

# Technical Note

The estimates in this report were obtained from the Current Population Survey (CPS), a national monthly sample survey of approximately 60,000 households, which provides a wide range of information on the labor force, employment, and unemployment. Earnings data are collected from one-fourth of the CPS monthly sample. The survey is conducted for the Bureau of Labor Statistics by the U.S. Census Bureau, using a scientifically selected national sample with coverage in all 50 States and the District of Columbia.

Over its history, numerous changes have been made in the CPS questionnaire, methodology, and estimation procedures to improve the quality of the data that the survey produces. In January 2003, several major changes were introduced to the CPS. As a result, most data for 2003 forward are not strictly comparable with data for earlier years. These changes include the following:

- Population controls were updated by the Census Bureau to incorporate new intercensal information and assumptions about the growth of the population, especially estimates of net international migration.
- The survey questions on Hispanic ethnicity and race were modified to comply with new standards on race and ethnicity data from Federal agencies. In accordance with the new standards, individuals now are asked whether they are of Hispanic ethnicity before being asked about their race. Also, individuals now are asked directly if they are Spanish, Hispanic, or Latino, instead of being asked a general question on country of origin. With respect to race, the response category of Asian and Pacific Islanders was split into two categories: Asian, and Native Hawaiian or Other Pacific Islanders. In accordance with the new standards, individuals were allowed to choose more than one race category. Prior to 2003, individuals who considered themselves to belong to more than one race were required to select a single primary race. In this report, data by race for 2003 forward include only those who choose a single race category.
- New occupational and industrial classification systems were introduced. These systems were derived from the 2000 Standard Occupational Classification (SOC) and the 2002 North American Industry Classification System (NAICS). The new classification systems differ substantially from the previous systems. The introduction of the

new occupational and industrial classification systems effectively created a break in series from 2000 forward for data disaggregated by class of worker status—that is, the classification of workers as either self-employed or wage and salary. This change resulted in a slightly lower estimate of the number of wage and salary workers and in minor revisions to the earnings measures for 2000-2002. Users therefore may note some differences with previously published women's-to-men's earnings ratios for those years.

Additionally, data for 2004 are not strictly comparable with data for 2003 and earlier years because of the introduction in January 2004 of further revisions to the population controls used in the CPS.

For more information about these and other recent changes to the survey, see “Revisions to the Current Population Survey Effective in January 2003” in the February 2003 issue of *Employment and Earnings* on the Internet at [www.bls.gov/cps/rvcps03.pdf](http://www.bls.gov/cps/rvcps03.pdf) or the “Explanatory Notes and Estimates of Error” section of the February 2005 and subsequent issues of *Employment and Earnings*.

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## Concepts and Definitions

Concepts used in this report are defined below.

*Civilian labor force.* This group comprises all persons classified as employed or unemployed.

*Employed persons.* Employed persons are those who, during the survey week, (a) did any work at all as paid civilians; (b) worked in their own business or profession or on their own farm; (c) worked 15 hours or more as unpaid workers in a family business; or (d) were temporarily absent from their jobs because of illness, vacation, bad weather, or another reason.

*Unemployed persons.* Unemployed persons are those who had no employment during the survey week, were available for work at that time, and made specific efforts to find employment sometime in the prior 4 weeks. Persons laid off from their former jobs and awaiting recall did not need to be looking for work to be classified as unemployed.

*Civilian labor force participation rate.* This rate is the civilian labor force as a percent of the civilian noninstitutional population.

*Unemployment rate.* This rate represents the number unemployed as a percent of the civilian labor force.

*Race.* White, black or African American, and Asian are terms used to describe the race of persons. Persons in these categories are those who selected that race group only. Data for the remaining race categories—American Indian or Alaska Native, Native Hawaiian or Other Pacific Islanders, and persons who selected more than one race category—are included in totals but are not shown separately because the number of survey respondents was too small to develop estimates of sufficient quality for publication. In the enumeration process, race is determined by the household respondent.

*Hispanic or Latino ethnicity.* This term refers to persons who identified themselves in the CPS enumeration process as being Spanish, Hispanic, or Latino. Persons whose ethnicity is identified as Hispanic or Latino may be of any race.

*Family.* A family is a group of two or more persons residing together who are related by birth, marriage, or adoption. Families are classified either as married-couple families or as families maintained by women or men without spouses.

*Usual weekly earnings.* Data are collected on wages and salaries before taxes and other deductions and include any overtime pay, commissions, or tips usually received (at the principal job in the case of multiple jobholders). Earnings of self-employed workers are excluded, regardless of whether their businesses are incorporated. Prior to 1994, respondents were asked how much they usually earned per week. Since January 1994, respondents have been asked to identify the easiest way for them to report earnings (hourly, weekly, biweekly, twice monthly, monthly, annually, other) and how much they usually earn in the reported period. Earnings reported on a basis other than weekly are converted to a weekly equivalent. The term “usual” is as perceived by the respondent. If the respondent asks for a definition of usual, interviewers are instructed to define the term as more than half the weeks worked during the past 4 or 5 months.

