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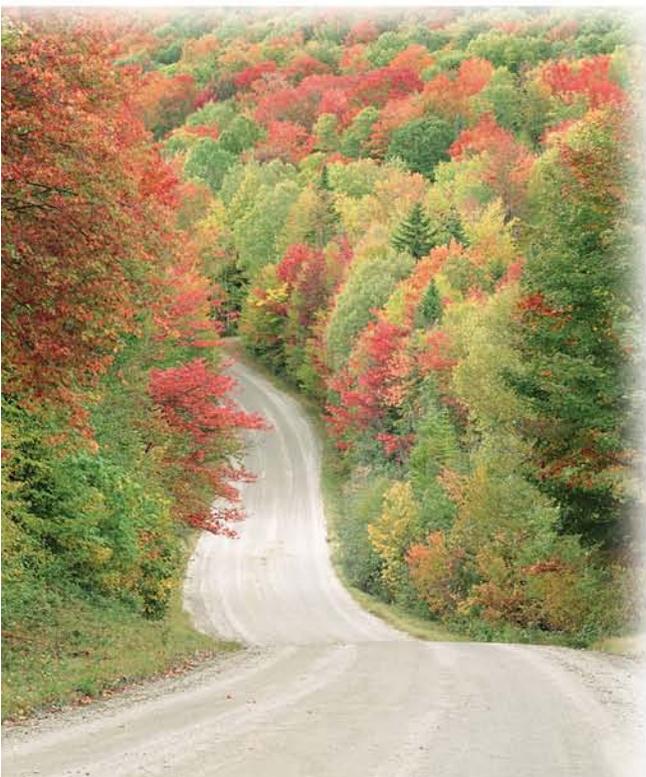


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Commentary on the rural economy



***Regional Asset Indicators:
Tapping the Skills Surplus
in Rural America***

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The most successful regional economies in America today are often driven by high-skill jobs and industries. These successful engines of higher wages and stronger growth demand a steady supply of high-skill workers to fuel their ever-expanding needs. In urban areas, high-skill workers are plentiful. Surprisingly, workers with valuable skills are also available in many rural places—but are often hidden because they are not always fully used by local industry.

Underemployed workers represent a vital potential asset for regions seeking to reinvent their economies. By tapping this surplus of valuable worker skills, some rural regions may be able to generate high-skill job growth. Even neighboring areas can benefit from such high-skill pools, as regions increasingly exploit synergistic assets to partner across traditional jurisdictional lines in today's globalizing economy.

This article is the second in a series reporting on new regional asset indicators. The new metrics for measuring a region's potential assets comprise five categories: Innovation, Workforce, Finance, Lifestyle, and Information. This article analyzes the often underused and overlooked local resource, *underemployment*, which is a critical workforce asset.

Why is underemployment important?

High-skill workers are an essential ingredient for achieving prosperity in a globalizing economy. They bring higher wages and increased economic and entrepreneurial activity to their community. Concentrations of these workers may also lead to longer-term benefits for regions by enhancing the likelihood that high-skill industries will take root. These benefits are significant. Over the 1990s, high-skill industries grew considerably faster than the overall U.S. economy and were largely responsible for rising levels of innovation and economic growth.

Measuring underemployment conveys information about how fully these valuable high-skill workers are being used. Communities tend to rely on unemployment as a measure, but it reveals little about the potential skills in the workforce. *Unemployment* occurs when a worker cannot find a job.

Underemployment, in contrast, occurs when the skills of workers are not fully used in their current jobs.

Underemployment signals that a local surplus of skills is available for a region. Such a pool of surplus skills allows a more productive matching of firms and workers. Both groups benefit from the relationship. Companies fulfill their skill needs, while skilled workers enjoy more fulfilling and higher paying jobs.

Underemployed workers offer additional benefits when they put their own skill surpluses to use by starting new businesses. As these start-ups flourish,

they may create new job opportunities for all workers in the community. Further, higher skill surpluses are associated with higher average entrepreneur income, suggesting that many communities may already be realizing some of the benefits available from entrepreneurship among surplus high-skill workers.

