MONTHLY LABOR
REVIEW

Volume 132, Number 8
August 2009

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The August *Review*

Included in the multitude of information provided by the Bureau of Labor Statistics are data on earnings. One source of such data is the Current Population Survey (CPS), which is administered to a large, nationally representative sample of households and has been conducted each month since the 1940s. Over the years researchers and other interested parties have studied changes and trends in earnings over time by race, sex, and other demographic variables. In the first article of this issue, Professor Richard V. Burkhauser and Jeff Larrimore, both from Cornell University, look more deeply into CPS data to reevaluate trends in earnings gaps. The article analyzes internal, or non-public use, CPS data from 1975–2007, which, the authors find, show earnings gaps different from those calculated from public-use CPS data. The authors point out that public-use data, which are the data usually used by researchers, do not include suppressed—or topcoded—earnings. Topcoding is the replacement of a datum representing part or all of a person's true income with a lower value and is done in order to protect the confidentiality of survey respondents. The article also finds that trends in and gaps between the earnings of men and women, Blacks and Whites, and people of various education levels are all sensitive to topcoding.

Another widely watched indicator produced by BLS is the Producer Price Index (PPI). The PPI is produced in the Office of Prices and Living Conditions (OPLC), and it measures the average change over time in the selling prices received by domestic producers for their output. Historically, this information has been collected and presented on an industry basis. However, beginning with the release of July data in August 2009, BLS introduced a new set of construction price indexes for wherever-provided goods and services. In contrast to industry-based price indexes, commodity-based indexes measure price change for a (wherever-provided) service or (wherever-made) good, regardless of the producer's industry of origin. In this issue's second article, Jonathan C. Weinhagen and Bonnie H. Murphy, both OPLC economists, introduce this new measure and explain in detail how it differs from the more traditional approach. The benefit of commodity-based indexes, the authors suggest, is that they allow data users to examine price movements for a specific service or construction-related product within a single price index that combines prices from all industries producing that product or service. In addition, detailed price indexes can be aggregated into many higher level indexes not found in the industry-based PPI aggregation structure. These wherever-provided aggregations give data users additional indexes to follow and analyze.

This month's third article, by Bill Passero, a senior economist in the OPLC, discusses the impact that income imputations have had on the Consumer Expenditure (CE) Survey. Beginning in 2004, the CE Survey began imputing for missing responses to questions about income that survey respondents acknowledged receiving, but for which they had not provided values. The purpose of the article is to assess the impact and efficacy of imputation by comparing pre- and postimputation estimates of CE-reported income with estimates from the CPS, which has employed imputation for many years in the course of producing its income estimates. The conclusions are that, generally, imputation has brought CE estimates closer to CPS estimates and that further refinements to the CE income questions and imputation procedures are expected in the future.

Silicon valley employment

For those who followed the news or their investment portfolios for most of 2000, the seemingly daily reports of downturns in the stock market are an all-too-painful memory. The "dot-com bubble" is the appellation usually used to refer to the financial fallout following the boom of investment and growth in certain kinds of information technology companies. But what did this dramatic fall in stocks and market capitalizations mean for workers and jobs in an area characterized by industries and occupations strongly associated with high-tech? A Regional Report by BLS economists Amar Mann and Tony Nunes looks at this issue from a regional perspective by analyzing Silicon Valley high-tech employment from 2001 to 2008. Silicon Valley refers geographically to six counties in northern California. The report shows that high-tech employment in the area remained relatively stable throughout early 2001, in spite of the 2000 stock market crash and the 2001 recession. However, by the end of 2001 the Silicon Valley unemployment rate had more than doubled, and it wasn't until 2004 that high-tech employment began to increase. It continued to increase through 2008, although 2008 employment was still 17 percent lower than in 2001. The report is available online at **http://www.bls.gov/opub/regional_reports/200908_silicon_valley_high_tech.pdf**. □

Using internal CPS data to reevaluate trends in labor-earnings gaps

The Current Population Survey provides data that are used to compare gaps in the labor earnings of women and men, people of different races, and people of different levels of education; this article presents a data series that uses cell means and more accurately measures gaps and trends in earnings than do other publicly available series

Richard V. Burkhauser and Jeff Larrimore

The Current Population Survey (CPS) is a large, nationally representative sample of households collected each month since 1942 by the U.S. Census Bureau.[1] This article focuses on data from the surveys conducted in March because the March survey includes an extensive income questionnaire. The data that are publicly available from the CPS are the primary tool used to investigate yearly trends in United States average labor earnings and their distribution. However, to protect the confidentiality of its respondents, the Census Bureau topcodes the highest values from each source of income that it collects when it reports the income in the public-use CPS data. Topcoding is the replacement of a datum representing part or all of a person's true income with a lower value. One of the challenges that topcoding presents for those using the public-use data to examine labor-earnings levels and trends is that the topcodes vary over time, which leads to artificial increases or decreases in earnings (when the term "earnings" appears alone in this article, it still refers to "labor earnings") at the top of the earnings distribution as different fractions of the population are subject to topcoding each year.[2] Although the public-use data are used extensively to measure the earnings gaps between men and women and Blacks and Whites,[3] until now little was known about how topcoding affects comparisons of labor earnings across these subsets of the population.[4]

This article finds that gaps between the earnings of men and women, Blacks and Whites, and people of various education levels are all sensitive to topcoding. Ratios of these earnings as well as trends in the gaps and ratios also are sensitive to topcoding. The article arrives at these findings by analyzing 1975–2007 CPS data and comparing the values of gaps and ratios obtained using the public-use CPS data with values found using the internal CPS data.

This article presents an extended cell mean series that will be explained in more detail in a later section. The earnings gaps calculated using the extended cell mean series in conjunction with public-use CPS data are found to closely approximate those obtained with the Census Bureau's internal CPS data. Additionally, this article finds that women, Blacks, and the less-educated are relatively worse off compared with men, Whites, and the more-educated, respectively, than previously reported using the public-use CPS data. Although the trends for all of the aforementioned earnings gaps are sensitive

The results and conclusions presented in this article are those of the authors and do not necessarily reflect the views of the U. S. Census Bureau. This article has been screened to ensure that no confidential data are disclosed.

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to topcoding, the impact that attempting to correct for topcoding has on trends differs by year.[5]

Calculating earnings gaps

To calculate gaps in earnings between men and women, between Blacks and Whites, and among people of various levels of education, this article examines the annual labor earnings from wages and salaries, self-employment, and farm earnings of full-time, full-year workers in the CPS.[6] Prior to 1987 these "earnings sources" were reported as three separate values. Since then a fourth source—primary labor earnings (regardless of source)—has been added. The earnings sources and their names in the public and internal CPS data files are listed in table A–1 of the appendix. Much of the previous work exploring earnings gaps between men and women, between or among races, and among people of various levels of education focuses solely on wage and salary earnings and excludes self-employment and farm earnings, primarily because of concerns about the accuracy of self-employment earnings in the CPS. However, as Theresa J. Devine demonstrates, earnings gap data are sensitive to the inclusion or exclusion of self-employment earnings since the earnings gap between men and women is larger among full-time self-employed workers than among full-time wage earners.[7] Because the aim is to compare groups of people on the basis of *all* their labor market earnings, farm and self-employment earnings must be included along with wages.

An additional detail to consider is whether to analyze annual earnings or to instead recalculate the statistics as weekly or hourly wages. For this article a choice has been made to use annual earnings. The results are similar no matter which of these three methods is used; however, since women tend to work fewer weeks per year, using a weekly or hourly measure does generate a slightly smaller earnings gap between men and women.[8]

Another question is how best to calculate group earnings when calculating earnings gaps. To limit the impact of outliers on the earnings gap between men and women, the Census Bureau uses median rather than mean earnings when reporting the earnings gap between men and women in its *Income, Poverty, and Health Insurance Coverage in the United States* series.[9] The Census Bureau does not calculate earnings gaps between people of different races or levels of education in this report. The gap in median earnings between men and women that is presented by the Census Bureau is regularly reproduced in factsheets by policy institutes and has been widely used as background information in the literature on the pay gap between men and women.[10] However, using median earnings comes at the cost of focusing only on the midpoint of the earnings distribution. As a result of the use of median earnings, if women make substantial gains compared with men at either tail of the distribution, a simple comparison of the median over time will probably understate these gains. Additionally, since earnings distributions are positively skewed in all years, mean earnings give relatively more weight than median earnings to changes in the upper tail of the distribution. So for researchers interested in this portion of the distribution, the mean is better able to capture differences between groups and changes over time. Because this article focuses on the upper tail of the distribution, where most topcoding occurs, it evaluates mean earnings, which better reflect changes occurring throughout the entire earnings distribution and are better able to capture the impact of topcoding on earnings gaps.

Despite these differences in calculating earnings gaps, the general trends in earnings gaps in the literature have generally been consistent. Most previous literature has found that the earnings gap between men and women was largely unchanged for much of the 20th Century. It was not until the 1980s that women made substantial gains. In the 1990s, however, these gains subsided and the gap remained stable for much of the decade.[11]

While the consensus among researchers is that the earnings gap between Blacks and Whites also has been shrinking, the timing of its decline differs greatly from the timing of the decline in the earnings gap between women and men. The earnings gap between Blacks and Whites declined rapidly from the mid-1960s until the middle of the 1970s before stagnating or increasing slightly through much of the 1980s.[12] There is some disagreement on the direction of the earnings gap between Blacks and Whites during the 1990s, with David Card and John E. DiNardo finding the gap more or less constant and Kenneth Couch and Mary C. Daly and Chinhui Juhn reporting a decline.[13] The next section of the article shows the sensitivity of such earnings trends to four methods of dealing with topcodes in the CPS data.

Topcoding CPS data

To protect the confidentiality of respondents, the Census Bureau topcodes each source of income that respondents report in the public-use CPS data. The full list of labor-earnings topcoding thresholds over time is presented in tables A–2 and A–3 of the appendix. In addition to

topcoding each income source in the March CPS, the Census Bureau topcodes earnings reported in CPSs from other months, such as the usual weekly earnings reported in the surveys filled out by outgoing rotation groups.[14] The further topcoding prevents researchers from obtaining additional earnings information from other questions in the CPS. Because topcodes vary over time, they can affect both the sizes of earnings gaps and their trends over time.

Prior to 1995, the Census Bureau simply replaced the value for each source of an individual's income that was topcoded with the level of income at the threshold for topcoding. Starting with 1995 data, the Census Bureau instead began replacing the income figure with a cell mean—the mean value of all topcoded data from the source of income in question. For labor earnings, each cell contains earnings figures from workers who are all of the same sex and race and who all either work both full time and year round or do not. Because the Census Bureau has not provided cell means retroactively for years prior to 1995, using the public-use CPS data without taking this major change in reported earnings values into account results in a sizable increase in measured earnings in 1995 and beyond. Hence, while the use of cell means starting in 1995 causes the public-use CPS data to conform better to the internal CPS data, not taking the improvement in measurement into account will overestimate actual increases in labor earnings from any year before 1995 to 1995 or any year after.[15]

Topcoding also has important implications for measuring the relative labor earnings of subsamples of the population and measuring gaps in earnings among subsamples. For example, if the distributions of labor earnings of women and men were identical, individuals' earnings in both groups would be topcoded at the same rate. So, topcoding would reduce the mean earnings of both men and women by the same percentage, leaving intergroup inequality unchanged.

However, if individuals in the two groups have different probabilities of being topcoded or if the mean suppressed labor earnings of those who are topcoded differ between the two groups, topcoding will influence the earnings gap measure. Because a larger percentage of women than men are below the topcoding threshold, women are less likely to be topcoded; it can be expected that topcoding will artificially raise the ratio of women's mean earnings to men's mean earnings, because the women's observed mean earnings will be less artificially depressed from the topcodes than those of men and hence will be closer to their true mean. Similar results will occur even if the probability of topcoding is the same across both groups, provided that the amount of suppressed earnings is higher for men than for women. The same holds for Blacks relative to Whites and those with less education relative to those with more education.

Prevalence of topcoding

Table 1 shows, for the trough year of each business cycle since 1975, the percentages of various groups of full-time, full-year workers who have had earnings from at least one source topcoded in the public-use CPS data.[16] The groups of people are organized by sex (men and women), race (Blacks and Whites), and level of education attained (less than a high school degree, a high school degree but no higher education, and education beyond high school). The three business cycles run from 1975 to 1982, from 1982 to 1992, and from 1993 to 2004. The method for selecting the starting points and endpoints of business cycles in this article has been chosen somewhat arbitrarily. Rather than define business cycles directly by changes in macroeconomic growth, this article uses troughs in income, which in general lag behind macroeconomic growth. Choosing slightly different trough years would not have a significant effect on this article's findings. Although it is not a trough year, 1992 is included in the table. As will be discussed in more detail later, Census Bureau data collection procedures were redesigned after 1992. This reduces the ability to compare 1992 data with 1993 data. So 1993 represents both the trough year of the 1993–2004 business cycle and the first year of the new procedures. Like 1992, the year 2007 is not a trough year, but it is included in the table because it is the most recent year for which data are available. The business cycles are measured from trough to trough.

As can be seen in table 1, although the percentage of people whose earnings are topcoded varies by sex, race, and level of education, the overall incidence of topcoding has increased greatly over the past 30 years for every group of workers in the table. For example, virtually no women or black full-time, full-year workers had topcoded labor earnings in 1975, but close to 1 percent of each group had topcoded earnings in 2007.

While topcoding has been rising among the earnings of men, women, Blacks, Whites, and people of all three levels of education, in any given year there are noticeable differences in topcoding rates among these groups. Because women's earnings are less likely to be topcoded than those of men, one expects to find a larger difference between men's observed labor earnings and their true mean labor earnings than one expects to find for women's observed

Table 1. Percentages of various groups of full-time, full-year workers whose labor earnings are topcoded, and ratios of selected percentages; by year, selected years,1975–2007

Year	Women	Men	Ratio	Blacks	Whites	Ratio	Less than a high school degree	High school degree	Education beyond high school	Ratio	Ratio
	(1)	(2)	(1)/(2)	(3)	(4)	(3)/(4)	(7)	(8)	(9)	(8)/(7)	(9)/(8)
1975	0.02	1.18	0.02	0.00	0.91	0.00	0.09	0.28	1.73	3.14	6.24
1982	.16	1.76	.09	.33	1.30	.26	.07	.34	2.18	4.70	6.44
1992	.39	2.98	.13	.37	2.22	.17	.22	.35	3.24	1.59	9.39
1993	.66	3.51	.19	.80	2.68	.30	.30	.56	3.78	1.91	6.70
2004	.57	2.23	.26	.61	1.84	.33	.31	.59	2.23	1.88	3.80
2007	.86	2.59	.33	.85	2.30	.37	.22	.64	2.66	2.84	4.18

SOURCE: Authors' calculations made by use of public and internal CPS data.

and true earnings. Correcting for topcoding should show that the gap between women's and men's earnings is wider than previously reported. For the same reasons, one can expect that correcting for topcoding will show that the gap between the earnings of Blacks and those of Whites is wider than previously reported and that the gap between the earnings of people with a high school degree or less and the earnings of those in higher education groups also is wider than previously reported.

As can be seen in the table, topcoding ratios also have changed over time. In 2007, women were topcoded 33 percent as much as men, up from only 2 percent as much in 1975. In 2007, Blacks were topcoded 37 percent as much as Whites, compared with 1975 when no Blacks were topcoded. On the whole, from 1975 to 2007 the less-educated showed larger increases in topcoding than did the more-educated. Hence, trends in earnings gaps between the sexes, between Blacks and Whites, and among people of varying levels of education are expected to be affected by topcoding.

Methods of managing topcoding problems

The issue of topcoding can be handled in various ways. A first approach—referred to for the purposes of this article as "Unadjusted Public Use"—is to simply ignore topcoding issues and use the unadjusted public-use CPS data as released by the Census Bureau. However, as discussed earlier, doing so will result in a series whose labor-earnings levels are suppressed prior to 1995, because of topcoding, and are much higher thereafter, primarily because of the Census Bureau's introduction of cell means in 1995. This shift to cell means in 1995 is further complicated by changes to topcoding thresholds made by the Census Bureau at the same time. For instance, the topcode for primary earnings rose from $99,999 to $150,000, thus reducing the share of full-time male workers whose primary labor earnings were topcoded from 3.93 percent to 1.35 percent, but the use of cell means increases the average reported primary labor earnings of those men who were still topcoded to $305,989.

A second approach—referred to as "No Cell Mean Public Use"—is to ignore the introduction of cell means into the public-use CPS data and to produce a labor-earnings series in which all topcoded values are assigned the value of the topcoding threshold, even those values which date from after the introduction of cell means in 1995. While this approach removes the large artificial jump in labor earnings due to the introduction of cell means in 1995, it does not address the problem of inconsistent changes in topcoding thresholds over time (such as the change in the primary labor earnings topcode from $99,999 in 1994 to $150,000 in 1995) or the variation in topcoding rates across groups within the U.S. population.[17]

A third approach, used by Richard V. Burkhauser, J. S. Butler, Shuaizhang Feng, and Andrew J. Houtenville for labor earnings and by Burkhauser, Couch, Houtenville, and Ludmila Rovba for household income, is to create a consistent topcode series—an approach referred to as "Consistent Topcode Public Use."[18] For each earnings source, this series finds the year in which the topcoding threshold cuts most deeply into the source's earnings distribution and then for every other year applies whatever topcoding threshold cuts into the source's earnings distribution by the same percentage. This approach is preferable to both the Unadjusted Public Use

approach and the No Cell Mean Public Use approach in that it consistently measures a given percentage of the distribution of the earnings from the source in question in all years of the study. However, this consistency over time in topcoding rates comes at the cost of losing information by topcoding a larger fraction of the population in almost every year. In this article, which analyzes labor earnings for full-time, full-year workers, the Consistent Topcode Public use approach cuts into the data by anywhere from 2.5 to 3.8 percent. The public-use CPS data reflect a cut (due to topcoding) that ranges from 0.6 to 2.7 percent, depending on the year.

Just as the existence of topcoding in the public-use CPS data can distort gaps in earnings and trends in earnings inequality across groups, increasing the fraction of the population that is topcoded can exacerbate the problem. Because more individuals are topcoded with the Consistent Topcode Public Use approach than they are in the public data, the observed mean labor earnings of each group within the population will be lower. But, because most of the people who are captured by the reduction in the topcodes are men, white, or more educated, using this approach will reduce the mean earnings of these groups more than it will reduce the mean labor earnings of women, Blacks or the less-educated. Hence, the Consistent Topcode Public Use method will consistently overestimate the mean earnings of workers with the former set of characteristics relative to workers with the latter characteristics by disproportionately excluding the top part of the labor-earnings distribution.

Given the limitations of consistent topcoding in providing a consistent comparison of the economic well-being of subpopulations, a new method for controlling for topcoding in the public-use CPS data is needed. As mentioned earlier, the Census Bureau began using cell means in 1995. Cell means from before 1995 are what is necessary to create an unbroken series that is based on cell means. Jeff Larrimore, Burkhauser, Feng, and Laura Zayatz have employed approximately the same method the Census Bureau used to create its cell means from 1995 onward in order to generate cell means that date back to 1975.[19] With these cell means, it is possible to create an unbroken cell-means-based data series that can be used with the public-use CPS data. The earnings distributions in this series better match those found in the internal CPS data for each of the population subgroups examined.

To create the extended cell mean series for each source of labor earnings, the population is divided by sex, race, and employment status, the same categories the Census Bureau uses to produce its cell means. The topcoded earnings value is then replaced with the weighted mean earnings—from the source of earnings in question—of all individuals with the same set of demographic characteristics for whom the source of earnings in question is topcoded in the public-use CPS data. To protect the confidentiality of respondents' identities, when fewer than 5 individuals are topcoded from an earnings source, those individuals' earnings are combined with the earnings of individuals from a similar earnings source in order to obtain a cell size of 5 or more and generate a cell mean. (This procedure for preserving confidentiality is the same as that used by the Census Bureau.)

Although this new approach for correcting the effects of topcoding—an approach referred to as "Cell Mean Public Use"—has significant advantages over consistent topcoding because it allows one to better understand changes at the high end of the earnings distribution, it still does not capture the full distribution. In addition to topcoding income in the public-use CPS data, the Census Bureau censors high-income values for each source of income in the internal CPS data. The full list of points beyond which labor earnings are not released internally—termed "censoring points" in this article—is reported in tables A–2 and A–3 of the appendix. Since the internal CPS data are censored, values at the very top of the distribution for each source of income cannot be observed in these data.[20] This poses a potential problem when creating a cell mean series for the public-use CPS data from the internal CPS data, because at best the trends in the series will match those found in the internal data from which the cell means are created. If changes in the censoring points in the internal CPS data affect earnings gaps, ratios, or trends in the Internal series, the same gaps, ratios, and trends will be affected in the Cell Mean Public Use Series.

While this is a limitation of the cell mean series in measuring the "true" trends in labor earnings, the problem is not as serious as it could be because the censoring points in the internal CPS data are much higher than the topcodes in the public-use CPS data. As a result, the fraction of individuals who are affected by censoring points is lower than the fraction affected by the public-use CPS topcodes. Thus, although some censoring does occur in the internal CPS data, the results calculated using the extended cell mean series with the public-use CPS data (that is, using the Cell Mean Public Use approach) are much closer to the results that would be obtained using data that consistently captures the full earnings distribution.

Additionally, the censoring points tend to be more stable than their counterparts used for the public-use CPS

data, the topcoding thresholds. Since the Census Bureau switched from reporting three sources of labor earnings to four sources in 1987, the only years in which changes were made to censoring points were 1992 and 1993.

Problems with data from the years 1992 and 1993 are not limited to the internal data. In 1993 the Census Bureau also implemented a substantial redesign of its collection procedures, a redesign that included the implementation of computer-assisted data collection.[21] The change in procedures increased the ability of the Census Bureau to observe earnings near the top of the distribution; since those high earnings are observed in the internal data but are topcoded in the public-use data, the use of internal data exacerbates the observed break in the series. Therefore, although the use of cell means with public-use CPS data allows for consistent trends before and after these years—trends that closely match the internal CPS data—researchers should take caution when using the cell mean series, or any CPS-based earnings series, to compare the year 1992 or any year before with the year 1993 or any year after.

Accuracy in capturing mean labor earnings

As was explained in the previous section, men's and women's mean labor earnings were calculated using four methods of dealing with topcoding. Each cell in panel 1 of table 2 is the ratio of a datum from one of the four series to its corresponding figure from the internal CPS data. There are separate columns for men and women. A ratio of 1.000 indicates that the method perfectly captures the mean earnings observed in the Internal data series. The lower the ratio, the more earnings are missed as a result of topcoding.

As can be seen when looking at the data for 2007, because of the cell means provided by the Census Bureau, the mean earnings of full-time, full-year male and female workers captured in the Unadjusted Public Use data since 1995 are very close to the mean earnings in the Internal data series. So, for people only interested in years since 1995 (the year cell means were first provided by the Census Bureau), the men's and women's earnings statistics in the Unadjusted Public Use data and the Cell Mean Public Use data come very close to matching the corresponding statistics in the Internal series.

But for those also interested in years prior to 1995, the Unadjusted Public Use data series is flawed because it does not provide cell means for earnings that are above the threshold for topcoding. Hence, its mean values are smaller for both men's and women's earnings. In contrast, the Cell Mean Public Use data provide yearly means very close to those from the Internal series for both men and women in all years back to 1975, coming within 0.2 percent of the internal mean values for both men and women in each of the trough years.

Unlike the Unadjusted Public Use and Cell Mean Public Use series, the No Cell Mean Public Use and the Consistent Topcode Public Use series understate the mean earnings of both men and women in *all* years. Additionally, the amount by which earnings are understated through the use of these series has grown over time. For example, the mean earnings that are calculated using the Consistent Topcode Public Use series understate the results in the Internal series by 4.9 percent for men and 0.2 percent for women in 1975. By 2007 the gap between the Consistent Topcode Public Use series and Internal series rises to 9 percent for men's earnings and 4 percent for women's earnings.

As is seen in panels 2 and 3 of table 2, the methods for managing topcoding have effects on the calculations of mean earnings of black and white workers and of workers with different levels of education that are similar to the methods' effects on the calculation of men's and women's earnings. Mean earnings computed using the Cell Mean Public Use series in all years or the Unadjusted Public Use series after 1995 closely match the mean earnings calculated using the Internal series. Use of the Consistent Topcode Public Use or the No Cell Mean Public Use series understates mean earnings (in relation to the Internal series), doing so more for white than for black workers and more for more highly educated workers than for less-educated workers.

Accuracy in capturing earnings gaps

Having shown that mean earnings of men, women, Blacks, Whites, and people of three levels of education are influenced by the height of topcoding thresholds, the article now focuses in this section on differences among the No Cell Mean Public Use, Consistent Topcode Public Use, Cell Mean Public Use, and Internal series in order to explain how topcoding affects earnings gaps. The Unadjusted Public Use series is excluded from further discussions because its data from prior to 1995 are identical to the No Cell Mean Public Use series and its data from 1995 onward are nearly identical to the Cell Mean Public Use series. In addition, the Unadjusted Public Use series has a clear artificial jump in 1995 that makes it inferior to either the No Cell Mean Public Use series or the Cell

Table 2. The ratio of mean labor earnings according to each of four publicly available data series to mean labor earnings according to internal CPS data, selected years, 1975–2007

Panel 1. Ratios involving the mean labor earnings of women and men

Year	No Cell Mean Public Use		Unadjusted Public Use		Consistent Topcode Public Use		Cell Mean Public Use	
	Women	Men	Women	Men	Women	Men	Women	Men
1975	1.000	0.986	1.000	0.986	0.998	0.951	1.000	1.000
1982	.998	.988	.998	.988	.993	.955	1.000	.999
1992	.992	.958	.992	.958	.988	.940	1.000	1.000
1993	.970	.914	.970	.914	.966	.901	.999	1.000
2004	.973	.929	1.001	1.000	.965	.902	1.001	1.000
2007	.970	.935	1.000	1.000	.960	.910	1.000	1.000

Panel 2. Ratios involving the mean labor earnings of Blacks and Whites

Year	No Cell Mean Public Use		Unadjusted Public Use		Consistent Topcode Public Use		Cell Mean Public Use	
	Blacks	Whites	Blacks	Whites	Blacks	Whites	Blacks	Whites
1975	1.000	0.988	1.000	0.988	0.998	0.957	1.000	1.000
1982	.997	.990	.997	.990	.989	.962	1.000	.999
1992	.993	.966	.993	.966	.990	.951	1.000	1.000
1993	.961	.927	.961	.927	.957	.916	1.000	1.000
2004	.978	.939	1.003	1.002	.972	.915	1.003	1.002
2007	.961	.944	1.001	1.002	.953	.921	1.001	1.002

Panel 3. Ratios involving the mean labor earnings of people of each of three levels of education

Year	No Cell Mean Public Use			Unadjusted Public Use		
	Less than a high school degree	High school degree	Education beyond high school	Less than a high school degree	High school degree	Education beyond high school
1975	0.999	0.994	0.982	0.999	0.994	0.982
1982	.999	.997	.986	.999	.997	.986
1992	.992	.993	.957	.992	.993	.957
1993	.966	.967	.915	.966	.967	.915
2004	.967	.970	.934	.982	.996	1.003
2007	.987	.973	.937	.994	.996	1.002

Year	Consistent Topcode Public Use			Cell Mean Public Use		
	Less than a high school degree	High school degree	Education beyond high school	Less than a high school degree	High school degree	Education beyond high school
1975	0.991	0.982	0.935	1.000	0.999	1.001
1982	.996	.987	.947	1.000	1.000	.999
1992	.989	.990	.938	.999	.999	1.000
1993	.964	.963	.902	.979	.989	1.006
2004	.964	.962	.908	.982	.996	1.003
2007	.982	.967	.913	.994	.996	1.002

SOURCE: Authors' calculations made by use of public and internal CPS data.

Mean Public Use series alone.

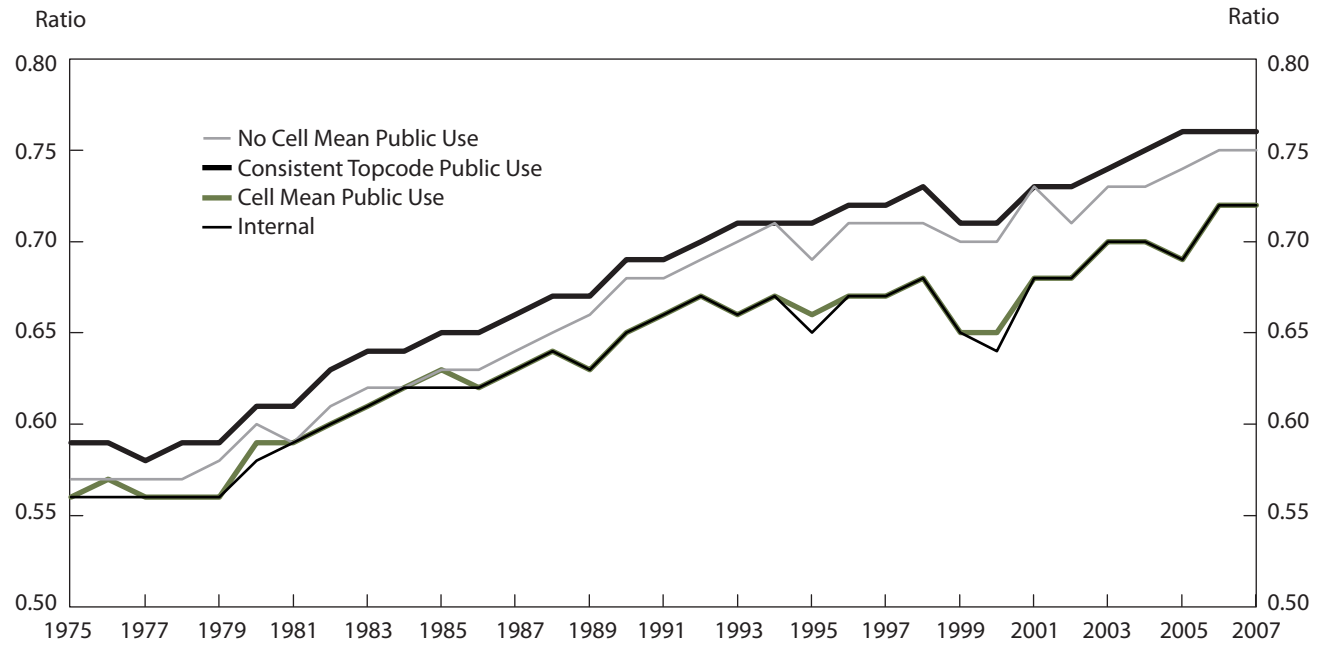
The gap in earnings between women and men. Because the No Cell Mean Public Use and Consistent Topcode Public Use series consistently understate the labor earnings of both men and women, the true ratio of women's earnings to men's earnings could in principal be greater or less than the ratio in the Cell Mean Public Use and Internal series. But as tables 1 and 2 have shown, men are more likely than women to be topcoded, and the average man who is topcoded has a higher wage or salary than the average woman who is topcoded. One therefore expects the ratio of women's earnings to men's earnings to be higher in the No Cell Mean Public Use and Consistent Topcode Public Use series than in the Cell Mean Public Use and Internal series, especially in the years for which cell means were not calculated.

The expectation proves to be true, as can be seen in chart 1, which compares the ratio of mean women's earnings to mean men's earnings as calculated using each of the four data series. In all years, the ratio of women's earnings to men's earnings is larger according to the No Cell Mean Public Use series than according to the Internal series. This difference is relatively small in the first year of the sample, but grows over time. In 1975 it was under 1 percentage point—female workers earned 56.6 percent of what male workers earned according to the No Cell Mean Public Use series, and they earned 55.8 percent of what male workers earned according to the Internal series—in 1989 it was over 2 percent, and in 2007 it was 2.8 percent. Thus, using the public-use CPS data without cell means will cause researchers to overstate the decline in the earnings gap between men and women over these years.

This overstatement is even greater when the Consistent Topcode Public Use method is used, since this approach further suppresses values at the top of the earnings distribution and topcodes even more men's earnings relative to women's earnings. Using consistent topcoding overstates the ratio of women's earnings to men's mean earnings by 2.8 percentage points in 1975, and the overstatement rises to 4.0 percentage points by 2007. In contrast, as can also be seen in chart 1, the Cell Mean Public Use series nicely approximates the women-to-men earnings ratios found using the internal CPS data.

The chart shows that the gap between the earnings ratio calculated using the No Cell Mean Public Use series and

Chart 1. Ratio of women's mean labor earnings to men's mean labor earnings, according to four data series, 1975–2007



SOURCE: Authors' calculations made by use of public and internal CPS data.

that calculated using the Internal series widens over time. The same happens for the Consistent Topcode Public Use series relative to the Internal series. Because of the widening of the gaps between the ratio calculated using the Internal series and the ratios calculated using the other two series, it might be assumed that using either of the other two series will overstate the earnings gains made by female workers relative to male workers for each of the three business cycles occurring during the 1975–2004 period. However, it will be shown that this is not the case.

Panel 1 of table 3 shows the percentage change in the ratio of women's mean earnings to men's mean earnings over each of the three business cycles that have occurred since 1975. As was done previously, direct comparisons across 1992–93 are excluded from the analysis because of the Census redesign.

When the years from 1975 to 2004 are grouped into the business cycles of 1975–82, 1982–92, and 1993–2004, one finds that in each of the three business cycles the percentage change calculated with the Cell Mean Public Use series closely matches that calculated with the Internal series. In contrast, both the Consistent Topcode Public Use and the No Cell Mean Public Use series understate the percentage change that occurred in the 1975–82 business cycle and, to a lesser extent, also understate the change that occurred during the 1993–2004 business cycle. However, for the 1982–92 business cycle, these two series overstate the relative earnings gains of women. Thus, while each of these two series slightly misstates the relative earnings gains of

Table 3. Percentage change in four ratios during the 1975–82, 1982–92, and 1993–2004 periods, according to four CPS data series

Panel 1. Percentage change in the ratio of women's mean labor earnings to men's mean labor earnings

Timespan	No Cell Mean Public Use	Consistent Topcode Public Use	Cell Mean Public Use	Internal
1975–1982	7.76	7.12	8.29	8.16
1982–1992	13.65	12.20	10.77	10.92
1993–2004	4.17	5.28	5.60	5.47

Panel 2. Percentage change in the ratio of Blacks' mean labor earnings to Whites' mean labor earnings

Timespan	No Cell Mean Public Use	Consistent Topcode Public Use	Cell Mean Public Use	Internal
1975–1982	1.60	0.55	2.20	2.14
1982–1992	3.04	2.32	.78	.90
1993–2004	4.51	–3.50	–4.87	–5.00

Panel 3. Percentage change in the ratio of the mean labor earnings of workers with a high school degree but no higher education to the mean labor earnings of wokers without a high school degree

Timespan	No Cell Mean Public Use	Consistent Topcode Public Use	Cell Mean Public Use	Internal
1975–1982	3.33	3.20	3.29	3.16
1982–1992	4.79	5.38	4.55	4.43
1993–2004	5.31	4.99	5.47	5.06

Panel 4. Percentage change in the ratio of the mean labor earnings of workers with education beyond high school to the mean labor earnings of workers with a high school degree but no higher education

Timespan	No Cell Mean Public Use	Consistent Topcode Public Use	Cell Mean Public Use	Internal
1975–1982	1.70	2.37	1.24	1.58
1982–1992	5.63	7.04	8.66	8.41
1993–2004	6.14	5.18	3.39	4.33

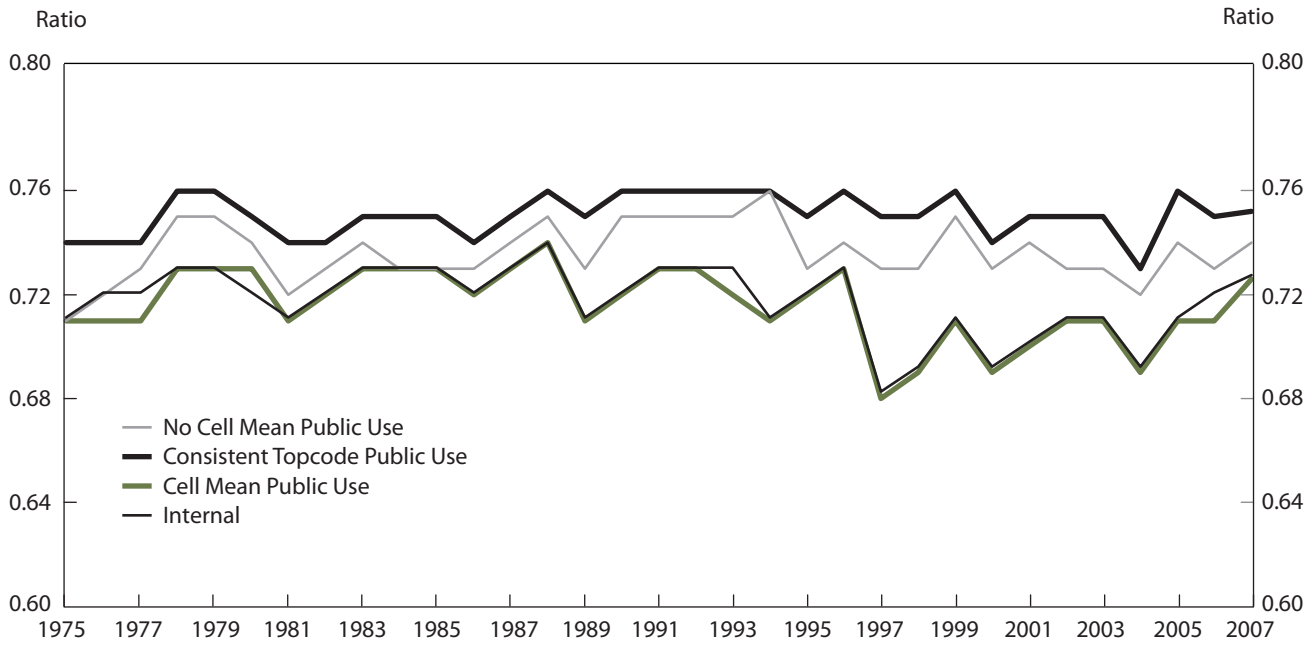
SOURCE: Authors' calculations made by use of public and internal CPS data.

women in all three business cycles, the direction of the misstatement is specific to the time period analyzed.

