

ADP NATIONAL EMPLOYMENT REPORTSM
Development MethodologyPrepared by  MACROECONOMIC ADVISERS, LLC

I. Overview

Publication of the *Employment Situation* by the U.S. Bureau of Labor Statistics (the BLS) is the first — and generally the most important — release of government-sponsored economic data every month. Employment is an intrinsically important statistic. Furthermore, financial markets react, sometimes strongly, to “surprises”¹ in the BLS’ estimates of establishment employment that might signal future changes in monetary policy. Hence, information that helps analysts anticipate monthly changes in employment is valuable.

Automatic Data Processing, Inc., (ADP) is the nation’s leading provider of payroll-related services. Currently, ADP processes payrolls for nearly 500,000 clients in the United States, covering 24 million employees in all major industries and states. While doing so, every month ADP collects a wealth of information related to payroll employment well before publication of the *Employment Situation*.

ADP has contracted with Macroeconomic Advisers, LLC (MA) to create and maintain from this rich, timely data set a new measure of total nonfarm private employment called the **ADP National Employment Report** (the ADP report). It is constructed from ADP’s data on payrolls following a procedure similar to that used by the BLS to process its monthly survey of Current Employment Statistics into the “official” estimates of establishment employment. The ADP report is released, for public use only, two days prior to the *Employment Situation*.

There is information in the ADP report that was not previously available. Indeed, empirical analysis performed by MA demonstrates that the ADP report: (1) can be used, in real time, to outperform consensus forecasts of the monthly change in establishment employment; (2) anticipates revisions to preliminary estimates of the change in establishment employment; (3) can be used to improve upon commonly applied regression models of the monthly change in establishment employment.

This is an unprecedented event. Never before has such a rich set of private data that directly measures an economic variable of such vital importance to analysts, traders, and policymakers, become available to the public in such a regular, timely manner, and in a form that can be understood quickly and used effectively in empirical analysis. Consequently, the ADP report is likely to become the most closely watched economic statistic produced on a regular basis within the private sector.

¹ Surprises can be measured as errors in the then-available “consensus” forecasts of the initial estimate of the monthly change in establishment employment reported by BLS.

II. Construction

Late in each month, anonymous aggregate data on processed payrolls are collected by ADP, checked for anomalies, and, by secure means, made available to MA for further processing. That processing normally begins on the Monday before the monthly publication by the BLS of the *Employment Situation*. Macroeconomic Advisers assigns NAICS² industry codes to as many of ADP's records as possible, merges payrolls together into establishments, discards payrolls not covering pay periods that include the 12th of the month³, and filters undesired volatility from the data. Not all payrolls processed by ADP can be assigned an industry code, nor do they all cover pay periods that include the 12th of the month. Hence, the ADP report is computed from a subset of ADP's records that, in December 2005, covered approximately 14 million employees at approximately 225,000 business establishments.

After this initial processing of the underlying data, the ADP report is computed as follows.

- Monthly “matched-sample”⁴ growth rates of employment are computed for a comprehensive set of 19 nonfarm private industries.⁵
- The monthly growth rates of employment in each of the nonfarm private industries are seasonally adjusted.⁶
- A monthly growth rate for total nonfarm private employment is computed as a weighted average of the monthly growth rates across industries; weights are the shares of employment across industries, lagged one month, as currently reported by the BLS.
- Starting from an initial BLS benchmark level of total nonfarm private employment⁷, the aggregate monthly growth rates based on ADP payroll data are “chained” together to create an initial monthly index of the level of total nonfarm private employment based on the ADP data.
- This index is then benchmarked to the annual benchmark level of total nonfarm private employment reported by the BLS⁸, by adjusting up or down the aggregate growth rate by a constant amount between each annual benchmark.

The ***ADP National Employment Report***, historical data for which is available beginning in January of 2001, is revised once a year when a new benchmark level for establishment

² NAICS is the North American Industrial Classification System.

³ This corresponds to the BLS definition of “employed”.

⁴ A “matched-sample” growth rate is based on payrolls common to both periods over which growth is computed. In the context of retail sales, it is also sometimes referred to as a “same-store” growth rate.

⁵ These are the 19 private NAICS “sectors”.

⁶ Moving, concurrent seasonal factors are computed using the Census Bureau’s X.11 program.

⁷ This is for March of 2000, on a seasonally-adjusted basis.

⁸ In March of each year, as the benchmark level becomes available.



employment is published by the BLS. At that time, seasonal factors for the ADP report are also updated, and the seasonally adjusted historical data are restated.

III. Reporting and Dissemination

The ADP National Employment Report is intended for use by the general public. It is updated monthly and released by ADP to the public, free of charge, at 8:15am Eastern Time on the Wednesday prior to publication by the BLS of the Employment Situation. The monthly press release includes a table with six months of data on the level, change, and percent change of total nonfarm private employment, along with the corresponding figures published by the BLS, and a historical chart. (See sample table below.) Users can find the report at www.ADPemploymentreport.com or subscribe to it via e-mail. The history of the ADP report, as well as the growth rate of the report before benchmarking, is available to the public, free of charge, on the Web site.

