

# National

## Economic Gains Enough to Further Tighten Labor Market

August 1, 2016

Indicators released over the past two months suggest a modest upturn in U.S. economic activity in the second quarter. Job growth has slowed but remains at a rate consistent with further declines in unemployment. Wage inflation has accelerated recently, and increasing tightness in the labor market signals more increases to come. Trimmed mean inflation looks to remain fairly steady over the coming four quarters.

### Output Growth Strengthens Slightly, but Trend Slows

Initial data from the Bureau of Economic Analysis (BEA) showed that the economy shook off some of the weakness observed in the first quarter (*Chart 1*), with personal consumption expenditures (PCE) and net exports the only major contributors with 2.8 and 0.2 percentage points added to growth, respectively.

While the second quarter marked a slight improvement from the first quarter, it was significantly lower than the 2.2 average growth over the recovery. Moreover, the four-quarter rate—a measure of recent trend—slipped from 3.0 percent a year ago to 1.2 percent today. This is the largest year-to-year drop in the trend since 2011. However, slow trend doesn't necessarily mean slow growth ahead: In 2013, growth accelerated to more than 3.5 percent, annualized, in the second half following a four-quarter rate that was even lower at 1.0 percent.

### Hiring Wanes

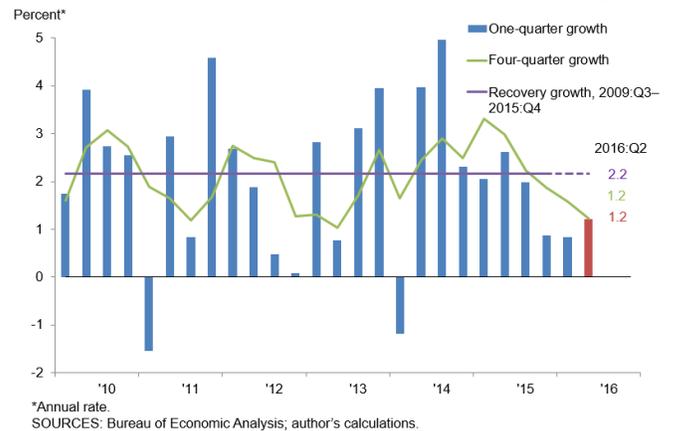
Nonfarm payroll employment only increased an average 147,000 per month from April through June, down from 196,000 from January through March, the lowest quarterly average rate since 2012.

Meanwhile, the unemployment rate bounced up to 4.9 percent in June, after falling to 4.7 percent in May, leaving the second-quarter average unchanged at 4.9 percent. If 150,000 jobs per month becomes the new normal over the coming year, will the unemployment rate resume its decline?

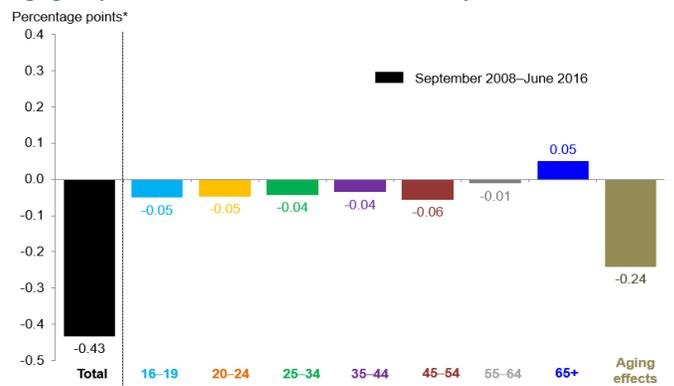
Movements in the unemployment rate occur due to changes in participation, hiring and population. The participation rate has mostly increased since October 2015. However, looking over a longer history going back to late 2008, it has fallen on net and has done so in large part because of aging (*Chart 2*). In other words, it has fallen because of factors independent of labor-market decisions. Consequently, unless firms incentivize higher rates of participation, for example, through much higher wage rates, it's likely that participation will continue falling over the medium term.