The gap in earnings between Blacks and Whites. Chart 2 shows the ratio of Blacks' mean earnings to Whites' mean earnings during the 1975–2007 period, according to the Internal series and each of the three methods of correcting for topcoding. Similar to the case of the ratio of women's mean earnings to men's mean earnings, using the No Cell Mean Public Use series overstates the relative earnings of black workers; the extent of this overstatement grows over time from 0.9 percentage points in 1975 to 2.9 percentage points in 2004 before falling back to 1.3 percentage points in 2007. In another parallel to the ratio of women's earnings to men's earnings, the Consistent Topcode Public Use series overstates the relative earnings of black workers by even more than the No Cell Mean Public Use series, as white workers are more likely to be near the top of the earnings distribution and thus have additional earnings suppressed by consistent topcoding. However, the earnings ratio calculated from year to year with the Cell Mean Public Use series again closely matches the ratio from the Internal series, and it is the best available method of replicating the earnings gap seen in the Internal series.

Panel 2 of table 3 displays the percentage change in the ratio of Blacks' mean earnings to Whites' mean earnings for each of the three business cycles. For every business cycle, the relationships among trends in the ratios of Blacks' mean earnings to Whites' mean earnings are similar to the relationships among trends in the ratios of women's mean earnings to men's mean earnings. Again, the Cell Mean Public Use series closely matches the trends in the Internal series for all three business cycles. Additionally, one also can see that during the 1975–82 business cycle, the Consistent Topcode Public Use and No Cell Mean Public Use series both slightly understate the relative *gain* in earnings made by black workers, as compared with the Internal series. For the 1993–2004 business cycle, the Consistent Topcode Public Use and No Cell Mean Public Use series understate the relative *decline* in Blacks' earnings in relation to Whites' earnings. For the 1982–92 business cycle the No Cell Mean Public Use and the Consistent Topcode Public Use series slightly overstate the earnings gains made by black workers. As was the case regarding men's and women's earnings, although these two series slightly misstate the percentage change in the ratio of Blacks' mean earnings to Whites' mean earnings,

Chart 2. Ratio of Blacks' mean labor earnings to White's mean labor earnings, according to four data series, 1975–2007



SOURCE: Authors' calculations made by use of public and internal CPS data.

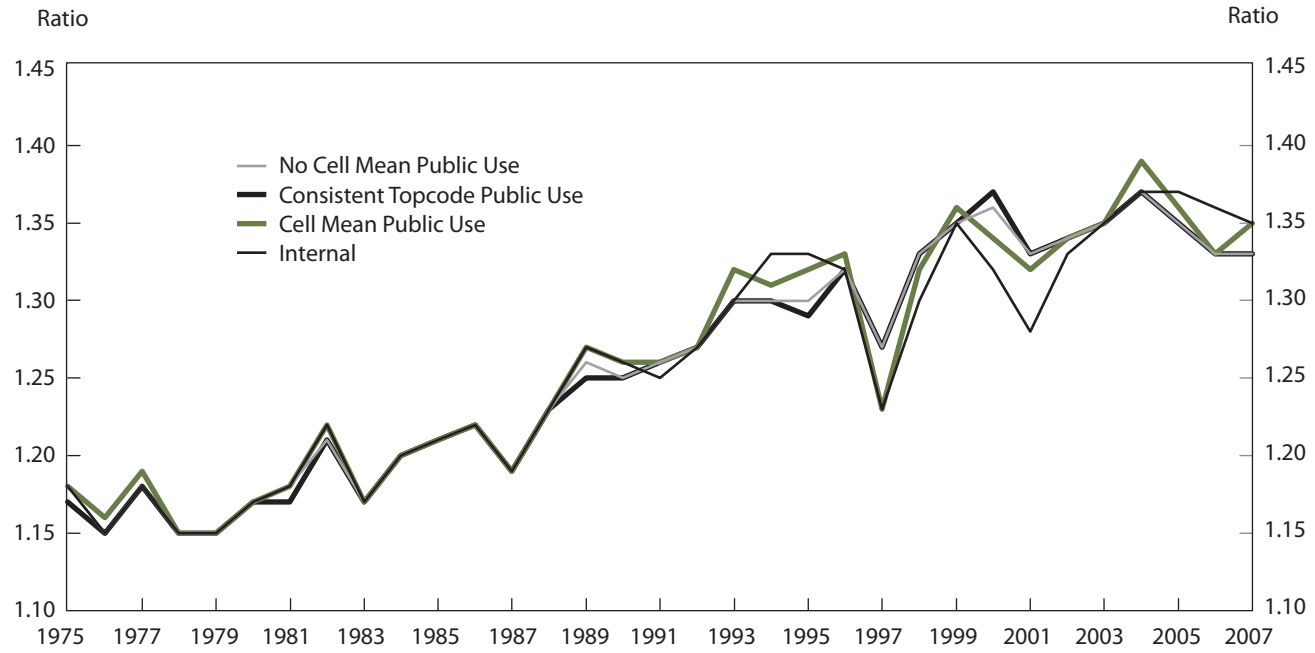
the direction of this misstatement varies over the three business cycles.

It may not come as a surprise that the Cell Mean Public Use series is nearly able to replicate the results from the Internal series in generating comparisons of women with men and Blacks with Whites, since sex and race were two of the conditioning criteria used when generating the cell means for each earnings source. Thus, a natural question is whether the Cell Mean Public Use approach is as successful at replicating the Internal series for subsets of the population that do not match the conditioning criteria.

Education mean earnings gaps. Mean earnings were calculated for the three levels of education previously mentioned: no high school degree, a high school degree but no higher education, and education beyond high school. For the 1975–2007 period, chart 3 displays the ratio of the mean earnings of workers with a high school degree but no higher education to the mean earnings of those without a high school degree. Chart 4 shows the ratio of the mean earnings of workers with education beyond high school to those of workers with only a high school degree. Both the charts present their respective ratios as calculated using data from the Internal series and each of the three methods of correcting for topcoding. In the creation of cells, level of education was not controlled for like sex and race were; therefore, the cells contain earnings figures from people of various levels of education. Nevertheless, as was seen with the earnings gaps between men and women and between Whites and Blacks, the "education earnings gaps" that are calculated using the Cell Mean Public Use series very closely match those calculated with the Internal series. Thus, it does not seem that the benefits of using cell means are confined to data calculated using the conditioning criteria of sex, race, and employment status.

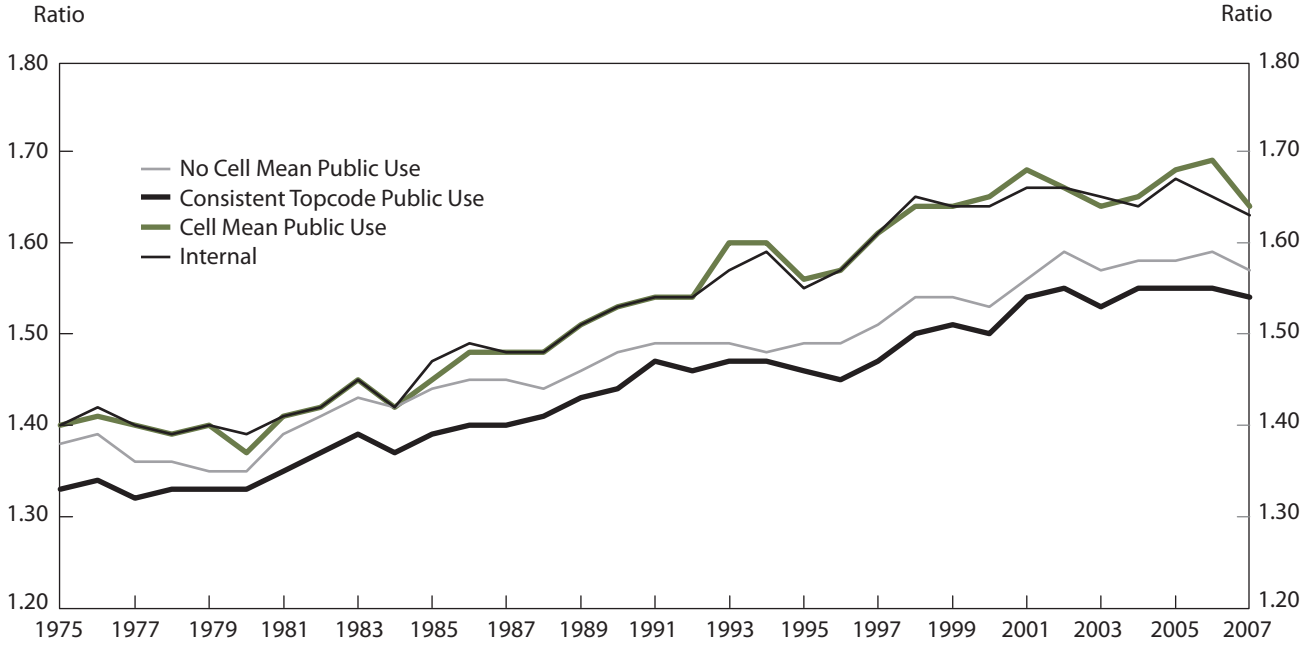
Additionally, this article finds that the degree to which labor earnings are understated when one uses the No Cell Mean Public Use or Consistent Topcode Public Use series increases with education because those with education beyond high school are more likely to have higher labor earnings and thus are more likely to have earnings suppressed by topcoding. Among the lower two education groups, there actually are some years in which the workers without a high school degree have earnings suppressed at a slightly higher rate than those with a high school degree, which causes the ratio of the mean

Chart 3. Ratio of the mean labor earnings of workers with a high school degree but no higher education to the mean labor earnings of workers without a high school degree, according to four data series, 1975–2007



SOURCE: Authors' calculations made by use of public and internal CPS data.

Chart 4. Ratio of the mean labor earnings of workers with education beyond high school to the mean labor earnings of workers with a high school degree but no higher education, according to four data series, 1975–2007



SOURCE: Authors' calculations made by use of public and internal CPS data.

earnings of the group with more education to the mean earnings of the group with less education to be higher in the No Cell Mean Public Use Series and the Consistent Topcode Public Use series than in the Internal series. In contrast, among the higher two education groups, in all years earnings are suppressed at a higher rate among those with some higher education than those with just a high school degree; therefore, not appropriately correcting for topcoding will lead to an understatement of the returns to higher education.

Panels 3 and 4 of table 3 present percentage changes in ratios of mean earnings for the business cycles of 1975–82, 1982–92, and 1993–2004, as calculated using data from the Internal series and the three other data series. The subject of panel 3 is the ratio of the mean earnings of workers with a high school degree but no higher education to the mean earnings of workers without a high school degree; the subject of panel 4 is the ratio of the mean earnings of workers with education beyond high school to those of workers with a high school degree but no higher education. Panels 3 and 4 take the same approach as panels 1 and 2 except that in panels 3 and 4, the ratio is of the group with the higher earnings to the group with the lower earnings. (The ratio is the other way around in panels 1 and 2).

In each of the first two business cycles, there is a similar pattern to that seen for the mean earnings ratios of women to men and Blacks to Whites: the percentage changes calculated using the Cell Mean Public Use series are quite similar to those calculated the Internal series. Considering all three business cycles, the No Cell Mean Public Use series and Consistent Topcode Public Use series are less accurate in capturing trends, but, as is the case in panels 1 and 2, the direction of the misstatement is not systematic; the percentage change is understated in some years and overstated in others.

In contrast to the findings concerning the earnings ratios of women to men and Blacks to Whites, in panels 3 and 4 the trends in data calculated using the Cell Mean Public Use series do not closely match the trends in data calculated using the Internal series in all three business cycles. In the 1993–2004 period, the Cell Mean Public Use series somewhat overstates the relative increase in the earnings of workers with a high school diploma (but no higher education) in relation to the earnings of workers without a high school diploma. This misstatement of the

trend occurs primarily because the cells do not control for education, thereby causing variations in how closely cell means represent the individual components of the cells. Nonetheless, in calculating the relative earnings of the lower two education groups, the Cell Mean Public Use series still approximates the Internal series better than do the other series.

For the 1993–2004 period the Cell Mean Public Use series somewhat understates the relative increase in the earnings of workers with some higher education in relation to workers with a high school diploma but no further education. Upon closer inspection, however, it can be seen that this understatement results mainly from the choice of 1993 as the first year in the timespan in question. In 1993 the difference (of 0.026) between the Internal and the Cell Mean Public Use series values for the earnings gap between those with some higher education and those with only a high school diploma is at its second largest amount over the entire 1975–2007 period. When 1994 is used as the base year, the Cell Mean Public Use values are much closer to the Internal series values. Thus, it is not that the Cell Mean Public Use series is unable to capture the trends in the Internal series in recent years, but rather that it does a poor job when 1993 is the anchor year.

Topcoding is a well-documented problem for the CPS, but until recently, the only available strategy for mitigating the problem has been to place further restrictions on the data, either by using consistent topcoding or by discarding the cell means provided by the Census Bureau from 1995 onward. As a result, calculations have tended to understate true mean earnings in the United States. When comparing earnings across two groups within the population that are topcoded at different rates, all previously available topcode correction schemes may lead to a misstatement of the earnings gap between the groups.

The authors of this article were able to partially lift the constraints of topcoding by obtaining access to the internal CPS data files. Although these internal data also are topcoded, the topcoding thresholds (censoring points) are substantially higher and more stable over time than those in the public-use CPS data. The key to this article is the extension of the cell mean series provided by the Census Bureau. The extension of cell means back to 1975 allows researchers using the public-use CPS data to estimate the earnings of individuals above the topcode threshold. Using the Cell Mean Public Use series with the public-use CPS data makes it possible to closely match the results found using internal CPS values from 1975 to 2007. Although the Cell Mean Public Use series best approximates the earnings statistics in the internal CPS data for groups based on race, sex, or employment status—because these characteristics are controlled for in the creation of cells—the cell mean series also is very useful for approximating the internal data for groups formed on the basis of other criteria, such as education level. Since the Cell Mean Public Use series is now available to the general public, researchers who are interested in exploring not just trends in earnings gaps and ratios but also more detailed questions about the underlying causes of gaps in pay can use the series to answer their questions with a precision similar to that obtained with access to the internal CPS files.

For this article, four data series were used to calculate earning gaps between women and men, between Blacks and Whites, and among people of three levels of education—all who worked full time year round. Using the Cell Mean Public Use series resulted in earnings gaps that, on the whole, were moderately larger than those calculated using the No Cell Mean Public Use series. According to the public-use data without cell means, in 2007 the mean earnings of women who worked full time year round were 75.1 percent of those of their male counterparts. The figure drops to 72.3 percent when topcoding is accounted for through the use of cell means. Similarly, in 2007 the mean earnings of Blacks were 74.0 percent of those of Whites without the use of cell means, compared with 72.6 percent with the use of cell means. The largest change, however, occurs for groups based on educational attainment. For the year 2007, the mean earnings of workers with some postsecondary education were 64 percent more than the mean earnings of those with only a high school degree as calculated with data from the Cell Mean Public Use series, compared with 57 percent as calculated using the No Cell Mean Public Use series. Thus, the returns to higher education are understated substantially if cell means are not used.

Sizes of individual earnings gaps and trends in earnings gaps both are sensitive to the choice of method of correcting for topcoding. Ignoring cell means and the earnings of individuals above the topcoding thresholds will distort the measured trends in earnings ratios between women and men, between Blacks and Whites, and among groups of different levels of education. However, unlike the case of earnings gaps, the direction of the distortion is not consistent and is sensitive to the years chosen for calculating the trends. Using public-use data without cell means will overstate relative changes in the earnings of women, Blacks, and the less-educated in some years but will understate relative changes in their earnings in other years. □

Notes

ACKNOWLEDGMENTS: Support for the research in this article came from the National Science Foundation and the National Institute for Disability and Rehabilitation Research. The authors thank Lisa Marie Dragoset, Ian Schmutte, Arnie Reznek, Laura Zayatz, the Cornell Census RDC Administrators, and all their U.S. Census Bureau colleagues who have helped with this project.

[1] Each year the U.S. Census Bureau uses March CPS data to calculate yearly average income and poverty rates, and it releases these rates to the public; see **www.census.gov/prod/2008pubs/p60-235.pdf** (visited July 27, 2009) for more details. The March CPS data that the Census Bureau uses in its calculations are not available, except under certain conditions, to researchers outside of the Census Bureau.

[2] For an early review of this problem in the earnings-inequality literature, see Frank Levy and Richard J. Murnane, "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations," *Journal of Economic Literature*, September 1992, pp. 1333–81. For a more recent discussion see Shuaizhang Feng, Richard V. Burkhauser, and J.S. Butler, "Levels and Long-Term Trends in Earnings Inequality: Overcoming Current Population Survey Censoring Problems Using the GB2 Distribution," *Journal of Business and Economic Statistics*, January 2006, pp. 57–62.

[3] See, among other sources, Chinhui Juhn, Kevin M. Murphy, and Brooks Pierce, "Accounting for the Slowdown in Black-White Wage Convergence," in Marvin Kosters, ed., *Workers and their Wages* (Washington, DC, AEI Press, 1991); David Card and John E. DiNardo, "Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles," *Journal of Labor Economics*, October 2002, pp. 733–83; Kenneth Couch and Mary C. Daly, "Black-White Wage Inequality in the 1990s: a Decade of Progress," *Economic Inquiry*, January 2002, pp. 31–42; and Chinhui Juhn, "Labor Market Dropouts and Trends in the Wages of Black and White Men," *Industrial and Labor Relations Review*, July 2003, pp. 643–62.

[4] For a discussion of the impact of topcoding on the income gap between men with and without disabilities, see Richard V. Burkhauser and Jeff Larrimore, "Trends in the Relative Household Income of Working-Age Men with Work Limitations: Correcting the Record using Internal Current Population Survey Data," *Journal of Disability Policy Studies*, forthcoming article, see **http://dps.sagepub.com** (visited July 27, 2009).

[5] The research in this article was conducted while the authors were Special Sworn Status researchers of the U.S. Census Bureau at the New York Census Research Data Center at Cornell University. The article was completed while Richard V. Burkhauser was a Visiting Scholar at the American Enterprise Institute.

[6] In order to reduce the impact of changes in hours worked on the analysis of labor earnings, the sample used in this analysis is restricted to individuals over the age of 15 who work full time (35 hours or more per week) and year round (50 or more weeks per year). The Census Bureau uses the same restrictions for their annual analysis of earnings. (See page 10 of **www.census.gov/prod/2008pubs/p60-235.pdf**.) For this article, the sample is restricted also to individuals who are not in the military and do not reside in group quarters. These additional restrictions do not substantially affect the results.

[7] Theresa J. Devine, "Characteristics of self-employed women in the United States," *Monthly Labor Review*, March 1994, pp. 20–34.

[8] Francine D. Blau, and Lawrence M. Kahn, "Gender Differences in Pay," *Journal of Economic Perspectives*, Fall 2000, pp. 75–99.

[9] Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica Smith, *Income, Poverty, and Health Insurance Coverage in the United States: 2006*, Current Population Reports P60-233 (U.S. Census Bureau, 2007).

[10] See "The Paycheck Fairness Act: Helping to Close the Gap for Women," National Women's Law Center, 2006, on the Internet at **www.pay-equity.org/PDFs/PaycheckFairnessActApr06.pdf** (visited July 27, 2009); and "The Gender Wage Ratio: Women's and Men's Earnings," Institute for Women's Policy Research, IWPR # C350, 2008, on the Internet at **www.iwpr.org/pdf/C350.pdf** (visited July 27, 2009) for examples of policy factsheets that use data from the Census Bureau. See Blau and Kahn, "Gender Differences in Pay"; and June O'Neill, "The Gender Wage Gap, circa 2000," *American Economic Review: AEA Papers and Proceedings*, May 2003, pp. 309–14, for examples of using Census data for background information on the pay gap between men and women.

[11] Francine D. Blau and Lawrence M. Kahn, "Swimming Upstream: Trends in the Gender Wage Differential in the 1980s," *Journal of Labor Economics*, January 1997, pp. 1–42; Card and DiNardo, "Skill-Biased Technological Change and Rising Wage Inequality"; and O'Neill, "The Gender Wage Gap, circa 2000."

[12] Juhn and others, "Accounting for the Slowdown in Black-White Wage Convergence"; John Bound and Richard B. Freeman, "What Went Wrong? The Erosion of Relative Earnings and Employment Among Young Black Men in the 1980s," *Quarterly Journal of Economics*, February 1992, pp. 201–32.

[13] Card and DiNardo, "Skill-Biased Technological Change and Rising Wage Inequality"; Couch and Daly, "Black-White Wage Inequality in the 1990s"; and Juhn, "Labor Market Dropouts and Trends in the Wages of Black and White Men."

[14] Outgoing rotation groups are groups of people who are in their fourth or sixteenth month as part of the sample. The survey of outgoing rotation groups contains questions on usual weekly and hourly earnings. However, unlike the income supplement in the March CPS, this survey does not contain detailed income questions asking about sources of income other than earnings.

[15] Feng and others, "Levels and Long-Term Trends in Earnings Inequality."

[16] Complete annual statistics on topcoding rates and income by group as well as earnings ratios for all years from 1975 to 2007 for both the public use and internal use are available on request from the authors.

[17] A common refinement to the No Cell Mean Public Use approach is to assign topcoded individuals earnings that are a fixed multiple of the topcoding threshold—usually between 1.3 and 1.5. (See, for example, Blau and Kahn, "Gender Differences in Pay."). While the addition of this refinement comes closer to capturing levels of earnings gaps, the trends are nearly identical to those seen in the No Cell Mean Public Use series, and the refinement does not account for changes in the distribution of earnings above the topcoding thresholds over time. For the sake of brevity, the results that were calculated through the use of this method are not included in this article, but they are available from the authors upon request.

[18] Richard V. Burkhauser, J.S. Butler, Shuaizhang Feng, and Andrew J. Houtenville, "Long term trends in earnings inequality: what the CPS

can tell us," *Economics Letter*s, February 2004, pp. 295–99; and Richard V. Burkhauser, Kenneth A. Couch, Andrew J. Houtenville, and Ludmila Rovba, "Income Inequality in the 1990s: Re-Forging a Lost Relationship," *Journal of Income Distribution*, Winter 2004, pp. 8–35.

[19] Jeff Larrimore, Richard V. Burkhauser, Shuaizhang Feng, and Laura Zayatz, "Consistent Cell Means for Topcoded Incomes in the Public Use March CPS (1975-2007)," *Journal of Economic and Social Measurement, 2008*, pp. 89–128.

[20] For a more detailed discussion of internal censoring, see Edward J. Welniak, "Measuring Household Income Inequality Using the CPS," in James Dalton and Beth Kilss, eds., *Special Studies in Federal Tax Statistics 2003* (Statistics of Income Directorate, Internal Revenue Service, 2003); and Richard V. Burkhauser, Shuaizhang Feng, and Stephen Jenkins, "Using the P90/P10 ratio to measure U.S. inequality trends with the Current Population Survey: a view from inside the Census Bureau vaults," *The Review of Income and Wealth*, February 2009, pp. 166–85.

[21] For details on the redesign of the Census Bureau's collection procedures, see Paul Ryscavage, "A surge in growing income inequality?" *Monthly Labor Review*, August 1995, pp. 51–61; and Arthur F. Jones and Daniel H. Weinberg, *The Changing Shape of the Nation's Income Distribution*, Current Population Reports P60-204 (U.S. Census Bureau, 2000).

Appendix A–1. Sources of labor earnings that are reported in the Current Population Survey

Name	Name in public files	Name in internal files	Definition
	1975–86		
Wages and salaries	I51A	WSAL_VAL	Wages and salaries
Self-employment	I51B	SEMP_VAL	Earnings from self-employment
Farm	I51C	FRSE_VAL	Farm earnings
	1987–2007		
Primary earnings	ERN_VAL	ERN_VAL	Primary earnings
Wages and salaries	WS_VAL	WS_VAL	Wages and salaries—second source
Self-employment	SE_VAL	SE_VAL	Self-employment earnings—second source
Farm	FRM_VAL	FRM_VAL	Farm earnings—second source

SOURCES: Current Population Survey Annual Demographic File Technical Documentation, 1976–2002; Current Population Survey Annual Social and Economic Supplement Technical Documentation, 2003–08.

Appendix A–2. Topcoding thresholds used for public CPS data and those used for internal data, by earnings source, selected years, 1975–86

Year or years	Topcoding thresholds used for public data			Topcoding thresholds used for internal data		
	Wages and salaries	Self-employment	Farm earnings	Wages and salaries	Self-employment	Farm earnings
1975–80	50,000	50,000	50,000	99,999	99,999	99,999
1981–83	75,000	75,000	75,000	99,999	99,999	99,999
1984	99,999	99,999	99,999	99,999	99,999	99,999
1985–86	99,999	99,999	99,999	250,000	250,000	250,000

SOURCES: The topcoding thresholds used for public data come from Current Population Survey Annual Demographic File Technical Documentation. The topcoding thresholds used for internal data come from the authors' calculations, which were made by use of internal CPS data.

Appendix A–3. Topcoding thresholds used for public CPS data and those used for internal data, by income source, selected years, 1987–2007

Year or years	Topcoding thresholds used for public data				Topcoding thresholds used for internal data			
	Primary earnings	Wages and salaries	Self-employment	Farm earnings	Primary earnings	Wages and salaries	Self-employment	Farm earnings
1987–92	99,999	99,999	99,999	99,999	299,999	99,999	99,999	99,999
1993	99,999	99,999	99,999	99,999	999,999	999,999	999,999	999,999
1994	99,999	99,999	99,999	99,999	1,099,999	1,099,999	999,999	999,999
1995–2001	150,000	25,000	40,000	25,000	1,099,999	1,099,999	999,999	999,999
2002–07	200,000	35,000	50,000	25,000	1,099,999	1,099,999	999,999	999,999

SOURCES: The topcoding thresholds used for public data come from the Current Population Survey Annual Demographic File Technical Documentation, 1987–2002, and from the Current Population Survey Annual Social and Economic Supplement Technical Documentation, 2003–08. The topcoding thresholds used for internal data come from the authors' calculations, which were made by use of internal CPS data.

New wherever-provided services and construction indexes for PPI

A new set of wherever-provided services and construction price indexes expands the BLS products covering the services and construction sectors of the economy; these indexes combine prices from all industries producing a specific service or construction product into a single price index for that service or product

Jonathan C. Weinhagen
and
Bonnie H. Murphy

Effective with the release of July data on August 18, 2009, the Bureau of Labor Statistics (BLS) introduced a new set of wherever-provided (that is, commodity-based) services and construction price indexes. The new indexes measure price change for specific services and construction products, regardless of the provider's industry of origin.

Background and definitions

Prior to the mid-1980s, the BLS published industry and commodity-based price indexes for only the goods sector of the economy (mining, manufacturing, agriculture, and utilities). Due to the rapid growth of the U.S. services sector, the BLS undertook an effort to expand its coverage to include services and construction price indexes. This effort resulted in the publication of the first BLS industry-based service price index, the PPI for rail transportation, in January 1985. Through the mid-1990s, the services expansion effort continued, with the development of price indexes for many industries in the transportation sector that had relatively straightforward pricing methodologies. Over the past two decades, expansion efforts have moved forward to include indexes for more complex industries in the information, health care, real estate, professional services, administrative services, finance and insurance, and wholesale and retail trade sectors. Measuring price changes for industries in these sectors required the development of new, innovative pricing concepts, diverse sampling strategies, and unique data collection techniques. The BLS currently calculates and publishes price indexes representing approximately 77.4 percent of services[1] and 28.6 percent of total nonresidential construction.[2] Still, gaps in the coverage of services exist; for example, education services, computer systems design and related services, and scientific research and development services are not covered.

As the BLS has expanded its coverage to include both the services and construction sectors of the economy, the expansion effort has focused primarily on the development of industry-based price indexes—indexes that measure price change for the output of an industry, including its primary, secondary, and miscellaneous production. Primary production is considered the industry's main revenue-generating activity, whereas secondary and miscellaneous production encompasses additional activities from which the industry generates revenue. Secondary production is the production of nonprimary goods, while

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miscellaneous production is the provision of nonprimary services. For instance, the primary output of the wired telecommunications industry (NAICS 517110) is telephone-line provision services, such as local services, toll services, and private-line services. Miscellaneous production of this industry would include wired telecommunications services.

In contrast to industry-based indexes, commodity-based price indexes measure price change for a (wherever-provided) service or (wherever-made) good, regardless of the producer's industry of origin. For example, a wherever-provided index for air transportation of freight would measure price change for air transportation of freight from all industries which provide that service. Price changes from industries in which air transportation of freight is classified as either primary production or miscellaneous production would be included in the price index.

In 2006, the BLS began an effort to develop a set of wherever-provided services and construction indexes. This effort included the creation of wherever-provided index weights, the development of an index construction methodology, the identification of the set of detailed wherever-provided indexes whose calculation and publication the BLS could support, and the development of an aggregation and publication structure for the detailed indexes.

Aggregation and publication structure

Instead of using an established product classification structure, the BLS developed its own publication structure for the new, wherever-provided indexes. Doing so allowed the Agency to build on and remain consistent with its already existing commodity-based structure for goods. The newly developed publication structure includes detailed product-level indexes, as well aggregate indexes that combine detailed price indexes for related services into higher level indexes. In developing the index publication structure, the BLS employed a set of six main principles. This section discusses each of these principles in detail and gives an overview of the publication structure.

Coding structure. Indexes were grouped in accordance with a coding methodology similar to the current PPI commodity structure for goods indexes. Major groupings are coded at the two-digit level, and within these two-digit groupings are more detailed commodity groupings that descend in order of aggregation to the detailed-product level (typically, the eight-digit level). In order to remain consistent with current practice within the BLS goods-based aggregation structure, in some cases identical indexes are included at various levels of aggregation. For example, PPI 301401 and PPI 30140101 are identical indexes for air transportation of freight. Weight and price data do not support breaking out additional detail under 301401; therefore, no further eight-digit products could be added beneath the six-digit index. Instead, an eight-digit index denoting the same service was added.

Although the current goods indexes encompass the two-digit groupings 01 through 15, the services groupings were numbered beginning with code 30. This choice permits a degree of flexibility that otherwise would be unavailable if the services structures began at two-digit group 16, directly following the last goods groupings. There may, for example, come a time when the numbering system for traditional commodities needs to be expanded or reorganized. The final services code in the structure is 60. Following the same line of reasoning, the BLS numbered the construction groupings beginning with two-digit group code 80.

Similarity of product. Detailed indexes were grouped into higher level aggregates according to similarity of product. Data users often find this type of grouping useful, and the methodology is consistent with the current BLS organizational structure for goods-based commodity indexes, which also groups commodities according to similarity of product. For example, the two-digit index 30 encompasses all transportation services, the two-digit index 40 all investment services.

Avoidance of multiple counting. In organizing the wherever-provided services indexes into two-digit groupings, the BLS attempted to avoid aggregations that would result in substantial multiple counting of price changes. Multiple counting, which can lead to inaccurate and distorted measures of price change, occurs when an aggregate index includes not only the price for a product, but also prices for one or more inputs to the product. The wherever-provided structure, for example, includes separate two-digit aggregations, one for transportation services and the other for services related to transportation, because services related to transportation are most often inputs to transportation services. Avoiding multiple counting will permit two-digit services commodity PPIs to provide meaningful information on price changes.

Wherever-provided structure and PPI industry structure. In

developing the index publication structure, an effort was made to develop alternative index aggregations not found in the industry structure. Within transportation services, for example, transportation of freight and mail were separated from passenger transportation. Then, separate aggregate indexes for total passenger transportation services, as well as total freight and rail transportation services, were created. By contrast, within the PPI industry structure, aggregations are based on mode of transportation. The industry structure includes, for instance, an aggregate index for air transportation that combines detailed indexes for air passenger and air freight transportation into a single index.

In a second example, for book, periodical, and newspaper publishing, sales and subscriptions were separated from advertising space sales, and the latter category was combined into a two-digit grouping with advertising from all other media—for instance, television, Web sites, and radio. The industry structure, in contrast, aggregates indexes according to medium. Thus, the industry structure contains an aggregate index for all periodical publishers, and that index combines indexes for sales and advertising from all types of periodicals.

A third example is that the wherever-provided structure separates wired telecommunications into residential services and business services and creates separate aggregate indexes for each. These indexes combine detailed indexes for local and long-distance telecommunications services into either the aggregate residential or the business telecommunications services index. The industry structure, by contrast, aggregates indexes according to long-distance or local telecommunications services.

Partial coverage. Although the PPI covers all industries in the mining and manufacturing sectors, that is not the case in the services or construction sectors. Consequently, higher level aggregate indexes within the wherever-provided structure may be missing products that would be included if the PPI covered all services and construction industries. In cases where the PPI does cover a service area, but not all products under the aggregate area, the index is still published and the term "partial" is added to the end of the index title if the coverage is less than 80 percent. Within the transportation grouping, for example, only about 75 percent coverage exists for passenger transportation services. The PPI covers passenger transportation from air and rail, but does not currently cover boat, bus, taxicab, or several other forms of passenger transportation.[3]

Index reassignment from goods to services structure. In a small number of cases, the traditional PPI goods structure contained indexes for services. With the arrival of wherever-provided services indexes, the affected services indexes were removed from the goods structure and added to the new services structure. The areas affected by this change were publishing, metal treatment services, and mining services.

Exhibit 1 presents an overview of the publication structure for services and construction up to the three-digit level.[4]

Weights

An important step in developing the wherever-provided services and construction indexes was to construct a set of weights. The primary data source for these weights was Census Bureau revenue data—specifically, data for "Product Lines by Kind of Business." These data are organized according to the North American Industry Classification System (NAICS) and indicate specific products provided by industries and the revenue value for these products. The products are organized according to Census Product Codes (CPCs).[5] Note that, with its 2007 Economic Census survey, to be published by 2011, the Census Bureau will have completed its classification of service product-line data according to the North American Product Classification System (NAPCS), and PPI commodity weights for services will then be based on revenue figures from that system. The transition to NAPCS-based weights may result in some structural changes to the wherever-provided services indexes.[6] However, in order to minimize future structural changes, the BLS reviewed the NAPCS structure while developing both the individual wherever-provided services indexes and the publication structure for those indexes.

Wherever-provided weights were created by aggregating Census Bureau revenue data for individual products, regardless of the providers' industries of origin. For example, the wherever-provided weight for auditing services was constructed by summing the revenues from all the industries that provide auditing services into a single value representing the total revenue of auditing services. (See exhibit 2.)

The 2002 Census of Services classifies auditing services into two product lines: financial auditing services (CPC 34060) and tax auditing services (CPC 35800). Exhibit 2 presents the revenue for both of these products on an industry-by-industry basis. The first and second columns indicate, respectively, the Census of Services product code and title of the service being provided. The third and

Exhibit 1. Summary of wherever-provided structure

30	Transportation services
301	Transportation of freight and mail
302	Transportation of passengers (partial)
31	Services related to transportation activities
311	Services related to water transportation
312	Services related to air transportation
313	Other selected services related to transportation activities (partial)
32	Warehousing, storage, and related services
321	Warehousing, storage, and related services
33	Publishing sales, excluding software
331	Book, periodical, and newspaper publishing sales and subscriptions
332	Directory, mailing list, and related compilations publishing sales
333	Greeting card publishing sales
334	Calendars, yearbooks, and other miscellaneous publishing sales
34	Software publishing
341	System software publishing
342	Application software publishing
35	Network compensation from broadcast and cable television and radio
351	Network compensation from broadcast and cable television
352	Network compensation from radio
36	Advertising space and time sales
361	Advertising space sales in periodicals, newspapers, directories, and mailing lists
362	Television advertising time sales
363	Radio advertising time sales
364	Internet advertising space sales (partial)
37	Telecommunication, cable, and Internet user services
371	Wired telecommunication services
372	Wireless telecommunication services
373	Cable and satellite subscriber services
374	Internet access services
38	Data processing and related services
381	Data processing and related services
39	Credit intermediation services (partial)
391	Loan services (partial)
392	Deposit services (partial)
393	Other credit intermediation services, including trust services
40	Investment services
401	Securities brokerage, dealing, investment advice, and related services
402	Portfolio management
403	Investment banking
41	Insurance and annuities
411	Insurance
412	Annuities
42	Commissions from sales of insurance
421	Commissions from sales of insurance
43	Real estate services (partial)
431	Nonresidential real estate services
432	Residential real estate services (partial)
433	Real estate appraisal fees
44	Rental and leasing of goods (partial)
441	Passenger car rental
442	Truck, utility trailer, and RV rental and leasing
443	Construction, mining, and forestry machinery and equipment rental and leasing
45	Professional services (partial)
451	Legal services
452	Accounting services (partial)
453	Architectural and engineering services
454	Management, scientific, and technical consulting services
455	Advertising and related services (partial)
456	Information technology (IT) technical support and consulting services (partial)
46	Employment services
461	Permanent placement services
462	Executive search services
463	Staffing services
47	Travel arrangement services (partial)
471	Arrangement of flights from travel agencies (partial)
472	Arrangement of vehicle rentals and lodging (partial)
473	Arrangement of cruises and tours (partial)
474	Other travel arrangements (partial)
48	Security services (partial)
481	Guard services
49	Cleaning and building maintenance services (partial)
491	Janitorial services
50	Waste collection and remediation services (partial)
501	Waste collection
51	Health care services
511	Outpatient care (partial)
512	Inpatient care
513	Sales of blood and blood products, organs, and tissues
52	Educational services (partial)
521	Computer training school services
53	Accommodation services
531	Travelers' accommodation services
54	Food and beverage for immediate consumption services (partial)
541	Food and beverage for immediate consumption services (partial)
55	Repair and maintenance services (partial)
551	Commercial and industrial machinery and equipment repair and maintenance
552	Motor vehicle repair and maintenance (partial)
553	Ship repair and maintenance
554	Aircraft repair and maintenance
56	Entertainment services (partial)
561	Membership dues and admissions and recreation facility use fees (partial)
562	Recreational activity instruction fees (partial)
563	Gaming receipts (partial)
564	Amusement machine receipts (partial)
57	Wholesale trade services
571	Machinery and equipment and parts and supplies wholesaling
572	Furnishings wholesaling
573	Building materials and hardware wholesaling
574	Metals, minerals, and ores wholesaling
575	Chemicals and allied products wholesaling
576	Paper and plastics products wholesaling
577	Apparel wholesaling
578	Food and alcohol wholesaling
579	Other commodities wholesaling
58	Retail trade services
581	Food and alcohol retailing
582	Health and beauty care retailing, including optical goods

Exhibit 1. Continued—Summary of wherever-provided structure

583	Apparel and jewelry retailing
584	Computer hardware, software, and supplies retailing
585	TV, video, and photographic equipment and supplies retailing
586	Automobiles and automobile parts retailing
587	Manufactured (mobile) homes retailing
588	RVs, trailers, and campers retailing
589	Sporting goods, including boats, retailing
58A	Lawn, garden, and farm equipment and supplies retailing
58B	Furniture retailing
58C	Flooring and floor coverings retailing
58D	Hardware and building materials and supplies retailing
58E	Major household appliances retailing
58F	Fuels and lubricants retailing
58G	Cleaning supplies and paper products retailing
58H	Book retailing
58I	Other merchandise retailing (partial)
59	Metal treatment services
591	Metal treatment services
60	Mining services
601	Mining services
80	Construction
801	New nonresidential building construction
802	Nonresidential building maintenance and repair construction (partial)

fourth columns respectively designate the NAICS code and title of the industry or industry group providing the services. The last column shows the revenue for the specific service. Thus, the first row shows that industry group 541 (professional, scientific, and technical services) produced $11,243,910,000 of commodity financial auditing services (CPC 34060) in 2002.

