The U.S. labor market has substantially recovered from the effects of the recent recession. The unemployment rate has dropped from 10 percent at the end of 2009 to 5.5 percent today, a level Federal Open Market Committee participants consider close to its long-run value. Although the current economic expansion widely improved labor market conditions, there is some debate about whether these improvements lead to higher wages. In this essay, we review the relationship between wage growth and unemployment.

In a very influential and still much-debated 1958 article, A.W. Phillips argued that when unemployment is low, nominal wages tend to increase at a fast pace, while the opposite is true when unemployment is high. This relationship (and its variants) is called “the Phillips curve.” While this relationship should be interpreted with caution, its rationale is rooted in a very simple economic principle: When the labor market is tight—that is, when demand for labor is high compared with the supply of labor—wages tend to increase.

The negative relationship between unemployment and earnings growth seems to hold across states.

NOTE: ND; North Dakota. Unusually high earnings growth in North Dakota is likely due to increased labor demand from the shale oil boom and related activities.
The Phillips curve is often studied at the national level; however, not all regions experienced the recent recession and subsequent expansion in the same way. Unemployment in some states reached almost 15 percent, while in others it remained around 4 percent during the worst of the recession. Given this disparity, wage pressures can be expected to evolve differently in different areas. An examination of wage growth and unemployment data on a subnational level reveals interesting variation and helps identify a Phillips curve relationship even for short periods of time.

The left panel of the figure plots the Phillips curve for the 50 states from 2008 to 2013: Each point represents a year-state combination, with the year-over-year growth in nominal earnings on the y-axis and the yearly unemployment rate on the x-axis. The shape-color combinations of the points represent three different periods, with two years per period. (For example, green diamonds are used for both 2008 and 2009.) As the data show, the negative relationship between unemployment and earnings growth seems to hold across states.

Economic research suggests that not all wages react the same way to economic conditions and wages of new hires may be more sensitive to the state of the labor market. The intuition is that, in a tight labor market, workers have more employment options and firms desiring quality workers must offer high wages. The right panel of the figure includes earnings of new hires only rather than all employees. Although the negative relationship between unemployment and earnings growth does not seem as strong, in part because of higher volatility in the year-over-year earnings of new hires, it holds nonetheless.

Both panels suggest that wages tend to respond to conditions in the labor market and to the unemployment rate in particular. Since labor markets in the United States have substantially improved and are expected to improve even more, it is likely that nominal wages will increase at a faster pace.