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Economic Research Note

US: a field guide to wage-watching

- **Fed policy is increasingly predicated on the outlook for wage inflation**
- **Several different wage inflation measures are being released over a three-week span**
- **These measures differ in the concept they measure as well as sources and collection methodologies**
- **The ECI is probably the best single measure, though other series also contain useful information**

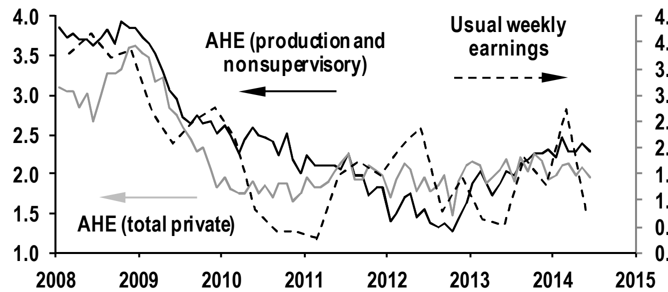
The Bureau of Labor Statistics (BLS) released the Q2 usual median weekly earnings report on July 24. Next week it will release the Q2 Employment Cost Index (ECI) and July average hourly earnings. The following week it will report on Q2 compensation per hour and unit labor costs. All of these measures of wage inflation bear close watching, particularly since Fed policy is increasingly predicated on evidence of any acceleration in wages. This note describes these various wage measures, as well as their strengths and weaknesses. We conclude that the ECI is likely the best single indicator of inflation pressures, but that it has some problems and there is also valuable information in the other measures.

A closer look at wage measures

We begin by documenting the various compensation measures, including the concept measured and the survey methodology.

Average hourly earnings: the measure of gross pay divided by total hours paid. Earnings are calculated before taxes and other deductions and do not include most bonus pay or employee benefits. The data are derived from establishment survey data collected by the BLS as part of the same survey used to collect the monthly payroll employment figures. The sample currently covers about 457,000 business establishments employing about a quarter of the private sector workforce; data on average hourly earnings are reported only for the private sector. Firms are queried about the pay period that includes the 12th of the month. Data on earnings for production and nonsupervisory workers begin in 1964 and data on earnings for all private sector employees begin in 2006. The earnings data are affected by shifts in employees between relatively high-paid and low-paid work and changes in workers' earnings in individual establishments. These monthly series are usually reported on the first Friday of the subsequent month.

Nominal average hourly earnings and median usual weekly earnings
%oya, both scales



Source: BLS

Employment Cost Index and Employer Costs for Employee Comp.
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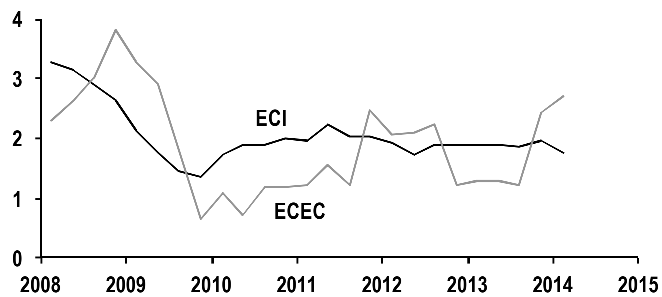

Source: BLS

Median weekly earnings: the median of respondents' views of their "usual" weekly earnings which represents earnings before taxes and other deductions, and which include overtime pay, commissions, and/or tips usually received (bonuses may or may not be included depending on the responder's perception of "usual"). Just as average hourly earnings is derived from the establishment survey of the employment report, median weekly earnings is derived from the household survey (or Current Population Survey) of that report. Although the Current Population Survey is conducted monthly, the median weekly earnings data are reported with a quarterly frequency about 3-4 weeks into the subsequent quarter. The data are based on about a 25% subset of the monthly Current Population Survey (or about 15,000 households per month) and is limited to wage and salary workers, thus excluding the self-employed. The series is an average of the three months in the quarter. This is the only main wage indicator that is reported from the employee perspective, rather than the employer perspective.

Employment Cost Index (ECI): a measure of total compensation – not only wages and salaries but benefits as well. Benefits include paid leave, supplemental pay, premium pay, nonproduction bonuses, insurance benefits, and legally required benefits, but do not include stock options. The ECI is currently derived from a field economist survey of about 10,400 establishments. Firms are queried on the third month of the quarter. The index covers the private sector as well as state and local government workers (reported separately and as a combined aggregate). Fixed weights are used to control for shifts among occupations and industries. The ECI is a quarterly measure reported about a month after the conclusion of each quarter.

