“What’s up with wage growth?” (by Mary C. Daly, Bart Hobijn, and Benjamin Pyle in *FRBSF EconomicLetter*, Federal Reserve Bank of San Francisco, March 2016) examines what they and others see as sluggish growth in wages during the recovery after the recent recession and asks, basically, are we sure we are comparing apples to apples?

In other words, suppose we compare average wages from one period with the average wages of another period. Economic theory says that wage growth should decrease as unemployment increases during a recession, and then increase during a recovery. During the 2007–09 recession, wage growth declined as unemployment increased. But since the recession ended, wage growth has been less than expected. This seems odd to Daly, Hobijn, and Pyle and many other economists, especially considering that unemployment and job growth statistics seem to show an improving economy. However, the most basic assumption of all comparisons, in economics and every other scientific discipline, is *ceteris paribus*, which is "all or other things being equal or held constant" in Latin.

When we compare wages in one period with wages in another period, we assume (probably without really thinking about it) that the wages in both periods are for the same group of workers doing the same jobs in the same area. Is this a reasonable assumption? In the real world, perhaps not, and the longer the time between the two periods, the less so. There are sure to be many workers who were employed, and thus earned wages, in both periods. There are also some workers who were working in the first period, but not the second, perhaps because they became unemployed or they retired or they left the labor force for some other reason. There are also some workers who earned wages in the second period but were not working or maybe were not even in the labor force during the first. This difference in the composition of employment from one period to another has, say the authors, an effect on wage statistics.

Movements into and out of employment can reduce the growth of the average wage measure for the group as a whole, even if a large portion of workers are continuously employed and earning wages that are stable or increasing. Older workers, who are typically experienced and at the height of their earning potential, retire and are replaced by younger, less experienced workers earning lower wages.

During the 2007–09 recession, the authors say, firms retained their experienced workers, while they laid off less-experienced workers. Perhaps managers thought that the less-experienced would be easier to replace once business conditions improve. “Last hired, first fired,” as the saying goes. This particular composition of
employment, relatively more higher-paid workers, tempered the expected tendency for low wage growth during a recession.

During the post-recession recovery period, the less-experienced were rehired and new workers found jobs for the first time. These lower-paid workers produced the opposite effect on the wage measure. Relatively more lower-paid workers in the employment composition put a damper on wage growth, causing it to increase less than would be expected in a recovery. Another consideration is the effect of retiring baby boomers on aggregate statistics. Older, higher-paid workers exiting the labor force has exerted a downward pressure on wage growth in recent years.

The authors sum up by saying that changes in the composition of employment has had a significant impact on aggregate wage measures over the period they studied. Aggregate wage measures, which compare all of the workers in one period with all of the workers in another, may not be as good an economic indicator as has been thought. Measures of wage growth that are calculated with wage data from workers who are continuously employed would be an improvement.