While a surplus of high-skill labor is clearly an asset, it may come with an expiration date. Assets such as coastlines or mountains are fixed, but surplus high-skill labor is a highly mobile asset. If underemployed workers are neglected, they may choose to leave for places with better opportunities. Many parts of rural America have experienced this "brain drain" phenomenon. While rural America produces talented and educated individuals, other places often enjoy the economic benefits that these vibrant workers can create.

How do we measure underemployment?

In general, underemployment reflects a mismatch between a region's workers and its jobs. In this sense, regional underemployment is the amount of worker skills that remain after they have been matched with the demands of local jobs. Underemployment occurs only when the total supply of skills among workers is higher than the skills demanded by local jobs. In these communities, some portion of the highly skilled workers must take less-skilled jobs.

The following equation describes the actual computation:

$$\text{Underemployment} = \text{Supply}^{\text{high-skill}} - \text{Demand}^{\text{high-skill}}$$

The first part of the measure is the supply of worker skills, specifically the percent of high-skill workers in a county. The level of worker skills in 1990 and 2000 can be estimated using U.S. Census data on educational attainment. Workers with either a college or post-graduate degree are classified as high-skill, while those with less than a high

school diploma, a high school diploma, or some college constitute the less-skilled. Metro counties, on average, have a greater share of high-skill workers than rural counties, 21.4% vs. 15.8%. Still, many parts of rural America have significant concentrations of high-skill workers.

The second component is the demand for high-skill workers, namely the percent of jobs that require high-skill workers. Demand is more difficult to measure than supply. Data are available on the mix of occupations in each county, but we do not know precisely the level of skills these jobs require. The Census Bureau provides estimates of the average education of workers by occupation for metro and nonmetro areas. To the extent that the national labor market efficiently matches workers with jobs based on skills, we can view these averages as benchmarks for the level of skills that each occupation should demand. Thus, demand is calculated as a weighted average of a county's known occupational mix and the suggested educational requirements of those occupations based on the metro and nonmetro national averages.

To see how the underemployment asset indicator works, consider Chase County, which lies in the Flint Hills of east-central Kansas. In nonmetro counties nationally, 32% of management, business, and professional jobs require workers with high skills. Chase County employs 260 of its 1,580 workers (roughly 16%) in these occupations. To meet these demands 5.1% (32% * 16%) of all workers in Chase County would need high skills.

Once this process is repeated for all other occupations in the county, and the results are summed, the asset indicator can be determined. Chase County needs 18.8% of its labor pool to have high skills to meet the county's total occupational skill demands. Around 21% of the county's labor force has high skills. Thus,

its skills surplus equals 2.5% of its labor force (21.3%-18.8%).