Assuming that the participation rate remains constant in the second half of 2016, the economy would need to add only 110,000 to 130,000 jobs per month to keep the unemployment rate steady. (Even fewer jobs would be needed assuming the participation rate falls.)<sup>1</sup> Hence, a continuation of second-quarter job growth should easily further drive down the unemployment rate.

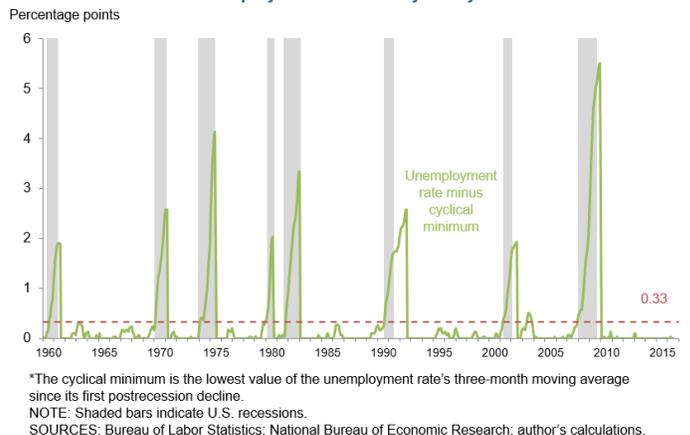
**Chart 1**  
Real GDP Growth Up from First Quarter, but Trend Down from a Year Ago



**Chart 2**  
Aging Responsible for Over Half the Decline in Participation Since Late 2008



**Chart 3**  
Small Increase in the Unemployment Rate Nearly Always Means Recession



## A Recession Rule of Thumb

Unemployment is close to most estimates of the longer-run sustainable rate<sup>2</sup>, i.e., the rate consistent with full employment and price stability, and further job gains may bring unemployment below what's sustainable, setting the stage for it to increase later on.

Historical experience indicates that unemployment rate increases can be problematic. Over the past 50 years, with one exception, whenever the unemployment rate's three-month moving average has risen more than a few tenths of a percentage point, more increases follow and the economy enters recession (*Chart 3*).<sup>3</sup> Consequently, if unemployment falls much below the longer-run sustainable rate, it will be difficult for it to reverse course upward without triggering a recession.

## Wage Inflation Will Rise and Price Pressures to Remain Stable

How much further the unemployment rate can fall before wage and price pressures kick in is also of keen interest to many. For Federal Reserve policymakers, the Fed's dual mandate of full employment and price stability makes it especially important to understand the relationship between the unemployment rate and wage and price pressures.

The question of what wage measure to consider is a key one. Choosing a measure that is not robust to shifts in the composition of occupations or the exit and entry of low- and high-skilled workers can be misleading.

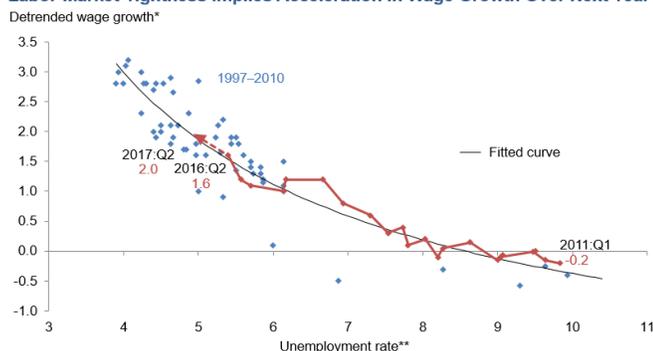
One measure highly resilient against such shifts is the Atlanta Fed Wage Growth Tracker (WGT). It measures the median 12-month wage growth of individuals continuously employed over the last 12 months. To forecast how wages will change over the coming year, the relationship between WGT (less lagged inflation expectations) and lagged values of the unemployment rate was estimated (*Chart 4*).<sup>4</sup> There's strong intuition (validated by empirical studies) for this relationship, with one narrative among others stating that as the supply of available labor lessens, firms subsequently must bid up wages to attract the remaining job candidates. Assuming consistency with historical movements and 2 percent inflation expectations, the forecast calls for wage inflation to rise from its current four-quarter rate of 3.6 percent to 4.0 percent in second quarter 2017.