*Medians of weekly earnings.* The median is the amount that divides a given earnings distribution into two equal groups, one having earnings above the median, and the other having earnings below the median. The BLS estimating procedure for determining the median of an earnings distribution places each reported or calculated weekly earnings value into a \$50-wide interval that is centered on a multiple of \$50. The value of the median is estimated through a linear interpolation of the interval in which the median lies. Over-the-year changes

in the medians for specific groups may not necessarily be consistent with the movements estimated for the overall group boundary. The most common reasons for this possible anomaly follow: (1) There could be a change in the relative weights of the subgroups. For example, the medians of both 16- to 24-year-olds and those 25 years and over may rise, but if the lower earning 16-to-24 age group accounts for a greatly increased share of the total, the overall median could actually fall. (2) There could be a large change in the shape of the distribution of reported earnings. This could be caused by survey observations that are clustered at rounded values, for example, \$250, \$300, or \$400. An estimate lying in a \$50-wide centered interval containing such a cluster, or “spike,” tends to change more slowly than one in other intervals. Medians, for example, measure the central tendency of a multip peaked distribution that shifts over time. As the distribution shifts, the median does not necessarily move at the same rate. Specifically, the median takes relatively more time to move through a frequently reported interval but, once above the upper limit of such an interval, it can move relatively quickly to the next frequently reported earnings interval. BLS procedures for estimating medians mitigate such irregular movements of the measures; however, users should be cautious of these effects when evaluating short-term changes in the medians, as well as in ratios of the medians.

*Hours at work.* These are the actual hours worked during the reference week. For example, persons who normally work 40 hours a week but were off during Columbus Day holiday would be reported as working 32 hours, even though they were paid for the holiday.

*Usual hours, or usual full- or part-time status.* Data on persons “at work” exclude persons who were temporarily absent from a job and therefore classified in the zero-hours-worked category, “with a job but not at work.” These are persons who were absent from their jobs for the entire week for reasons such as bad weather, vacation, illness, or involvement in a labor dispute. To differentiate a person’s normal schedule from his or her activity during the reference week, persons also are classified according to their usual full- or part-time status. In this context, *full-time workers* are those who usually worked 35 hours or more (at all jobs combined). This group includes some individuals who worked less than 35 hours in the reference week for either economic or noneconomic reasons and those who were temporarily absent from work. Similarly, *part-time workers* are those who usually work less than 35 hours per week (at all jobs), regardless of the number of hours worked in the reference week. This may include some individuals who actually worked more than 34 hours in the reference week, as well as those who are temporarily absent from work.

*Wage and salary workers.* These are workers who receive wages, salaries, commissions, tips, payment in kind, or piece rates. The group includes employees in both the private and public sectors but, for purposes of the earnings series, ex-

cludes all self-employed persons, regardless of whether their businesses are incorporated.

*Hourly paid workers.* Workers who are paid an hourly wage are a subset of wage and salary workers, representing approximately three-fifths of all wage and salary workers. Workers paid by the hour are, therefore, included in the full- and part-time worker tables in this report, along with salaried workers and other workers not paid by the hour. (Data for workers paid at hourly rates are presented separately.)

*Work experience.* These data reflect the work activity during the calendar year and are obtained from the Annual Social and Economic Supplement (ASEC) to the Current Population Survey. *Persons who worked* were those who answered “yes” to the following questions from the ASEC: “Did you work at a job or business at any time during (the year)?” or “Did you do any temporary, part-time, or seasonal work even for a few days during (the year)?” Since the reference period is a full year, the number of persons with some employment or unemployment greatly exceeds the average levels for any given month, which are based on a 1-week reference period, and the corresponding annual averages of monthly estimates.

### **Reliability**

Statistics based on the CPS are subject to both sampling and

nonsampling error. When a sample, rather than an entire population, is surveyed, there is a chance that the sample estimates may differ from the “true” population values they represent. The exact difference, or *sampling error*, varies depending on the particular sample selected, and this variability is measured by the standard error of the estimate. There is about a 90-percent chance, or level of confidence, that an estimate based on a sample will differ by no more than 1.6 standard errors from the “true” population value because of sampling error. BLS analyses are generally conducted at the 90-percent level of confidence. Standard errors included in this report were rounded for presentation purposes, as were the earnings estimates. Consequently, a precise confidence interval cannot be constructed using these data.

CPS data also are affected by *nonsampling error*. Nonsampling error can occur for many reasons, including the failure to sample a segment of the population, inability to obtain information for all respondents in the sample, inability or unwillingness of respondents to provide correct information, and errors made in the collection or processing of data.

For a full discussion of the reliability of data from the CPS and information on estimating standard errors, see the “Explanatory Notes and Estimates of Error” section of the Bureau of Labor Statistics *Employment and Earnings* publication.