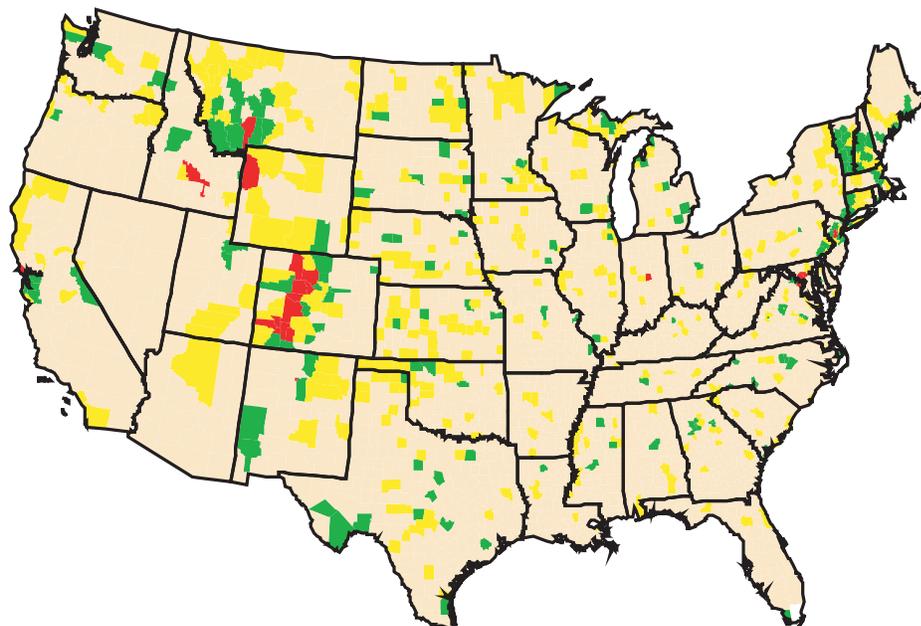
The spectrum of underemployed counties

In 2000, about 20% of nonmetro counties showed signs of underemployment, compared with about 16% of metro counties (Figure 1). In other words, one-fifth of the counties in rural America have workers whose skills are overlooked. In 1990, this figure was just over a third. Around 34% of rural counties, and 22% of metro counties, had a skills surplus in 1990 (Figure 2). While the percent of metro counties with a surplus declined by six points, in rural counties it declined by 14 points. As Figure 3 suggests, however, the change in skill surpluses among rural counties varied significantly.

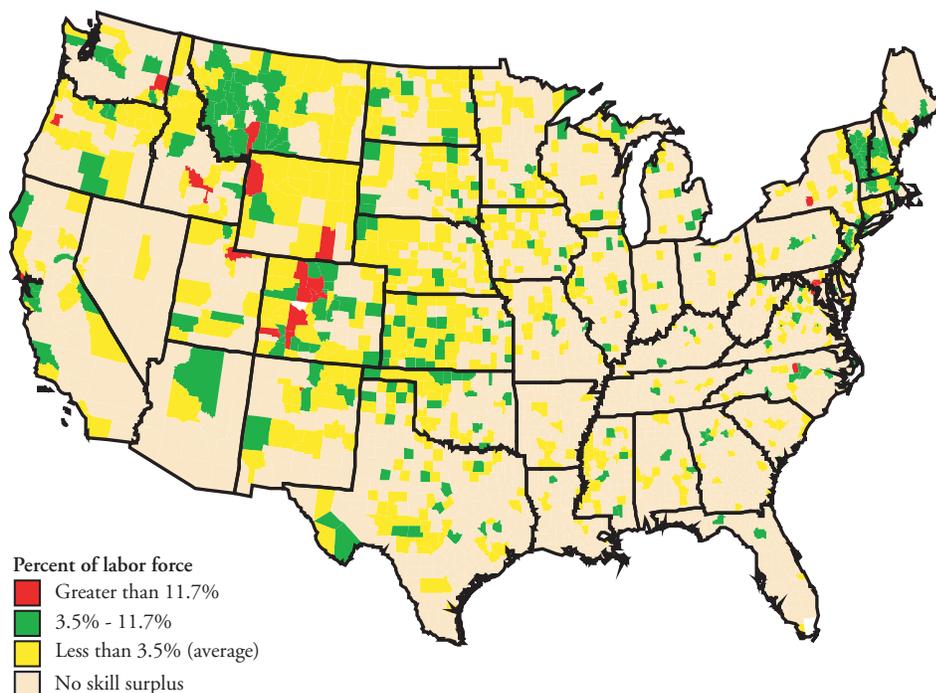
In the 1990s, population and employment grew faster in underemployed counties than in rural America as a whole. Such growth suggests these underemployed counties were already taking some advantage of their skills surplus. The best performers were in areas rich in natural amenities, such as the Rocky Mountain region. Demand for high-skill labor increased in these places throughout the decade. Interestingly, the increased demand was not quite strong enough to offset the inflows of high-skill workers, resulting in increased skill surpluses by 2000. This apparent “brain-gain” may have been fueled by a resurgent interest in natural amenities and enhanced quality of life. And the existing high-skill pool allowed key industries to take root and grow with the new infusions.

At the same time, many underemployed counties did not fully capitalize on the opportunities offered by high-skill labor. These counties are scattered throughout the country and are generally less endowed with natural amenities. Most of these counties experienced a decline in the skills surplus from 1990 to 2000. Employment and population growth were slower as well, and their demand for high-skill labor tended to

**Figure 1
Skill Surplus 2000**



**Figure 2
Skill Surplus 1990**



be much weaker than other underemployed places in 2000. Conditions such as these threaten areas with a possible “brain-drain.” High-skill workers are apparently not drawn to these counties. If demand stays weak, these places stand to lose their existing high-skill worker pools.