The Employer Costs for Employee Compensation (ECEC) is a survey associated with the ECI. Like the ECI, this measures the average cost to employees for wages and salaries and benefits per employee hour worked and reports details on wages and salaries and benefits including the related subcategories such as paid leave, insurance, and workers' compensation. Unlike the ECI, the ECEC does not employ fixed weights and thus may give something closer to an average labor cost measure. The ECEC is reported quarterly about 2½ months after the end of each quarter. There is only a continuous series for the ECEC back to 2002.

Compensation per hour and unit labor costs. The compensation concept used in compensation per hour includes accrued wages and salaries, supplements, employer contributions to employee benefit plans, and all forms of incentive compensation. Compensation per hour is the numerator in unit labor costs; the denominator is output per hour, i.e. productivity. The nonfarm business sector data are typically highlighted, but figures are also reported on the business sector, manufacturing sector, and nonfinancial corporate sector. The BLS's productivity and costs data are derived from a variety of sources, with most of the wage and salary data coming form the BLS's establishment survey – average hourly earnings benchmarked to the Quarterly Census of Employment and Wages. The quarterly data are typically first reported about five weeks after the end of each quarter and then revised about one month later.

Weighing the relative merits

Our primary interest in wage inflation is what it tells us about upcoming consumer price inflation developments (though it is also important as a determinant of labor income which in turn is a determinant of consumer spending). First principles would dictate that unit labor cost is the best measure of wage inflation for two reasons. First, it controls for productivity growth; nominal wage gains matched by commensurate productivity gains are not inflationary, but such wage gains threaten price stability when they run well in excess of productivity growth. Second, the compensation per hour measure that is in the numerator of unit labor costs is the most comprehensive, as it includes not only benefits – like the ECI – but also large categories of incentive compensation such as stock options and grants – unlike the ECI. The growth in compensation per hour relative to the ECI is testament to the growing importance of this form of pay. These two strengths of the unit labor cost measure, however, both impart significant volatility, partly because productivity is inherently volatile and partly because properly accounting for the granting of stock options has eluded statisticians.

Nonfarm business hourly compensation and unit labor costs

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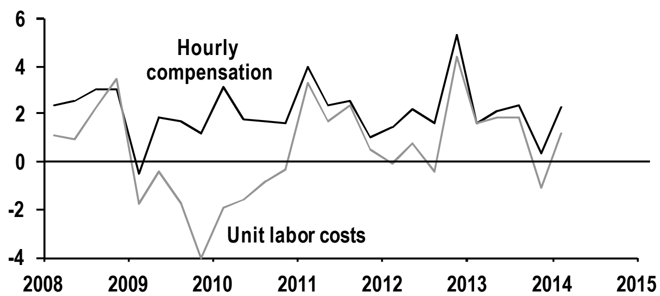

Source: BLS

Regression results

Variable	R^2	Coefficient	Standard error
ECI	0.53	0.70	0.06
ULC	0.28	0.28	0.04
Med. wkly earn.	0.25	0.39	0.06
Comp/hr	0.18	0.27	0.05
AHE	0.11	0.42	0.11

Note: models regress %oya change in core PCE inflation on a constant and %oya change in specified independent variable lagged one year. Quarterly observations used between 83Q1 (or 84Q1, depending on availability) and latest observation.

Source: J.P. Morgan

A key strength of the ECI is that it has timely, direct measures of benefits. A key drawback is its reliance on a fixed-weight scheme, which is inappropriate for thinking about labor cost pressures. The average hourly earnings measure is timely and has a massive sample size. However, it excludes most benefits and measure average wages indirectly – by dividing total pay by total hours worked – potentially introducing a source of measurement error. While the median weekly earning series provides demographic details on wage growth not available in other measures, it tends to be particularly volatile on a quarterly basis.

In a simple horse-race where we regress four-quarter core PCE inflation against year-ago levels of four-quarter inflation of the various wage measures, the ECI comes out ahead. There are, of course, an uncountable number of permutations of this exercise we could try, but the obvious ones (using core CPI, changing lag lengths, including slack or relative food and energy prices, etc.) yielded qualitatively similar results. It would seem the ECI's strengths outweigh its weaknesses. At the same time, the other measures are also informative as regards future inflation developments. An upcoming note will discuss the forces that impel wage inflation and the near-term outlook for compensation growth.

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