
**Appendix Figure 2 Animated Map of the Local Stable Job Growth Rate for Finance and Insurance**  
(Click to play animation. Windows Media Player)

**Stable job net growth rate (Trade) 2004Q4**



**Appendix Figure 3 Animated Map of the Local Stable Job Growth Rate for Wholesale and Retail Trade**  
(Click to play animation. Windows Media Player)

**Stable job net growth rate (Construction) 2004Q4**



**Appendix Figure 4 Animated Map of the Local Stable Job Growth Rate for Construction  
(Click to play animation. Windows Media Player)**