Underemployment has been remarkably persistent in several areas since 1990 (Figure 3). However, the window for benefiting from surplus skills is not likely to stay open indefinitely, particularly in slow-growing counties. The decline in skill surpluses in the slower job growth counties foreshadows a “brain-drain” and underscores the importance of tapping this valuable asset before it leaves.

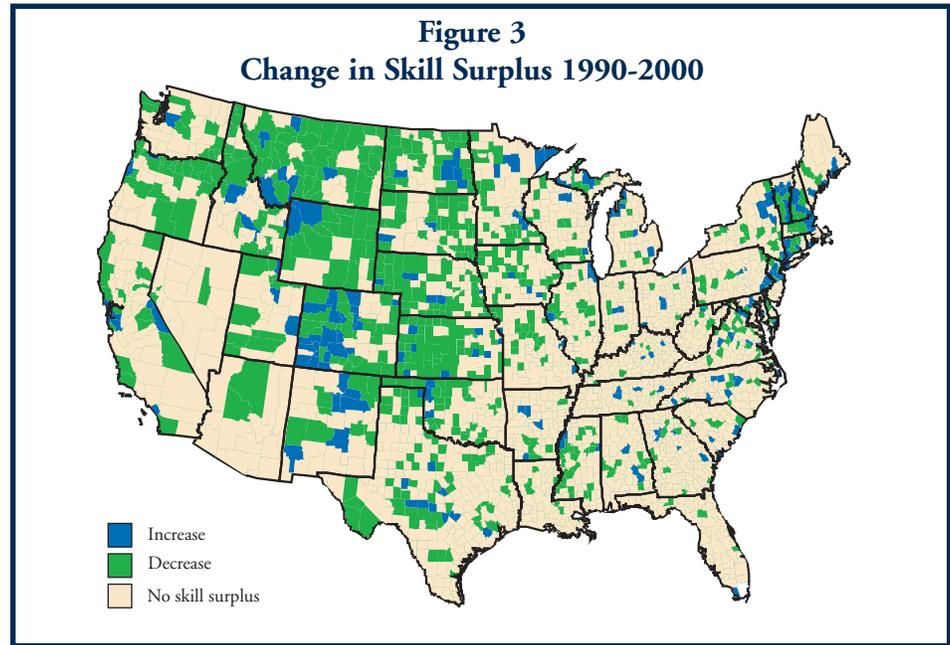
Conclusion

High-skill occupations are playing an increasingly important role in national employment and economic growth. Since 1990, high-skill industries have grown considerably faster than the overall U.S. economy. They have been largely responsible for rising levels of innovation and economic growth in rural America and elsewhere.

To capitalize on high-skill occupations, communities must recognize their high-skill workers. The underemployment asset indicator discussed in this article sheds new light on the regional availability of high-skill workers.

Today’s surplus of skills, however, may become tomorrow’s deficit. Eventually, local labor markets will tend to balance the supply and demand of skills, either through the growth of new high-skill industries or through the departure of high-skill workers.

Underemployed regions need not accept the latter outcome. High-skill workers are attracted by quality of life factors, such as natural amenities, and may choose to start businesses in places where these factors are abundant. Consequently, communities that determine to build on existing natural, cultural, and social amenities will achieve



the most success in retaining and using their high-skill workers.

Several other key factors can help communities capitalize on their high-skill labor surpluses. Building a digital infrastructure can enhance the vitality of many high-skill industries. Continued support of public colleges and universities can ensure that these industries have the workers they need. Where size and remoteness impede access to markets,

communities can combine resources to produce the support networks that small businesses need to thrive. And, communities can work with existing firms to adopt higher-skill methods of operation.

Rural America often has the assets to prosper in the new global economy. But first communities must recognize the potential in these assets so they can take full advantage of today’s evolving economic opportunities.

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