Turning to price inflation, the Dallas Fed's preferred measure of inflation is the Trimmed Mean PCE price index, which excludes the greatest individual price movements (high or low) from a basket of items during a given month and consequently better captures the underlying trend. This gives Trimmed Mean PCE a tight association with labor-market slack. On a 12-month basis, Trimmed Mean PCE inflation was 1.78 percent in May—roughly unchanged from its levels so far this year but up from a year ago.

Just as was the case with wage inflation, one can anticipate future trimmed mean inflation using lagged values of the unemployment rate (*Chart 5*).<sup>5</sup> Doing so suggests trimmed mean inflation will hold fairly steady, at about 1.8 percent, over the four quarters ending second quarter 2017.

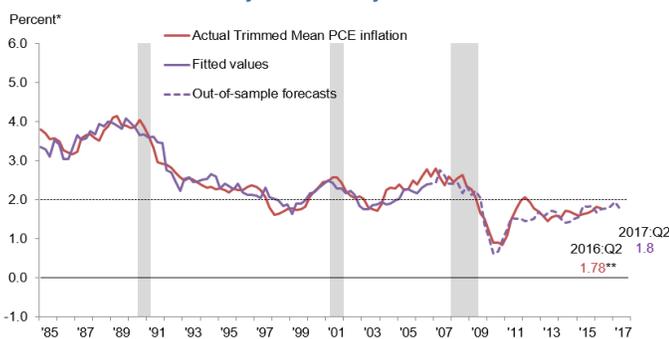
—Alan Armen

**Chart 4**  
Labor-Market Tightness Implies Acceleration in Wage Growth Over Next Year



\*Atlanta Fed Wage Growth Tracker, minus Survey of Professional Forecasters four-quarter lagged 10-year personal consumption expenditures inflation expectations, four-quarter percent change.  
\*\*Lagged four quarters, seasonally adjusted.  
SOURCES: Bureau of Labor Statistics; Federal Reserve Bank of Atlanta; Federal Reserve Bank of Philadelphia; author's calculations.

**Chart 5**  
Trimmed Mean Inflation Likely to Hold Steady at 1.8 Percent Over Next Year



\*Four-quarter percent change.  
\*\*2016:Q2 figure is an estimate based on incomplete data covering February through May.  
NOTE: Shaded bars indicate U.S. recessions.  
SOURCES: Bureau of Economic Analysis; Federal Reserve Bank of Dallas; National Bureau of Economic Research; author's calculations.

## Notes

1. Assuming a constant participation rate and between 0.9 and 1.1 percent population growth (approximately the low and high, respectively, over the recovery) in those aged 16 years and over.
2. The June 2016 Federal Reserve Board Summary of Economic Projections and the Congressional Budget Office both currently estimate the long-run sustainable unemployment rate to be around 4.8 percent.
3. For a more in-depth elaboration of this observed rule of thumb, see "Is Rising Unemployment an Early Warning of State-Level Recession?" by Alan Armen and Tyler Atkinson, *Economic Letter*, vol. 11, no. 8, 2016.
4. Specifically, the curve shows results from a regression of four-quarter wage growth detrended using four-quarter lagged 10-year inflation expectations on the four-quarter lagged unemployment rate, the inverse of the four-quarter-lagged unemployment rate and a constant. In this regression, the coefficient on the inverse unemployment rate is large, positive and highly statistically significant, indicating that the relationship between it and wage inflation is strongly nonlinear.
5. For a more detailed explanation of the model, see "Inflation, Slack and Fed Credibility," by Evan F. Koenig and Tyler Atkinson, *Federal Reserve Bank of Dallas Staff Paper*, no. 16, 2012.

## About the Author

Armen is a research analyst in the Research Department at the Federal Reserve Bank of Dallas.