Exhibit 2 shows that the total revenue generated by all industries for financial auditing services in 2002 was $11,339,564,000 and that the total revenue generated by all industries for tax auditing services that same year was $700,415,000. Therefore, the total 2002 revenue and the wherever-provided weight for auditing services is $11,339,564,000 + $700,415,000 = $12,039,979,000. This figure represents the weight the BLS would assign auditing services within the wherever-provided structure.

Index construction

This section describes both how the wherever-provided weights are used to construct the commodity-based services indexes and some additional aspects of index construction. The wherever-provided services indexes are calculated by the same methodology that is used for calculating commodity PPIs for mining, manufacturing, agriculture, and utilities.

Like other commodity PPIs, the wherever-provided services indexes are typically published at the eight-digit product level. However, additional detailed indexes are calculated below the eight-digit level, and these indexes are aggregated to create the published eight-digit index. The detailed indexes are created to increase accuracy by allowing for a more precise weighting structure than would exist if just the eight-digit index were calculated.

For a specific commodity, unpublished detailed indexes measuring the average change in the selling price from every industry that is a primary producer of the commodity are calculated. In addition, a single index tracking price change in industries in which the commodity does not represent their primary production is calculated. The unpublished indexes are then aggregated into an eight-digit wherever-made index.

Prior to the implementation of the updated PPI estimation system in 2008, the BLS was unable to calculate detailed indexes for nonprimary producers to use in wherever-provided index estimation. The new estimation system allowed for this improvement in index calculation methodology. The new system also resulted in additional improvements for commodity-based calculation, including more accurate monthly weights and the possibility of calculating detailed product indexes not found within the industry-based indexes.

As stated earlier, the PPI does not cover all industries in the services or construction sector. In cases where the index covers some industries producing a specific product, but is missing more than 20 percent of the production of the service, the uncovered weight is removed from the wherever-provided index. As mentioned earlier, the suffix "partial" in the title of the index informs the data user that the index includes only a portion of the wherever-provided service. Conversely, the PPI includes the weight of the missing industry (or industries) within the wherever-provided index in cases where coverage of a specific commodity is at least 80 percent. These indexes are published without the "partial" designation, and the weight is imputed with the use of standard PPI imputation methodology. For the product index, either removing or imputing the weight will yield the same index calculation. For higher level aggregate indexes, however, removing or imputing a commodity index's weight will yield a different result.[7]

Finally, note that the wherever-provided indexes for new construction are methodologically identical to the industry-based new-construction indexes. These two sets of indexes are built from identical weights and share the

Exhibit 2. Example of construction of wherever-provided index weight: auditing services

Census of Services product code	Census of Services product title	NAICS industry code	NAICS industry title	Revenue (thousands)
34060	Financial auditing services	541	Professional, scientific, and technical services	$11,243,910
34060	Financial auditing services	541211	Offices of certified public accountants	10,831,314
34060	Financial auditing services	541611	Administration management and general management consulting services	394,940
34060	Financial auditing services	541612	Human resources and executive search consulting services	4,068
34060	Financial auditing services	541613	Marketing consulting services	8,357
34060	Financial auditing services	541614	Process, physical distribution, and logistics consulting services	3,978
34060	Financial auditing services	541620	Environmental consulting services	1,253
34060	Financial auditing services	561	Administrative and support services	95,654
34060	Financial auditing services	561110	Office administrative services	95,654
34060	Financial auditing service		total	11,339,564
35800	Tax auditing services	541	Professional, scientific, and technical services	700,415
35800	Tax auditing services	541211	Offices of certified public accountants	665,489
35800	Tax auditing services	541219	Other accounting services	34,926
35800	Tax auditing services			
			total	700,415
			total auditing services	12,039,979

SOURCES: U.S. Census Bureau, Census of Services, 2002; North American Industry Classification System (NAICS).

same base dates and history. The wherever-provided new-construction indexes and their respective industry-based indexes therefore will exhibit identical month-to-month percent changes. For construction, the industry and wherever-provided indexes are the same because the BLS defines all types of new construction as primary production in all new-construction industries. The wherever-provided construction indexes were developed simply to provide completeness within the commodity-based PPI structure.

WITH THE RELEASE OF JULY 2009 DATA IN AUGUST, the BLS expanded its coverage of the services and construction sectors of the economy to include wherever-provided producer price indexes. These indexes track price change for services and construction products, regardless of their industry of origin.

Wherever-provided price indexes add analytical value to the PPI by allowing data users to examine price movements for a specific service or construction product within a single price index that combines prices from all industries producing that product. In addition, detailed price indexes are aggregated into many higher level indexes not found in the industry-based PPI aggregation structure. These wherever-provided aggregations give data users a large number of additional aggregate indexes, thereby further increasing the analytical usefulness of the PPI. □

NOTES

[1] Based on 1992 Bureau of Economic Analysis data from the Gross Product Originating Industry Accounts.

[2] Based on 2007 Census Bureau data from the Value of Construction Put in Place series.

[3] For a list of all partial-coverage indexes and explanations of missing coverage, go to **www.bls.gov/ppi/partialcoverage.pdf**.

[4] For the entire publication structure, go to **www.bls.gov/ppi/wep_rel_imp_200906**.

[5] A concordance between the wherever-provided services indexes and CPCs can be found at **www.bls.gov/ppi/wep_cpc_concord.pdf**.

[6] NAPCS-based weights have not yet been implemented in the 2007 Economic Census for the goods-producing sector, so the weighting structure for goods will not be affected.

[7] Again, the complete list of partial-coverage indexes, as well as explanations of missing coverage, can be found at **www.bls.gov/ppi/partialcoverage.pdf.**

The impact of income imputation in the Consumer Expenditure Survey

With the release of 2004 data from the Consumer Expenditure Survey, the Bureau of Labor Statistics began implementing imputation for missing responses to questions about income; imputation has brought CE estimates closer to CPS estimates, but significant disparities remain between the estimates for many of the smaller components

Bill Passero

From 1980, the year the Consumer Expenditure Survey (CE) became a continuous survey, until 2004, no procedures were employed to produce estimates for sources of income that respondents acknowledged receiving, but for which they did not provide values. However, the release of 2004 data marked the introduction of imputation for missing income responses. With a number of years of imputed income data now available, it is possible to evaluate how well BLS imputation routines are working. The purpose of this article is to assess the impact and efficacy of imputation by comparing pre- and postimputation estimates of CE-reported income with estimates from the Current Population Survey (CPS), a large-scale household survey that has employed imputation for many years in the course of producing its income estimates.

In the next section, after a brief discussion of the background and history of income imputation in the CE, the methodology for comparing CE and CPS income estimates is presented. Then the timing of income data collection in the two surveys is examined. Timing is important because it affects the construction of matching periods for comparison. The discussion then proceeds to detail the structure and content of the income questions asked in each survey's respective collection instrument.

Following the latter discussion, the next section of the article is dedicated to a comparative analysis of aggregate income estimates from the CE and CPS. The common income categories that can be created from the two surveys are detailed, and three alternative estimates of CE income are described. These estimates are then measured against CPS estimates. The analytical portion of this section is devoted to examining both levels and ratios of CE and CPS aggregates, for total income and by income category. The final section of the article briefly summarizes the results of the analysis and notes the direction that future refinements in the collection and imputation of income in the CE are likely to take.

Background

The CE produces comprehensive expenditure data reflecting the buying habits of U.S. families. Because it is vital that the soundness and consistency of these data be maintained, the

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BLS conducts regular, thorough comparisons of CE data with expenditure data from other sources, such as the Personal Consumption Expenditures (PCE) component of the National Income and Product Accounts produced by the Bureau of Economic Analysis.[1] But a unique feature of the CE which makes it particularly useful is that, as a household survey, it also collects demographic and socioeconomic characteristics of participants that can be associated with the expenditures they make.

Among these characteristics is family income, one of the most important demographic determinants of consumer spending. Household surveys intent on collecting data on family income, either as their primary interest or as supplementary to their primary interest, often encounter the issue of nonresponse because of the sensitive nature of income data. Respondents frequently feel uncomfortable answering questions about their income or may believe that such questions are an invasion of their personal privacy.

Survey managers have resorted to various methods developed by the statistics community for imputing values to substitute for missing responses. These methods make certain assumptions about the distribution of missing values and the relationship of nonresponse to socioeconomic characteristics of the sample population. To the extent that the procedures violate the mechanisms leading to nonresponse, the resulting imputed values will lead to biased and inconsistent results when used for analytical purposes.

CE managers have become particularly sensitive to these concerns because sampled consumer units[2] report expenditure data that are expected a priori to be highly correlated with income. Consequently, from 1972 to 2003 the CE did not impute for missing income, and CE data releases instead identified sample households as either "complete" or "incomplete" income respondents.[3]

Given the unique requirements that any income imputation procedure would have to satisfy, CE and Census Bureau staff began a systematic search for an appropriate method. Geoffrey Paulin and David Ferraro laid out theoretical and practical issues that would have to be resolved before a method could be selected.[4] Two general methods for performing imputations merited evaluation. Hot-decking was the technique employed by large-scale surveys such as the CPS. This technique imputes missing income values in the sample with values reported by persons in families with a similar set of demographic and socioeconomic characteristics, predetermined to be relevant to the level of income. Paulin and Ferraro eliminated hot-decking as a method for the CE because of the small sample size of that survey.

The second class of methods examined was model-based imputation, which draws on the work of Roderick Little and Donald Rubin.[5] Each of these methods consists of two parts. The first part involves the creation of a statistical model to predict income values, while the second part is concerned with producing error terms to add to the predicted values, thereby preserving the variance of the distribution.

To employ a model-based imputation method appropriately, the response mechanism by which the missing income responses came into being had to be determined first. Little and Rubin laid out three mechanisms. In the first, the missing income responses occur completely at random and are not correlated with any characteristics of the respondents. In the second, the missing responses are correlated with characteristics of the respondents, excluding income. In the final method, the missing responses are correlated with both characteristics of the respondents and the level of income.

In addition, two operational modeling questions had to be answered: first, would income imputation be done at the consumer unit level or at the individual member level within each consumer unit? and second, would imputation be done for total income or for each of the component items of total income?

After researching these questions, Paulin and Ferraro concluded that the second response mechanism, wherein nonresponse is correlated with respondent characteristics only, would be tested first. This testing would then be aimed toward (1) imputation at the consumer unit level, which would avoid complications introduced by interactions involving work decisions between members, and (2) individual components of income, which would provide more information for researchers and allow for differences in model specification and parameter estimates between items.

Finally, Paulin and Ferraro addressed the question of whether expenditures were useful in predicting income and, therefore, should be included in modeling. Testing also would confirm retrospectively whether past reluctance to impute with methods that did not account for expenditures was justified. Paulin and Ferraro found that both total expenditures and expenditures for selected subaggregations of items demonstrated predictive power.

While research continued into the appropriate method for imputing income in the CE, changes were made in the collection instruments in 2001 to improve the reporting of income. Bracketing questions were added to the survey to follow the initial questions. The bracketing questions asked for the amount received for each source of income a

respondent indicated that the consumer unit had received. Thus, if a respondent initially refused to report his or her income or did not know the amount received, the bracketing questions probed to determine whether the respondent would select a range that best reflected the amount received. The responses to the bracketing questions added a layer of complexity to the task of choosing an imputation method.

Once the research was completed, it was determined that the method chosen for the CE would be a regression-based procedure that would preserve both means and variances for each source of income. The process would produce five imputed values for each missing observation. The first step would be to run a regression to obtain coefficients to use in creating imputed values. Random noise would then be added to each coefficient, and the resulting "shocked" coefficient used to estimate an imputed value. Additional noise would be added to the estimated values to ensure that consumer units with similar demographic characteristics would not receive similar imputed incomes. After the five imputed values were created for each missing value, an estimate representing the mean of those five values would be calculated. Reported specific values would be retained as is. If a respondent reported a certain bracket within which his or her income fell, the imputed values would have to fall within the range defined for that bracket.

In a small number of instances, a consumer unit might report not receiving income from any source. In such an extremely unlikely situation, the income imputation procedure would be run with an additional step: a logistic regression based on the characteristics of the consumer unit, such as whether he or she was retired or was a student, would be run first to impute a receipt status (yes or no) for each source of income. For those sources of income that a consumer unit was imputed to have received, the model would be run to produce imputed income values.

Data collection

The introduction of imputed income in data released from the 2004 CE permits the same kind of comparisons between the CE and other sources that have been made in the past for expenditure items. In fact, by comparing the CE income estimates with those from another established source of income data over a period covering pre- and postimputation years, one can measure both the impact of imputation on the relationship of aggregate CE income to the independent source and the efficacy and quality of the imputation method in producing those estimates. For this study, CE income data are compared with similar data from the CPS for the 2002–06 period.

Comparisons of mean or aggregate pretax income between the CE and the CPS have been a staple feature of BLS publications for almost 20 years.[6] Almost all these published comparisons were based on CE data before imputation and CPS data that included imputed values. Income estimates for the CE are from its Interview Survey component, while the Annual Social and Economic Supplement (ASEC) is the source of CPS income data for comparison in this study.

The difference in timing of the collection of income data between the CE and the CPS poses challenges in constructing matching periods for comparison purposes. The Interview Survey is designed to collect one year's worth of expenditure data from sample units. This is done through five interviews, the first interview for bounding purposes only and the remaining four interviews conducted at 3-month intervals, thereby collecting expenditure data for 12 months. The Interview Survey uses a rotating design whereby sample units are introduced every month (replacing other units that have completed their participation in the survey.) Income data are collected during the second and fifth interviews, covering the 12 months prior to the month of the current interview. Thus, a consumer unit undergoing the second interview in June 2007 would report wage income received from June 2006 through May 2007.

The ASEC is conducted annually in March, although a limited number of eligible households are interviewed in February and April. The survey collects data on the previous calendar year's income from all sources. Thus, households completing the ASEC in March 2007 report income for the 2006 calendar year. Conducting the ASEC in March is believed to provide better income data, because most households would either be in the process of completing or have just completed preparing tax returns and therefore would be more likely to remember income sources and amounts.

Although the structure and wording of income questions are similar in the CE and the CPS, there are major differences that can affect the estimates. In the CE, the respondent is asked to report the amount received from earned income, Social Security, Railroad Retirement, and Supplemental Security Income individually for each consumer unit member aged 14 years and older. For each of the remaining sources of income, the respondent reports the amount received by the consumer unit as a whole. In comparison, in the ASEC the respondent is directed to report individually the amount received for each source

of income by each household member 15 years or older. Regarding income reference periods, the CE respondent is asked about the amount received over the last 12 months for each source of income, with the exception of Social Security and Railroad Retirement income, for which the respondent reports the amount of the last payment received. If the respondent either refuses to answer or does not know the amount received for any of these sources, he or she is shown a card with ranges or brackets of income and then is asked to report which bracket best reflects the amount received. In the ASEC, respondents are asked to report the amount received over the calendar year. If they find that a year is too big a time span over which they can exercise recall, they are allowed to report for shorter periods. The periodicity of their response is asked if necessary.

Sources of income

With respect to the contents of the income questions, and using the CE questions as a basis for comparison, one readily sees that it is natural to consider earned income first, because it is by far the largest contributor to total income. The questionnaire in the Interview Survey asks the amount each eligible member of the consumer unit received in wages and salaries (including commissions, tips, allowances, Armed Forces pay, severance pay, teaching fellowships, and the like) for all jobs. The Interview Survey also collects data in a separate question on income or losses after expenses from each consumer unit member's unincorporated nonfarm business, partnership, or professional practice, as well as income or losses from the consumer unit's own farm. The ASEC asks for earnings, including tips, bonuses, overtime pay, and commissions, from the employer for whom the member worked longest during the calendar year. Such earnings can be wage and salary income, net income (or loss) from nonfarm self-employment, or net income (or loss) from farm self-employment. Three followup questions probe for earnings from other employers, other nonfarm businesses, and other farms. Severance pay and military allotments are included in earnings, and questions on these topics are asked in combination with questions on other miscellaneous sources of income after the questions for all other specific income categories have been asked.

The CE probes for amounts of Social Security and Railroad Retirement income received. These amounts include survivor and disability insurance payments, as well as retirement benefits. The ASEC asks separate questions about Social Security income and Railroad Retirement income. Data on Social Security income are obtained from a question on payments received by the household member directly or on behalf of children under age 19 in the household. Data on Railroad Retirement income are collected in questions covering three broad categories of income for which an individual may be eligible under the program: pension or retirement income, survivor benefits, and income related to a health condition or disability.

Supplemental Security Income (SSI) is one of the few sources of income for which the CE and ASEC questions are essentially the same. Both surveys ask for the amount of SSI received from all government sources. Questions collecting data on interest income in the CE and ASEC also are quite similar. The only difference is in the potential sources of interest income referenced in the questions. The Interview Survey probes for interest from bank accounts, money market funds, certificates of deposit, or bonds, whereas the ASEC uses three questions that specifically screen for whether any members of the household have received any interest from money market funds, interest-earning checking accounts, savings accounts, cashed savings bonds, treasury notes, individual retirement accounts (IRAs), certificates of deposit, or other investments that pay interest.

In one of its questions, the CE queries respondents for amounts of regular income from dividends, trusts, estates, or royalties. The types of income cited in this question also are found in a number of places in the ASEC questionnaire. One question is specifically directed toward dividends from stocks and mutual funds. Data on receipts from estates or trusts are collected in two places. The first is as a source of survivor benefits, the second as a class of property income. Data on net royalty income also are collected in the latter question.

Data on pension and annuity income, whether due to retirement, due to disability, or as a survivor, are collected through one question in the CE Interview Survey. Sources specified for such income are private companies, the military, government, IRAs, and Keogh plans. As mentioned earlier with regard to Railroad Retirement income, the ASEC inquires about retirement and pension income, survivor benefits, and disability income in separate questions. The question about retirement and pension income refers to all such income from a previous employer or union, or any other type of retirement income from sources other than Social Security or veterans' benefits. With the exception of retirement income from Railroad Retirement, the income data collected here conceptually match CE counterpart data.

The ASEC query on survivor benefits also mentions widows' pensions, insurance annuities, and other survivor

benefits (other than Social Security or veterans' benefits). Income from survivor pensions from private companies; unions; Federal, State, and local governments; and the military are reported here. The ASEC questions concerning income related to a health condition or disability identify many of the same sources that are listed for survivor benefits, such as companies, unions, government at all levels, and the military. Finally, though not explicitly stated in the question, income received from foreign government pensions is offered as an example of one of the types of income the miscellaneous income question at the end of the ASEC is designed to capture.

Unemployment compensation and supplemental unemployment compensation are other sources of income cited in the CE Interview Survey questionnaire. The ASEC poses three separate questions on unemployment compensation. One asks for the amount of State or Federal unemployment compensation, the second probes for income from supplemental unemployment benefits, and the third focuses on union unemployment or strike benefits.

The CE asks respondents to combine income received from worker's compensation or veteran's benefits, including the GI bill, but excluding military retirement benefits, in one report. Worker's compensation is surveyed in a distinct question in the ASEC, but the question also covers any other payments made as a result of a job-related injury or illness. Worker's compensation benefits, including benefits for black lung disease, also are reported in the aforementioned ASEC questions on survivor benefits and disability income. The receipt of veterans' benefit payments warrants its own question in the ASEC, but not in the CE.

Another question in the CE Interview instrument pertains to income received as public assistance or welfare. In 2002, the questionnaire used Aid to Families with Dependent Children and grants from Job Corps as examples of such assistance. In subsequent years, the questionnaire was revised to refer specifically to cash assistance from any State or local government welfare program, such as Temporary Assistance to Needy Families, or short-term emergency help. The main question that seeks this information in the ASEC probes for cash assistance received from a State or county welfare program (with the name of a representative State program added as an example), either directly or on behalf of children in the household. The miscellaneous-income question at the end of the ASEC lists welfare, emergency assistance, and other short-term cash assistance as examples of the types of income to be reported.

Two questions in the CE Interview Survey instrument cover any net income or loss from any type of rental of rooms or living units. The first question is directed toward collecting data on net income or loss from roomers or boarders; the second focuses on ascertaining data on net income or loss received from other rental units. The property income question in the ASEC, which was heretofore mentioned as a source for trust/estate and royalty income, also seeks information on net income or loss from rental property and receipts from roomers and boarders.

Child support payments not received as a lump sum are an additional component of income found in the CE Interview Survey. A similar question appears in the ASEC.

The CE Interview Survey questionnaire asks about regular income from alimony or other sources, such as income from persons outside the consumer unit. The ASEC splits these sources between two questions, the first referring to alimony payments, the second to regular financial assistance from friends or relatives not living in the household.

Finally, the CE Interview Survey poses a catchall question seeking information about "other" money income. Among the sources from which this other money might have been received, the question lists cash scholarships and fellowships, stipends not based on working, and the care of foster children. All other income from a source not specified in previous questions is to be reported here. The ASEC contains a question requesting information on educational assistance for tuition, fees, books, or living expenses, including Pell Grants. Listed in this question as sources of educational assistance are scholarships and grants, as well as employers, friends, and relatives living outside the household. Assistance from any of these sources could be reported in a number of places in the CE. To the extent that a student is receiving regular payments, such payments would be reported as regular income from sources outside the consumer unit. If the assistance is earmarked for a particular educational expense, such as tuition, it could be reported in the educational expenses section of the CE as an expenditure for which reimbursement is received. The miscellaneous-income question at the end of the ASEC encompasses payment for caring for a foster child, as well as any other money income not already covered by earlier questions.

The ASEC is designed to cover the civilian noninstitutional population, plus those military personnel who live with at least one other civilian adult, on or off base. The CE also is designed to represent the civilian noninstitutional population, plus a portion of the institutional population: residents of boarding houses; those living in student or worker housing facilities, such as college dormitories;

staff units in hospitals or in homes for the aged, infirm, or needy; and those residing in permanent living quarters in hotels, motels, or mobile home parks. Nursing home residents are excluded, as are military personnel living on base. Off-base military personnel are included.

Comparison of CE and CPS income

Sources and timeframes. ASEC income data used in this article are derived from an unpublished Census table titled "In-House Table 8. Income Allocation by Income Source," which the CPS produces annually for its internal use. For each source of income, the table shows the number of persons 15 years and older (in thousands) who receive income from that source and the mean amount of income they receive. Both those directly reporting income and those for which allocation is done are covered. In Census parlance, allocation is the equivalent of imputation in the CE. The means and numbers of persons reporting each source of income are multiplied together to obtain aggregate income.

The income categories shown here are the most detailed that can be constructed from the types of income provided in table 8 from the ASEC and the income Universal Classification Codes from the CE.[7] Total aggregate income is composed of the following categories: wage and salary income; net nonfarm self-employment income; net farm self-employment income; unemployment compensation; workers' compensation (including compensation for black lung disease) and veterans' benefits; Social Security and Railroad Retirement income; Supplemental Security Income; public assistance; pensions and annuities; interest; dividends, rents, royalties, and estates and trusts; child support; and accident and temporary insurance, educational assistance, alimony, financial assistance, and other income not elsewhere classified.

As noted earlier, annual estimates of income for the CPS match the calendar year, while the annual estimates of income for the CE Interview Survey cover the year prior to the month of interview. Thus, a major issue in comparing CE and CPS income estimates is determining how to select consumer units for inclusion in the analysis. After due consideration, three estimators of CE income were chosen.

The first replicates the method used for producing income estimates in the CE-CPS income comparison tables (and the reference tables) that appear in CE publications.[8] Recall that the CE Interview Survey collects expenditure data for the 3 months prior to the interview month; annual income reported by consumer units in their second or fifth interview is adjusted to fit the same period. In practice, this means dividing the annual amount by 12, thus creating a monthly amount, and then assigning that amount to each of the 3 months covered by the interview. For example, if a consumer unit reports $600 of interest income at its second interview in March 2006, this process will assign $50 ($600 ÷ 12) to each of the months from December 2005 through February 2006, the reference period for the interview. Second-interview income is carried forward through the third and fourth interviews before the income data are collected again at the fifth interview. Thus, at its third interview in June 2006, the aforementioned consumer unit would have $50 of interest income assigned to each of March, April, and May of 2006. The annual CE estimate for any calendar year will be calculated from all income assigned to that year.

Compared with the CPS estimate, the estimate created by this method uses a significant amount of income reported from an earlier period. With 2006 as an example, the first month whose interviews would be used in the CE estimate is February. One-twelfth of the income reported in that interview would be assigned to January. However, the 12-month reference period for reporting would run from February 2005 through January 2006, meaning that 11 months of the reference period would have been outside the calendar year of interest. April 2006 would be the first month in which one-twelfth of the annual income reported would be allocated to a 3-month reference period in which each month would be in 2006 (January–March). Yet the recall period for income in the April 2006 interviews is April 2005–March 2006, a full 9 months of which still are outside the year of interest.

In fact, the only month whose interviews would span a recall period matching the ASEC calendar year is January of the *next* year. (For calendar-year 2006, interviews conducted in January 2007 would have an annual reference period from January 2006 to December 2006.) This fact forms the basis for the second method of creating CE estimates for comparison with CPS income estimates: only the second and fifth interviews conducted in January of the next year are used to construct the estimate. Although using such interviews would exactly match the period covered by the ASEC, the number of interviews is very small—about one-sixth of the number of interviews conducted in any one quarter. This small number of interviews would be detrimental to the statistical reliability of the estimate, potentially leading to wide annual swings in it, particularly for some of the more thinly reported categories of income.

Because of the conceptual attractiveness of the sec-

ond method in matching the ASEC timeframe, the third method for creating CE estimates essentially expands on the second method. Centering on January interviews, this method adds the second and fifth interviews conducted between October of the previous year and April of the current year, or 3 months before and after January, to expand the number of interviews used in creating the estimate. As a result, one-seventh of the interviews report income earned in the year matching the calendar year. The earliest 12-month period, reported by one-seventh of the interviews, would run from October 1 of the previous year to September 30 of the current year; similarly, another one-seventh of the interviews would cover the latest 12-month period, from April 1 of the current year through March 31 of the next year.

In all three methods, weighting adjustments are made to ensure that the aggregate estimates are representative of the entire population. The adjustments start with the fact that sample units in the CE Interview Survey are assigned population weights such that the sum of the weights for consumer units interviewed in a calendar quarter will equal one national population. Thus, for any month, the sum of the weights of interviewed units will be approximately one-third of the national population and the sum of the weights of units undergoing a particular interview—the second, third, fourth, or fifth—during that month will approximate one-twelfth of the national population.

To obtain a population-weighted estimate of CE income by the first method is straightforward because of the way annual income is mapped to the reference months of each interview. For example, all income assigned to March 2006 would originate in interviews conducted from April through June of 2006. The weights assigned to consumer units interviewed during those 3 months would approximate one national population. Thus, one can calculate a nationally representative estimate of March 2006 income by applying the weights to the income reported. This procedure can be extended to each month of a calendar year, and then a weighted annual estimate for each year can be derived by summing the monthly estimates.

The weighting adjustment for the second method of estimating CE income also is fairly simple and is expanded to apply to the third method. The second method uses the second and fifth interviews in January of a survey year. These interviews represent approximately one-sixth of the interviews conducted in the first quarter of the year; thus, their weights are multiplied by 6 to produce a weighted national estimate. In the third method, the weights for the second and fifth interviews taken over the 7 months from October to April would represent about one-and-one-sixth times the national population. Rather than deflate them all equally, it was decided that the weights for units undergoing their second and fifth interviews in the outlying months of October and April would be cut by one-half. This decision would be simple to implement and would assign greater weight to interviews conducted in months closer to the central month of January.

Results. The impact of imputation in the CE can be seen in table 1, which shows aggregate incomes, total and by source, from the CE and CPS, along with the ratio of CE-to-CPS estimates for the years 2002–06. The CE did not impute for income nonresponse in the first 2 years of this period, so the estimates are based on all reported income, regardless of whether the consumer unit was considered a complete or incomplete income respondent.

Imputation significantly raises CE aggregate income, bringing it into near comparability with CPS estimates. On average, imputation adds about 20 percentage points to the CE/CPS ratio. For the preimputation period of 2002–03, the mean CE/CPS ratio for total aggregate income, taking into account each method for estimating CE income, is about 0.75. The average ratio for the postimputation period of 2004–06 rises to about 0.95.

This increase in the ratio for aggregate income is driven largely by the increase in wage and salary income after imputation in the CE. Wage and salary income accounts for about 80 percent of total CE income and 77 percent of total CPS income over the 2002–06 period. Before imputation, CE aggregate income averages about $1,650 billion less than CPS aggregate income, with CE wage and salary income trailing CPS wage and salary income by about $1,123 billion. The CE/CPS ratio for wage and salary income averages about 0.78. After imputation, the gaps between aggregate income and wage and salary income in the CE and CPS narrow to an average of about $462 billion and $179 billion, respectively. Wage and salary income for the CE almost matches the CPS estimate, with an average ratio of about 0.97.

Social Security and Railroad Retirement income is the next-largest component of total income in the CE and CPS. The story here is similar to the one for wage and salary income. The mean 2002–03 CE/CPS ratio is somewhat more than 0.80, while the 2004–06 ratio increases to slightly more than 0.95.

Imputation in the CE has a larger impact on the CE/CPS ratio for nonfarm self-employment income, the third-largest contributor to total income, than for any other component of income. In fact, the ratio almost doubles after imputation, going from about 0.63 to a bit more than

Table 1. Aggregate pretax income and ratios for Current Population Survey (CPS) and for three alternative measures for Consumer Expenditure Survey (CE), by total and source of income, 2002–06

[In billions of dollars]

Year and survey	Total		Wage and salary		Nonfarm self-employment		Farm self-employment		Unemployment compensation	
	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio
2002										
CPS	$6,515.7	...	$5,078.4	...	$302.6	...	$20.4	...	$37.9	...
CE, reference year 2002	4,629.0	71.0	3,736.3	73.6	197.8	65.4	14.9	72.8	14.7	38.7
CE, January 2003	4,858.1	74.6	3,880.9	76.4	204.3	67.5	4.2	20.3	13.2	34.8
CE, October 2002–April 2003	4,838.7	74.3	3,890.2	76.6	198.6	65.6	18.5	90.7	20.1	53.0
2003										
CPS	6,707.2	...	5,157.1	...	331.6	...	28.0	...	36.9	...
CE, reference year 2003	5,007.9	74.7	4,042.1	78.4	194.6	58.7	15.8	56.3	18.8	51.0
CE, January 2004	5,328.2	79.4	4,295.7	83.3	210.7	63.5	8.2	29.1	20.6	55.8
CE, October 2003–April 2004	5,109.5	76.2	4,125.7	80.0	194.3	58.6	14.8	53.0	20.0	54.1
2004										
CPS	6,939.6	...	5,346.6	...	321.7	...	29.0	...	25.0	...
CE, reference year 2004	6,322.2	91.1	5,021.3	93.9	338.4	105.2	22.6	77.8	18.6	74.3
CE, January 2005	6,689.9	96.4	5,119.7	95.8	566.6	176.1	15.7	54.0	22.4	89.5
CE, October 2004–April 2005	6,636.6	95.6	5,206.3	97.4	435.1	135.2	11.3	38.9	16.4	65.4
2005										
CPS	7,352.4	...	5,630.6	...	366.5	...	37.3	...	22.3	...
CE, reference year 2005	6,872.5	93.5	5,432.6	96.5	430.1	117.4	12.5	33.7	13.1	58.8
CE, January 2006	6,872.1	93.5	5,394.3	95.8	558.5	152.4	20.1	53.9	9.9	44.4
CE, October 2005–April 2006	6,940.3	94.4	5,522.8	98.1	423.4	115.5	10.6	28.5	11.6	52.1
2006										
CPS	7,800.6	...	5,967.4	...	407.7	...	31.7	...	20.7	...
CE, reference year 2006	7,170.8	91.9	5,718.6	95.8	414.0	101.5	14.7	46.5	12.8	61.9
CE, January 2007	7,332.3	94.0	5,994.1	100.4	445.0	109.1	13.1	41.5	16.0	77.3
CE, October 2006–April 2007	7,286.8	93.4	5,815.2	97.5	380.1	93.2	26.7	84.3	11.0	53.5

Year and survey	Workers' compensation (including compensation for black lung disease) and veterans' benefits		Social Security and Railroad Retirement		Supplemental Security Income		Public assistance		Pensions and annuities	
	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio
2002										
CPS	36.4	...	389.8	...	25.9	...	6.0	...	262.5	...
CE, reference year 2002	7.7	20.4	312.9	80.3	23.3	90.0	4.1	67.8	178.7	68.1
CE, January 2003	6.5	17.2	299.1	76.7	19.5	75.2	4.2	69.6	217.4	82.8
CE, October 2002–April 2003	7.1	18.7	315.9	81.0	20.8	80.3	4.6	76.6	203.4	77.5
2003										
CPS	36.1	...	410.1	...	28.0	...	7.1	...	276.3	...
CE, reference year 2003	8.0	22.2	325.4	79.3	19.1	68.2	4.1	57.4	226.3	81.9
CE, January 2004	8.1	22.5	343.8	83.8	14.6	52.0	2.6	36.9	252.6	91.5
CE, October 2003–April 2004	9.9	27.3	334.7	81.6	15.5	55.4	3.9	55.7	231.8	83.9
2004										
CPS	39.9	...	431.8	...	30.6	...	5.8	...	291.9	...
CE, reference year 2004	8.9	22.4	400.0	92.6	20.8	67.9	4.7	82.1	280.1	96.0
CE, January 2005	11.6	29.0	431.0	99.8	13.4	43.8	5.6	97.5	300.0	102.8
CE, October 2004–April 2005	8.9	22.4	411.4	95.3	18.9	61.9	5.0	87.4	316.3	108.3
2005										
CPS	43.9	...	449.2	...	31.1	...	6.6	...	310.3	...
CE, reference year 2005	10.8	24.5	431.0	96.0	25.0	80.4	5.2	78.7	290.4	93.6
CE, January 2006	7.5	17.1	441.1	98.2	25.9	83.3	4.9	74.8	268.1	86.4
CE, October 2005–April 2006	10.3	23.4	441.9	98.4	26.4	84.7	5.5	83.8	291.1	93.8

Table 1. Continued—Aggregate pretax income and ratios for Current Population Survey (CPS) and for three alternative measures for Consumer Expenditure Survey (CE), by total and source of income, 2002–06

[In billions of dollars]

Year and survey	Workers' compensation (including compensation for black lung disease) and veterans' benefits		Social Security and Railroad Retirement		Supplemental Security Income		Public assistance		Pensions and annuities	
	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio
2006										
CPS	$41.6	...	$471.5	...	$31.6	...	$5.6	...	$314.9	...
CE, reference year 2006	11.8	28.4	446.0	94.6	23.6	74.6	5.2	92.9	283.5	90.0
CE, January 2007	8.4	20.1	409.1	86.8	26.6	84.1	4.9	87.9	213.6	67.8
CE, October 2006–April 2007	13.5	32.4	452.2	95.9	25.9	81.8	5.0	90.2	302.6	96.1

Year and survey	Interest		Dividends, rents, royalties, and estates and trusts		Child support		Accident and temporary insurance, educational assistance, alimony, financial assistance, and other income not elsewhere classified	
	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio	Aggregate	CE/CPS ratio
2002								
CPS	145.4	...	119.7	...	24.0	...	66.7	...
CE, reference year 2002	36.9	25.4	50.3	42.1	13.3	55.3	38.1	57.2
CE, January 2003	39.8	27.4	48.9	40.9	13.3	55.3	107.0	160.5
CE, October 2002–April 2003	41.7	28.7	57.3	47.8	14.3	59.6	46.3	69.5
2003								
CPS	148.3	...	152.4	...	25.1	...	70.0	...
CE, reference year 2003	47.9	32.3	60.7	39.8	17.1	67.9	28.0	40.0
CE, January 2004	38.2	25.7	63.2	41.5	21.5	85.4	48.5	69.2
CE, October 2003–April 2004	43.4	29.2	65.6	43.0	16.9	67.4	32.9	47.0
2004								
CPS	163.2	...	157.0	...	27.0	...	70.2	...
CE, reference year 2004	59.0	36.2	85.3	54.3	19.2	71.1	43.1	61.4
CE, January 2005	59.0	36.1	50.6	32.2	21.7	80.5	72.6	103.5
CE, October 2004–April 2005	49.8	30.5	81.0	51.6	21.0	77.7	55.2	78.6
2005								
CPS	186.9	...	169.8	...	26.0	...	72.0	...
CE, reference year 2005	61.9	33.1	99.9	58.8	19.2	73.8	40.7	56.5
CE, January 2006	37.6	20.1	45.1	26.6	17.0	65.4	41.9	58.1
CE, October 2005–April 2006	61.3	32.8	71.9	42.3	19.6	75.4	43.9	60.9
2006								
CPS	229.2	...	186.7	...	25.4	...	66.6	...
CE, reference year 2006	69.7	30.4	106.9	57.3	22.6	88.9	41.4	62.1
CE, January 2007	66.8	29.1	80.1	42.9	18.1	71.3	36.6	55.0
CE, October 2006–April 2007	85.7	37.4	109.5	58.6	21.3	84.0	38.0	57.0

1.22, making nonfarm self-employment income the only source of income for which the CE estimate is, on average, higher than the CPS estimate.

At about 4 percent of the total, pension and annuity income is the next-largest component of total income. After imputation, the CE/CPS ratio for pension and annuity income rises by an amount that is almost equivalent to that for Social Security and Railroad Retirement income. For 2002–03, the ratio averages just under 0.81, increasing to slightly under 0.93 for 2004–06.

None of the nine remaining income components represents as much as 2 percent of total income reported in the CE. For the CPS, however, two categories—interest income; and income from dividends, rents, royalties, and estates and trusts—each make up more than 2 percent of total income. Hence, the CE/CPS ratios for these items are

fairly low, and, historically, they have been among the lowest in the published tables. In addition, interest income is one of the few components whose CE/CPS ratio does not increase appreciably after imputation: on average, the aggregate preimputation interest income estimate in the CE is about 28 percent of the CPS estimate, while, after imputation, the estimate increases about 3.5 percentage points, to just under 32 percent of the CPS estimate.

