

Appendix 6.1

Alternative Measures of Employment

Household Employment

- *Survey.* The Current Population Survey (CPS) is a monthly survey of households (or people). The household survey produces estimates about the labor force, the employed, the unemployed, the unemployment rate, and demographic information about the employed and unemployed. Multiple jobholders are counted only once in the estimate of employment, which includes people on unpaid leave from their jobs.

Household employment includes the unincorporated self-employed, unpaid family workers in family businesses, agriculture and related workers, workers in private households, and workers on unpaid leave. Excluded are workers on furlough for the entire reference pay period, even if they receive pay for the furlough period. They are considered to be unemployed, and on temporary layoff.

- *Reference period.* The household survey reference period is a 7-day calendar week, typically the week that includes the 12th of the month.
- *Benchmark.* Adjustments to underlying population base made annually using population estimates, and every 10 years using the decennial census.

Payroll Employment

- *Survey.* Each month, the Current Employment Statistics (CES) program surveys approximately 147,000 businesses and government agencies, representing approximately 634,000 individual worksites, in order to provide detailed industry data on employment, hours, and earnings of workers on nonfarm payrolls. Multiple jobholders are counted for each nonfarm payroll job. In other words, payroll employment counts the number of full and part-time jobs, while household employment counts the number of employed workers whether they have one or more jobs. Employment includes only people who received pay for the reference pay period.
- *Reference period.* The payroll survey reference period uses the employer's pay period that includes the 12th of the month. Employer pay periods vary in length; they may be weekly, biweekly or twice monthly, monthly, or some other variation. Biweekly pay periods are the most common.
- *Benchmark.* Payroll employment is benchmarked annually to the universe employment counts derived primarily from unemployment insurance (UI) tax records.
- *Adjustments.* The payroll survey's business sampling frame cannot include new firms immediately; they are incorporated with a lag. Similarly, the permanent closure of a firm is not always captured immediately. Because the sample cannot fully reflect business births and deaths in real time, the payroll survey estimation methodology includes a statistical procedure to account for the net effect of births and deaths in the final employment estimates.

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Predicting the Markets

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The methodology used for births and deaths prior to 2003 ("bias adjustment") had been evaluated as a possible source of divergence in household and payroll survey employment, along with some known limitations in the payroll survey sample design in use at that time. In 2003, BLS completed a comprehensive redesign of the payroll survey sample and introduced a new methodology to estimate the net employment effect of business births and deaths. These changes greatly improved the accuracy of the payroll employment estimates and reduced the size of the annual benchmark revisions. The net birth-death model in use since 2003 was developed based on findings that actual net employment change from business births and deaths follows a relatively stable trend across years and is not highly correlated with changes in the business cycle, or with changes in overall employment.

ADP Private Payrolls

- *Survey.* The ADP Research Institute® works in close collaboration with Moody's Analytics and its experienced team of labor market researchers to publish monthly employment reports. Given Automatic Data Processing Inc.'s large client base, which includes about one-fifth of U.S. private payroll employment, it is possible to get a first glimpse at the BLS payroll employment report (Current Employment Statistics) prior to the official release by the BLS. To this end, ADP in partnership with Moody's Analytics has developed a method of predicting the private-sector employment two days before the release of the CES report. This collaboration of ADP with Moody's Analytics has produced the ADP National Employment Report. Although ADP's client base does not precisely match the distribution of employment as reported by the BLS, Moody's Analytics adjusts the ADP data to match the CES distribution.
- *Methodology.* Moody's Analytics gets access to ADP payroll files, which are compiled into time series beginning in 2001. Much of the data processing mimics the methodology used by the Bureau of Labor Statistics (BLS) to calculate payroll employment for the CES report. Unlike the BLS, which tracks employees paid during the month, the ADP methodology includes employees who are active. These are chosen over paid because employees may receive more than one paycheck for incentive pay or bonuses. This would result in multiple records and, therefore, the inclusion of such records would overstate the actual number of employees on a company's payroll.

JOLTS Payrolls

- *Survey.* The Job Openings and Labor Turnover Survey (JOLTS) produces monthly estimates of job openings, hires, quits, layoffs and discharges, and other separations. JOLTS defines hires as all additions to the payroll during the month. Separations includes both quits (employees who left voluntarily), layoffs & discharges (involuntary separations initiated by the employer), and other separations (including retirements or transfers to other locations). Data from a sample of approximately 16,000 U.S. business establishments are collected by the BLS. The JOLTS survey covers all nonagricultural industries in the public and private sectors for the 50 States and the District of Columbia.
- *Reference period.* Hires and separations are reported for the entire calendar month.
- *Derived measure.* A measure of the change in monthly employment can be derived as hires minus separations. This measure is similar to the change in the payroll employment series compiled by the BLS.

Sources: [Comparing employment from the BLS household and payroll surveys](#); [How the Business Birth/Death Model Improves Payroll Employment Estimates](#); [Impact of business births and deaths in the payroll survey](#); [The ADP National Employment Report](#); and [JOLTS Home Page](#).