Estimates of total nonfarm private employment, seasonally adjusted
numbers in thousands, unless noted

Table with 7 columns: Category, 2005 (Oct, Nov, Dec), 2006 (Jan, Feb, Mar). Rows include ADP National Employment Report and BLS Establishment Employment with their respective values and changes.

p=preliminary

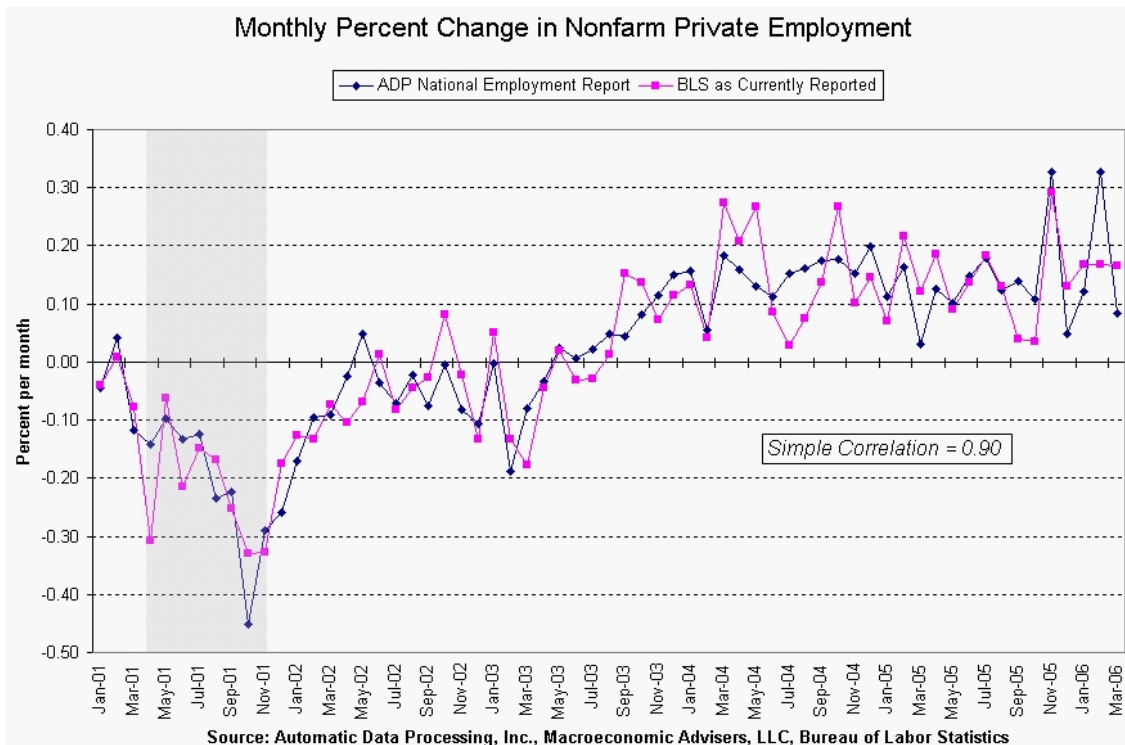
Source: Automatic Data Processing, Inc; Macroeconomic Advisers, LLC; Bureau of Labor Statistics

IV. Confidentiality

Payroll data collected by ADP and used in the calculation of the ADP report are aggregate in nature, encoded to ensure anonymity, and made available to MA for processing only under tightly secured procedures. MA does not know the identity of an ADP client or receive any information related to any individual employee. During the time between the collection of the data and the release of the ADP report to the general public, personnel involved in the computation and publication of the report are prohibited from discussing it under rigid guidelines developed and strictly enforced by ADP and MA.

IV. Statistical Properties

Statistical analysis performed by Macroeconomic Advisers demonstrates that the ADP report is very highly correlated with estimates of total nonfarm private establishment employment published by the U.S. Bureau of Labor Statistics. For example, the simple correlation between the monthly changes in the ADP National Employment Report and in total nonfarm private employment as currently reported by the BLS is 0.90 since January of 2001. (See chart below.)



Because it is available earlier than the corresponding *Employment Situation*, the ADP report offers valuable advance insights into the monthly growth of employment. It is also of value in anticipating revisions to preliminary estimates of employment reported earlier by the BLS. In particular, MA's analysis demonstrates that:

- There is a statistical tendency for the ADP report to predict initial estimates of the monthly changes in employment better than “consensus” forecasts then available.
- The ADP report can be combined in statistical models with consensus forecasts to improve upon them even further.
- The ADP report can be used to improve upon other statistical models commonly used to predict monthly changes in employment.
- There is a statistical tendency for estimates of growth of establishment employment, as reported by the BLS, to be revised in the direction of growth of the ADP report in the two months following release of the initial estimate by the BLS.
- Given its tendencies to (a) outperform consensus forecasts of the initial estimate of the change in establishment employment, and (b) anticipate revisions to



- employment in recent months, the ADP report can be used to anticipate the total “surprise” inherent in the *Employment Situation*.
- There is a statistical tendency for estimates of growth of establishment employment, as reported by the BLS, to be revised in the direction of growth of the ADP report after the annual benchmarking of establishment.

Given these demonstrable properties, the ADP report is likely to become one of the most — if not the most — closely followed economic statistics produced regularly in the private sector.

V. Further Research

At this time, the **ADP National Employment Report** is only a measure of total nonfarm private employment at the national level. In the future it may be possible to develop related reliable measures for employment by industry, size of firm, and region. In addition, consideration may be given to the development of measures for wages and salaries, withheld taxes, and payroll taxes. We will inform the public of such developments as they occur.

For questions regarding the methodology used to develop the **ADP National Employment Report**, visit the Macroeconomic Advisers, LLC web site at www.macroadvisers.com.

For additional information about the **ADP National Employment Report**, please visit: www.ADPemploymentreport.com

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