Imputation does not have a marked impact on the CE/CPS ratio for income from dividends, rents, royalties, and estates and trusts either, although the initial level of the ratio is higher than that for interest income. The ratio for 2002–03 averages midway between 0.42 and 0.43, and increases to an average of just over 0.47 after imputation.

Each of the remaining seven sources of income accounts for less than 1 percent of total income in each of the CE and the CPS. Thus, any change in the CE/CPS ratio after imputation has a tiny impact on overall aggregate income between the two surveys. In addition, the number of consumer units in the CE reporting income from these sources is often very low, particularly for the method of creating CE estimates from the second and fifth interviews from January of the next year. Hence, outlying values have a disproportionate impact on the calculated estimates.

Of the seven components still outstanding, two actually show a drop in the average ratio between 2002–03 and 2004–06. The first of these is farm self-employment income, for which the CE-CPS ratio drops almost 3 percentage points, from slightly under 54 percent to 51 percent. The other component is an amalgam of individual income sources from each survey that could be combined into the category of accident and temporary insurance, educational assistance, alimony, financial assistance, and other income not elsewhere classified. The CE/CPS ratio for this component shows an even larger change between pre- and postimputation periods, dropping from an average of about 0.74 to approximately 0.66. For both of these components, and more strikingly for the latter, the wide swings in the CE estimates across years in the second and third estimation methods are due to infrequent reports of such income, a factor that offers an explanation for the drop in the ratio.

Examining the five remaining sources of income reveals, on the one hand, that the mean CE/CPS ratio for unemployment compensation rises significantly after imputation. The CE estimate for 2002–03 averages almost 48 percent of the CPS estimate. For the 3-year period after imputation is introduced, the CE estimate rises to an average of more than 64 percent of the CPS estimate. On the other hand, for income from workers' compensation (including compensation for black lung disease) and veterans' benefits, the ratio of CE to CPS income changes very little after imputation, moving from about 0.22 to more than 0.24.

SSI is another income component for which the average ratio remains relatively stable subsequent to imputation. At a mean of about 70 percent of the CPS estimate in 2002–03, the CE estimate for SSI is the fifth highest among the components with respect to the CPS. Adding imputed SSI income to that reported by consumer units increases the CE estimate only to an average of somewhat under 74 percent of the CPS estimate during 2004–06. By contrast, child support income, a marginally smaller component of total income than SSI, exhibits a large increase in the CE/CPS ratio after imputation: the ratio averages slightly more than 0.65 for 2002–03, after which it rises to an average of well over 0.76 over the 3-year period that followed. The final and smallest source of total income, public assistance, displays the largest rise in the CE/CPS ratio after imputation began. The CE estimate averages under 61 percent of the CPS estimate in the 2 years prior to imputation, rising over the next 3 years to an average of slightly more than 86 percent of the CPS estimate, a greater-than-25-percentage-point increase.

The role of imputation

The preceding examination of the change in the ratio of CE income to CPS income after CE income estimates are augmented by imputation shows only part of the picture with respect to the impact of imputation on the relationship between the two measures. This section investigates more closely the magnitude of imputation as it affects the final aggregate estimates for total income and for each source of income in the CE and the CPS over the 2004–06 period when imputation is done for both surveys.

Table 2 shows the percentage of CE and CPS aggregate income, both total and by source, accounted for by imputation for the 3 years during which it has been used in the CE. An examination of total income shows that about 37 percent of the CE aggregate is attributable to imputation, compared with about 33 percent in the CPS. On average, the percentage of imputed income in the CE has risen each year since the inception of imputation, while the percentage has remained stable in the CPS. Even though the CPS aggregates are larger than the CE aggregates and the difference between the aggregates has risen from approximately $400 billion in 2004 to about $530 billion in 2006, the dollar amounts imputed in the CE are uniformly larger than the amounts imputed in the

Table 2. Aggregate pretax income and percent distribution, total and by reported and allocated status, by source of income, Current Population Survey (CPS) and three alternative measures of Consumer Expenditure Survey (CE), 2004–06

[In billions of dollars]

Year, category of income, and survey	Total	Reported	Percent reported	Allocated	Percent allocated
2004					
Total aggregate income:					
CPS	$6,939.6	$4,603.6	66.3	$2,336.0	33.7
CE, reference year 2004	6,322.2	3,944.6	62.4	2,377.5	37.6
CE, January 2005	6,689.9	4,318.1	64.5	2,371.7	35.5
CE, October 2004–April 2005	6,636.6	4,274.2	64.4	2,362.3	35.6
Wage and salary:					
CPS	5,346.6	3,672.9	68.7	1,673.8	31.3
CE, reference year 2004	5,021.3	3,084.1	61.4	1,937.3	38.6
CE, January 2005	5,119.7	3,251.8	63.5	1,868.0	36.5
CE, October 2004–April 2005	5,206.3	3,331.5	64.0	1,874.8	36.0
Nonfarm self-employment:					
CPS	321.7	183.5	57.0	138.3	43.0
CE, reference year 2004	338.4	145.2	42.9	193.3	57.1
CE, January 2005	566.6	261.2	46.1	305.4	53.9
CE, October 2004–April 2005	435.1	179.9	41.3	255.2	58.7
Farm self-employment:					
CPS	29.0	12.7	43.9	16.3	56.1
CE, reference year 2004	22.6	8.1	35.9	14.5	64.1
CE, January 2005	15.7	7.5	48.1	8.1	51.9
CE, October 2004–April 2005	11.3	4.1	36.7	7.2	63.3
Unemployment compensation:					
CPS	25.0	18.7	74.8	6.3	25.2
CE, reference year 2004	18.6	15.0	80.7	3.6	19.3
CE, January 2005	22.4	13.4	59.9	9.0	40.1
CE, October 2004–April 2005	16.4	13.0	79.5	3.3	20.5
Workers' compensation (including compensation for black lung disease) and veterans' benefits:					
CPS	39.9	27.6	69.3	12.2	30.6
CE, reference year 2004	8.9	6.6	73.5	2.4	26.5
CE, January 2005	11.6	10.6	92.1	.9	7.9
CE, October 2004–April 2005	8.9	7.1	79.9	1.8	20.1
Social Security and Railroad Retirement:					
CPS	431.8	283.1	65.6	148.6	34.4
CE, reference year 2004	400.0	312.4	78.1	87.7	21.9
CE, January 2005	431.0	349.6	81.1	81.4	18.9
CE, October 2004–April 2005	411.4	329.9	80.2	81.5	19.8
Supplemental Security Income:					
CPS	30.6	21.8	71.2	8.8	28.7
CE, reference year 2004	20.8	16.9	81.6	3.8	18.4
CE, January 2005	13.4	12.0	89.7	1.4	10.3
CE, October 2004–April 2005	18.9	15.5	82.1	3.4	17.9
Public assistance:					
CPS	5.8	4.0	70.4	1.7	29.6
CE, reference year 2004	4.7	3.7	77.4	1.1	22.6
CE, January 2005	5.6	4.6	81.4	1.0	18.6
CE, October 2004–April 2005	5.0	3.8	74.7	1.3	25.3

Table 2. Continued—Aggregate pretax income and percent distribution, total and by reported and allocated status, by source of income, Current Population Survey (CPS) and three alternative measures of Consumer Expenditure Survey (CE), 2004–06

[In billions of dollars]

Year, category of income, and survey	Total	Reported	Percent reported	Allocated	Percent allocated
Pensions and annuities:					
CPS	$291.9	$193.6	66.3	$98.4	33.7
CE, reference year 2004	280.1	221.4	79.0	58.7	21.0
CE, January 2005	300.0	256.9	85.6	43.1	14.4
CE, October 2004–April 2005	316.3	254.5	80.5	61.8	19.5
Interest:					
CPS	163.2	41.3	25.3	121.8	74.7
CE, reference year 2004	59.0	27.8	47.0	31.3	53.0
CE, January 2005	59.0	38.8	65.9	20.1	34.1
CE, October 2004–April 2005	49.8	24.7	49.7	25.0	50.3
Dividends, rents, royalties, and estates and trusts:					
CPS	157.0	81.8	52.1	75.3	47.9
CE, reference year 2004	85.3	53.7	62.9	31.6	37.1
CE, January 2005	50.6	34.4	67.9	16.3	32.1
CE, October 2004–April 2005	81.0	48.6	60.0	32.4	40.0
Child support:					
CPS	27.0	19.5	72.3	7.5	27.7
CE, reference year 2004	19.2	16.7	86.8	2.5	13.2
CE, January 2005	21.7	19.1	87.9	2.6	12.1
CE, October 2004–April 2005	21.0	18.9	89.9	2.1	10.1
Accident and temporary insurance, educational assistance, alimony, financial assistance, and other					
CPS	70.2	43.0	61.3	27.1	38.7
CE, reference year 2004	43.1	33.3	77.3	9.8	22.7
CE, January 2005	72.6	58.1	80.0	14.5	20.0
CE, October 2004–April 2005	55.2	42.6	77.1	12.6	22.9
2005					
Total aggregate:					
CPS	7,352.2	5,026.8	68.4	2,325.7	31.6
CE, reference year 2005	6,872.5	4,322.3	62.9	2,550.1	37.1
CE, January 2006	6,872.1	4,332.7	63.0	2,539.4	37.0
CE, October 2005–April 2006	6,940.3	4,405.6	63.5	2,534.6	36.5
Wage and salary:					
CPS	5,630.6	4,002.1	71.1	1,628.4	28.9
CE, reference year 2005	5,432.6	3,376.8	62.2	2,055.8	37.8
CE, January 2006	5,394.3	3,400.0	63.0	1,994.5	37.0
CE, October 2005–April 2006	5,522.8	3,493.0	63.2	2,029.8	36.8
Nonfarm self-employment:					
CPS	366.5	216.4	59.1	150.1	41.0
CE, reference year 2005	430.1	187.7	43.6	242.4	56.4
CE, January 2006	558.5	229.6	41.1	328.9	58.9
CE, October 2005–April 2006	423.4	181.0	42.8	242.3	57.2
Farm self-employment:					
CPS	37.3	13.7	36.7	23.6	63.3
CE, reference year 2005	12.5	2.2	17.7	10.3	82.3
CE, January 2006	20.1	12.1	60.1	8.0	39.9
CE, October 2005–April 2006	10.6	6.2	57.9	4.5	42.1
Unemployment compensation:					
CPS	22.3	17.0	76.2	5.3	23.8
CE, reference year 2005	13.1	11.1	84.6	2.0	15.4
CE, January 2006	9.9	6.5	65.7	3.4	34.3
CE, October 2005–April 2006	11.6	9.4	80.6	2.3	19.4

Table 2. Continued—Aggregate pretax income and percent distribution, total and by reported and allocated status, by source of income, Current Population Survey (CPS) and three alternative measures of Consumer Expenditure Survey (CE), 2004–06

[In billions of dollars]

Year, category of income, and survey	Total	Reported	Percent reported	Allocated	Percent allocated
Workers' compensation (including compensation for black lung disease) and veterans' benefits:					
CPS	$43.9	$30.3	69.0	$13.6	31.1
CE, reference year 2005	10.8	8.4	77.8	2.4	22.2
CE, January 2006	7.5	7.5	99.4	([1])	.6
CE, October 2005–April 2006	10.3	7.6	74.2	2.6	25.8
Social Security and Railroad Retirement:					
CPS	449.2	301.8	67.2	147.5	32.8
CE, reference year 2005	431.0	341.0	79.1	90.1	20.9
CE, January 2006	441.1	351.8	79.8	89.3	20.2
CE, October 2005–April 2006	441.9	340.3	77.0	101.6	23.0
Supplemental Security Income:					
CPS	31.1	22.7	73.1	8.4	26.9
CE, reference year 2005	25.0	20.5	81.8	4.5	18.2
CE, January 2006	25.9	23.5	90.5	2.5	9.5
CE, October 2005–April 2006	26.4	20.5	77.6	5.9	22.4
Public assistance:					
CPS	6.6	5.0	76.4	1.6	23.6
CE, reference year 2005	5.2	4.2	80.4	1.0	19.6
CE, January 2006	4.9	4.2	84.1	.8	15.9
CE, October 2005–April 2006	5.5	4.5	81.7	1.0	18.3
Pensions and annuities:					
CPS	310.3	211.4	68.1	98.8	31.9
CE, reference year 2005	290.4	229.5	79.0	60.9	21.0
CE, January 2006	268.1	223.2	83.2	44.9	16.8
CE, October 2005–April 2006	291.1	224.9	77.3	66.2	22.7
Interest:					
CPS	186.9	54.8	29.3	132.1	70.7
CE, reference year 2005	61.9	29.6	47.8	32.4	52.2
CE, January 2006	37.6	12.7	33.6	25.0	66.4
CE, October 2005–April 2006	61.3	26.1	42.7	35.1	57.3
Dividends, rents, royalties, and estates and trusts:					
CPS	169.8	87.3	51.4	82.5	48.6
CE, reference year 2005	99.9	63.7	63.8	36.2	36.2
CE, January 2006	45.1	22.3	49.5	22.8	50.5
CE, October 2005–April 2006	71.9	45.7	63.6	26.2	36.4
Child support:					
CPS	26.0	19.5	75.0	6.5	25.0
CE, reference year 2005	19.2	17.7	92.0	1.5	8.0
CE, January 2006	17.0	14.8	87.0	2.2	13.0
CE, October 2005–April 2006	19.6	17.7	90.4	1.9	9.6
Accident and temporary insurance, educational assistance, alimony, financial assistance, and other					
CPS	72.0	44.7	62.0	27.3	38.0
CE, reference year 2005	40.7	30.0	73.9	10.6	26.1
CE, January 2006	41.9	24.8	59.2	17.1	40.8
CE, October 2005–April 2006	43.9	28.7	65.3	15.3	34.7

See note at end of table.

Table 2. Continued—Aggregate pretax income and percent distribution, total and by reported and allocated status, by source of income, Current Population Survey (CPS) and three alternative measures of Consumer Expenditure Survey (CE), 2004–06

[In billions of dollars]

Year, category of income, and survey	Total	Reported	Percent reported	Allocated	Percent allocated
2006					
Total aggregate income:					
CPS	$7,800.6	$5,226.9	67.0	$2,573.7	33.0
CE, reference year 2006	7,170.8	4,354.7	60.7	2,816.2	39.3
CE, January 2007	7,332.3	4,435.1	60.5	2,897.3	39.5
CE, October 2006–April 2007	7,286.8	4,492.4	61.7	2,794.4	38.3
Wage and salary income:					
CPS	5,967.4	4,163.5	69.8	1,803.9	30.2
CE, reference year 2006	5,718.6	3,447.2	60.3	2,271.5	39.7
CE, January 2007	5,994.1	3,685.0	61.5	2,309.1	38.5
CE, October 2006–April 2007	5,815.2	3,566.6	61.3	2,248.7	38.7
Nonfarm self-employment:					
CPS	407.7	227.3	55.7	180.4	44.2
CE, reference year 2006	414.0	144.9	35.0	269.1	65.0
CE, January 2007	445.0	109.7	24.7	335.3	75.3
CE, October 2006–April 2007	380.1	132.8	34.9	247.3	65.1
Farm self-employment:					
CPS	31.7	15.6	49.1	16.2	51.0
CE, reference year 2006	14.7	5.1	34.3	9.7	65.7
CE, January 2007	13.1	2.8	21.4	10.3	78.6
CE, October 2006–April 2007	26.7	17.5	65.6	9.2	34.4
Unemployment compensation:					
CPS	20.7	15.4	74.6	5.2	25.4
CE, reference year 2006	12.8	9.5	74.2	3.3	25.8
CE, January 2007	16.0	10.5	65.7	5.5	34.3
CE, October 2006–April 2007	11.0	8.2	74.4	2.8	25.6
Workers' compensation (including compensation for black lung disease) and veterans' benefits:					
CPS	41.6	28.7	69.0	12.9	31.0
CE, reference year 2006	11.8	8.4	71.4	3.4	28.6
CE, January 2007	8.4	4.7	55.6	3.7	44.4
CE, October 2006–April 2007	13.5	10.4	77.1	3.1	22.9
Social Security and Railroad Retirement:					
CPS	471.5	312.7	66.3	158.8	33.7
CE, reference year 2006	446.0	345.5	77.5	100.6	22.5
CE, January 2007	409.1	309.2	75.6	99.9	24.4
CE, October 2006–April 2007	452.2	349.9	77.4	102.3	22.6
Supplemental Security Income:					
CPS	31.6	23.7	74.8	8.0	25.2
CE, reference year 2006	23.6	18.9	80.0	4.7	20.0
CE, January 2007	26.6	22.5	84.6	4.1	15.4
CE, October 2006–April 2007	25.9	21.2	82.1	4.6	17.9
Public assistance:					
CPS	5.6	4.1	74.5	1.4	25.5
CE, reference year 2006	5.2	4.1	78.9	1.1	21.1
CE, January 2007	4.9	2.8	56.7	2.1	43.3
CE, October 2006–April 2007	5.0	3.8	75.4	1.2	24.6
Pensions and annuities:					
CPS	314.9	212.0	67.3	102.9	32.7
CE, reference year 2006	283.5	221.1	78.0	62.4	22.0
CE, January 2007	213.6	160.8	75.3	52.9	24.7
CE, October 2006–April 2007	302.6	228.1	75.4	74.5	24.6

Table 2. Continued—Aggregate pretax income and percent distribution, total and by reported and allocated status, by source of income, Current Population Survey (CPS) and three alternative measures of Consumer Expenditure Survey (CE), 2004–06

[In billions of dollars]

Year, category of income, and survey	Total	Reported	Percent reported	Allocated	Percent allocated
Interest:					
CPS	$229.2	$67.0	29.2	$162.1	70.7
CE, reference year 2006	69.7	31.0	44.5	38.7	55.5
CE, January 2007	66.8	26.9	40.3	39.9	59.7
CE, October 2006–April 2007	85.7	40.8	47.6	44.9	52.4
Dividends, rents, royalties, and estates and trusts:					
CPS	186.7	94.8	50.8	91.9	49.2
CE, reference year 2006	106.9	71.1	66.5	35.8	33.5
CE, January 2007	80.1	57.3	71.6	22.8	28.4
CE, October 2006– April 2007	109.5	67.6	61.7	41.9	38.3
Child support:					
CPS	25.4	18.2	71.6	7.2	28.5
CE, reference year 2006	22.6	20.4	90.6	2.1	9.4
CE, January 2007	18.1	15.7	86.6	2.4	13.4
CE, October 2006–April 2007	21.3	19.3	90.6	2.0	9.4
Accident and temporary insurance, educational assistance, alimony, financial assistance and other					
CPS	66.6	43.8	65.8	22.8	34.2
CE, reference year 2006	41.4	27.5	66.6	13.8	33.4
CE, January 2007	36.6	27.3	74.7	9.3	25.3
CE, October 2006–April 2007	38.0	26.2	68.9	11.8	31.1

[1] Less than 0.1.

CPS and the difference in imputed aggregate income has risen from about $35 billion in 2004 to around $260 billion in 2006.

As noted earlier, wage and salary income is the predominant component of total income, so the contribution of imputation to aggregate wages and salaries essentially matched the contribution to total income. Imputation is a bigger factor in the CE estimates than the CPS estimates, in terms of both the percentage of the estimate and the actual dollar value. In 2004, 37.0 percent of CE wages and salaries are a result of imputation, and the percentage rises to 37.2 percent in 2005 and 39.0 percent in 2006. Over the same 3 years, imputation accounts for about 30.1 percent of CPS wages and salaries. Wages and salaries imputed in the CE exceed those imputed in the CPS by about $220 billion for 2004, rising to about $475 billion in 2006.

The two components of total income representing retirement income show remarkably similar patterns with respect to the effect of imputation, both internally and in relation to the CPS. Though starting from a lower level, the average percentage of imputed income represented in the CE estimates for Social Security and Railroad Retirement income and for income from pensions and annuities increases each year from 2004 to 2006. For the former component, the percentage goes from 20.2 percent to 23.2 percent; for the latter component, it rises from 18.3 percent to 23.8 percent. Nonresponse appears to have been less of an issue for the CE than for the CPS, because the CPS is seen to have imputed, on average, 33.6 percent of Social Security and Railroad Retirement income and 32.8 percent of pensions and annuities over the 3-year span. With one exception, the income directly reported by respondents is $30 billion to $55 billion more for Social Security and $10 billion to $60 billion more for pensions and annuities in the CE than in the CPS.

More than one-half of the CE estimates for nonfarm self-employment income are derived from imputation. As with the sources of income mentioned in the previous two paragraphs, the average percentage of imputed income rises each year, but there is a sizable 11-percentage-point increase, from 57.5 percent to 68.5 percent, between 2005 and 2006. Imputation in the CPS averages 42.7 percent over the 3-year period. The amount imputed in the CE estimates is significantly greater than the amount imputed in the CPS each year, although, seemingly paradoxically, the average difference is smallest, at just over $103 billion,

in 2006, the year in which imputed income makes up the largest proportion of the CE estimate.

Interest income and, to a lesser degree, income from dividends, rents, royalties, and estates and trusts show wildly different response patterns between the CE and the CPS. The percentage of imputed income incorporated into the CE estimates for interest income has varied from 45.8 percent in 2004, to 58.6 percent in 2005, to 55.9 percent in 2006. The change in the percentage from year to year is attributable to swings in the percentage of income imputed in the CE estimate that is derived from January interviews only. The CPS derives an average of 72.0 percent of its annual estimates from imputation, and the actual dollar amounts imputed dwarf the amounts of imputed interest income in the CE by $100 billion to $120 billion.

The average percentage of imputed income for CE dividends, rents, royalties, and estates and trusts over the 2004–06 period peaks in 2005 at 41.0 percent and then drops the next year to 33.4 percent, the lowest of all 3 years. In 2004, imputed income makes up 36.4 percent of this category. CPS estimates for dividends, rents, royalties, and estates and trusts are composed of a higher percentage of imputed income—on average, about 48.6 percent—than is any CE estimate produced for the same period, with one exception: the 2005 CE estimate based on January 2006 interviews. In actual dollar amounts, the CPS uniformly imputes much higher amounts than does the CE, regardless of the way CE income is measured: on average, $83.2 billion dollars are imputed annually in the CPS, compared with $29.6 billion in the CE.

Turning to the two components whose CE/CPS ratios fall after imputation is instituted reveals that the first—farm self-employment income—shows average percentages of CE imputed income rivaling the levels for nonfarm self-employment income. For both 2004 and 2006, almost 60 percent of CE farm self-employment income originates as a result of imputation, slightly more than the 54.8 percent of the farm self-employment income estimate imputed in 2005. The CPS imputes about $10 billion more of farm self-employment income than the CE imputes annually, although, as a percentage of the total, the CE and the CPS imputations differ by less than 2 percentage points (58.0 percent and 56.8 percent, respectively).

Imputation constitutes a much smaller proportion of CE income for the second category: accident and temporary insurance, educational assistance, alimony, financial assistance, and other income not elsewhere classified. The average percentage of imputed income for this category ranges from 21.9 percent in 2004 to 33.9 percent in 2005. The amount of income imputed by the CPS for the same category averages twice as much ($25.7 billion compared with $12.8 billion) as the amount imputed in the CE across all of the years examined. As a proportion of the total, imputed income makes up 37 percent in the CPS and 28.6 percent in the CE.

Over the 2004–06 period, the annual average percentages of income imputed for unemployment compensation in the CE are fairly low and stable: 26.6 percent in 2004, 23.0 percent in 2005, and 28.6 percent in 2006. However, a closer examination of the imputation percentages for each method of selecting CE observations shows that imputation is much more prevalent when January interviews alone are used, adding up to 6 percentage points to the average. Overall, the percentages imputed in the CE and the CPS are similar, differing from about 1 to 3 percentage points across the years studied.

For the category of workers' compensation (including compensation for black lung disease) and veterans' benefits, tracking the average percentages imputed in the CE is somewhat misleading. In 2004 and 2005, the average percentages of income imputed are 18.2 percent and 16.2 percent, respectively. The average percentage almost doubles in 2006, to 32.0 percent. These results are due almost solely to the relative paucity of imputation in estimates based on January interviews. In 2005, barely any income from this source—0.6 percent—is imputed for January 2006 interviews. For the estimate based on interviews during the period from October 2005 to April 2006, the percentage imputed is 25.8 percent, and for the estimate based on the publication methodology, 22.2 percent results from imputation. In 2004, the situation is similar, though not so extreme. The respective percentages imputed are 26.5 percent (publication method), 20.1 percent (October 2004–April 2005), and 7.9 percent (January 2005). A complete reversal of this pattern occurs in 2006, with the percentage imputed for January 2007 interviews leaping to 44.4 percent while the percentages for the publication method and the October 2006–April 2007 interviews are 28.6 percent and 22.9 percent, respectively, comparable to the rates posted in the earlier 2 years. Imputation in the CPS accounts for about 30.9 percent of such income, compared with 24.4 percent of income derived for the latter two methods in the CE.

On average, the percentages of SSI imputed in the CE are the second lowest of any component of total income. Although imputed income makes up an increasing share of the total each year of the period examined, the overall rise is small, going from 15.5 percent in 2004 to 17.8 percent in 2006. CPS percentages of imputed income are

about 10 points higher than those in the CE (26.9 percent, compared with 16.7 percent), with actual dollar values imputed running more than twice as high as the CE's ($8.4 billion, compared with $3.9 billion).

Imputation in the CE for income from public assistance shows the interyear variability exhibited by other components, such as accident and temporary insurance, educational assistance, alimony, financial assistance, and other income not elsewhere classified, as well as interest income. The average percentage imputed swings from 22.2 percent in 2004, down to 17.9 percent in 2005, and then up to 29.7 percent in 2006. As with these other sources, the variability in the case of income from public assistance can be traced to changes in percentages imputed for January interviews. The percentage of income resulting from imputation in the CPS is greater than that of the CE for the first 2 years of the period, but lower than the CE's estimate for the final year.

The final component of total income, child support, shows both the lowest and most consistent average percentages of imputed income as a share of the total of any component of income in the CE. In 2005, only 10.2 percent of child support income—the lowest average percentage of the three years examined—is obtained via imputation. The highest percentage, only about 1.6 percentage points greater than the lowest, is 11.8 percent of the total, registered in 2004. The CPS imputes a much higher percentage of child support over the period, an average of 27.1 percent, more than 3 times as much, on average, in dollar terms: $7.1 billion, as opposed to $2.1 billion.

WITH THE RELEASE OF 2004 DATA from the Consumer Expenditure Survey (CE), the BLS began implementing imputation for missing responses to income questions. The multistage procedure produced multiple imputed values for each missing observation. To assess how well these imputation routines performed, estimates of aggregate income based on both reported and imputed values were compared with estimates calculated from the Current Population Survey (CPS) for the years 2002–06. This period covered the 2 years prior to the introduction of imputation and the 3 years following.

Because of methodological differences between the CE and the CPS, three alternative measures of CE income were derived for comparison with the CPS. On average, prior to imputation CE estimates for total money income before taxes were about 75 percent of the CPS aggregate. After imputation, CE estimates rose to about 95 percent of the CPS estimate. An examination of individual sources of income reveals that, in general, imputation has brought CE estimates closer to CPS estimates, although significant disparities remain between the estimates for many of the smaller components. On the basis of these results, further refinements to the CE income questions and imputation procedures are expected.

The analysis presented in this article has used the Annual Social and Economic Supplement (ASEC) of the CPS as a benchmark to which CE Interview Survey aggregates are compared. The Census Bureau, in its turn, evaluates the quality of ASEC estimates through comparison studies with other independent sources of income. In a similar vein, Daniel Weinberg has cited studies comparing CPS income data with national and State income data from the Bureau of Economic Analysis, with income data from the Census Bureau's Survey of Income and Program Participation, and with earnings data from the Internal Revenue Service.[9] Also, Bruce Webster has compared median household income and earnings estimates for 2004 and 2005 from the American Community Survey with CPS data.[10] Comparing CE income estimates with these alternative sources, in addition to continuing work with the CPS, offers further avenues for analyzing the quality of CE income data. □

Notes

ACKNOWLEDGMENT: Thanks go to Carmen DeNovas-Walt and Edward Welniak of the Income Surveys Branch of the U.S. Census Bureau for providing the CPS income data and reviewing the manuscript of this article.

[1] For a comprehensive review and analysis of comparisons between CE and PCE expenditure estimates, see Thesia I. Garner, George Janini, William Passero, Laura Paszkiewicz, and Mark Vendemia, "The CE and the PCE: a comparison," *Monthly Labor Review*, September 2006, pp. 20–46.

[2] A consumer unit consists of (1) all members of a particular household who are related by blood, marriage, adoption, or some other legal arrangement; (2) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent; or (3) two or more persons living together who use their incomes to make joint expenditure decisions. Financial independence is determined by spending behavior with regard to the three major expense categories: housing, food, and other living expenses. To be considered financially independent, the respondent must be financially responsible for at least two of the three major expenditure categories, either entirely or in part.

[3] See Thesia I. Garner and Laura Blanciforti, "Household Income Reporting: An Analysis of U. S. Consumer Expenditure Survey Data," *Journal of Official Statistics*, March 1994, pp. 69–91, for more details.

[4] Geoffrey D. Paulin and David L. Ferraro, "Imputing income in the Consumer Expenditure Survey," *Monthly Labor Review*, December 1994, pp. 23–31.

[5] Roderick J. A. Little and Donald B. Rubin, *Statistical Analysis with Missing Data* (New York, John Wiley and Sons, 1987), cited in Paulin and

Ferraro, "Imputing Income."

[6] See *Consumer Expenditure Survey, 1987*, Bulletin 2354 (Bureau of Labor Statistics, June 1990), text tables 6 and 7; *Consumer Expenditure Survey, 1990–91*, Bulletin 2425 (Bureau of Labor Statistics, September 1993), text tables 8 and 9; *Consumer Expenditure Survey, 1992–93*, Bulletin 2462 (Bureau of Labor Statistics, September 1995), text tables 6 and 7; *Consumer Expenditure Survey, 1994–95*, Bulletin 2492 (Bureau of Labor Statistics, December 1997), text tables 10 and 11; *Consumer Expenditure Survey, 1996–97*, Report 935 (Bureau of Labor Statistics, September 1999), text tables 8 and 9; *Consumer Expenditure Survey, 1998–99*, Report 955 (Bureau of Labor Statistics, November 2001), text tables 20 and 21; and *Consumer Expenditure Survey, 2002–2003*, Report 990 (Bureau of Labor Statistics, March 2006), text tables 3–6.

[7] Universal Classification Codes are six-digit codes that identify expenditure, income, and selected demographic variables at the most detailed level for use in CE data dissemination and CPI pricing activities.

[8] *Ibid*.

[9] Daniel H. Weinberg, "Income data quality issues in the CPS," *Monthly Labor Review*, June 2006, pp. 38–45.

[10] Bruce H. Webster, Jr., "Evaluation of Median Income and Earnings Estimates: A Comparison of the American Community Survey and the Current Population Survey" (U.S. Census Bureau), March 12, 2007, on the Internet at **www.census.gov/acs/www/Downloads/Evaluation_of_Income_Estimates31207.doc** (visited Mar. 9, 2009).

'Tis the season for learning

The Race Between Education and Technology. By Claudia Goldin and Lawrence F. Katz. Cambridge, MA, Harvard University Press, 2008, 488 pp., $39.95/hardback; $19.95/paperback.

This major work by two Harvard University economists argues that wealth creation in the United States was a direct result of the education of the masses of its citizens. They propose that the first 75 years of the 20th century could in fact be called a "human capital" period, in which most of today's productive technologies were created and successfully applied, leading to progressively higher standards of living. During the last quarter of the century and stretching into the 21st century, however, the U.S. began to lag behind other countries in a number of measures of educational achievement. The authors contend that this lag, in combination with the ease of international transfer of technology to lower cost countries, challenges America's ability to compete in the world market.

The case for investing in human capital is well developed and persuasive in this book. The evolution and spread of high schools are what the authors term "the virtues" that led to economic success. The virtues are 1) ample funding of public education through high school 2) decentralization, with ever more numerous school districts 3) separation of church and state, promoting an educational experience common to all American youth 4) gender neutrality and 5) a measure of permissiveness in making up for failed grades or missed schooling opportunities. These virtues, the authors contend, contrasted positively with the more elite systems of European countries, where tests were usually imposed at an early age that mandated placing youngsters on divergent and often inferior educational tracks.

Known in the early 20th century as the High School Movement, "Americans pioneered the modern secondary school…(and) tailored it for the masses." As early as 1920 a high school or college education was expected in 25 percent of all jobs, largely owing to the rapidly increasing need for white-collar workers. Successive cohorts of students benefited from educational attainment exceeding that of their parents. Since 1980, however, the "human capital stock of the work force" has grown more slowly, reflecting "the slower rate of increase of educational attainment for post-1950 cohorts." Some uncertainty about the continued viability of the "virtues" also colors the last parts of the authors' relevant discussion, given such matters as the contentiousness over unequal financing of school districts, for example.

But the authors' chief concern remains the slowing of mass college education in relation to the need they postulate for a forward-racing technology. This concern is strongly motivated by worry about the widening inequality gap in the distribution of income since the 1970s and its regressive social and economic implications. During the 1947–1973 period family incomes rose rapidly; the distribution of income tended to favor those at the bottom while retarding growth at the top. After the mid-1970s, income generally grew more slowly for most Americans but at a much faster clip in the top quintiles (or deciles). Moreover, the link between the advance in productivity—output per hour worked—and family income weakened; in fact, real median family incomes fell well behind gains in productivity. Thus, "the benefits of economic growth are now far less equally shared than in the past."

The authors trace the changes in the distribution of income to a growing inequality of earnings in the labor market. The labor market includes high-paid corporate executives, of course, but also middle- and low-income workers and unemployed persons looking for paid work. The authors present detailed analyses of the widening distribution of wage/salary incomes, not only between different skill groups but also within the same occupational, skill, and experience groups. This gap is truly an unprecedented phenomenon which requires much further research and explanation.

The authors' discussion of the rise in the college/high school premium is instructive. This premium more than doubled between the 1980s and the early 2000s, indicating strong rising returns to education. The four reasons thought to underlie this development are 1) intensified computerization, leading to a demand for highly-skilled and educated workers (although the authors disagree somewhat on the extent of the demand), 2) globalization and international trade, leading to outsourcing of labor-intensive jobs to lower wage countries and, simultaneously, putting downward pressure on the wages of lesser educated workers in the United States, 3) slowing growth in educational levels of post-1950 cohorts, causing a demand-supply imbalance in favor of educated workers and, 4) the weakened bargaining power of trade unions.

The authors feel that these reasons are an implicit rejection of the widespread belief that the demand for more educated workers has been linked solely to the skill-biased technology associated with computerization—a topic they discuss at some length. They feel that the proponents of this explanation ignore the historical evidence. True, we still witness technological change today, but these changes are quite ordinary in comparison to those experienced during the first decades of the 20th century. As a result of the "electric motor spread," for example, manufacturing horsepower in the form of purchased electricity rose from 9 percent in 1909 to 53 percent in 1929. Numerous new consumer goods—such as appliances, vacuum cleaners, radios, and automobiles—emerged in the market between 1900 and 1925, bearing witness to the productivity advances and the skill and education of the workers designing and fabricating them. In terms of today's skill-based technological change, the authors contend that "the era of computerization has brought little that is new;" in fact, they allude to certain reductions in skill bias which they call "deskilling." They cite "the substitution of office machinery for skill" as contributing to the "compression" of clerical workers' wages. Many other examples might be mentioned in which computerization simplified tasks, requiring little skill from the worker performing it (retail checkout comes to mind). Task simplification has become a core characteristic of work organization; it has become a condition of economies of scale, which long ago spread from manufacturing to service industries. Good for productivity, perhaps, but not so good for stimulating new ideas and inventions.

The case the authors make for improving the skill and education of the work force as key elements of economic growth, founded on a wealth of data, is well made. Their case for the need of a much enlarged college or university attendance, however, would have been stronger had they related it to the deeply unequal distribution of gains from advancing productivity. This is no small factor in depriving middle and lower class families of the means to finance their children's tertiary education.

The ability of the United States to further equalize educational opportunities can hardly be questioned; the United States still exceeds 19 other advanced countries in this measure, by 13 percent on average. The United States also ranks first among 24 countries in an index of business research and innovation, the adoption of new technology patents, and interaction between business and science. Notwithstanding the current recession, America possesses the wealth and accumulated knowledge to afford the advanced education urged by this valuable and informative work, and should pursue it. □

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Productivity's role in housing booms and busts

Financial analysts and market observers across the globe have attributed the recent economic downturn to a housing bubble brought on by negligent lending standards and the belief that housing prices would continue to increase indefinitely. But in a recent study, "Productivity Swings and Housing Prices," James A. Kahn of the Federal Reserve Bank of New York indicates that this view is incomplete and that it unjustly exaggerates the role that interest rate changes and credit market irregularities played in the growth and decline of housing prices. Kahn believes that a primary element of the housing boom and bust has been previously ignored by analysts: the role that changing economic fundamentals—specifically, swings in labor productivity, or output per hour of work—play in the movement of housing prices. The author explains that "productivity swings helped determine the price of housing through their effects on income growth and long-term income expectations—factors that directly influence what consumers are ready to pay for housing and what mortgage providers are willing to lend." While not discounting the influence that other factors had on housing price movements, Kahn's interpretation is one in which the scope of the effects of the credit condition in the United States is less far-reaching; he considers the credit market irregularities "to have exacerbated the situation caused in large measure by the decline in productivity growth." In other words, it was primarily changing economic fundamentals that led to the financial distress which resulted in consumers being pummeled by higher interest rates and unable to pay their mortgages; that is, economic fundamentals affected the housing market more than the housing market affected economic fundamentals.

Kahn's data are derived from a model based on productivity data and on estimates of the relationships among income, housing prices, and demand from 1963 through 2008. In the recent housing boom of the late 1990s, there was a period of rebounding productivity growth and a return to a high growth rate, and there also was a noticeably sharp increase in housing prices during the period. The recent downturn in housing prices corresponds to a deceleration in productivity. This trend is observable throughout recent history. During the late 1960s and early 1970s when the productivity rate was trending up, there was a steady upswing in housing prices of 3 percent per year. Then, housing prices declined in the late 1970s as productivity slowed to less than 1.5 percent per year.

How do productivity trends influence housing prices? Productivity growth is the most important determinant of long-term trends in household income. As productivity growth increases, so do income and the prospect of future income. As Kahn explains, "A sustained rise in income will significantly strengthen the current and future demand for housing. The increase in demand will drive up the price of land and hence…the market price of services that owners derive from living in this home." Housing prices are determined by a number of factors, including current income and expectations of future income. If borrowers believe that productivity rates will remain strong, they have reason to suppose their income will continue to increase and are therefore willing to pay higher prices for a house. Similarly, lenders have increased confidence in the ability of the borrowers to pay for the higher expenditure and thus view mortgages as less of a risk.

Further, housing demand is considered relatively inelastic; high prices usually are not enough to dissuade prospective house buyers from purchasing a home. Kahn explains that price-inelastic demand results in home prices growing faster than income during housing booms and declining more rapidly than income during housing busts. Many market analysts interpret these events as merely indicating a housing bubble, but Kahn believes that these price swings "can arise naturally from productivity shifts affecting the demand for housing."

Kahn places a strong emphasis on the importance of the public's perception of productivity. Usually, there is a lag between an actual increase or decrease in productivity and the public recognition of a shift in productivity growth. For example, according to recent estimates productivity growth had begun to slow in 2004, yet there was little public recognition of such a decline until 2007. The recognition of a long-coming slowdown in productivity growth corresponds with a considerable drop in housing prices. The lax lending conditions of the 2000s resulted from an understandable—albeit false—confidence in continued productivity growth. When consumers realized that their faith in continued productivity growth was misplaced, there came a swift decline in economic conditions. □

Current Labor Statistics
Monthly Labor Review
August 2009

NOTE: Many of the statistics in the following pages were subsequently revised. These pages have not been updated to reflect the revisions.

To obtain BLS data that reflect all revisions, see http://www.bls.gov/data/home.htm

For the latest set of "Current Labor Statistics," see http://www.bls.gov/opub/mlr/curlabst.htm

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Notes on Current Labor Statistics

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

General notes

The following notes apply to several tables in this section:

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of current and past experiences. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 17–21, 48, and 52. Seasonally adjusted labor force data in tables 1 and 4–9 and seasonally adjusted establishment survey data shown in tables 1, 12–14, and 17 are revised in the March 2007 *Review.* A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 54 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

Adjustments for price changes. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings.* Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

www.bls.gov/cps/

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

www.bls.gov/ces/

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment.*

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95,* BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

www.bls.gov/lpc/

For additional information on international comparisons data, see *International Comparisons of Unemployment,* Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry,* a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

Labor market indicators include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2. Measures of rates of change of compensation and wages from the Employment Cost Index

program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

Alternative measures of wage and compensation rates of change, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

Employment and Unemployment Data

(Tables 1; 4–29)

Household survey data

Description of the series

Employment data in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 60,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

Definitions

Employed persons include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*. For a discussion of changes introduced in January 2003, see "Revisions to the Current Population Survey Effective in January 2003" in the February 2003 issue of *Employment and Earnings* (available on the BLS Web site at **www.bls.gov/cps/rvcps03.pdf**).

Effective in January 2003, BLS began using the X-12 ARIMA seasonal adjustment program to seasonally adjust national labor force data. This program replaced the X-11 ARIMA program which had been used since January 1980. See "Revision of Seasonally Adjusted Labor Force Series in 2003," in the February 2003 issue of *Employment and Earnings* (available on the BLS Web site at **www.bls.gov/cps/cpsrs.pdf**) for a discussion of the introduction of the use of X-12 ARIMA for seasonal adjustment of the labor force data and the effects that it had on the data.

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

Establishment survey data

Description of the series

Employment, hours, and earnings data in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 160,000 businesses and government agencies, which represent approximately 400,000 individual worksites and represent all industries except agriculture. The active CES sample covers approximately one-third of all nonfarm payroll workers. Industries are classified in accordance with the 2002 North American Industry Classification System. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

Production workers in the goods-producing industries cover employees, up through the level of working supervisors, who engage directly in the manufacture or construction of the establishment's product. In private service-providing industries, data are collected for nonsupervisory workers, which include most employees except those in executive, managerial, and supervisory positions. Those

workers mentioned in tables 11–16 include production workers in manufacturing and natural resources and mining; construction workers in construction; and nonsupervisory workers in all private service-providing industries. Production and nonsupervisory workers account for about four-fifths of the total employment on private nonagricultural payrolls.

Earnings are the payments production or nonsupervisory workers receive during the survey period, including premium pay for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

Hours represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Table 17 provides an index on private nonfarm employment based on 278 industries, and a manufacturing index based on 84 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The March 2003 benchmark was introduced in February 2004 with the release of data for January 2004, published in the March 2004 issue of the *Review.* With the release in June 2003, CES completed a conversion from the Standard Industrial Classification (SIC) system to the North American Industry Classification System (NAICS) and completed the transition from its original quota sample design to a probability-based sample design. The industry-coding update included reconstruction of historical estimates in order to preserve time series for data users. Normally 5 years of seasonally adjusted data are revised with each benchmark revision. However, with this release, the entire new time series history for all CES data series were re-seasonally adjusted due to the NAICS conversion, which resulted in the revision of all CES time series.

Also in June 2003, the CES program introduced concurrent seasonal adjustment for the national establishment data. Under this methodology, the first preliminary estimates for the current reference month and the revised estimates for the 2 prior months will be updated with concurrent factors with each new release of data. Concurrent seasonal adjustment incorporates all available data, including first preliminary estimates for the most current month, in the adjustment process. For additional information on all of the changes introduced in June 2003, see the June 2003 issue of *Employment and Earnings* and "Recent changes in the national Current Employment Statistics survey," *Monthly Labor Review,* June 2003, pp. 3–13.

Revisions in State data (table 11) occurred with the publication of January 2003 data. For information on the revisions for the State data, see the March and May 2003 issues of *Employment and Earnings*, and "Recent changes in the State and Metropolitan Area CES survey," *Monthly Labor Review*, June 2003, pp. 14–19.

Beginning in June 1996, the BLS uses the X-12-ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review).* When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Current Employment Statistics: (202) 691–6555.

Unemployment data by State

Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

Quarterly Census of Employment and Wages

Description of the series

Employment, wage, and establishment data in this section are derived from the quarterly tax reports submitted to State employment security agencies by private and State and local government employers subject to State unemployment insurance (UI) laws and from Federal, agencies subject to the Unemployment Compensation for Federal Employees (UCFE) program. Each quarter, State agencies edit and process the data and send the information to the Bureau of Labor Statistics.

The Quarterly Census of Employment and Wages (QCEW) data, also referred as ES-202 data, are the most complete enumeration of employment and wage information by industry at the national, State, metropolitan area, and county levels. They have broad economic significance in evaluating labor

market trends and major industry developments.

Definitions

In general, the Quarterly Census of Employment and Wages monthly employment data represent the number of **covered workers** who worked during, or received pay for, the pay period that included the 12th day of the month. **Covered private industry employment** includes most corporate officials, executives, supervisory personnel, professionals, clerical workers, wage earners, piece workers, and part-time workers. It excludes proprietors, the unincorporated self-employed, unpaid family members, and certain farm and domestic workers. Certain types of nonprofit employers, such as religious organizations, are given a choice of coverage or exclusion in a number of States. Workers in these organizations are, therefore, reported to a limited degree.

Persons on paid sick leave, paid holiday, paid vacation, and the like, are included. Persons on the payroll of more than one firm during the period are counted by each UI-subject employer if they meet the employment definition noted earlier. The employment count excludes workers who earned no wages during the entire applicable pay period because of work stoppages, temporary layoffs, illness, or unpaid vacations.

Federal employment data are based on reports of monthly employment and quarterly wages submitted each quarter to State agencies for all Federal installations with employees covered by the Unemployment Compensation for Federal Employees (UCFE) program, except for certain national security agencies, which are omitted for security reasons. Employment for all Federal agencies for any given month is based on the number of persons who worked during or received pay for the pay period that included the 12th of the month.

An **establishment** is an economic unit, such as a farm, mine, factory, or store, that produces goods or provides services. It is typically at a single physical location and engaged in one, or predominantly one, type of economic activity for which a single industrial classification may be applied. Occasionally, a single physical location encompasses two or more distinct and significant activities. Each activity should be reported as a separate establishment if separate records are kept and the various activities are classified under different NAICS industries.

Most employers have only one establishment; thus, the establishment is the predominant reporting unit or statistical entity for reporting employment and wages data. Most employers, including State and local governments who operate more than one establishment in a State, file a Multiple Worksite Report each quarter, in addition to their quarterly UI report. The Multiple Worksite Report is used to collect separate employment and wage data for each of the employer's establishments, which are not detailed on the UI report. Some very small multi-establishment employers do not file a Multiple Worksite Report. When the total employment in an employer's secondary establishments (all establishments other than the largest) is 10 or fewer, the employer generally will file a consolidated report for all establishments. Also, some employers either cannot or will not report at the establishment level and thus aggregate establishments into one consolidated unit, or possibly several units, though not at the establishment level.

For the Federal Government, the reporting unit is the **installation**: a single location at which a department, agency, or other government body has civilian employees. Federal agencies follow slightly different criteria than do private employers when breaking down their reports by installation. They are permitted to combine as a single statewide unit: 1) all installations with 10 or fewer workers, and 2) all installations that have a combined total in the State of fewer than 50 workers. Also, when there are fewer than 25 workers in all secondary installations in a State, the secondary installations may be combined and reported with the major installation. Last, if a Federal agency has fewer than five employees in a State, the agency headquarters office (regional office, district office) serving each State may consolidate the employment and wages data for that State with the data reported to the State in which the headquarters is located. As a result of these reporting rules, the number of reporting units is always larger than the number of employers (or government agencies) but smaller than the number of actual establishments (or installations).

Data reported for the first quarter are tabulated into **size** categories ranging from worksites of very small size to those with 1,000 employees or more. The size category is determined by the establishment's March employment level. It is important to note that each establishment of a multi-establishment firm is tabulated separately into the appropriate size category. The total employment level of the reporting multi-establishment firm is not used in the size tabulation.

Covered employers in most States report total **wages** paid during the calendar quarter, regardless of when the services were performed. A few State laws, however, specify that wages be reported for, or based on the period during which services are performed rather than the period during which compensation is paid. Under most State laws or regulations, wages include bonuses, stock options, the cash value of meals and lodging, tips and other gratuities, and, in some States, employer contributions to certain deferred compensation plans such as 401(k) plans.

Covered employer contributions for old-age, survivors, and disability insurance (OASDI), health insurance, unemployment insurance, workers' compensation, and private pension and welfare funds are not reported as wages. Employee contributions for the same purposes, however, as well as money withheld for income taxes, union dues, and so forth, are reported even though they are deducted from the worker's gross pay.

Wages of covered Federal workers represent the gross amount of all payrolls for all pay periods ending within the quarter. This includes cash allowances, the cash equivalent of any type of remuneration, severance pay, withholding taxes, and retirement deductions. Federal employee remuneration generally covers the same types of services as for workers in private industry.

Average annual wage per employee for any given industry are computed by dividing total annual wages by annual average employment. A further division by 52 yields average weekly wages per employee. Annual pay data only approximate annual earnings because an individual may not be employed by the same employer all year or may work for more than one employer at a time.

Average weekly or annual wage is affected by the ratio of full-time to part-time workers as well as the number of individuals in high-paying and low-paying occupations. When average pay levels between States and industries are compared, these factors should be taken into consideration. For example, industries characterized by high proportions of part-time workers will show average wage levels appreciably less than the weekly pay levels of regular full-time employees in these industries. The opposite effect characterizes industries with low proportions of part-time workers, or industries that typically schedule heavy weekend and overtime work. Average wage data also may be influenced by work stoppages, labor turnover rates, retroactive payments, seasonal factors, bonus payments, and so on.

Notes on the data

Beginning with the release of data for 2001, publications presenting data from the Covered Employment and Wages program have switched to the 2002 version of the North American Industry Classification System

(NAICS) as the basis for the assignment and tabulation of economic data by industry. NAICS is the product of a cooperative effort on the part of the statistical agencies of the United States, Canada, and Mexico. Due to difference in NAICS and Standard Industrial Classification (SIC) structures, industry data for 2001 is not comparable to the SIC-based data for earlier years.

Effective January 2001, the program began assigning Indian Tribal Councils and related establishments to local government ownership. This BLS action was in response to a change in Federal law dealing with the way Indian Tribes are treated under the Federal Unemployment Tax Act. This law requires federally recognized Indian Tribes to be treated similarly to State and local governments. In the past, the Covered Employment and Wage (CEW) program coded Indian Tribal Councils and related establishments in the private sector. As a result of the new law, CEW data reflects significant shifts in employment and wages between the private sector and local government from 2000 to 2001. Data also reflect industry changes. Those accounts previously assigned to civic and social organizations were assigned to tribal governments. There were no required industry changes for related establishments owned by these Tribal Councils. These tribal business establishments continued to be coded according to the economic activity of that entity.

To insure the highest possible quality of data, State employment security agencies verify with employers and update, if necessary, the industry, location, and ownership classification of all establishments on a 3-year cycle. Changes in establishment classification codes resulting from the verification process are introduced with the data reported for the first quarter of the year. Changes resulting from improved employer reporting also are introduced in the first quarter. For these reasons, some data, especially at more detailed geographic levels, may not be strictly comparable with earlier years.

County definitions are assigned according to Federal Information Processing Standards Publications as issued by the National Institute of Standards and Technology. Areas shown as counties include those designated as independent cities in some jurisdictions and, in Alaska, those areas designated by the Census Bureau where counties have not been created. County data also are presented for the New England States for comparative purposes, even though townships are the more common designation used in New England (and New Jersey).

The Office of Management and Budget (OMB) defines metropolitan areas for use in Federal statistical activities and updates these definitions as needed. Data in this table use metropolitan area criteria established by OMB in definitions issued June 30, 1999 (OMB Bulletin No. 99-04). These definitions reflect information obtained from the 1990 Decennial Census and the 1998 U.S. Census Bureau population estimate. A complete list of metropolitan area definitions is available from the National Technical Information Service (NTIS), Document Sales, 5205 Port Royal Road, Springfield, Va. 22161, telephone 1-800-553-6847.

OMB defines metropolitan areas in terms of entire counties, except in the six New England States where they are defined in terms of cities and towns. New England data in this table, however, are based on a county concept defined by OMB as New England County Metropolitan Areas (NECMA) because county-level data are the most detailed available from the Quarterly Census of Employment and Wages. The NECMA is a county-based alternative to the city- and town-based metropolitan areas in New England. The NECMA for a Metropolitan Statistical Area (MSA) include: (1) the county containing the first-named city in that MSA title (this county may include the first-named cities of other MSA, and (2) each additional county having at least half its population in the MSA in which first-named cities are in the county identified in step 1. The NECMA is officially defined areas that are meant to be used by statistical programs that cannot use the regular metropolitan area definitions in New England.

For additional information on the covered employment and wage data, contact the Division of Administrative Statistics and Labor Turnover at (202) 691–6567.

Job Openings and Labor Turnover Survey

Description of the series

Data for the **Job Openings and Labor Turnover Survey** (JOLTS) are collected and compiled from a sample of 16,000 business establishments. Each month, data are collected for total employment, job openings, hires, quits, layoffs and discharges, and other separations. The JOLTS program covers all private nonfarm establishments such as factories, offices, and stores, as well as Federal, State, and local government entities in the 50 States and the District of Columbia. The JOLTS sample design is a random sample drawn from a universe of more than eight million establishments compiled as part of the operations of the Quarterly Census of Employment and Wages, or QCEW, program. This program includes all employers subject to State unemployment insurance (UI) laws and Federal agencies subject to Unemployment Compensation for Federal Employees (UCFE).

The sampling frame is stratified by ownership, region, industry sector, and size class. Large firms fall into the sample with virtual certainty. JOLTS total employment estimates are controlled to the employment estimates of the Current Employment Statistics (CES) survey. A ratio of CES to JOLTS employment is used to adjust the levels for all other JOLTS data elements. Rates then are computed from the adjusted levels.

The monthly JOLTS data series begin with December 2000. Not seasonally adjusted data on job openings, hires, total separations, quits, layoffs and discharges, and other separations levels and rates are available for the total nonfarm sector, 16 private industry divisions and 2 government divisions based on the North American Industry Classification System (NAICS), and four geographic regions. Seasonally adjusted data on job openings, hires, total separations, and quits levels and rates are available for the total nonfarm sector, selected industry sectors, and four geographic regions.

Definitions

Establishments submit **job openings** in-for-mation for the last business day of the reference month. A job opening requires that (1) a specific position exists and there is work available for that position; and (2) work could start within 30 days regardless of whether a suitable candidate is found; and (3) the employer is actively recruiting from outside the establishment to fill the position. Included are full-time, part-time, permanent, short-term, and seasonal openings. Active recruiting means that the establishment is taking steps to fill a position by advertising in newspapers or on the Internet, posting help-wanted signs, accepting applications, or using other similar methods.

Jobs to be filled only by internal transfers, promotions, demotions, or recall from layoffs are excluded. Also excluded are jobs with start dates more than 30 days in the future, jobs for which employees have been hired but have not yet reported for work, and jobs to be filled by employees of temporary help agencies, employee leasing companies, outside contractors, or consultants. The job openings rate is computed by dividing the number of job openings by the sum of employment and job openings, and multiplying that quotient by 100.

Hires are the total number of additions

to the payroll occurring at any time during the reference month, including both new and rehired employees and full-time and part-time, permanent, short-term and seasonal employees, employees recalled to the location after a layoff lasting more than 7 days, on-call or intermittent employees who returned to work after having been formally separated, and transfers from other locations. The hires count does not include transfers or promotions within the reporting site, employees returning from strike, employees of temporary help agencies or employee leasing companies, outside contractors, or consultants. The hires rate is computed by dividing the number of hires by employment, and multiplying that quotient by 100.

Separations are the total number of terminations of employment occurring at any time during the reference month, and are reported by type of separation—quits, layoffs and discharges, and other separations. Quits are voluntary separations by employees (except for retirements, which are reported as other separations). Layoffs and discharges are involuntary separations initiated by the employer and include layoffs with no intent to rehire, formal layoffs lasting or expected to last more than 7 days, discharges resulting from mergers, downsizing, or closings, firings or other discharges for cause, terminations of permanent or short-term employees, and terminations of seasonal employees. Other separations include retirements, transfers to other locations, deaths, and separations due to disability. Separations do not include transfers within the same location or employees on strike.

The separations rate is computed by dividing the number of separations by employment, and multiplying that quotient by 100. The quits, layoffs and discharges, and other separations rates are computed similarly, dividing the number by employment and multiplying by 100.

Notes on the data

The JOLTS data series on job openings, hires, and separations are relatively new. The full sample is divided into panels, with one panel enrolled each month. A full complement of panels for the original data series based on the 1987 Standard Industrial Classification (SIC) system was not completely enrolled in the survey until January 2002. The supple-mental panels of establishments needed to create NAICS estimates were not completely enrolled until May 2003. The data collected up until those points are from less than a full sample. Therefore, estimates from earlier months should be used with caution, as fewer sampled units were reporting data at that time.

In March 2002, BLS procedures for collecting hires and separations data were revised to address possible underreporting. As a result, JOLTS hires and separations estimates for months prior to March 2002 may not be comparable with estimates for March 2002 and later.

The Federal Government reorganization that involved transferring approximately 180,000 employees to the new Department of Homeland Security is not reflected in the JOLTS hires and separations estimates for the Federal Government. The Office of Personnel Management's record shows these transfers were completed in March 2003. The inclusion of transfers in the JOLTS definitions of hires and separations is intended to cover ongoing movements of workers between establishments. The Department of Homeland Security reorganization was a massive one-time event, and the inclusion of these intergovernmental transfers would distort the Federal Government time series.

Data users should note that seasonal adjustment of the JOLTS series is conducted with fewer data observations than is customary. The historical data, therefore, may be subject to larger than normal revisions. Because the seasonal patterns in economic data series typically emerge over time, the standard use of moving averages as seasonal filters to capture these effects requires longer series than are currently available. As a result, the stable seasonal filter option is used in the seasonal adjustment of the JOLTS data. When calculating seasonal factors, this filter takes an average for each calendar month after detrending the series. The stable seasonal filter assumes that the seasonal factors are fixed; a necessary assumption until sufficient data are available. When the stable seasonal filter is no longer needed, other program features also may be introduced, such as outlier adjustment and extended diagnostic testing. Additionally, it is expected that more series, such as layoffs and discharges and additional industries, may be seasonally adjusted when more data are available.

JOLTS hires and separations estimates cannot be used to exactly explain net changes in payroll employment. Some reasons why it is problematic to compare changes in payroll employment with JOLTS hires and separations, especially on a monthly basis, are: (1) the reference period for payroll employment is the pay period including the 12th of the month, while the reference period for hires and separations is the calendar month; and (2) payroll employment can vary from month to month simply because part-time and on-call workers may not always work during the pay period that includes the 12th of the month. Additionally, research has found that some reporters systematically underreport separations relative to hires due to a number of factors, including the nature of their payroll systems and practices. The shortfall appears to be about 2 percent or less over a 12-month period.

FOR ADDITIONAL INFORMATION on the Job Openings and Labor Turnover Survey, contact the Division of Administrative Statistics and Labor Turnover at (202) 961–5870.

Compensation and Wage Data

(Tables 1–3; 30–37)

The National Compensation Survey (NCS) produces a variety of compensation data. These include: The Employment Cost Index (ECI) and NCS benefit measures of the incidence and provisions of selected employee benefit plans. Selected samples of these measures appear in the following tables. NCS also compiles data on occupational wages and the Employer Costs for Employee Compensation (ECEC).

Employment Cost Index

Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It is a Laspeyres Index that uses fixed employment weights to measure change in labor costs free from the influence of employment shifts among occupations and industries.

The ECI provides data for the civilian economy, which includes the total private nonfarm economy excluding private households, and the public sector excluding the Federal government. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Sample establishments are classified by industry categories based on the 2002 North American Classification System (NAICS). Within a sample establishment, specific job categories are selected and classified into about 800 occupations according to the 2000 Standard Occupational Classification (SOC) System. Individual occupations are combined to represent one of ten intermediate aggregations, such as professional and related occupations, or one of five higher level aggre-

gations, such as management, professional, and related occupations.

Fixed employment weights are used each quarter to calculate the most aggregate series—civilian, private, and State and local government. These fixed weights are also used to derive all of the industry and occupational series indexes. Beginning with the March 2006 estimates, 2002 fixed employment weights from the Bureau's Occupational Employment Statistics survey were introduced. From March 1995 to December 2005, 1990 employment counts were used. These fixed weights ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of wages and compensation. For the series based on bargaining status, census region and division, and metropolitan area status, fixed employment data are not available. The employment weights are reallocated within these series each quarter based on the current ECI sample. The indexes for these series, consequently, are not strictly comparable with those for aggregate, occupational, and industry series.

Definitions

Total compensation costs include wages, salaries, and the employer's costs for employee benefits.

Wages and salaries consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

Benefits include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

Notes on the data

The ECI data in these tables reflect the con-version to the 2002 North American Industry Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. ECI series based on NAICS and SOC became the official BLS estimates starting in March 2006.

The ECI for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (December 2005=100) are available on the Internet: **www.bls.gov/ect/**

ADDITIONAL INFORMATION on the Employment Cost Index is available at **www.bls.gov/ncs/ect/home.htm** or by telephone at (202) 691–6199.

National Compensation Survey Benefit Measures

Description of the series

NCS benefit measures of employee benefits are published in two separate reports. The annual summary provides data on the incidence of (access to and participation in) selected benefits and provisions of paid holidays and vacations, life insurance plans, and other selected benefit programs. Data on percentages of establishments offering major employee benefits, and on the employer and employee shares of contributions to medical care premiums also are presented. Selected benefit data appear in the following tables. A second publication, published later, contains more detailed information about health and retirement plans.

Definitions

Employer-provided benefits are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Employees are considered as having **access** to a benefit plan if it is available for their use. For example, if an employee is permitted to participate in a medical care plan offered by the employer, but the employee declines to do so, he or she is placed in the category with those having access to medical care.

Employees in contributory plans are considered as **participating** in an insurance or retirement plan if they have paid required contributions and fulfilled any applicable service requirement. Employees in noncontributory plans are counted as participating regardless of whether they have fulfilled the service requirements.

Defined benefit pension plans use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

Defined contribution plans generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

Tax-deferred savings plans are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

Flexible benefit plans allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

Notes on the data

ADDITIONAL INFORMATION ON THE NCS benefit measures is available at **www.bls.gov/ncs/ebs/home.htm** or by telephone at (202) 691–6199.

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 37.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

Definitions

Number of stoppages: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

Workers involved: The number of workers directly involved in the stoppage.

Number of days idle: The aggregate number of workdays lost by workers involved in the stoppages.

Days of idleness as a percent of esti-

mated working time: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

ADDITIONAL INFORMATION on work stop-pages data is available at **www. bls. gov/cba/home.htm** or by telephone at (202) 691–6199.

Price Data

(Tables 2; 38–46)

Price data are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—December 2003 = 100 for many Producer Price Indexes (unless otherwise noted), 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 39. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of homeownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION, contact the Division of Prices and Price Indexes: (202) 691–7000.

Producer Price Indexes

Description of the series

Producer Price Indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the 2002 North American Industry Classification System and product codes developed by the U.S. Census Bureau.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods and services traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allow-

ances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification, the three-digit level for the Standard International Trade Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. The trade weights currently used to compute both indexes relate to 2000.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

FOR ADDITIONAL INFORMATION, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 47–50)

Business and major sectors

Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

Definitions

Output per hour of all persons (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, nonenergy materials, and purchased business services.

Compensation per hour is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

Unit labor costs are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

Unit nonlabor costs contain all the components of unit nonlabor payments except unit profits.

Unit profits include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

Hours of all persons are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

Labor inputs are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

Capital services are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

Combined units of labor and capital inputs are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 47–50 describe the relationship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

Industry productivity measures

Description of the series

The BLS industry productivity indexes measure the relationship between output and inputs for selected industries and industry groups, and thus reflect trends in industry efficiency over time. Industry measures include labor productivity, multifactor productivity, compensation, and unit labor costs.

The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

Definitions

Output per hour is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series is based on the hours of all workers or, in the case of some transportation industries, on the number of employees. For most industries, the series consists of the hours of all employees. For some trade and services industries, the series also includes the hours of partners, proprietors, and unpaid family workers.

Unit labor costs represent the labor compensation costs per unit of output produced, and are derived by dividing an index of labor compensation by an index of output. **Labor compensation** includes payroll as well as supplemental payments, including both legally required expenditures and payments for voluntary programs.

Multifactor productivity is derived by dividing an index of industry output by an index of combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate purchases. The measure of **capital input** represents the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories. The measure of **intermediate purchases** is a combination of purchased materials, services, fuels, and electricity.

Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics and the Census Bureau, with additional data supplied by other government agencies, trade associations, and other sources.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618, or visit the Web site at: **www.bls.gov/lpc/home.htm**

International Comparisons

(Tables 51–53)

Labor force and unemployment

Description of the series

Tables 51 and 52 present comparative measures of the labor force, employment, and unemployment approximating U.S. concepts for the United States, Canada, Australia, Japan, and six European countries. The Bureau adjusts the figures for these selected countries, for all known major definitional differences, to the extent that data to prepare adjustments are available. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For further information on adjustments and comparability issues, see Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review,* June 2000, pp. 3–20, available on the Internet at **www.bls.gov/opub/mlr/2000/06/art1full.pdf**.

Definitions

For the principal U.S. definitions of the labor force, employment, and unemployment, see the Notes section on Employment and Unemployment Data: Household survey data.

Notes on the data

Foreign country data are adjusted as closely as possible to the U.S. definitions. Primary areas of adjustment address conceptual differences in upper age limits and definitions of employment and unemployment, provided that reliable data are available to make these adjustments. Adjustments are made where applicable to include employed and unemployed persons above upper age limits; some European countries do not include persons older than age 64 in their labor force measures, because a large portion of this population has retired. Adjustments are made to exclude active duty military from employment figures, although a small number of career military may be included in some European countries. Adjustments are made to exclude unpaid family workers who worked fewer than 15 hours per week from employment figures; U.S. concepts do not include them in employment, whereas most foreign countries include all unpaid family workers regardless of the number of hours worked. Adjustments are made to include full-time students seeking work and available for work as unemployed when they are classified as not in the labor force.

Where possible, lower age limits are based on the age at which compulsory schooling ends in each country, rather than based on the U.S. standard of 16. Lower age limits have ranged between 13 and 16 over the years covered; currently, the lower age limits are either 15 or 16 in all 10 countries.

Some adjustments for comparability are not made because data are unavailable for adjustment purposes. For example, no adjustments to unemployment are usually made for deviations from U.S. concepts in the treatment of persons waiting to start a new job or passive job seekers. These conceptual differences have little impact on the measures. Furthermore, BLS studies have concluded that no adjustments should be made for persons on layoff who are counted as employed in some countries because of their strong job attachment as evidenced by, for example, payment of salary or the existence of a recall date. In the United States, persons on layoff have weaker job attachment and are classified as unemployed.

The annual labor force measures are obtained from monthly, quarterly, or continuous household surveys and may be calculated as averages of monthly or quarterly data. Quarterly and monthly unemployment rates are based on household surveys. For some countries, they are calculated by applying annual adjustment factors to current published data and, therefore, are less precise indicators of unemployment under U.S. concepts than the annual figures. The labor force measures may have breaks in series over time due to changes in surveys, sources, or estimation methods. Breaks are noted in data tables.

For up-to-date information on adjustments and breaks in series, see the Technical Notes of *Comparative Civilian Labor Force Statistics, 10 Countries*, on the Internet at **www.bls.gov/fls/flscomparelf.htm**, and the Notes of *Unemployment rates in 10 countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted*, on the Internet at **www.bls.gov/fls/flsjec.pdf**.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654 or **flshelp@bls.gov.**

Manufacturing productivity and labor costs

Description of the series

Table 53 presents comparative indexes of manufacturing output per hour (labor productivity), output, total hours, compensation per hour, and unit labor costs for the United States, Australia, Canada, Japan, the Republic of Korea, Singapore, Taiwan, and 10 European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. BLS does *not* recommend using these series for level comparisons because of technical problems.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to employees (wage and salary earners) in Belgium and Taiwan. For all other economies, the measures refer to all employed persons, including employees, self-employed persons, and unpaid family workers.

The data for recent years are based on the United Nations System of National Accounts 1993 (SNA 93). Manufacturing is generally defined according to the International Standard Industrial Classification (ISIC). However, the measures for France include parts of mining as well. For the United States and Canada, manufacturing is defined according to the North American Industry Classification System (NAICS 97).

Definitions

Output. For most economies, the output measures are real value added in manufacturing from national accounts. However, output for Japan prior to 1970 and for the Netherlands prior to 1960 are indexes of industrial production. The manufacturing value added measures for the United Kingdom are essentially identical to their indexes of industrial production.

For United States, the output measure for the manufacturing sector is a chain-weighted index of real gross product originating (deflated value added) produced by the Bureau of Economic Analysis of the U.S. Department of Commerce. Most of the other economies now also use chain-weighted as opposed to fixed-year weights that are periodically updated.

To preserve the comparability of the U.S. measures with those of other economies, BLS uses gross product originating in manufacturing for the United States. The gross product originating series differs from the manufacturing output series that BLS publishes in its quarterly news releases on U.S. productivity and costs (and that underlies the measures that appear in tables 48 and 50 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

Total hours refer to hours worked in all economies. The measures are developed from statistics of manufacturing employment and average hours. For most other economies, recent years' aggregate hours series are obtained from national statistical offices, usually from national accounts. However, for some economies and for earlier years, BLS calculates the aggregate hours series using employment figures published with the national accounts, or other comprehensive employment series, and data on average hours worked.

Hourly compensation is total compensation divided by total hours. Total compensation includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. For Australia, Canada, France, Singapore, and Sweden, compensation is increased to account for important taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for subsidies.

Labor productivity is defined as real output per hour worked. Although the labor productivity measure presented in this release relates output to the hours worked of persons employed in manufacturing, it does not measure the specific contributions of labor as a single factor of production. Rather, it reflects the joint effects of many influences, including new technology, capital investment, capacity utilization, energy use, and managerial skills, as well as the skills and efforts of the workforce.

Unit labor costs are defined as the cost of labor input required to produce one unit of output. They are computed as compensation in nominal terms divided by real output. Unit labor costs can also be computed by dividing hourly compensation by output per hour, that is, by labor productivity.

Notes on the data

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, go to **http://www.bls.gov/news.release/prod4.toc.htm** or contact the Division of International Labor Comparison at (202) 691–5654.

Occupational Injury and Illness Data

(Tables 54–55)

Survey of Occupational Injuries and Illnesses

Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

Occupational illness is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

Lost workday injuries and illnesses are cases that involve days away from work, or days of restricted work activity, or both.

Lost workdays include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both,

because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

Incidence rates are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at: **www.bls. gov/iif/**

Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

Definition

A fatal work injury is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses,which can be difficult to identify due to long latency periods.

Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at: **www.bls.gov/iif/**

1. Labor market indicators

Selected indicators	2007	2008	2007			2008				2009	
			II	III	IV	I	II	III	IV	I	II
Employment data											
Employment status of the civilian noninstitutional population (household survey): [1]											
Labor force participation rate	66.0	66.0	66.0	65.9	66.0	66.0	66.1	66.1	65.9	65.6	65.8
Employment-population ratio	63.0	62.2	63.0	62.9	62.8	62.8	62.5	62.1	61.3	60.3	59.7
Unemployment rate	4.6	5.8	4.5	4.7	4.8	4.9	5.4	6.0	6.9	8.1	9.2
Men	4.7	6.1	4.6	4.8	4.9	5.1	5.6	6.5	7.5	8.8	10.4
16 to 24 years	11.6	14.4	11.5	11.8	12.1	12.7	13.5	14.9	16.5	18.0	20.0
25 years and older	3.6	4.8	3.5	3.6	3.7	3.9	4.2	5.1	6.0	7.4	8.8
Women	4.5	5.4	4.4	4.6	4.7	4.8	5.1	5.6	6.1	7.2	8.0
16 to 24 years	9.4	11.2	9.0	9.7	9.9	10.1	11.1	11.9	11.6	12.9	14.4
25 years and older	3.6	4.4	3.6	3.7	3.8	3.9	4.1	4.5	5.2	6.2	6.9
Employment, nonfarm (payroll data), in thousands: [1]											
Total nonfarm	137,598	137,066	137,645	137,652	138,152	137,814	137,356	136,732	135,074	133,000	131,692
Total private	115,380	114,566	115,400	115,389	115,783	115,373	114,834	114,197	112,542	110,457	109,138
Goods-producing	22,233	21,419	22,289	22,099	22,043	21,800	21,507	21,247	20,532	19,520	18,815
Manufacturing	13,879	13,431	13,889	13,796	13,777	13,643	13,505	13,322	12,902	12,296	11,854
Service-providing	115,366	115,646	115,356	115,553	116,109	116,014	115,849	115,485	114,542	113,480	112,877
Average hours:											
Total private	33.9	33.6	33.9	33.8	33.8	33.8	33.6	33.6	33.3	33.1	33.0
Manufacturing	41.2	40.8	41.3	41.3	41.2	41.2	40.9	40.5	39.9	39.4	39.5
Overtime	4.2	3.7	4.3	4.1	4.1	4.0	3.8	3.5	2.9	2.6	2.8
Employment Cost Index[1, 2, 3]											
Total compensation:											
Civilian nonfarm[4]	3.3	2.6	.8	1.0	.6	.8	.7	.8	.3	.4	.4
Private nonfarm	3.0	2.4	.9	.8	.6	.9	.7	.6	.2	.4	.3
Goods-producing[5]	2.4	2.4	1.0	.5	.6	1.0	.7	.4	.3	.4	.3
Service-providing[5]	3.2	2.5	.9	.9	.6	.9	.7	.6	.3	.4	.3
State and local government	4.1	3.0	.6	1.8	.7	.5	.5	1.7	.3	.6	.5
Workers by bargaining status (private nonfarm):											
Union	2.0	2.8	1.2	.5	.7	.8	.8	.7	.6	1.0	.6
Nonunion	3.2	2.4	.9	.8	.6	.9	.7	.6	.2	.3	.2

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

[4] Excludes Federal and private household workers.

[5] Goods-producing industries include mining, construction, and manufacturing. Service-providing industries include all other private sector industries.

NOTE: Beginning in January 2003, household survey data reflect revised population controls. Nonfarm data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC based data.

2. Annual and quarterly percent changes in compensation, prices, and productivity

Selected measures	2007	2008	2007			2008				2009	
			II	III	IV	I	II	III	IV	I	II
Compensation data[1, 2, 3]											
Employment Cost Index—compensation:											
Civilian nonfarm	3.3	2.6	0.8	1.0	0.6	0.8	0.7	0.8	0.3	0.4	0.4
Private nonfarm	3.0	2.4	.9	.8	.6	.9	.7	.6	.2	.4	.3
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.4	2.7	.7	1.0	.7	.8	.7	.8	.3	.4	.4
Private nonfarm	3.3	2.6	.8	.9	.6	.9	.7	.6	.3	.4	.3
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	2.8	3.8	1.5	.1	.7	1.7	2.5	0	-3.9	1.2	1.4
Producer Price Index:											
Finished goods	3.9	6.3	1.9	.1	1.8	2.8	4.2	-.1	-7.4	.1	3.1
Finished consumer goods	4.5	7.4	2.5	.2	1.9	3.4	5.2	-.4	-10.0	.1	4.3
Capital equipment	1.8	2.8	-.1	-.1	1.2	.7	.6	1.0	1.9	-.1	.0
Intermediate materials, supplies, and components	4.1	10.5	3.2	.1	2.0	5.0	6.9	.7	-13.6	-2.0	2.7
Crude materials	12.1	21.5	3.8	-2.4	11.9	14.5	14.9	-15.6	-32.1	-7.4	13.1
Productivity data[4]											
Output per hour of all persons:											
Business sector	1.8	1.9	3.5	5.5	1.6	.2	3.1	.3	.8	.2	6.3
Nonfarm business sector	1.8	1.8	2.8	5.5	2.0	-.1	3.1	-.1	.8	.3	6.4
Nonfinancial corporations[5]	1.0	1.9	2.8	-1.1	5.3	-2.7	6.9	3.2	-1.4	-6.0	-

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

[4] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[5] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly change					Four quarters ending—				
	2008			2009		2008			2009	
	II	III	IV	I	II	II	III	IV	I	II
Average hourly compensation:[1]										
All persons, business sector	1.6	4.5	2.6	-2.5	0.1	2.6	2.9	2.5	1.5	1.1
All persons, nonfarm business sector	1.3	4.5	2.9	-2.4	.2	2.7	3.1	2.6	1.5	1.3
Employment Cost Index—compensation:[2]										
Civilian nonfarm[3]	.7	.8	.3	.4	.4	3.1	2.9	2.6	2.1	1.8
Private nonfarm	.7	.6	.2	.4	.3	3.0	2.8	2.4	1.9	1.5
Union	.8	.7	.6	1.0	.6	2.7	2.9	2.8	3.0	2.9
Nonunion	.7	.6	.2	.3	.2	3.0	2.8	2.4	1.8	1.2
State and local government	.5	1.7	.3	.6	.5	3.5	3.4	3.0	3.1	3.2
Employment Cost Index—wages and salaries:[2]										
Civilian nonfarm[3]	.7	.8	.3	.4	.4	3.2	3.1	2.7	2.2	1.8
Private nonfarm	.7	.6	.3	.4	.3	3.1	2.9	2.6	2.0	1.6
Union	1.1	.7	.7	.6	.7	2.9	2.9	3.2	3.1	2.7
Nonunion	.7	.6	.2	.4	.2	3.2	3.0	2.5	1.9	1.4
State and local government	.5	1.8	.3	.5	.5	3.4	3.5	3.1	3.0	3.0

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

[3] Excludes Federal and private household workers.

4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2009							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
TOTAL															
Civilian noninstitutional population[1]	231,867	233,788	233,627	233,864	234,107	234,360	234,612	234,828	235,035	234,739	234,913	235,086	235,271	235,452	235,655
Civilian labor force	153,124	154,287	154,400	154,506	154,823	154,621	154,878	154,620	154,447	153,716	154,214	154,048	154,731	155,081	154,926
Participation rate	66.0	66.0	66.1	66.1	66.1	66.0	66.0	65.8	65.7	65.5	65.6	65.5	65.8	65.9	65.7
Employed	146,047	145,362	145,738	145,596	145,273	145,029	144,657	144,144	143,338	142,099	141,748	140,887	141,007	140,570	140,196
Employment-population ratio[2]	63.0	62.2	62.4	62.3	62.1	61.9	61.7	61.4	61.0	60.5	60.3	59.9	59.9	59.7	59.5
Unemployed	7,078	8,924	8,662	8,910	9,550	9,592	10,221	10,476	11,108	11,616	12,467	13,161	13,724	14,511	14,729
Unemployment rate	4.6	5.8	5.6	5.8	6.2	6.2	6.6	6.8	7.2	7.6	8.1	8.5	8.9	9.4	9.5
Not in the labor force	78,743	79,501	79,227	79,358	79,284	79,739	79,734	80,208	80,588	81,023	80,699	81,038	80,541	80,371	80,729
Men, 20 years and over															
Civilian noninstitutional population[1]	103,555	104,453	104,371	104,490	104,613	104,741	104,869	104,978	105,083	104,902	104,999	105,095	105,196	105,299	105,412
Civilian labor force	78,596	79,047	79,055	79,286	79,308	79,392	79,380	79,335	78,998	78,585	78,687	78,578	79,081	79,395	79,291
Participation rate	75.9	75.7	75.7	75.9	75.8	75.8	75.7	75.6	75.2	74.9	74.9	74.8	75.2	75.4	75.2
Employed	75,337	74,750	74,949	74,973	74,737	74,503	74,292	74,045	73,285	72,613	72,293	71,655	71,678	71,593	71,387
Employment-population ratio[2]	72.8	71.6	71.8	71.8	71.4	71.1	70.8	70.5	69.7	69.2	68.9	68.2	68.1	68.0	67.7
Unemployed	3,259	4,297	4,106	4,313	4,572	4,889	5,088	5,290	5,714	5,972	6,394	6,923	7,403	7,802	7,904
Unemployment rate	4.1	5.4	5.2	5.4	5.8	6.2	6.4	6.7	7.2	7.6	8.1	8.8	9.4	9.8	10.0
Not in the labor force	24,959	25,406	25,315	25,204	25,305	25,349	25,489	25,643	26,085	26,318	26,312	26,516	26,115	25,904	26,121
Women, 20 years and over															
Civilian noninstitutional population[1]	111,330	112,260	112,183	112,290	112,401	112,518	112,633	112,731	112,825	112,738	112,824	112,908	112,999	113,089	113,189
Civilian labor force	67,516	68,382	68,421	68,273	68,666	68,385	68,700	68,753	68,891	68,584	68,917	68,977	69,148	69,112	69,060
Participation rate	60.6	60.9	61.0	60.8	61.1	60.8	61.0	61.0	61.1	60.8	61.1	61.1	61.2	61.1	61.0
Employed	64,799	65,039	65,169	65,103	65,003	65,008	64,975	64,902	64,860	64,298	64,271	64,148	64,226	63,895	63,810
Employment-population ratio[2]	58.2	57.9	58.1	58.0	57.8	57.8	57.7	57.6	57.5	57.0	57.0	56.8	56.8	56.5	56.4
Unemployed	2,718	3,342	3,252	3,170	3,662	3,377	3,725	3,851	4,031	4,286	4,646	4,828	4,922	5,217	5,249
Unemployment rate	4.0	4.9	4.8	4.6	5.3	4.9	5.4	5.6	5.9	6.2	6.7	7.0	7.1	7.5	7.6
Not in the labor force	43,814	43,878	43,762	44,017	43,736	44,133	43,933	43,978	43,935	44,154	43,907	43,931	43,850	43,976	44,130
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,982	17,075	17,073	17,084	17,092	17,101	17,110	17,118	17,126	17,098	17,090	17,083	17,076	17,064	17,053
Civilian labor force	7,012	6,858	6,924	6,947	6,849	6,844	6,799	6,531	6,557	6,547	6,610	6,493	6,501	6,573	6,575
Participation rate	41.3	40.2	40.6	40.7	40.1	40.0	39.7	38.2	38.3	38.3	38.7	38.0	38.1	38.5	38.6
Employed	5,911	5,573	5,620	5,520	5,533	5,518	5,390	5,196	5,194	5,188	5,184	5,083	5,103	5,082	4,999
Employment-population ratio[2]	34.8	32.6	32.9	32.3	32.4	32.3	31.5	30.4	30.3	30.3	30.3	29.8	29.9	29.8	29.3
Unemployed	1,101	1,285	1,304	1,427	1,316	1,326	1,408	1,335	1,363	1,359	1,427	1,410	1,398	1,491	1,576
Unemployment rate	15.7	18.7	18.8	20.5	19.2	19.4	20.7	20.4	20.8	20.8	21.6	21.7	21.5	22.7	24.0
Not in the labor force	9,970	10,218	10,149	10,137	10,243	10,257	10,311	10,587	10,568	10,551	10,480	10,590	10,575	10,491	10,478
White[3]															
Civilian noninstitutional population[1]	188,253	189,540	189,428	189,587	189,747	189,916	190,085	190,221	190,351	190,225	190,331	190,436	190,552	190,667	190,801
Civilian labor force	124,935	125,635	125,712	125,979	125,987	125,844	126,298	126,029	125,634	125,312	125,703	125,599	126,110	126,423	126,199
Participation rate	66.4	66.3	66.4	66.4	66.4	66.3	66.4	66.3	66.0	65.9	66.0	66.0	66.2	66.3	66.1
Employed	119,792	119,126	119,417	119,432	119,082	118,964	118,722	118,226	117,357	116,692	116,481	115,693	115,977	115,561	115,202
Employment-population ratio[2]	63.6	62.8	63.0	63.0	62.8	62.6	62.5	62.2	61.7	61.3	61.2	60.8	60.9	60.6	60.4
Unemployed	5,143	6,509	6,295	6,547	6,904	6,880	7,577	7,803	8,277	8,621	9,222	9,906	10,133	10,862	10,997
Unemployment rate	4.1	5.2	5.0	5.2	5.5	5.5	6.0	6.2	6.6	6.9	7.3	7.9	8.0	8.6	8.7
Not in the labor force	63,319	63,905	63,716	63,608	63,761	64,072	63,787	64,193	64,718	64,913	64,628	64,837	64,441	64,244	64,601
Black or African American[3]															
Civilian noninstitutional population[1]	27,485	27,843	27,816	27,854	27,896	27,939	27,982	28,021	28,059	28,052	28,085	28,118	28,153	28,184	28,217
Civilian labor force	17,496	17,740	17,708	17,744	17,949	17,733	17,768	17,708	17,796	17,791	17,703	17,542	17,816	17,737	17,700
Participation rate	63.7	63.7	63.7	63.7	64.3	63.5	63.5	63.2	63.4	63.4	63.0	62.4	63.3	62.9	62.7
Employed	16,051	15,953	16,041	15,989	16,026	15,709	15,762	15,703	15,674	15,546	15,336	15,212	15,142	15,095	15,103
Employment-population ratio[2]	58.4	57.3	57.7	57.4	57.4	56.2	56.3	56.0	55.9	55.4	54.6	54.1	53.8	53.6	53.5
Unemployed	1,445	1,788	1,667	1,755	1,923	2,024	2,006	2,005	2,122	2,245	2,368	2,330	2,673	2,642	2,597
Unemployment rate	8.3	10.1	9.4	9.9	10.7	11.4	11.3	11.3	11.9	12.6	13.4	13.3	15.0	14.9	14.7
Not in the labor force	9,989	10,103	10,109	10,111	9,947	10,206	10,214	10,313	10,263	10,261	10,382	10,576	10,337	10,446	10,517

See footnotes at end of table.

4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

Employment status	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Hispanic or Latino ethnicity															
Civilian noninstitutional population[1]	31,383	32,141	32,087	32,179	32,273	32,369	32,465	32,558	32,649	32,417	32,501	32,585	32,671	32,753	32,839
Civilian labor force	21,602	22,024	22,100	22,062	22,201	22,259	22,187	22,074	22,134	21,931	22,100	22,175	22,376	22,438	22,347
Participation rate	68.8	68.5	68.9	68.6	68.8	68.8	68.3	67.8	67.8	67.7	68.0	68.1	68.5	68.5	68.1
Employed	20,382	20,346	20,391	20,396	20,404	20,506	20,232	20,168	20,096	19,800	19,684	19,640	19,854	19,595	19,623
Employment-population ratio[2]	64.9	63.3	63.5	63.4	63.2	63.4	62.3	61.9	61.6	61.1	60.6	60.3	60.8	59.8	59.8
Unemployed	1,220	1,678	1,709	1,665	1,797	1,752	1,955	1,906	2,038	2,132	2,416	2,536	2,521	2,843	2,724
Unemployment rate	5.6	7.6	7.7	7.5	8.1	7.9	8.8	8.6	9.2	9.7	10.9	11.4	11.3	12.7	12.2
Not in the labor force	9,781	10,116	9,987	10,117	10,072	10,111	10,278	10,484	10,515	10,486	10,401	10,410	10,295	10,315	10,491

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

[3] Beginning in 2003, persons who selected this race group only; persons who selected more than one race group are not included. Prior to 2003, persons who reported more than one race were included in the group they identified as the main race.

NOTE: Estimates for the above race groups (white and black or African American) do not sum to totals because data are not presented for all races. In addition, persons whose ethnicity is identified as Hispanic or Latino may be of any race and, therefore, are classified by ethnicity as well as by race. Beginning in January 2003, data reflect revised population controls used in the household survey.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Characteristic															
Employed, 16 years and older	146,047	145,362	145,738	145,596	145,273	145,029	144,657	144,144	143,338	142,099	141,748	140,887	141,007	140,570	140,196
Men	78,254	77,486	77,726	77,683	77,484	77,249	76,938	76,577	75,847	75,092	74,777	74,053	74,116	74,033	73,777
Women	67,792	67,876	68,012	67,913	67,789	67,780	67,720	67,567	67,491	67,007	66,970	66,834	66,890	66,537	66,419
Married men, spouse present	46,314	45,860	45,902	46,093	45,804	45,887	45,787	45,610	45,182	44,712	44,502	44,470	44,469	44,255	44,294
Married women, spouse present	35,832	35,869	36,189	36,110	35,994	35,864	35,590	35,649	35,632	35,375	35,563	35,481	35,444	35,391	35,464
Persons at work part time[1]															
All industries:															
Part time for economic reasons	4,401	5,875	5,495	5,813	5,879	6,292	6,848	7,323	8,038	7,839	8,626	9,049	8,910	9,084	8,989
Slack work or business conditions	2,877	4,169	3,905	4,220	4,240	4,418	4,953	5,399	6,020	5,766	6,443	6,857	6,699	6,794	6,783
Could only find part-time work	1,210	1,389	1,359	1,300	1,412	1,514	1,514	1,585	1,617	1,667	1,764	1,839	1,810	1,922	1,980
Part time for noneconomic reasons	19,756	19,343	19,428	19,348	19,690	19,275	19,083	18,886	18,922	18,864	18,855	18,833	19,065	18,872	18,718
Nonagricultural industries:															
Part time for economic reasons	4,317	5,773	5,390	5,693	5,802	6,167	6,742	7,209	7,932	7,705	8,543	8,942	8,826	8,928	8,845
Slack work or business conditions	2,827	4,097	3,839	4,160	4,171	4,279	4,889	5,304	5,938	5,660	6,390	6,773	6,650	6,681	6,699
Could only find part-time work	1,199	1,380	1,340	1,287	1,385	1,541	1,499	1,579	1,619	1,658	1,760	1,850	1,802	1,909	1,969
Part time for noneconomic reasons	19,419	19,005	19,036	18,992	19,269	18,930	18,808	18,635	18,642	18,567	18,562	18,493	18,661	18,502	18,358

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Characteristic															
Total, 16 years and older	4.6	5.8	5.6	5.8	6.2	6.2	6.6	6.8	7.2	7.6	8.1	8.5	8.9	9.4	9.5
Both sexes, 16 to 19 years	15.7	18.7	18.8	20.5	19.2	19.4	20.7	20.4	20.8	20.8	21.6	21.7	21.5	22.7	24.0
Men, 20 years and older	4.1	5.4	5.2	5.4	5.8	6.2	6.4	6.7	7.2	7.6	8.1	8.8	9.4	9.8	10.0
Women, 20 years and older	4.0	4.9	4.8	4.6	5.3	4.9	5.4	5.6	5.9	6.2	6.7	7.0	7.1	7.5	7.6
White, total [1]	4.1	5.2	5.0	5.2	5.5	5.5	6.0	6.2	6.6	6.9	7.3	7.9	8.0	8.6	8.7
Both sexes, 16 to 19 years	13.9	16.8	17.0	19.1	17.3	17.5	18.6	18.4	18.7	18.4	19.1	20.0	19.7	20.3	21.4
Men, 16 to 19 years	15.7	19.1	18.7	22.4	19.5	19.7	22.6	21.4	21.4	21.8	22.2	23.3	22.5	24.4	23.9
Women, 16 to 19 years	12.1	14.4	15.3	15.6	15.0	15.2	14.4	15.3	16.0	14.8	16.0	16.7	16.9	16.0	18.9
Men, 20 years and older	3.7	4.9	4.6	4.8	5.1	5.5	5.8	6.1	6.5	6.8	7.4	8.0	8.5	9.0	9.2
Women, 20 years and older	3.6	4.4	4.2	4.2	4.7	4.2	4.9	5.1	5.5	5.8	6.1	6.5	6.4	6.9	6.8
Black or African American, total [1]	8.3	10.1	9.4	9.9	10.7	11.4	11.3	11.3	11.9	12.6	13.4	13.3	15.0	14.9	14.7
Both sexes, 16 to 19 years	29.4	31.2	29.8	32.0	29.3	29.8	32.9	32.2	33.7	36.5	38.8	32.5	34.7	39.4	37.9
Men, 16 to 19 years	33.8	35.9	35.4	37.7	29.8	32.9	37.2	42.0	35.2	44.0	45.6	41.2	42.1	46.1	44.4
Women, 16 to 19 years	25.3	26.8	24.4	26.8	28.9	26.7	27.8	23.2	32.2	29.8	32.1	25.2	27.2	34.0	32.4
Men, 20 years and older	7.9	10.2	9.7	10.3	10.6	11.9	11.8	12.1	13.4	14.1	14.9	15.4	17.2	16.8	16.4
Women, 20 years and older	6.7	8.1	7.5	7.5	9.1	9.3	8.9	9.0	8.9	9.2	9.9	9.9	11.5	11.2	11.3
Hispanic or Latino ethnicity	5.6	7.6	7.7	7.5	8.1	7.9	8.8	8.6	9.2	9.7	10.9	11.4	11.3	12.7	12.2
Married men, spouse present	2.5	3.4	3.1	3.3	3.7	3.9	4.1	4.2	4.4	5.0	5.5	5.8	6.3	6.8	6.9
Married women, spouse present	2.8	3.6	3.4	3.4	3.7	3.5	4.2	4.3	4.5	4.7	5.1	5.4	5.5	5.7	5.6
Full-time workers	4.6	5.8	5.6	5.8	6.3	6.3	6.8	7.0	7.5	8.0	8.6	9.2	9.6	10.2	10.3
Part-time workers	4.9	5.5	5.4	5.6	5.7	5.9	5.7	5.8	5.9	5.9	5.8	5.9	6.1	6.0	5.9
Educational attainment [2]															
Less than a high school diploma	7.1	9.0	8.9	8.6	9.7	9.8	10.4	10.6	10.9	12.0	12.6	13.3	14.8	15.5	15.5
High school graduates, no college [3]	4.4	5.7	5.2	5.3	5.8	6.3	6.5	6.9	7.7	8.0	8.3	9.0	9.3	10.0	9.8
Some college or associate degree	3.6	4.6	4.4	4.6	5.0	5.1	5.3	5.5	5.6	6.2	7.0	7.2	7.4	7.7	8.0
Bachelor's degree and higher [4]	2.0	2.6	2.4	2.5	2.7	2.6	3.1	3.2	3.7	3.8	4.1	4.3	4.4	4.8	4.7

[1] Beginning in 2003, persons who selected this race group only; persons who selected more than one race group are not included. Prior to 2003, persons who reported more than one race were included in the group they identified as the main race.

[2] Data refer to persons 25 years and older.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Less than 5 weeks	2,542	2,932	2,733	2,884	3,242	2,864	3,108	3,255	3,267	3,658	3,404	3,371	3,346	3,275	3,204
5 to 14 weeks	2,232	2,804	3,012	2,853	2,874	3,083	3,055	3,141	3,398	3,519	3,969	4,041	3,982	4,321	4,066
15 weeks and over	2,303	3,188	2,966	3,168	3,447	3,662	4,109	3,964	4,517	4,634	5,264	5,715	6,211	7,002	7,833
15 to 26 weeks	1,061	1,427	1,345	1,450	1,568	1,621	1,834	1,757	1,927	1,987	2,347	2,534	2,531	3,054	3,452
27 weeks and over	1,243	1,761	1,621	1,718	1,878	2,041	2,275	2,207	2,591	2,647	2,917	3,182	3,680	3,948	4,381
Mean duration, in weeks	16.8	17.9	17.6	17.3	17.6	18.7	19.8	18.9	19.7	19.8	19.8	20.1	21.4	22.5	24.5
Median duration, in weeks	8.5	9.4	10.1	9.8	9.3	10.3	10.6	10.0	10.6	10.3	11.0	11.2	12.5	14.9	17.9

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Reason for unemployment	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Job losers[1]	3,515	4,789	4,465	4,595	4,994	5,348	5,811	6,156	6,471	6,980	7,696	8,243	8,814	9,546	9,649
On temporary layoff	976	1,176	1,106	1,041	1,279	1,396	1,367	1,413	1,524	1,441	1,488	1,557	1,625	1,832	1,762
Not on temporary layoff	2,539	3,614	3,358	3,554	3,715	3,952	4,443	4,744	4,946	5,539	6,208	6,686	7,189	7,714	7,886
Job leavers	793	896	847	875	999	982	946	940	1,007	917	820	887	890	910	822
Reentrants	2,142	2,472	2,562	2,668	2,678	2,587	2,650	2,655	2,777	2,751	2,834	2,974	3,087	3,180	3,335
New entrants	627	766	761	818	829	822	825	760	829	780	1,005	868	900	956	947
Percent of unemployed															
Job losers[1]	49.7	53.7	51.7	51.3	52.6	54.9	56.8	58.6	58.4	61.1	62.3	63.5	64.4	65.4	65.4
On temporary layoff	13.8	13.2	12.8	11.6	13.5	14.3	13.4	13.4	13.8	12.6	12.0	12.0	11.9	12.6	11.9
Not on temporary layoff	35.9	40.5	38.9	39.7	39.1	40.6	43.4	45.1	44.6	48.5	50.2	51.5	52.5	52.9	53.5
Job leavers	11.2	10.0	9.8	9.8	10.5	10.1	9.2	8.9	9.1	8.0	6.6	6.8	6.5	6.2	5.6
Reentrants	30.3	27.7	29.7	29.8	28.2	26.6	25.9	25.3	25.1	24.1	22.9	22.9	22.5	21.8	22.6
New entrants	8.9	8.6	8.8	9.1	8.7	8.4	8.1	7.2	7.5	6.8	8.1	6.7	6.6	6.6	6.4
Percent of civilian labor force															
Job losers[1]	2.3	3.1	2.9	3.0	3.2	3.5	3.8	4.0	4.2	4.5	5.0	5.4	5.7	6.2	6.2
Job leavers	.5	.6	.5	.6	.6	.6	.6	.6	.7	.6	.5	.6	.6	.6	.5
Reentrants	1.4	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	2.0	2.1	2.2
New entrants	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.7	.6	.6	.6	.6

[1] Includes persons who completed temporary jobs.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

Sex and age	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Total, 16 years and older	4.6	5.8	5.6	5.8	6.2	6.2	6.6	6.8	7.2	7.6	8.1	8.5	8.9	9.4	9.5
16 to 24 years	10.5	12.8	12.9	13.5	13.3	13.4	13.8	13.9	14.7	14.8	15.5	16.3	16.7	17.3	17.8
16 to 19 years	15.7	18.7	18.8	20.5	19.2	19.4	20.7	20.4	20.8	20.8	21.6	21.7	21.5	22.7	24.0
16 to 17 years	17.5	22.1	23.2	24.9	22.2	21.7	23.1	24.1	24.1	21.4	22.9	23.7	23.0	23.4	25.1
18 to 19 years	14.5	16.8	15.9	17.6	17.4	17.8	18.4	18.3	19.1	20.2	21.0	20.9	21.3	22.9	23.7
20 to 24 years	8.2	10.2	10.2	10.4	10.7	10.8	10.6	11.1	12.1	12.1	12.9	14.0	14.7	15.0	15.2
25 years and older	3.6	4.6	4.4	4.5	5.0	5.0	5.3	5.6	6.0	6.4	6.9	7.2	7.5	8.1	8.2
25 to 54 years	3.7	4.8	4.6	4.7	5.2	5.3	5.5	5.8	6.3	6.7	7.2	7.6	7.8	8.4	8.5
55 years and older	3.1	3.8	3.4	3.7	4.1	4.2	4.6	4.8	4.9	5.2	5.6	6.2	6.4	6.7	7.0
Men, 16 years and older	4.7	6.1	5.9	6.2	6.4	6.8	7.2	7.4	7.9	8.3	8.8	9.5	10.0	10.5	10.6
16 to 24 years	11.6	14.4	14.1	15.3	14.6	14.8	16.5	16.1	16.9	17.1	17.6	19.3	19.8	20.2	19.8
16 to 19 years	17.6	21.2	20.8	23.5	21.1	21.4	24.7	24.0	23.3	24.4	24.9	25.7	25.6	26.7	26.2
16 to 17 years	19.4	25.2	26.1	29.3	24.5	23.2	27.3	28.8	27.0	26.5	26.5	28.2	26.3	26.1	25.8
18 to 19 years	16.5	19.0	17.5	20.1	19.0	20.4	21.7	21.2	21.5	22.8	24.7	24.6	25.3	27.8	26.9
20 to 24 years	8.9	11.4	11.2	11.7	11.7	11.9	12.9	12.9	14.2	14.1	14.6	16.7	17.5	17.5	17.2
25 years and older	3.6	4.8	4.5	4.8	5.1	5.5	5.6	5.9	6.4	6.9	7.5	7.9	8.3	9.0	9.2
25 to 54 years	3.7	5.0	4.7	5.0	5.3	5.8	5.8	6.1	6.7	7.3	7.9	8.3	8.8	9.5	9.5
55 years and older	3.2	3.9	3.5	3.8	4.3	4.5	4.7	5.1	5.1	5.3	6.0	6.3	6.7	7.0	7.7
Women, 16 years and older	4.5	5.4	5.3	5.3	5.9	5.5	5.9	6.1	6.4	6.7	7.3	7.5	7.6	8.0	8.3
16 to 24 years	9.4	11.2	11.5	11.6	12.0	11.9	10.7	11.5	12.4	12.2	13.3	13.1	13.3	14.2	15.7
16 to 19 years	13.8	16.2	16.8	17.4	17.3	17.3	16.5	16.7	18.2	17.1	18.3	17.8	17.4	18.6	21.8
16 to 17 years	15.7	19.1	20.4	20.5	20.1	20.3	19.2	19.7	21.2	16.2	19.8	19.4	19.9	20.7	24.4
18 t0 19 years	12.5	14.3	14.1	14.9	15.6	14.9	14.7	15.1	16.6	17.5	17.0	17.2	17.1	17.5	20.4
20 to 24 years	7.3	8.8	8.9	8.9	9.5	9.4	8.1	9.2	9.8	10.0	10.9	11.0	11.5	12.2	12.8
25 years and older	3.6	4.4	4.2	4.2	4.9	4.4	5.1	5.2	5.4	5.8	6.2	6.5	6.6	7.0	7.0
25 to 54 years	3.8	4.6	4.5	4.4	5.1	4.6	5.2	5.4	5.7	6.0	6.4	6.7	6.7	7.2	7.2
55 years and older[1]	3.0	3.7	3.4	4.3	4.5	3.9	4.3	4.3	4.3	5.4	5.3	5.8	5.4	5.8	6.4

[1] Data are not seasonally adjusted.

NOTE: Beginning in January 2003, data reflect revised population controls used in the household survey.

10. Unemployment rates by State, seasonally adjusted

State	May 2008	Apr. 2009[p]	May 2009[p]	State	May 2008	Apr. 2009[p]	May 2009[p]
Alabama	4.7	9.0	9.8	Missouri	5.8	8.1	9.0
Alaska	6.6	7.9	8.3	Montana	4.3	6.0	6.3
Arizona	5.2	7.7	8.2	Nebraska	3.2	4.5	4.8
Arkansas	4.9	6.5	7.0	Nevada	6.1	10.6	11.2
California	6.8	11.1	11.6	New Hampshire	3.7	6.3	6.5
Colorado	4.7	7.4	7.6	New Jersey	5.1	8.4	8.8
Connecticut	5.4	7.9	8.0	New Mexico	4.0	5.8	6.5
Delaware	4.4	7.4	8.1	New York	5.2	7.7	8.2
District of Columbia	6.6	9.9	10.7	North Carolina	5.9	10.7	11.1
Florida	5.8	9.7	10.3	North Dakota	3.1	4.1	4.3
Georgia	5.9	9.2	9.6	Ohio	6.3	10.2	10.8
Hawaii	3.6	6.9	7.4	Oklahoma	3.6	6.2	6.4
Idaho	4.5	7.0	7.8	Oregon	5.7	11.8	12.2
Illinois	6.4	9.4	10.1	Pennsylvania	5.1	7.8	8.3
Indiana	5.3	9.9	10.6	Rhode Island	7.4	11.1	12.1
Iowa	4.0	5.1	5.7	South Carolina	6.3	11.4	12.0
Kansas	4.3	6.5	7.0	South Dakota	2.9	4.8	5.0
Kentucky	6.2	9.9	10.7	Tennessee	6.2	9.9	10.7
Louisiana	4.1	6.2	6.6	Texas	4.7	6.6	7.1
Maine	5.1	7.9	8.3	Utah	3.3	5.2	5.4
Maryland	4.1	6.8	7.2	Vermont	4.5	7.3	7.4
Massachusetts	4.9	8.0	8.2	Virginia	3.8	6.8	7.1
Michigan	8.2	12.9	14.1	Washington	5.1	9.0	9.1
Minnesota	5.3	8.0	8.1	West Virginia	4.3	7.7	8.4
Mississippi	6.8	9.1	9.7	Wisconsin	4.4	8.6	8.9
				Wyoming	3.0	4.5	5.0

[p] = preliminary

11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

State	May 2008	Apr. 2009[p]	May 2009[p]	State	May 2008	Apr. 2009[p]	May 2009[p]
Alabama	2,165,770	2,131,372	2,128,625	Missouri	3,010,341	3,008,361	3,010,398
Alaska	356,621	358,717	359,246	Montana	505,824	502,680	500,764
Arizona	3,113,180	3,153,411	3,152,711	Nebraska	994,761	990,513	986,374
Arkansas	1,370,462	1,358,972	1,359,936	Nevada	1,363,718	1,400,452	1,405,644
California	18,350,638	18,629,516	18,540,642	New Hampshire	738,886	744,003	741,954
Colorado	2,726,411	2,737,359	2,721,183	New Jersey	4,491,277	4,572,378	4,560,364
Connecticut	1,869,243	1,887,180	1,886,515	New Mexico	957,148	955,478	958,824
Delaware	441,836	438,347	437,897	New York	9,667,195	9,771,997	9,771,413
District of Columbia	332,437	326,180	328,977	North Carolina	4,523,232	4,579,637	4,567,108
Florida	9,182,221	9,247,899	9,243,663	North Dakota	368,799	369,837	368,264
Georgia	4,840,682	4,784,070	4,771,449	Ohio	5,974,256	5,968,531	5,979,690
Hawaii	654,451	646,671	649,217	Oklahoma	1,743,609	1,771,688	1,771,775
Idaho	752,952	750,167	750,801	Oregon	1,948,331	2,003,610	1,997,653
Illinois	6,721,065	6,611,172	6,667,033	Pennsylvania	6,392,041	6,430,784	6,472,104
Indiana	3,224,739	3,205,269	3,217,452	Rhode Island	567,555	563,408	566,044
Iowa	1,676,096	1,674,828	1,678,902	South Carolina	2,141,142	2,198,419	2,203,107
Kansas	1,494,100	1,521,980	1,528,417	South Dakota	443,915	446,866	446,366
Kentucky	2,037,985	2,076,540	2,077,485	Tennessee	3,045,228	3,039,141	3,041,301
Louisiana	2,063,640	2,074,281	2,068,540	Texas	11,657,814	11,924,810	11,955,424
Maine	706,045	703,855	702,616	Utah	1,379,661	1,379,354	1,382,429
Maryland	2,995,817	2,968,440	2,954,959	Vermont	354,952	360,992	360,927
Massachusetts	3,422,272	3,434,282	3,429,901	Virginia	4,110,823	4,170,518	4,170,047
Michigan	4,954,537	4,847,947	4,848,258	Washington	3,457,067	3,539,901	3,560,990
Minnesota	2,924,896	2,964,037	2,957,266	West Virginia	807,314	795,041	793,448
Mississippi	1,315,760	1,311,937	1,311,155	Wisconsin	3,075,254	3,110,840	3,105,412
				Wyoming	291,844	290,793	291,608

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the database.

[p] = preliminary

12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
TOTAL NONFARM	137,598	137,066	137,356	137,228	137,053	136,732	136,352	135,755	135,074	134,333	133,652	133,000	132,481	132,178	131,735
TOTAL PRIVATE	115,380	114,566	114,834	114,691	114,497	114,197	113,813	113,212	112,542	111,793	111,105	110,457	109,865	109,573	109,178
GOODS-PRODUCING	22,233	21,419	21,507	21,432	21,351	21,247	21,063	20,814	20,532	20,127	19,832	19,520	19,253	19,041	18,818
Natural resources and mining	724	774	770	777	787	794	794	793	789	781	771	754	740	731	725
Logging	60.1	57.0	56.0	55.8	56.1	56.5	56.6	56.6	55.7	55.2	54.5	51.9	51.4	51.3	51.1
Mining	663.8	717.0	713.8	721.3	730.6	737.7	737.7	736.8	733.3	725.3	716.4	701.9	689.0	679.6	673.8
Oil and gas extraction	146.2	161.6	160.7	162.7	164.7	166.3	166.5	167.4	169.4	167.7	167.8	166.9	167.0	168.1	169.1
Mining, except oil and gas [1]	223.4	227.7	226.9	227.6	230.0	230.2	230.5	230.7	229.2	227.9	225.7	222.8	220.4	219.4	217.7
Coal mining	77.2	80.6	79.6	79.5	81.7	82.5	83.1	84.3	84.5	84.9	84.1	83.3	82.4	81.4	80.3
Support activities for mining	294.3	327.7	326.2	331.0	335.9	341.2	340.7	338.7	334.7	329.7	322.9	312.2	301.6	292.1	287.0
Construction	7,630	7,215	7,232	7,201	7,177	7,131	7,066	6,939	6,841	6,706	6,593	6,470	6,367	6,310	6,224
Construction of buildings	1,774.2	1,659.3	1,660.6	1,655.5	1,647.5	1,625.0	1,609.9	1,588.4	1,572.9	1,536.9	1,509.5	1,481.5	1,461.7	1,451.2	1,428.3
Heavy and civil engineering	1,005.4	970.2	972.2	970.9	966.1	960.2	952.6	942.5	933.2	926.6	919.0	907.2	885.5	876.1	860.3
Speciality trade contractors	4,850.2	4,585.3	4,598.7	4,574.6	4,563.1	4,545.4	4,503.9	4,408.5	4,335.2	4,242.2	4,164.4	4,081.4	4,019.6	3,983.1	3,935.3
Manufacturing	13,879	13,431	13,505	13,454	13,387	13,322	13,203	13,082	12,902	12,640	12,468	12,296	12,146	12,000	11,869
Production workers	9,975	9,649	9,723	9,672	9,608	9,543	9,425	9,322	9,174	8,946	8,804	8,654	8,532	8,409	8,304
Durable goods	8,808	8,476	8,533	8,502	8,439	8,392	8,300	8,216	8,085	7,881	7,753	7,620	7,490	7,372	7,267
Production workers	6,250	5,986	6,040	6,006	5,948	5,898	5,805	5,741	5,633	5,458	5,352	5,239	5,130	5,034	4,952
Wood products	515.3	459.6	462.9	458.4	451.9	446.4	438.8	429.8	416.2	403.9	390.4	388.4	382.4	373.5	366.1
Nonmetallic mineral products	500.5	468.1	469.7	466.4	464.5	460.2	458.2	450.1	441.2	434.3	425.8	417.0	415.5	410.7	405.5
Primary metals	455.8	443.3	446.6	444.8	440.8	441.1	438.6	429.8	419.6	409.3	395.2	386.4	376.2	367.8	359.8
Fabricated metal products	1,562.8	1,528.3	1,534.8	1,528.4	1,530.6	1,519.4	1,505.0	1,486.3	1,461.5	1,425.3	1,399.0	1,370.3	1,344.1	1,325.9	1,308.5
Machinery	1,187.1	1,185.6	1,190.8	1,191.1	1,187.5	1,183.1	1,179.3	1,162.7	1,150.2	1,126.0	1,100.8	1,070.5	1,051.4	1,032.0	1,015.1
Computer and electronic products [1]	1,272.5	1,247.6	1,248.5	1,247.3	1,248.3	1,246.5	1,239.8	1,233.3	1,223.7	1,212.9	1,196.9	1,187.1	1,171.1	1,156.1	1,143.0
Computer and peripheral equipment	186.2	182.8	182.1	182.5	182.6	182.8	182.4	181.8	180.0	180.3	175.5	173.5	167.8	164.2	163.5
Communications equipment	128.1	129.0	130.2	129.1	129.1	129.2	128.6	129.5	129.1	129.6	129.0	128.5	127.8	127.4	126.7
Semiconductors and electronic components	447.5	432.4	431.2	431.9	432.3	431.0	428.4	423.2	417.4	410.5	403.3	397.6	389.2	382.8	374.9
Electronic instruments	443.2	441.6	442.4	441.8	442.6	442.5	440.2	438.8	437.5	433.8	431.9	430.9	431.1	427.2	424.5
Electrical equipment and appliances	429.4	424.9	428.3	428.4	425.5	422.6	421.3	417.5	412.0	406.1	399.1	389.7	382.0	378.4	375.6
Transportation equipment	1,711.9	1,606.5	1,634.3	1,625.7	1,584.5	1,572.6	1,531.3	1,532.5	1,501.8	1,423.5	1,423.7	1,400.4	1,365.9	1,335.3	1,310.8
Furniture and related products	531.1	481.0	488.0	483.4	475.7	470.3	458.8	449.6	440.6	428.6	417.4	408.8	401.0	394.4	387.8
Miscellaneous manufacturing	641.7	630.8	629.0	627.9	630.1	629.4	628.5	624.2	618.4	611.0	604.5	601.1	600.4	597.4	594.7
Nondurable goods	5,071	4,955	4,972	4,952	4,948	4,930	4,903	4,866	4,817	4,759	4,715	4,676	4,656	4,628	4,602
Production workers	3,725	3,663	3,683	3,666	3,660	3,645	3,620	3,581	3,541	3,488	3,452	3,415	3,402	3,375	3,352
Food manufacturing	1,484.1	1,484.8	1,482.1	1,478.1	1,482.7	1,484.3	1,484.7	1,489.0	1,477.6	1,470.7	1,467.2	1,464.4	1,474.9	1,471.7	1,470.6
Beverages and tobacco products	198.2	199.0	200.6	200.0	199.2	199.3	197.2	196.4	195.8	194.2	191.3	191.6	190.9	190.5	189.9
Textile mills	169.7	151.0	150.7	149.0	149.5	147.5	145.6	140.6	136.8	133.6	130.0	128.2	127.3	126.1	123.9
Textile product mills	157.7	147.5	147.1	146.2	145.2	145.5	144.5	143.5	141.2	137.4	134.2	129.3	127.5	127.0	126.5
Apparel	214.6	198.4	200.0	199.5	200.4	197.3	192.8	187.1	183.5	178.9	176.3	173.8	169.9	170.2	165.8
Leather and allied products	33.8	33.6	34.2	33.0	34.5	34.3	33.9	32.6	32.6	32.4	31.9	31.7	31.7	31.5	31.0
Paper and paper products	458.2	445.8	448.2	447.1	444.7	441.9	439.7	437.1	433.4	427.3	422.5	418.3	415.1	410.5	409.0
Printing and related support activities	622.1	594.1	594.8	591.5	591.5	587.6	582.3	574.1	567.0	558.1	549.2	541.5	534.4	529.6	523.2
Petroleum and coal products	114.5	117.1	117.6	118.1	118.0	117.9	117.8	117.2	116.9	114.2	114.6	114.5	114.6	114.5	114.2
Chemicals	860.9	849.8	852.8	850.0	847.3	844.3	843.4	842.6	837.1	832.7	828.2	823.4	818.9	814.9	811.8
Plastics and rubber products	757.2	734.2	743.4	739.3	734.7	729.7	721.1	705.9	694.9	679.7	669.3	659.0	651.1	641.4	636.4
SERVICE-PROVIDING	115,366	115,646	115,849	115,796	115,702	115,485	115,289	114,941	114,542	114,206	113,820	113,480	113,228	113,137	112,917
PRIVATE SERVICE-PROVIDING	93,147	93,146	93,327	93,259	93,146	92,950	92,750	92,398	92,010	91,666	91,273	90,937	90,612	90,532	90,360
Trade, transportation, and utilities	26,630	26,385	26,467	26,425	26,354	26,257	26,157	26,005	25,843	25,735	25,605	25,479	25,371	25,308	25,263
Wholesale trade	6,015.2	5,963.7	5,983.1	5,966.9	5,954.3	5,947.2	5,920.1	5,890.3	5,850.7	5,819.3	5,773.7	5,741.3	5,710.8	5,695.7	5,681.7
Durable goods	3,121.5	3,060.7	3,071.7	3,062.5	3,052.4	3,047.2	3,026.1	3,004.9	2,978.6	2,959.6	2,926.2	2,899.4	2,875.5	2,861.8	2,846.6
Nondurable goods	2,062.2	2,053.0	2,061.5	2,053.2	2,049.0	2,044.1	2,040.5	2,033.6	2,025.1	2,013.9	2,006.6	2,002.5	1,997.7	1,996.6	1,995.6
Electronic markets and agents and brokers	831.5	850.1	849.9	851.2	852.9	855.9	853.5	851.8	847.0	845.8	840.9	839.4	837.6	837.3	839.5
Retail trade	15,520.0	15,356.3	15,404.4	15,380.2	15,334.5	15,278.2	15,216.8	15,126.0	15,037.9	14,991.5	14,934.3	14,872.4	14,839.7	14,811.6	14,791.0
Motor vehicles and parts dealers [1]	1,908.3	1,844.5	1,866.2	1,851.4	1,832.6	1,818.4	1,792.7	1,770.5	1,745.6	1,730.1	1,716.8	1,701.8	1,690.2	1,681.6	1,673.5
Automobile dealers	1,242.2	1,186.0	1,204.7	1,191.5	1,176.2	1,164.8	1,141.7	1,121.2	1,099.9	1,088.6	1,078.7	1,067.7	1,057.1	1,050.2	1,043.0
Furniture and home furnishings stores	574.6	542.8	546.5	545.8	542.3	538.4	532.4	522.6	514.2	508.3	499.7	497.7	492.4	486.3	484.6
Electronics and appliance stores	549.4	549.6	552.9	553.0	551.0	547.1	545.1	541.5	538.6	535.5	533.7	518.6	518.0	517.0	515.2

See notes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted
[In thousands]

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
Building material and garden supply stores	1,309.3	1,253.1	1,252.2	1,244.1	1,245.9	1,248.4	1,245.9	1,235.8	1,227.8	1,214.9	1,207.1	1,193.5	1,189.3	1,186.3	1,182.0
Food and beverage stores	2,843.6	2,858.4	2,863.2	2,863.4	2,853.8	2,846.5	2,851.9	2,843.5	2,835.1	2,835.3	2,826.0	2,827.6	2,828.9	2,828.0	2,830.4
Health and personal care stores	993.1	1,002.4	1,003.6	1,005.4	999.0	998.9	995.9	989.4	991.2	985.7	986.9	985.0	984.2	984.7	984.7
Gasoline stations	861.5	843.4	845.8	843.0	840.9	834.8	836.1	836.9	834.4	833.0	832.1	830.4	831.1	829.0	829.4
Clothing and clothing accessories stores	1,500.0	1,484.2	1,487.2	1,483.6	1,483.3	1,478.5	1,471.5	1,462.2	1,448.5	1,445.0	1,443.8	1,433.4	1,432.7	1,426.8	1,422.7
Sporting goods, hobby, book, and music stores	656.3	646.7	646.9	642.2	645.8	641.6	641.2	633.1	624.3	620.8	613.6	610.0	608.8	607.0	605.0
General merchandise stores[1]	3,020.6	3,047.1	3,052.0	3,062.3	3,058.2	3,045.8	3,025.5	3,024.5	3,029.2	3,040.7	3,040.7	3,045.5	3,041.2	3,041.8	3,043.2
Department stores	1,591.5	1,557.0	1,561.8	1,563.2	1,554.4	1,541.9	1,523.9	1,517.5	1,521.2	1,529.1	1,532.6	1,530.9	1,524.0	1,526.0	1,524.7
Miscellaneous store retailers	865.4	847.8	849.4	848.3	845.6	844.3	845.0	838.3	825.0	819.5	815.1	810.4	805.3	805.8	803.3
Nonstore retailers	437.9	436.3	438.5	437.7	436.1	435.5	433.6	427.7	424.0	422.7	418.8	418.5	417.6	417.3	417.0
Transportation and warehousing	4,540.9	4,505.0	4,521.1	4,518.0	4,506.0	4,471.3	4,456.9	4,424.4	4,389.9	4,354.4	4,327.0	4,295.5	4,251.7	4,233.5	4,221.9
Air transportation	491.8	492.6	494.9	492.9	488.1	483.2	482.1	481.6	477.8	476.8	474.8	474.0	466.8	466.7	468.3
Rail transportation	233.7	229.5	227.1	230.1	228.8	227.6	229.5	229.0	226.8	227.1	224.1	220.7	217.9	214.6	212.9
Water transportation	65.5	65.2	66.1	66.4	64.9	64.5	63.9	62.6	60.3	59.7	60.9	59.6	58.1	57.2	56.1
Truck transportation	1,439.2	1,391.1	1,393.1	1,391.2	1,390.3	1,378.1	1,370.3	1,358.0	1,340.8	1,323.3	1,313.9	1,300.3	1,283.2	1,277.4	1,269.9
Transit and ground passenger transportation	412.1	418.1	421.9	420.8	422.7	414.4	413.8	411.7	410.1	408.1	406.4	406.2	401.8	405.4	412.6
Pipeline transportation	39.9	42.0	42.3	42.7	42.5	43.1	43.3	43.2	43.3	43.1	43.1	43.0	43.0	42.5	42.1
Scenic and sightseeing transportation	28.6	28.0	28.1	27.6	27.3	27.1	27.1	27.2	27.2	26.9	27.0	27.0	27.2	28.5	27.8
Support activities for transportation	584.2	589.9	590.9	592.8	592.1	589.5	588.0	582.2	579.5	569.3	561.0	554.6	550.3	545.6	537.3
Couriers and messengers	580.7	575.9	579.2	577.7	575.7	572.9	570.5	565.7	564.6	563.2	563.7	558.5	556.0	550.5	551.3
Warehousing and storage	665.2	672.8	677.5	675.8	673.6	670.9	668.4	663.2	659.5	656.9	652.1	651.6	647.4	645.1	643.6
Utilities	553.4	559.5	558.2	559.7	559.3	560.5	562.8	564.0	564.6	569.3	570.0	570.1	568.5	567.5	568.2
Information	3,032	2,997	3,006	2,995	2,990	2,986	2,982	2,965	2,940	2,924	2,918	2,905	2,884	2,858	2,840
Publishing industries, except Internet	901.2	882.6	886.8	882.9	879.4	876.6	872.6	863.6	857.8	846.3	836.3	827.8	820.1	808.6	801.6
Motion picture and sound recording industries	380.6	381.6	383.5	380.1	380.0	381.7	388.7	385.0	377.2	376.7	389.8	393.7	389.5	381.3	379.0
Broadcasting, except Internet	325.2	315.9	315.7	315.9	313.8	313.0	312.9	313.1	308.1	306.5	302.5	299.0	296.3	294.2	292.0
Internet publishing and broadcasting															
Telecommunications	1,030.6	1,021.4	1,025.5	1,022.8	1,023.1	1,021.6	1,014.5	1,010.2	1,004.0	1,001.6	999.5	996.7	989.3	986.4	980.9
ISPs, search portals, and data processing	267.8	261.6	261.8	260.5	259.8	259.6	258.9	257.5	256.4	257.0	254.6	253.9	255.5	253.8	254.1
Other information services	126.3	133.6	132.2	133.0	133.6	133.6	134.1	135.1	136.5	135.7	134.8	134.1	133.7	133.2	132.8
Financial activities	8,301	8,146	8,162	8,154	8,141	8,115	8,088	8,043	8,010	7,954	7,898	7,857	7,811	7,784	7,755
Finance and insurance	6,132.0	6,015.2	6,026.1	6,019.9	6,010.6	5,994.3	5,978.7	5,948.7	5,924.0	5,890.4	5,853.9	5,829.5	5,799.6	5,781.6	5,762.0
Monetary authorities—central bank	21.6	22.2	22.3	22.3	22.3	22.3	22.1	21.5	21.3	21.0	20.9	20.8	20.5	20.3	20.2
Credit intermediation and related activities[1]	2,866.3	2,735.8	2,738.5	2,730.9	2,724.4	2,722.4	2,706.4	2,692.8	2,680.8	2,665.3	2,648.8	2,635.4	2,619.8	2,613.5	2,602.8
Depository credit intermediation[1]	1,823.5	1,819.5	1,822.2	1,820.0	1,818.4	1,814.8	1,811.1	1,806.9	1,804.9	1,798.1	1,790.9	1,783.4	1,778.0	1,774.4	1,772.6
Commercial banking	1,351.4	1,359.9	1,362.1	1,361.1	1,360.1	1,359.0	1,356.0	1,352.7	1,351.8	1,346.6	1,340.5	1,334.2	1,329.4	1,327.9	1,324.5
Securities, commodity contracts, investments	848.6	858.1	864.4	860.4	861.4	851.4	847.8	842.1	839.9	826.5	814.9	805.8	797.0	791.7	784.6
Insurance carriers and related activities	2,306.8	2,308.8	2,310.6	2,316.1	2,312.0	2,307.6	2,311.0	2,300.9	2,292.0	2,287.4	2,281.1	2,279.4	2,274.3	2,268.3	2,265.2
Funds, trusts, and other financial vehicles	88.7	90.3	90.3	90.2	90.5	90.6	91.4	91.4	90.0	90.2	88.2	88.1	88.0	87.8	89.2
Real estate and rental and leasing	2,169.1	2,130.2	2,135.9	2,134.4	2,130.0	2,120.6	2,109.0	2,093.8	2,085.8	2,063.2	2,043.8	2,027.0	2,011.7	2,002.7	1,993.3
Real estate	1,500.4	1,481.1	1,485.5	1,481.5	1,482.4	1,474.5	1,471.2	1,461.7	1,458.2	1,444.9	1,432.4	1,421.9	1,411.9	1,405.1	1,397.6
Rental and leasing services	640.3	620.9	622.5	624.4	619.4	617.7	609.7	603.8	599.3	589.9	583.2	576.6	571.5	569.2	567.7
Lessors of nonfinancial intangible assets	28.4	28.2	27.9	28.5	28.2	28.4	28.1	28.3	28.3	28.4	28.2	28.5	28.3	28.4	28.0
Professional and business services	17,942	17,778	17,824	17,788	17,727	17,675	17,612	17,488	17,356	17,205	17,029	16,910	16,783	16,756	16,650
Professional and technical services[1]	7,659.5	7,829.7	7,828.9	7,833.6	7,833.0	7,834.4	7,844.0	7,827.7	7,797.2	7,765.5	7,729.2	7,697.9	7,670.7	7,652.4	7,617.3
Legal services	1,175.4	1,163.7	1,164.5	1,163.0	1,161.0	1,160.2	1,160.2	1,157.7	1,156.8	1,154.1	1,148.7	1,144.9	1,139.4	1,136.9	1,131.5
Accounting and bookkeeping services	935.9	950.1	948.3	947.5	947.9	945.6	946.4	941.0	933.7	927.5	924.4	929.5	929.3	938.0	936.3
Architectural and engineering services	1,432.2	1,444.8	1,450.5	1,449.2	1,447.2	1,441.4	1,437.1	1,428.6	1,419.4	1,411.1	1,394.2	1,377.9	1,364.1	1,350.3	1,336.4

See notes at end of table.

12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
Computer systems design and related services	1,372.1	1,450.3	1,446.2	1,456.2	1,460.6	1,461.6	1,466.1	1,467.9	1,466.8	1,462.4	1,463.7	1,459.2	1,460.4	1,457.0	1,456.4
Management and technical consulting services	952.7	1,008.9	1,010.1	1,011.3	1,011.6	1,021.0	1,022.9	1,024.9	1,020.5	1,025.7	1,021.6	1,016.0	1,016.7	1,017.9	1,016.7
Management of companies and enterprises	1,866.4	1,894.6	1,900.6	1,895.3	1,895.2	1,887.1	1,882.8	1,882.0	1,872.1	1,871.7	1,862.1	1,852.6	1,840.2	1,829.9	1,818.9
Administrative and waste services	8,416.3	8,053.7	8,094.9	8,058.6	7,998.6	7,953.2	7,884.8	7,778.3	7,686.3	7,567.5	7,437.8	7,359.4	7,272.3	7,274.0	7,213.6
Administrative and support services[1]	8,061.3	7,693.5	7,736.4	7,699.3	7,637.0	7,591.9	7,522.0	7,414.2	7,324.4	7,203.1	7,076.5	6,999.2	6,911.7	6,912.7	6,853.0
Employment services[1]	3,545.9	3,144.4	3,184.0	3,146.9	3,089.5	3,049.8	2,987.7	2,896.7	2,829.5	2,720.5	2,638.7	2,567.0	2,506.4	2,501.9	2,466.2
Temporary help services	2,597.4	2,342.6	2,383.5	2,349.1	2,301.1	2,264.2	2,218.9	2,128.5	2,055.6	1,965.7	1,892.7	1,835.4	1,781.5	1,780.6	1,749.2
Business support services	817.4	823.2	818.1	817.4	814.9	818.1	820.8	823.7	816.0	817.6	805.0	799.1	792.9	790.5	784.6
Services to buildings and dwellings	1,849.5	1,847.0	1,851.4	1,848.6	1,847.0	1,843.3	1,837.4	1,829.4	1,818.1	1,812.5	1,796.8	1,791.5	1,778.7	1,786.1	1,773.5
Waste management and remediation services	355.0	360.2	358.5	359.3	361.6	361.3	362.8	364.1	361.9	364.4	361.3	360.2	360.6	361.3	360.6
Educational and health services	18,322	18,855	18,843	18,888	18,950	18,957	18,981	19,044	19,080	19,119	19,138	19,158	19,175	19,215	19,252
Educational services	2,941.4	3,036.6	3,049.2	3,062.4	3,083.7	3,055.1	3,047.3	3,066.0	3,063.1	3,088.4	3,083.1	3,077.9	3,077.4	3,077.6	3,090.0
Health care and social assistance	15,380.2	15,818.5	15,794.1	15,825.9	15,865.9	15,901.9	15,934.1	15,977.8	16,017.0	16,030.3	16,054.7	16,080.1	16,097.8	16,137.7	16,162.1
Ambulatory health care services[1]	5,473.5	5,660.7	5,652.0	5,676.3	5,683.8	5,699.5	5,706.1	5,727.7	5,742.6	5,753.3	5,770.1	5,779.8	5,794.1	5,812.9	5,829.3
Offices of physicians	2,201.6	2,265.7	2,264.6	2,272.7	2,272.7	2,279.0	2,283.3	2,289.8	2,294.5	2,300.4	2,304.4	2,308.0	2,310.5	2,314.6	2,320.6
Outpatient care centers	512.0	532.5	531.2	535.4	537.2	534.8	536.6	536.9	536.7	538.0	538.5	537.7	538.7	539.3	542.8
Home health care services	913.8	958.0	955.3	961.1	963.4	966.8	968.6	975.6	980.7	981.4	991.0	996.7	1,004.5	1,013.3	1,017.9
Hospitals	4,515.0	4,641.1	4,634.0	4,646.8	4,660.7	4,668.9	4,681.9	4,692.4	4,703.7	4,707.5	4,711.3	4,715.1	4,716.7	4,719.1	4,722.1
Nursing and residential care facilities[1]	2,958.3	3,008.1	3,005.7	3,006.3	3,009.9	3,007.6	3,013.2	3,022.3	3,029.6	3,029.4	3,033.6	3,041.0	3,042.8	3,049.1	3,054.7
Nursing care facilities	1,602.6	1,613.7	1,613.0	1,612.3	1,612.6	1,608.9	1,611.0	1,614.5	1,617.3	1,616.6	1,617.9	1,621.8	1,624.5	1,626.8	1,628.4
Social assistance[1]	2,433.4	2,508.7	2,502.4	2,496.5	2,511.5	2,525.9	2,532.9	2,535.4	2,541.1	2,540.1	2,539.7	2,544.2	2,544.2	2,556.6	2,556.0
Child day care services	850.4	859.2	853.8	844.6	851.6	862.5	862.3	863.2	864.3	862.7	860.4	858.2	853.9	860.3	852.2
Leisure and hospitality	13,427	13,459	13,490	13,473	13,454	13,428	13,395	13,344	13,304	13,268	13,236	13,202	13,168	13,195	13,177
Arts, entertainment, and recreation	1,969.2	1,969.3	1,975.1	1,966.6	1,964.7	1,955.3	1,952.0	1,944.0	1,947.1	1,943.8	1,936.2	1,928.7	1,900.6	1,901.8	1,883.6
Performing arts and spectator sports	405.0	406.3	409.7	406.9	406.2	402.9	402.5	398.8	401.4	405.7	398.6	400.5	392.9	396.8	392.2
Museums, historical sites, zoos, and parks	130.3	131.8	132.2	132.1	132.1	130.6	129.6	130.6	130.8	130.3	130.9	130.6	130.5	130.9	130.5
Amusements, gambling, and recreation	1,433.9	1,431.2	1,433.2	1,427.6	1,426.4	1,421.8	1,419.9	1,414.6	1,414.9	1,407.8	1,406.7	1,397.6	1,377.2	1,374.1	1,360.9
Accommodations and food services	11,457.4	11,489.3	11,515.3	11,506.3	11,489.3	11,472.4	11,442.7	11,399.6	11,356.5	11,323.7	11,299.7	11,273.2	11,267.0	11,293.6	11,293.6
Accommodations	1,866.9	1,857.3	1,865.0	1,854.6	1,843.6	1,841.3	1,827.9	1,812.1	1,794.3	1,768.4	1,754.7	1,732.7	1,723.6	1,728.7	1,726.9
Food services and drinking places	9,590.4	9,632.0	9,650.3	9,651.7	9,645.7	9,631.1	9,614.8	9,587.5	9,562.2	9,555.3	9,545.0	9,540.5	9,543.4	9,564.9	9,566.7
Other services	5,494	5,528	5,535	5,536	5,530	5,532	5,535	5,509	5,477	5,461	5,449	5,426	5,420	5,416	5,423
Repair and maintenance	1,253.4	1,228.2	1,233.6	1,230.6	1,220.6	1,221.2	1,216.4	1,204.7	1,189.9	1,184.7	1,177.3	1,166.3	1,163.7	1,158.4	1,156.7
Personal and laundry services	1,309.7	1,326.6	1,327.4	1,328.9	1,331.7	1,333.9	1,330.1	1,323.2	1,320.9	1,313.6	1,312.5	1,302.4	1,297.3	1,293.3	1,300.2
Membership associations and organizations	2,931.1	2,973.3	2,973.8	2,976.6	2,977.6	2,977.1	2,988.3	2,980.7	2,965.7	2,963.1	2,958.7	2,956.8	2,958.6	2,964.3	2,965.8
Government	22,218	22,500	22,522	22,537	22,556	22,535	22,539	22,543	22,532	22,540	22,547	22,543	22,616	22,605	22,557
Federal	2,734	2,764	2,765	2,776	2,768	2,771	2,775	2,783	2,778	2,793	2,796	2,808	2,876	2,860	2,819
Federal, except U.S. Postal Service	1,964.7	2,016.8	2,014.6	2,020.2	2,027.1	2,034.3	2,043.5	2,052.4	2,057.3	2,065.8	2,071.0	2,086.0	2,154.6	2,150.2	2,111.9
U.S. Postal Service	769.1	747.5	750.5	755.8	740.6	736.5	731.9	730.1	720.9	726.9	724.9	721.7	721.0	709.5	706.8
State	5,122	5,178	5,175	5,184	5,204	5,192	5,194	5,197	5,196	5,192	5,192	5,186	5,189	5,189	5,176
Education	2,317.5	2,359.0	2,355.4	2,365.1	2,379.5	2,373.3	2,372.8	2,380.3	2,381.3	2,380.2	2,382.3	2,379.9	2,385.5	2,386.2	2,381.1
Other State government	2,804.3	2,818.9	2,819.4	2,819.1	2,824.6	2,818.9	2,820.7	2,816.4	2,814.8	2,811.6	2,809.4	2,805.9	2,803.5	2,802.5	2,795.1
Local	14,362	14,557	14,582	14,577	14,584	14,572	14,570	14,563	14,558	14,555	14,559	14,549	14,551	14,556	14,562
Education	7,986.8	8,075.6	8,101.3	8,088.3	8,084.5	8,075.4	8,071.6	8,067.6	8,060.5	8,070.7	8,076.7	8,078.7	8,081.4	8,078.0	8,085.8
Other local government	6,375.5	6,481.8	6,481.1	6,488.2	6,499.4	6,496.4	6,498.3	6,495.6	6,497.7	6,484.7	6,482.5	6,469.8	6,469.2	6,478.3	6,476.2

[1] Includes other industries not shown separately.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

p = preliminary.

13. Average weekly hours of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
TOTAL PRIVATE	33.9	33.6	33.6	33.6	33.7	33.6	33.5	33.4	33.3	33.3	33.3	33.1	33.1	33.1	33.0
GOODS-PRODUCING	40.6	40.2	40.3	40.3	40.2	39.9	39.8	39.5	39.4	39.3	39.2	38.9	39.0	39.0	39.0
Natural resources and mining	45.9	45.1	44.9	44.8	45.3	44.5	44.7	45.3	44.3	44.2	43.9	43.4	43.0	43.3	43.1
Construction	39.0	38.5	38.7	38.7	38.6	38.3	38.3	37.7	38.0	37.9	38.0	37.7	37.5	37.6	37.6
Manufacturing	41.2	40.8	40.9	41.0	40.8	40.5	40.4	40.2	39.9	39.8	39.5	39.4	39.6	39.4	39.5
Overtime hours	4.2	3.7	3.8	3.7	3.7	3.5	3.5	3.2	2.9	2.9	2.7	2.6	2.7	2.8	2.9
Durable goods	41.5	41.1	41.2	41.2	41.1	40.6	40.6	40.4	40.0	39.8	39.6	39.3	39.5	39.4	39.4
Overtime hours	4.2	3.7	3.8	3.7	3.7	3.4	3.4	3.1	2.8	2.7	2.5	2.4	2.5	2.6	2.6
Wood products	39.4	38.6	39.1	38.8	38.8	38.4	38.1	37.6	36.8	36.9	37.1	36.9	37.0	36.9	37.5
Nonmetallic mineral products	42.3	42.1	42.0	42.6	42.2	41.9	41.8	40.9	40.9	40.2	40.0	39.9	40.2	40.5	40.8
Primary metals	42.9	42.2	42.5	42.2	42.5	41.8	41.4	40.9	40.5	40.4	40.1	40.1	40.0	40.0	39.6
Fabricated metal products	41.6	41.3	41.2	41.2	41.1	40.9	40.8	40.8	40.3	39.7	39.5	39.0	39.2	39.2	39.2
Machinery	42.6	42.3	42.1	42.1	42.5	42.1	41.8	41.4	41.1	40.9	40.6	40.1	40.1	39.9	39.8
Computer and electronic products	40.6	41.0	41.2	41.1	41.0	40.8	40.8	41.3	40.4	40.7	40.5	39.9	40.2	40.0	39.9
Electrical equipment and appliances	41.2	40.9	40.9	40.8	40.8	41.0	40.4	40.2	39.7	39.4	38.9	38.8	39.6	39.3	39.1
Transportation equipment	42.8	42.0	42.1	42.6	41.7	40.9	41.3	40.9	40.9	40.4	40.1	40.0	40.6	40.0	40.4
Furniture and related products	39.2	38.1	38.7	38.3	37.9	37.4	37.4	37.2	37.3	37.7	37.4	37.7	37.6	37.8	37.8
Miscellaneous manufacturing	38.9	38.9	39.0	39.1	39.4	38.7	38.9	38.5	38.3	38.4	38.2	38.2	38.3	38.0	37.9
Nondurable goods	40.8	40.4	40.4	40.6	40.4	40.2	40.2	39.9	39.7	39.7	39.5	39.4	39.6	39.6	39.6
Overtime hours	4.1	3.7	3.8	3.7	3.8	3.6	3.6	3.4	3.1	3.2	3.0	3.0	3.1	3.2	3.3
Food manufacturing	40.7	40.5	40.6	40.6	40.5	40.3	40.3	39.9	39.8	40.1	39.9	40.1	40.1	40.0	39.9
Beverage and tobacco products	40.7	38.8	38.8	38.7	38.2	38.2	38.1	37.9	36.7	37.0	37.0	36.2	35.8	36.5	35.4
Textile mills	40.3	38.7	38.8	39.2	39.5	38.9	38.4	37.7	37.0	37.1	36.4	36.3	36.9	36.8	37.9
Textile product mills	39.7	38.6	38.9	39.1	38.7	38.1	37.9	37.9	37.1	37.0	37.1	37.0	37.5	38.3	37.7
Apparel	37.2	36.4	36.4	37.0	36.5	35.9	36.3	36.2	36.0	36.0	35.6	36.1	36.1	36.1	35.5
Leather and allied products	38.2	37.5	38.4	38.2	37.5	37.5	36.9	34.4	34.7	34.0	33.3	32.8	32.4	32.0	31.9
Paper and paper products	43.1	42.9	42.7	42.6	42.9	42.4	42.2	42.1	41.9	41.6	41.5	41.1	41.4	41.2	41.9
Printing and related support activities	39.1	38.3	38.1	38.0	38.2	38.3	38.3	38.2	38.0	37.7	37.3	37.5	37.7	37.6	38.0
Petroleum and coal products	44.1	44.6	44.6	45.5	45.6	45.2	45.2	44.4	45.3	45.1	43.8	44.3	43.8	43.4	43.3
Chemicals	41.9	41.5	41.6	41.9	41.4	41.3	41.5	41.3	41.1	41.1	41.1	40.9	41.0	41.1	41.2
Plastics and rubber products	41.3	41.0	41.0	41.3	41.0	40.7	40.6	40.6	40.0	39.9	39.6	39.4	39.8	39.8	39.9
PRIVATE SERVICE-PROVIDING	32.4	32.3	32.3	32.3	32.4	32.3	32.3	32.2	32.2	32.2	32.1	32.1	32.0	32.0	31.9
Trade, transportation, and utilities	33.3	33.2	33.2	33.2	33.2	33.2	33.1	33.0	32.9	32.9	32.8	32.7	32.8	32.9	32.8
Wholesale trade	38.2	38.2	38.3	38.4	38.3	38.1	38.2	38.1	37.8	38.1	37.9	37.8	37.8	37.6	37.6
Retail trade	30.2	30.0	30.0	30.0	30.0	30.1	29.9	29.8	29.7	29.7	29.8	29.7	29.8	29.9	29.8
Transportation and warehousing	37.0	36.4	36.4	36.4	36.4	36.4	36.3	36.1	36.2	36.0	35.7	35.7	35.8	36.0	35.8
Utilities	42.4	42.7	43.0	42.4	42.3	42.7	42.5	42.4	42.9	42.6	43.2	42.4	42.3	42.1	41.9
Information	36.5	36.7	36.7	36.7	36.8	36.9	36.9	37.0	37.0	37.2	36.9	36.7	36.4	36.5	36.4
Financial activities	35.9	35.8	35.8	35.7	36.1	36.0	35.9	36.1	35.9	36.2	36.2	36.1	36.0	36.0	35.9
Professional and business services	34.8	34.8	34.8	34.8	34.9	34.8	34.9	34.9	34.8	34.9	34.8	34.7	34.7	34.7	34.6
Education and health services	32.6	32.5	32.5	32.5	32.6	32.5	32.5	32.4	32.4	32.4	32.3	32.4	32.3	32.3	32.2
Leisure and hospitality	25.5	25.2	25.3	25.2	25.2	25.2	25.1	25.0	25.0	24.8	25.0	24.8	24.8	24.7	24.6
Other services	30.9	30.8	30.7	30.8	30.9	30.7	30.7	30.7	30.6	30.7	30.6	30.5	30.5	30.5	30.3

[1] Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.
p = preliminary.

14. Average hourly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
TOTAL PRIVATE															
Current dollars	$17.43	$18.08	$18.04	$18.10	$18.18	$18.21	$18.28	$18.34	$18.40	$18.43	$18.46	$18.50	$18.50	$18.53	$18.53
Constant (1982) dollars	8.33	8.30	8.20	8.16	8.20	8.21	8.33	8.54	8.65	8.64	8.61	8.64	8.65	8.65	8.65
GOODS-PRODUCING	18.67	19.33	19.27	19.36	19.43	19.48	19.56	19.63	19.69	19.72	19.78	19.85	19.82	19.84	19.84
Natural resources and mining	20.97	22.50	22.04	22.54	23.01	23.08	23.03	23.28	23.23	23.14	23.14	23.33	23.38	23.31	23.31
Construction	20.95	21.87	21.77	21.85	22.02	22.09	22.17	22.28	22.41	22.43	22.42	22.59	22.55	22.60	22.60
Manufacturing	17.26	17.74	17.73	17.80	17.78	17.81	17.89	17.94	17.96	17.99	18.07	18.10	18.11	18.11	18.11
Excluding overtime	16.43	16.97	16.94	17.03	17.01	17.07	17.15	17.25	17.33	17.36	17.47	17.52	17.51	17.49	17.49
Durable goods	18.20	18.70	18.70	18.78	18.74	18.74	18.84	18.91	18.94	18.99	19.09	19.17	19.18	19.22	19.22
Nondurable goods	15.67	16.15	16.11	16.16	16.19	16.28	16.35	16.37	16.39	16.43	16.49	16.46	16.49	16.46	16.46
PRIVATE SERVICE-PROVIDING	17.11	17.77	17.74	17.79	17.87	17.90	17.97	18.03	18.10	18.14	18.17	18.20	18.21	18.24	18.24
Trade,transportation, and utilities	15.78	16.16	16.16	16.17	16.23	16.20	16.23	16.29	16.31	16.36	16.38	16.38	16.38	16.41	16.41
Wholesale trade	19.59	20.14	20.11	20.15	20.28	20.20	20.22	20.29	20.31	20.41	20.52	20.59	20.70	20.87	20.87
Retail trade	12.75	12.87	12.87	12.88	12.92	12.91	12.89	12.93	12.94	12.97	12.96	12.97	12.96	12.96	12.96
Transportation and warehousing	17.72	18.41	18.41	18.42	18.48	18.47	18.58	18.66	18.66	18.72	18.67	18.68	18.62	18.61	18.61
Utilities	27.88	28.84	29.12	28.67	28.89	28.86	28.91	28.91	29.16	29.22	29.67	29.31	29.29	29.40	29.40
Information	23.96	24.77	24.78	24.87	24.95	24.90	24.99	24.94	24.91	24.98	25.09	25.31	25.28	25.44	25.44
Financial activities	19.64	20.27	20.24	20.26	20.37	20.43	20.43	20.41	20.53	20.53	20.55	20.62	20.64	20.74	20.74
Professional and business services	20.15	21.19	21.08	21.19	21.38	21.47	21.63	21.78	21.97	22.04	22.17	22.26	22.26	22.27	22.27
Education and health services	18.11	18.88	18.84	18.92	18.96	19.04	19.08	19.13	19.20	19.18	19.24	19.24	19.33	19.35	19.35
Leisure and hospitality	10.41	10.84	10.85	10.87	10.89	10.90	10.92	10.90	10.94	10.97	10.97	10.98	10.97	10.98	10.98
Other services	15.42	16.08	16.09	16.13	16.17	16.20	16.24	16.29	16.29	16.30	16.25	16.23	16.22	16.25	16.25

[1] Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.
p = preliminary.

15. Average hourly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
TOTAL PRIVATE	$17.43	$18.08	$18.00	$18.02	$18.10	$18.25	$18.27	$18.40	$18.40	$18.49	$18.57	$18.57	$18.52	$18.47	$18.42
Seasonally adjusted	–	–	18.04	18.10	18.18	18.21	18.28	18.34	18.40	18.43	18.46	18.50	18.50	18.53	18.53
GOODS-PRODUCING	18.67	19.33	19.26	19.39	19.53	19.63	19.61	19.65	19.75	19.64	19.64	19.74	19.78	19.83	19.84
Natural resources and mining	20.97	22.50	21.75	22.45	23.06	23.19	22.98	23.31	23.53	23.41	23.19	23.40	23.40	23.10	22.99
Construction	20.95	21.87	21.69	21.90	22.16	22.34	22.28	22.32	22.52	22.32	22.25	22.45	22.44	22.54	22.48
Manufacturing	17.26	17.74	17.73	17.73	17.75	17.84	17.86	17.94	18.06	18.03	18.07	18.09	18.13	18.09	18.13
Durable goods	18.20	18.70	18.70	18.66	18.72	18.80	18.81	18.92	19.06	18.99	19.09	19.17	19.20	19.20	19.22
Wood products	13.68	14.20	14.16	14.25	14.25	14.37	14.44	14.58	14.66	14.69	14.77	14.67	14.72	14.91	14.85
Nonmetallic mineral products	16.93	16.90	16.97	16.93	16.85	16.94	16.92	16.85	16.73	16.82	17.03	17.19	17.37	17.25	17.30
Primary metals	19.66	20.18	20.26	20.43	20.28	20.36	20.01	19.98	20.05	19.80	19.75	19.69	19.98	19.80	19.96
Fabricated metal products	16.53	16.99	16.93	16.94	17.08	17.14	17.18	17.21	17.36	17.24	17.30	17.29	17.41	17.38	17.43
Machinery	17.72	17.97	17.90	17.96	17.97	18.08	18.11	18.18	18.15	18.16	18.17	18.26	18.20	18.36	18.24
Computer and electronic products	19.94	21.03	21.02	21.11	21.21	21.23	21.42	21.37	21.44	21.46	21.42	21.71	21.73	21.70	21.70
Electrical equipment and appliances	15.93	15.78	15.72	15.85	15.94	15.99	15.83	15.74	15.88	15.81	15.93	15.95	15.99	16.15	16.18
Transportation equipment	23.04	23.83	23.86	23.75	23.88	24.05	24.10	24.37	24.58	24.66	24.69	24.80	24.76	24.85	25.00
Furniture and related products	14.32	14.54	14.58	14.52	14.59	14.54	14.55	14.77	14.92	14.95	14.85	15.02	15.00	15.02	15.13
Miscellaneous manufacturing	14.66	15.19	15.15	15.35	15.33	15.31	15.33	15.42	15.60	15.66	15.97	16.02	16.07	16.18	16.06
Nondurable goods	15.67	16.15	16.08	16.20	16.15	16.30	16.32	16.35	16.43	16.51	16.48	16.43	16.51	16.43	16.51
Food manufacturing	13.55	14.00	13.97	14.03	14.02	14.15	14.10	14.17	14.26	14.34	14.30	14.24	14.27	14.26	14.34
Beverages and tobacco products	18.54	19.35	18.74	19.02	18.60	18.97	19.41	19.98	19.95	20.07	20.25	20.40	20.25	20.38	20.21
Textile mills	13.00	13.57	13.58	13.77	13.67	13.72	13.71	13.69	13.80	13.90	13.76	13.88	13.79	13.63	13.63
Textile product mills	11.78	11.73	11.80	11.80	11.78	11.81	11.62	11.59	11.72	11.59	11.53	11.34	11.34	11.34	11.33
Apparel	11.05	11.40	11.35	11.35	11.28	11.48	11.38	11.35	11.38	11.46	11.40	11.26	11.44	11.28	11.40
Leather and allied products	12.04	12.96	12.88	12.85	12.94	12.98	13.14	13.61	13.47	14.10	14.19	14.21	14.34	13.85	14.08
Paper and paper products	18.44	18.88	18.93	19.11	18.81	19.04	19.11	18.89	19.11	19.27	18.99	18.90	19.29	19.09	19.29
Printing and related support activities	16.15	16.75	16.77	16.81	16.83	16.90	16.99	16.86	17.01	16.79	16.79	16.69	16.76	16.61	16.61
Petroleum and coal products	25.21	27.46	26.99	27.54	27.69	28.25	28.69	28.28	28.17	29.13	29.57	29.80	29.26	29.18	29.41
Chemicals	19.55	19.49	19.29	19.41	19.53	19.77	19.67	19.77	19.72	19.89	19.96	19.93	20.02	20.16	20.22
Plastics and rubber products	15.39	15.85	15.72	15.87	15.86	15.94	16.03	16.13	16.24	16.24	16.22	16.20	16.19	16.09	16.02
PRIVATE SERVICE-PROVIDING	17.11	17.77	17.68	17.68	17.73	17.90	17.94	18.10	18.09	18.23	18.33	18.31	18.24	18.18	18.10
Trade, transportation, and utilities	15.78	16.16	16.17	16.18	16.21	16.27	16.24	16.26	16.14	16.37	16.47	16.45	16.42	16.40	16.34
Wholesale trade	19.59	20.14	20.05	20.12	20.23	20.20	20.21	20.41	20.36	20.44	20.65	20.64	20.69	20.78	20.66
Retail trade	12.75	12.87	12.90	12.92	12.93	13.01	12.89	12.85	12.74	12.96	12.99	13.02	13.01	12.99	12.96
Transportation and warehousing	17.72	18.41	18.46	18.54	18.52	18.53	18.55	18.69	18.62	18.68	18.73	18.64	18.58	18.54	18.54
Utilities	27.88	28.84	29.02	28.49	28.64	28.95	29.00	28.96	29.28	29.27	29.70	29.42	29.50	29.50	29.20
Information	23.96	24.77	24.78	24.75	24.87	25.03	25.06	25.03	24.86	25.03	25.12	25.40	25.24	25.41	25.30
Financial activities	19.64	20.27	20.26	20.19	20.29	20.42	20.41	20.54	20.50	20.48	20.68	20.67	20.65	20.72	20.67
Professional and business services	20.15	21.19	21.09	21.06	21.12	21.31	21.45	21.97	22.01	22.16	22.52	22.52	22.28	22.15	22.09
Education and health services	18.11	18.88	18.79	18.96	18.95	19.08	19.04	19.10	19.23	19.26	19.26	19.23	19.33	19.29	19.32
Leisure and hospitality	10.41	10.84	10.78	10.73	10.79	10.89	10.93	10.93	11.05	11.03	11.06	11.00	10.99	10.99	10.90
Other services	15.42	16.08	16.10	16.06	16.10	16.22	16.17	16.24	16.27	16.34	16.34	16.33	16.27	16.29	16.16

1 Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

16. Average weekly earnings of production or nonsupervisory workers[1] on private nonfarm payrolls, by industry

Industry	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May[p]	June[p]
TOTAL PRIVATE	$590.04	$607.99	$613.80	$607.27	$613.59	$613.20	$613.87	$620.08	$610.88	$608.32	$616.52	$614.67	$607.46	$609.51	$609.70
Seasonally adjusted	–	–	606.14	608.16	612.67	611.86	612.38	612.56	612.72	613.72	614.72	612.35	612.35	613.34	611.49
GOODS-PRODUCING	757.34	776.60	783.88	781.42	794.87	791.09	788.32	782.07	778.15	762.03	758.10	763.94	759.55	773.37	779.71
Natural resources and mining	962.64	1,013.78	985.28	1,005.76	1,051.54	1,041.23	1,038.70	1,072.26	1,040.03	1,020.68	1,008.77	1,003.86	994.50	990.99	1,002.36
CONSTRUCTION	816.66	842.36	854.59	858.48	875.32	869.03	866.69	845.93	840.00	828.07	823.25	837.39	830.28	856.52	858.74
Manufacturing	711.56	724.23	730.48	719.84	727.75	729.66	726.90	726.57	727.82	712.19	708.34	709.13	705.26	710.94	719.76
Durable goods	754.77	767.56	776.05	761.33	775.01	770.80	767.45	766.26	771.93	750.11	748.33	751.46	746.88	752.64	763.03
Wood products	539.34	547.81	566.40	560.03	561.45	561.87	551.61	549.67	538.02	524.43	531.72	531.05	534.34	553.16	574.70
Nonmetallic mineral products	716.78	711.30	724.62	726.30	726.24	725.03	719.10	692.54	677.57	654.30	657.36	673.85	694.80	700.35	716.22
Primary metals	843.26	850.84	871.18	860.10	865.96	861.23	832.42	817.18	818.04	797.94	786.05	793.51	783.22	788.04	798.40
Fabricated metal products	687.20	701.47	699.21	692.85	707.11	707.88	707.82	707.33	706.55	680.98	678.16	670.85	668.54	677.82	685.00
Machinery	754.19	759.92	755.38	750.73	763.73	764.78	760.62	758.11	755.04	740.93	735.89	730.40	720.72	727.06	724.13
Computer and electronic products	808.80	861.43	872.33	861.29	869.61	874.68	876.08	891.13	883.33	866.98	863.23	864.06	860.51	863.66	872.34
Electrical equipment and appliances	656.46	645.60	647.66	640.34	650.35	660.39	645.86	642.19	646.32	621.33	613.31	615.67	615.62	633.08	635.87
Transportation equipment	986.79	999.94	1,016.44	978.50	1,002.96	990.86	1,002.56	994.30	1,022.53	993.80	990.07	992.00	985.45	991.52	1,017.50
Furniture and related products	560.84	554.20	571.54	557.57	566.09	549.61	542.72	546.49	563.98	559.13	547.97	563.25	552.00	566.25	577.97
Miscellaneous manufacturing	569.99	591.73	595.40	594.05	608.60	595.56	593.27	593.67	600.60	599.78	603.67	613.57	610.66	614.84	611.89
Nondurable goods	639.99	652.20	652.85	652.86	654.08	663.41	659.33	658.91	657.20	650.49	644.37	644.06	642.24	647.34	655.45
Food manufacturing	551.32	566.91	568.58	568.22	572.02	581.57	575.28	572.47	573.25	569.30	561.99	563.90	555.10	570.40	573.60
Beverages and tobacco products	755.22	750.18	738.36	741.78	716.10	720.86	729.82	767.23	726.18	728.54	741.15	730.32	706.73	754.06	721.50
Textile mills	524.40	524.93	529.62	535.65	542.70	544.68	525.09	520.22	514.74	510.13	493.98	502.46	496.44	497.50	520.67
Textile product mills	467.77	453.12	468.46	462.56	460.60	452.32	438.07	441.58	441.84	423.04	426.61	419.58	417.31	432.05	435.07
Apparel	411.39	415.17	415.41	416.55	410.59	409.84	411.96	414.28	410.82	407.98	403.56	407.61	409.55	408.34	406.98
Leather and allied products	459.50	486.49	501.03	485.73	481.37	486.75	484.87	462.74	476.84	470.94	465.43	470.35	457.45	445.97	450.56
Paper and paper products	795.58	809.21	806.42	808.35	806.95	818.72	812.18	802.83	814.09	797.78	780.49	769.23	792.82	780.78	806.32
Printing and related support activities	632.02	642.50	633.91	630.38	644.59	655.72	659.21	652.48	654.89	627.95	622.91	627.54	625.15	617.89	626.20
Petroleum and coal products	1,112.73	1,224.26	1,219.95	1,266.84	1,259.90	1,302.33	1,322.61	1,275.43	1,256.38	1,307.94	1,286.30	1,290.34	1,258.18	1,254.74	1,288.16
Chemicals	819.54	808.80	808.25	809.40	810.50	820.46	814.34	822.43	814.44	811.51	820.36	815.14	816.82	820.51	837.11
Plastics and rubber products	635.63	649.04	650.81	647.50	650.26	655.13	652.42	658.10	657.72	647.98	639.07	636.66	633.03	635.56	644.00
PRIVATE SERVICE-PROVIDING	554.89	574.31	579.90	572.83	576.23	578.17	577.67	588.25	578.88	579.71	592.06	587.75	580.03	579.94	577.39
Trade, transportation, and utilities	526.07	535.79	544.93	538.79	541.41	543.42	535.92	536.58	531.01	530.39	538.57	537.92	535.29	537.92	535.95
Wholesale trade	748.94	769.91	779.95	770.60	774.81	767.60	772.02	787.83	767.57	770.59	784.70	782.26	775.88	779.25	776.82
Retail trade	385.11	386.39	393.45	391.48	391.78	395.50	384.12	381.65	380.93	378.43	384.50	384.09	385.10	388.40	387.50
Transportation and warehousing	654.95	670.33	681.17	674.86	679.68	676.35	671.51	680.32	679.63	663.14	663.04	665.45	655.87	661.88	663.73
Utilities	1,182.65	1,231.19	1,250.76	1,205.13	1,205.74	1,244.85	1,238.30	1,236.59	1,256.11	1,243.98	1,286.01	1,241.52	1,250.80	1,241.95	1,223.48
Information	874.65	908.44	919.34	910.80	917.70	926.11	924.71	936.12	917.33	921.10	931.95	934.72	911.16	914.76	913.33
Financial activities	705.13	726.37	737.46	718.76	726.38	728.99	728.64	753.82	731.85	735.23	761.02	754.46	739.27	739.70	737.92
Professional and business services	700.82	738.25	748.70	730.78	739.20	739.46	750.75	775.54	761.55	762.30	785.95	785.95	766.43	766.39	766.52
Education and health services	590.09	614.30	614.43	618.10	617.77	620.10	616.90	624.57	621.13	622.10	624.02	623.05	620.49	619.21	620.17
Leisure and hospitality	265.52	273.27	280.28	276.83	278.38	272.25	273.25	273.25	270.73	264.72	275.39	272.80	270.35	271.45	271.41
Other services	477.06	494.99	500.71	496.25	500.71	497.95	496.42	501.82	496.24	498.37	501.64	498.07	494.61	495.22	489.65

1 Data relate to production workers in natural resources and mining and manufacturing, construction workers in construction, and nonsupervisory workers in the service-providing industries.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.
Dash indicates data not available.
p = preliminary.

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 278 industries											
Over 1-month span:												
2005	52.6	60.1	54.1	58.1	56.8	58.3	58.5	59.2	54.2	55.9	62.7	57.6
2006	64.9	62.2	63.8	59.8	49.1	51.8	59.2	55.4	55.7	56.3	59.4	60.7
2007	53.5	55.5	52.4	49.4	55.9	48.3	50.7	46.5	55.9	57.2	59.4	57.9
2008	42.1	40.6	44.1	41.1	42.6	36.9	37.6	39.1	34.7	33.0	27.1	20.5
2009	22.1	20.8	19.6	21.8	29.3	28.6						
Over 3-month span:												
2005	51.7	57.2	59.0	59.8	57.9	62.0	60.5	62.9	60.3	55.5	56.3	62.7
2006	67.7	68.6	65.1	65.1	60.5	58.9	55.5	57.0	55.0	54.4	59.0	64.2
2007	62.5	54.8	54.2	54.8	54.1	50.4	52.8	48.7	53.3	53.9	58.3	62.5
2008	57.7	44.8	40.2	39.7	37.3	33.6	33.6	32.8	34.9	33.2	26.9	20.8
2009	18.6	14.2	15.1	15.3	20.3	23.8						
Over 6-month span:												
2005	55.4	57.9	58.1	57.0	58.3	60.9	63.1	63.3	61.6	59.6	61.4	62.5
2006	64.6	63.8	67.5	66.2	65.5	66.6	60.3	61.1	57.9	57.9	62.4	59.0
2007	60.3	57.2	60.5	58.3	55.5	56.5	52.8	52.4	56.6	54.4	56.8	59.0
2008	56.6	53.0	50.7	47.4	40.2	33.4	31.0	33.4	30.6	29.0	26.0	24.4
2009	21.6	17.2	15.1	15.3	15.9	16.4						
Over 12-month span:												
2005	60.9	60.9	60.0	59.2	58.3	60.3	61.3	63.3	60.7	59.2	59.8	61.8
2006	67.2	65.5	65.9	62.9	65.5	66.8	64.8	64.4	66.6	65.9	64.9	66.2
2007	63.3	59.4	61.1	59.6	59.2	58.3	56.8	57.2	59.4	58.9	58.1	59.6
2008	54.4	56.1	52.6	49.1	50.2	47.8	43.7	42.3	38.0	37.8	32.3	28.2
2009	24.0	22.0	19.9	18.1	17.5	17.5						
	Manufacturing payrolls, 84 industries											
Over 1-month span:												
2005	36.7	46.4	42.2	46.4	40.4	33.7	41.0	43.4	45.8	47.6	44.6	47.0
2006	57.8	49.4	53.6	47.0	37.3	50.6	49.4	42.2	40.4	42.8	41.0	44.0
2007	44.6	41.0	30.7	24.7	38.0	32.5	43.4	30.7	39.2	42.8	60.8	48.2
2008	30.7	28.9	37.3	32.5	40.4	25.3	25.9	27.7	22.9	18.7	15.1	10.2
2009	6.0	9.6	10.8	16.3	11.4	13.3						
Over 3-month span:												
2005	36.7	43.4	41.0	41.6	35.5	36.1	34.9	36.7	42.2	44.0	38.6	48.8
2006	56.6	57.2	48.2	48.2	44.6	50.0	43.4	45.2	36.7	33.1	35.5	39.2
2007	40.4	33.1	33.1	28.9	29.5	30.1	31.9	28.9	30.7	30.7	39.2	51.2
2008	48.8	33.7	28.3	29.5	26.5	22.9	19.9	16.9	22.3	21.1	15.1	11.4
2009	6.0	3.6	3.6	7.8	8.4	10.2						
Over 6-month span:												
2005	33.7	39.8	38.0	36.1	35.5	34.9	39.8	36.1	36.1	38.0	36.7	39.8
2006	45.2	45.2	50.6	48.8	50.6	50.0	45.2	47.0	43.4	42.2	39.8	34.3
2007	37.3	33.1	29.5	28.9	30.7	34.9	28.9	26.5	29.5	28.3	33.7	38.0
2008	34.3	30.1	37.3	35.5	25.3	20.5	17.5	18.1	16.9	13.3	11.4	9.6
2009	9.0	4.8	4.8	6.0	4.8	4.8						
Over 12-month span:												
2005	45.2	44.0	42.2	41.0	36.7	35.5	32.5	34.3	33.1	33.7	33.7	38.0
2006	44.0	41.0	41.0	39.8	39.8	45.2	42.2	42.8	47.0	48.8	45.8	44.6
2007	39.8	36.7	37.3	30.7	28.9	29.5	30.7	28.9	33.1	28.9	34.3	35.5
2008	27.7	28.9	25.9	25.3	30.7	27.1	24.7	19.3	21.7	21.7	16.9	15.1
2009	8.4	4.8	4.8	4.8	6.0	6.0						

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

Data for the two most recent months are preliminary.

18. Job openings levels and rates by industry and region, seasonally adjusted

Industry and region	Levels[1] (in thousands)							Percent						
	2008	2009						2008	2009					
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
Total[2]	3,224	2,920	2,973	2,633	2,513	2,523	2,558	2.3	2.1	2.2	1.9	1.9	1.9	1.9
Industry														
Total private[2]	2,861	2,461	2,606	2,269	2,042	2,191	2,206	2.5	2.2	2.3	2.0	1.8	2.0	2.0
Construction	66	55	58	51	29	39	67	0.9	0.8	0.9	0.8	0.5	0.6	1.1
Manufacturing	188	115	141	115	95	105	101	1.4	0.9	1.1	0.9	0.8	0.9	0.8
Trade, transportation, and utilities	495	488	488	414	332	466	484	1.9	1.9	1.9	1.6	1.3	1.8	1.9
Professional and business services	562	501	482	428	461	451	412	3.1	2.8	2.8	2.5	2.7	2.6	2.4
Education and health services	685	636	589	537	515	530	528	3.5	3.2	3.0	2.7	2.6	2.7	2.7
Leisure and hospitality	315	272	332	289	322	265	304	2.3	2.0	2.4	2.1	2.4	2.0	2.3
Government	345	417	367	353	461	310	321	1.5	1.8	1.6	1.5	2.0	1.4	1.4
Region[3]														
Northeast	633	560	607	583	520	554	610	2.4	2.2	2.4	2.3	2.0	2.2	2.4
South	1,245	1,109	1,109	1,000	942	888	880	2.5	2.2	2.2	2.0	1.9	1.8	1.8
Midwest	607	587	563	499	512	512	485	1.9	1.9	1.8	1.6	1.7	1.7	1.6
West	689	655	638	556	570	544	560	2.2	2.1	2.1	1.8	1.9	1.8	1.9

[1] Detail will not necessarily add to totals because of the independent seasonal adjustment of the various series.

[2] Includes natural resources and mining, information, financial activities, and other services, not shown separately.

[3] **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **Midwest**: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The job openings level is the number of job openings on the last business day of the month; the job openings rate is the number of job openings on the last business day of the month as a percent of total employment plus job openings.

[p] = preliminary.

19. Hires levels and rates by industry and region, seasonally adjusted

Industry and region	Levels[1] (in thousands)							Percent						
	2008	2009						2008	2009					
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
Total[2]	4,508	4,460	4,339	4,099	4,117	3,942	3,776	3.3	3.3	3.2	3.1	3.1	3.0	2.9
Industry														
Total private[2]	4,214	4,141	4,042	3,799	3,822	3,739	3,673	3.7	3.7	3.6	3.4	3.5	3.4	3.4
Construction	366	381	370	343	341	365	289	5.3	5.7	5.6	5.3	5.4	5.8	4.6
Manufacturing	252	237	257	244	236	206	209	2.0	1.9	2.1	2.0	1.9	1.7	1.8
Trade, transportation, and utilities	891	949	814	883	888	842	740	3.4	3.7	3.2	3.5	3.5	3.3	2.9
Professional and business services	786	762	730	668	733	721	680	4.5	4.4	4.3	4.0	4.4	4.3	4.1
Education and health services	528	539	527	483	475	473	530	2.8	2.8	2.8	2.5	2.5	2.5	2.8
Leisure and hospitality	711	743	704	693	691	695	708	5.3	5.6	5.3	5.3	5.3	5.3	5.4
Government	271	306	275	271	340	273	254	1.2	1.4	1.2	1.2	1.5	1.2	1.1
Region[3]														
Northeast	726	753	837	696	729	712	766	2.9	3.0	3.3	2.8	2.9	2.9	3.1
South	1,659	1,663	1,566	1,458	1,619	1,423	1,331	3.4	3.4	3.2	3.0	3.4	3.0	2.8
Midwest	1,009	1,003	904	943	901	867	856	3.3	3.3	3.0	3.1	3.0	2.9	2.9
West	1,053	1,002	960	931	949	995	904	3.5	3.3	3.2	3.1	3.2	3.4	3.1

[1] Detail will not necessarily add to totals because of the independent seasonal adjustment of the various series.

[2] Includes natural resources and mining, information, financial activities, and other services, not shown separately.

[3] **Northeast**: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **Midwest:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The hires level is the number of hires during the entire month; the hires rate is the number of hires during the entire month as a percent of total employment.

[p] = preliminary.

20. Total separations levels and rates by industry and region, seasonally adjusted

Industry and region	Levels[1] (in thousands)							Percent						
	2008	2009						2008	2009					
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
Total[2]	4,958	4,949	4,833	4,712	4,641	4,356	4,337	3.7	3.7	3.6	3.5	3.5	3.3	3.3
Industry														
Total private[2]	4,673	4,686	4,555	4,434	4,362	4,066	3,985	4.1	4.2	4.1	4.0	4.0	3.7	3.7
Construction	452	524	463	463	437	411	359	6.6	7.8	7.0	7.2	6.9	6.5	5.8
Manufacturing	419	476	424	401	390	367	359	3.2	3.8	3.4	3.3	3.2	3.1	3.0
Trade, transportation, and utilities	1,041	1,049	920	1,001	982	951	785	4.0	4.1	3.6	3.9	3.9	3.8	3.1
Professional and business services	898	866	951	778	839	771	727	5.2	5.0	5.6	4.6	5.0	4.6	4.4
Education and health services	498	494	498	466	462	419	485	2.6	2.6	2.6	2.4	2.4	2.2	2.5
Leisure and hospitality	755	763	731	751	716	684	711	5.7	5.7	5.5	5.7	5.4	5.2	5.4
Government	278	277	271	265	255	288	324	1.2	1.2	1.2	1.2	1.1	1.3	1.4
Region[3]														
Northeast	799	813	783	878	700	774	780	3.2	3.2	3.1	3.5	2.8	3.1	3.2
South	1,815	1,898	1,742	1,741	1,682	1,565	1,524	3.7	3.9	3.6	3.6	3.5	3.3	3.2
Midwest	1,088	1,120	1,121	1,085	1,065	1,016	998	3.5	3.7	3.7	3.6	3.5	3.4	3.3
West	1,227	1,180	1,188	978	1,188	980	1,060	4.0	3.9	4.0	3.3	4.0	3.3	3.6

[1] Detail will not necessarily add to totals because of the independent seasonal adjustment of the various series.

[2] Includes natural resources and mining, information, financial activities, and other services, not shown separately.

[3] **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **Midwest:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The total separations level is the number of total separations during the entire month; the total separations rate is the number of total separations during the entire month as a percent of total employment.

[p]= preliminary

21. Quits levels and rates by industry and region, seasonally adjusted

Industry and region	Levels[1] (in thousands)							Percent						
	2008	2009						2008	2009					
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
Total[2]	2,114	2,063	1,911	1,856	1,777	1,788	1,808	1.6	1.5	1.4	1.4	1.3	1.4	1.4
Industry														
Total private[2]	1,984	1,945	1,831	1,749	1,678	1,682	1,698	1.8	1.7	1.6	1.6	1.5	1.5	1.6
Construction	92	85	87	102	74	84	75	1.3	1.3	1.3	1.6	1.2	1.3	1.2
Manufacturing	87	105	105	81	80	86	88	.7	.8	.8	.7	.7	.7	.7
Trade, transportation, and utilities	518	469	372	444	385	398	392	2.0	1.8	1.5	1.7	1.5	1.6	1.6
Professional and business services	297	326	310	278	272	281	267	1.7	1.9	1.8	1.6	1.6	1.7	1.6
Education and health services	256	248	258	249	228	249	263	1.3	1.3	1.3	1.3	1.2	1.3	1.4
Leisure and hospitality	461	443	431	433	430	396	434	3.5	3.3	3.3	3.3	3.3	3.0	3.3
Government	130	105	115	107	99	107	110	.6	.5	.5	.5	.4	.5	.5
Region[3]														
Northeast	302	278	271	273	263	303	262	1.2	1.1	1.1	1.1	1.1	1.2	1.1
South	847	790	759	751	691	718	671	1.7	1.6	1.6	1.6	1.4	1.5	1.4
Midwest	452	491	468	431	410	397	419	1.5	1.6	1.5	1.4	1.4	1.3	1.4
West	498	492	453	408	453	398	450	1.6	1.6	1.5	1.4	1.5	1.3	1.5

[1] Detail will not necessarily add to totals because of the independent seasonal adjustment of the various series.

[2] Includes natural resources and mining, information, financial activities, and other services, not shown separately.

[3] **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia; **Midwest**: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The quits level is the number of quits during the entire month; the quits rate is the number of quits during the entire month as a percent of total employment.

[p] = preliminary.

22. Quarterly Census of Employment and Wages: 10 largest counties, fourth quarter 2008.

County by NAICS supersector	Establishments, fourth quarter 2008 (thousands)	Employment		Average weekly wage[1]	
		December 2008 (thousands)	Percent change, December 2007-08[2]	Fourth quarter 2008	Percent change, fourth quarter 2007-08[2]
United States[3]	9,177.5	133,870.4	-2.3	$918	2.2
Private industry	8,884.3	111,752.9	-2.9	919	2.0
Natural resources and mining	127.0	1,802.7	2.0	996	5.1
Construction	881.7	6,636.1	-10.2	1,052	4.9
Manufacturing	360.0	12,891.3	-6.2	1,094	1.8
Trade, transportation, and utilities	1,925.3	26,316.1	-3.5	766	1.1
Information	147.4	2,948.2	-3.4	1,360	.1
Financial activities	862.8	7,853.7	-3.2	1,390	-.4
Professional and business services	1,537.6	17,366.1	-4.1	1,201	3.7
Education and health services	857.4	18,304.3	2.9	872	3.7
Leisure and hospitality	742.2	12,957.7	-1.7	390	1.8
Other services	1,229.1	4,445.7	-.7	581	2.8
Government	293.2	22,117.5	.9	914	4.0
Los Angeles, CA	433.9	4,152.9	-3.4	1,075	1.8
Private industry	430.0	3,552.8	-3.8	1,064	1.1
Natural resources and mining	.5	10.5	-2.7	1,261	5.4
Construction	14.0	136.7	-12.3	1,138	4.8
Manufacturing	14.5	417.6	-5.9	1,107	3.8
Trade, transportation, and utilities	53.6	802.4	-5.4	833	-.8
Information	8.8	207.5	([4])	1,889	([4])
Financial activities	24.1	231.8	-5.7	1,462	-3.8
Professional and business services	42.6	574.2	([4])	1,306	([4])
Education and health services	28.1	500.0	([4])	979	([4])
Leisure and hospitality	27.2	396.1	-1.6	927	5.9
Other services	201.1	258.8	.5	454	1.1
Government	4.0	600.1	([4])	1,141	5.6
Cook, IL	141.0	2,480.0	-2.8	1,118	1.5
Private industry	139.6	2,169.2	-3.3	1,126	1.3
Natural resources and mining	.1	1.1	-5.6	998	-5.0
Construction	12.4	82.8	-10.5	1,478	6.9
Manufacturing	7.0	219.9	-6.5	1,119	3.0
Trade, transportation, and utilities	27.6	467.7	-4.9	840	-.4
Information	2.6	56.1	-3.2	1,487	-4.3
Financial activities	15.7	203.7	-4.3	2,007	.7
Professional and business services	29.1	423.4	-4.8	1,525	3.5
Education and health services	14.0	386.1	3.1	930	1.3
Leisure and hospitality	11.7	227.5	-2.2	440	.0
Other services	14.6	96.1	-.1	783	3.2
Government	1.4	310.8	.8	1,058	2.9
New York, NY	118.9	2,386.4	-1.3	1,856	-.6
Private industry	118.6	1,934.3	-1.6	2,041	-.7
Natural resources and mining	.0	.2	-3.6	1,594	4.7
Construction	2.4	36.3	.6	1,939	.6
Manufacturing	3.0	33.7	-8.3	1,565	.7
Trade, transportation, and utilities	22.0	255.2	-3.3	1,294	-1.5
Information	4.6	134.5	-1.5	2,055	-.3
Financial activities	19.2	369.0	-3.9	4,085	-1.3
Professional and business services	25.5	489.1	-2.4	2,173	.6
Education and health services	8.9	297.7	1.6	1,133	6.0
Leisure and hospitality	11.8	224.3	.8	889	-.7
Other services	18.0	90.2	.7	1,102	([4])
Government	.3	452.1	.0	1,062	1.6
Harris, TX	98.1	2,078.1	1.0	1,187	2.6
Private industry	97.6	1,820.6	.9	1,215	2.3
Natural resources and mining	1.6	85.8	7.1	2,872	-7.6
Construction	6.7	156.9	.5	1,217	7.1
Manufacturing	4.6	187.7	2.4	1,468	-3.4
Trade, transportation, and utilities	22.5	443.1	.6	1,035	4.0
Information	1.4	32.0	-2.4	1,393	8.2
Financial activities	10.6	117.9	-2.7	1,517	4.7
Professional and business services	19.6	336.9	-.2	1,448	3.7
Education and health services	10.4	224.3	3.1	958	3.2
Leisure and hospitality	7.6	175.2	-.6	404	4.7
Other services	11.9	59.6	.4	673	3.2
Government	.5	257.5	1.8	988	5.2
Maricopa, AZ	103.6	1,741.0	-5.8	892	2.1
Private industry	102.9	1,512.8	-6.9	893	2.2
Natural resources and mining	.5	9.0	-4.9	1,026	20.6
Construction	11.0	115.5	-25.3	986	3.4
Manufacturing	3.6	120.8	-8.0	1,217	3.6
Trade, transportation, and utilities	22.9	365.7	-6.8	796	.9
Information	1.7	29.4	-4.1	1,098	3.4
Financial activities	12.9	140.1	-4.8	1,066	-.4
Professional and business services	23.2	289.2	-8.5	989	5.0
Education and health services	10.3	216.8	5.7	999	2.3
Leisure and hospitality	7.4	176.8	-5.3	420	-1.4
Other services	7.4	48.4	-4.9	613	2.7
Government	.7	228.2	2.0	881	.1

See footnotes at end of table.

22. Continued—Quarterly Census of Employment and Wages: 10 largest counties, fourth quarter 2008.

County by NAICS supersector	Establishments, fourth quarter 2008 (thousands)	Employment		Average weekly wage[1]	
		December 2008 (thousands)	Percent change, December 2007-08[2]	Fourth quarter 2008	Percent change, fourth quarter 2007-08[2]
Orange, CA	102.7	1,451.2	-4.8	$1,043	1.4
Private industry	101.3	1,301.1	-5.3	1,043	1.2
Natural resources and mining	.2	4.2	-9.0	665	-2.8
Construction	6.9	83.3	-14.9	1,234	4.5
Manufacturing	5.3	166.4	-5.7	1,226	-.2
Trade, transportation, and utilities	17.2	272.3	-6.9	947	1.4
Information	1.3	29.0	-3.8	1,423	4.0
Financial activities	10.7	110.0	-7.5	1,582	-2.6
Professional and business services	19.1	258.3	-7.6	1,259	6.0
Education and health services	10.0	150.8	3.2	960	2.3
Leisure and hospitality	7.1	171.7	-2.2	406	1.5
Other services	18.0	49.0	-.3	569	-4.2
Government	1.4	150.1	-.8	1,044	3.2
Dallas, TX	68.6	1,484.4	-1.2	1,123	1.1
Private industry	68.1	1,314.7	-1.6	1,141	1.1
Natural resources and mining	.6	8.5	12.6	4,744	(4)
Construction	4.4	80.1	(4)	1,075	(4)
Manufacturing	3.1	129.8	-5.4	1,224	1.1
Trade, transportation, and utilities	15.2	308.2	-2.1	990	-4.2
Information	1.7	47.3	-4.2	1,524	3.6
Financial activities	8.8	142.9	(4)	1,429	-1.7
Professional and business services	15.1	275.6	(4)	1,375	2.4
Education and health services	6.7	153.9	3.8	1,059	3.1
Leisure and hospitality	5.4	128.5	(4)	493	(4)
Other services	6.6	39.0	-1.2	682	3.6
Government	.5	169.7	2.3	984	2.2
San Diego, CA	100.0	1,309.1	-3.0	981	2.0
Private industry	98.8	1,082.3	-3.5	960	1.6
Natural resources and mining	.8	9.4	-11.4	577	.2
Construction	7.0	70.4	-14.3	1,140	5.5
Manufacturing	3.1	100.4	-3.3	1,306	.9
Trade, transportation, and utilities	14.2	218.3	-6.3	759	.7
Information	1.3	38.6	.6	1,970	2.3
Financial activities	9.5	74.2	-5.7	1,171	-1.0
Professional and business services	16.3	210.9	-4.4	1,238	2.0
Education and health services	8.2	138.3	4.2	953	3.1
Leisure and hospitality	6.9	158.2	-2.3	425	3.9
Other services	26.9	58.4	2.0	491	1.7
Government	1.3	226.8	-.4	1,079	2.8
King, WA	77.6	1,175.3	-1.5	1,130	4.0
Private industry	77.0	1,018.2	-2.0	1,140	4.0
Natural resources and mining	.4	2.9	7.0	1,573	11.8
Construction	6.6	63.8	-11.6	1,197	6.8
Manufacturing	2.4	108.8	-3.3	1,449	7.0
Trade, transportation, and utilities	14.9	221.8	-2.9	955	1.0
Information	1.8	81.4	6.1	1,982	3.9
Financial activities	6.9	72.4	-5.0	1,418	2.6
Professional and business services	13.7	185.4	-3.3	1,378	4.6
Education and health services	6.5	129.3	4.6	894	3.8
Leisure and hospitality	6.2	108.6	-2.5	450	1.6
Other services	17.6	43.7	-.8	631	3.6
Government	.5	157.1	1.9	1,069	4.2
Miami-Dade, FL	86.8	1,003.9	-4.2	924	2.6
Private industry	86.4	851.3	-4.7	907	2.3
Natural resources and mining	.5	9.6	-10.6	457	-11.1
Construction	6.4	42.0	-21.4	973	5.3
Manufacturing	2.6	41.2	-11.7	818	1.0
Trade, transportation, and utilities	23.5	253.4	-4.0	814	1.2
Information	1.5	19.0	-8.1	1,266	5.2
Financial activities	10.2	67.2	-7.6	1,387	.1
Professional and business services	18.2	132.2	-5.2	1,229	6.6
Education and health services	9.4	145.9	2.8	901	1.7
Leisure and hospitality	6.0	104.0	-1.9	514	.6
Other services	7.6	36.2	-3.3	579	6.0
Government	.4	152.6	-1.1	1,017	3.7

[1] Average weekly wages were calculated using unrounded data.

[2] Percent changes were computed from quarterly employment and pay data adjusted for noneconomic county reclassifications. See Notes on Current Labor Statistics.

[3] Totals for the United States do not include data for Puerto Rico or the Virgin Islands.

[4] Data do not meet BLS or State agency disclosure standards.

NOTE: Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs. Data are preliminary.

23. Quarterly Census of Employment and Wages: by State, fourth quarter 2008.

State	Establishments, fourth quarter 2008 (thousands)	Employment		Average weekly wage[1]	
		December 2008 (thousands)	Percent change, December 2007-08	Fourth quarter 2008	Percent change, fourth quarter 2007-08
United States[2]	9,177.5	133,870.4	-2.3	$918	2.2
Alabama	121.6	1,909.8	-3.1	790	3.5
Alaska	21.4	303.9	1.6	927	5.7
Arizona	164.5	2,557.9	-5.1	848	2.7
Arkansas	86.5	1,168.2	-1.5	706	-1.0
California	1,370.0	15,288.5	-3.2	1,042	.7
Colorado	177.1	2,295.8	-1.5	932	.5
Connecticut	113.5	1,688.0	-1.7	1,164	1.2
Delaware	29.4	416.8	-3.0	943	1.9
District of Columbia	34.4	687.5	.3	1,570	5.1
Florida	623.0	7,586.6	-5.3	824	1.6
Georgia	276.7	3,970.3	-3.5	853	2.3
Hawaii	39.3	614.7	-3.5	821	3.5
Idaho	57.2	634.1	-3.9	693	1.0
Illinois	371.5	5,795.8	-2.3	985	1.0
Indiana	161.4	2,831.3	-3.4	764	2.7
Iowa	94.6	1,483.7	-1.0	756	3.1
Kansas	87.2	1,370.2	-.2	769	3.1
Kentucky	108.4	1,783.2	-2.6	754	3.0
Louisiana	128.5	1,907.5	.1	829	5.9
Maine	51.1	595.3	-2.1	735	4.0
Maryland	164.3	2,531.8	-1.9	1,010	2.4
Massachusetts	215.1	3,239.6	-1.1	1,154	1.8
Michigan	258.2	3,993.3	-4.9	903	3.6
Minnesota	172.0	2,658.8	-1.9	907	2.6
Mississippi	71.0	1,117.2	-2.8	679	3.8
Missouri	175.7	2,700.9	-1.7	842	7.9
Montana	43.2	433.8	-1.5	678	2.9
Nebraska	60.4	923.1	-.3	730	1.0
Nevada	77.5	1,206.5	-6.5	862	-1.1
New Hampshire	49.9	626.2	-2.0	936	2.2
New Jersey	273.7	3,927.7	-2.4	1,123	2.8
New Mexico	54.9	821.2	-1.2	768	3.9
New York	585.9	8,677.4	-1.0	1,169	1.4
North Carolina	260.1	4,003.8	-3.0	793	1.9
North Dakota	25.8	354.4	1.9	725	5.1
Ohio	293.0	5,167.5	-3.2	816	2.6
Oklahoma	100.8	1,559.8	.0	755	4.9
Oregon	134.1	1,676.6	-3.7	808	1.3
Pennsylvania	344.0	5,645.8	-1.3	897	2.6
Rhode Island	35.9	464.3	-3.4	887	5.7
South Carolina	119.5	1,837.1	-3.5	731	2.1
South Dakota	30.8	395.2	.4	663	2.5
Tennessee	143.1	2,695.7	-3.3	824	1.4
Texas	566.6	10,510.8	.4	933	2.4
Utah	88.3	1,215.0	-2.1	770	1.4
Vermont	25.1	304.4	-1.7	774	4.3
Virginia	233.5	3,656.8	-1.3	953	3.3
Washington	222.8	2,885.0	-1.8	918	3.7
West Virginia	48.9	713.8	-.1	735	7.1
Wisconsin	161.1	2,753.2	-1.9	793	3.0
Wyoming	25.2	284.5	1.5	850	4.3
Puerto Rico	55.3	1,028.5	-2.9	528	2.3
Virgin Islands	3.6	45.5	-1.4	731	-.8

[1] Average weekly wages were calculated using unrounded data.

[2] Totals for the United States do not include data for Puerto Rico or the Virgin Islands.

NOTE: Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs. Data are preliminary.

24. Annual data: Quarterly Census of Employment and Wages, by ownership

Year	Average establishments	Average annual employment	Total annual wages (in thousands)	Average annual wage per employee	Average weekly wage
	Total covered (UI and UCFE)				
1998	7,634,018	124,183,549	$3,967,072,423	$31,945	$614
1999	7,820,860	127,042,282	4,235,579,204	33,340	641
2000	7,879,116	129,877,063	4,587,708,584	35,323	679
2001	7,984,529	129,635,800	4,695,225,123	36,219	697
2002	8,101,872	128,233,919	4,714,374,741	36,764	707
2003	8,228,840	127,795,827	4,826,251,547	37,765	726
2004	8,364,795	129,278,176	5,087,561,796	39,354	757
2005	8,571,144	131,571,623	5,351,949,496	40,677	782
2006	8,784,027	133,833,834	5,692,569,465	42,535	818
2007	8,971,897	135,366,106	6,018,089,108	44,458	855
	UI covered				
1998	7,586,767	121,400,660	$3,845,494,089	$31,676	$609
1999	7,771,198	124,255,714	4,112,169,533	33,094	636
2000	7,828,861	127,005,574	4,454,966,824	35,077	675
2001	7,933,536	126,883,182	4,560,511,280	35,943	691
2002	8,051,117	125,475,293	4,570,787,218	36,428	701
2003	8,177,087	125,031,551	4,676,319,378	37,401	719
2004	8,312,729	126,538,579	4,929,262,369	38,955	749
2005	8,518,249	128,837,948	5,188,301,929	40,270	774
2006	8,731,111	131,104,860	5,522,624,197	42,124	810
2007	8,908,198	132,639,806	5,841,231,314	44,038	847
	Private industry covered				
1998	7,381,518	105,082,368	$3,337,621,699	$31,762	$611
1999	7,560,567	107,619,457	3,577,738,557	33,244	639
2000	7,622,274	110,015,333	3,887,626,769	35,337	680
2001	7,724,965	109,304,802	3,952,152,155	36,157	695
2002	7,839,903	107,577,281	3,930,767,025	36,539	703
2003	7,963,340	107,065,553	4,015,823,311	37,508	721
2004	8,093,142	108,490,066	4,245,640,890	39,134	753
2005	8,294,662	110,611,016	4,480,311,193	40,505	779
2006	8,505,496	112,718,858	4,780,833,389	42,414	816
2007	8,681,001	114,012,221	5,057,840,759	44,362	853
	State government covered				
1998	67,347	4,240,779	$142,512,445	$33,605	$646
1999	70,538	4,296,673	149,011,194	34,681	667
2000	65,096	4,370,160	158,618,365	36,296	698
2001	64,583	4,452,237	168,358,331	37,814	727
2002	64,447	4,485,071	175,866,492	39,212	754
2003	64,467	4,481,845	179,528,728	40,057	770
2004	64,544	4,484,997	184,414,992	41,118	791
2005	66,278	4,527,514	191,281,126	42,249	812
2006	66,921	4,565,908	200,329,294	43,875	844
2007	67,381	4,611,395	211,677,002	45,903	883
	Local government covered				
1998	137,902	12,077,513	$365,359,945	$30,251	$582
1999	140,093	12,339,584	385,419,781	31,234	601
2000	141,491	12,620,081	408,721,690	32,387	623
2001	143,989	13,126,143	440,000,795	33,521	645
2002	146,767	13,412,941	464,153,701	34,605	665
2003	149,281	13,484,153	480,967,339	35,669	686
2004	155,043	13,563,517	499,206,488	36,805	708
2005	157,309	13,699,418	516,709,610	37,718	725
2006	158,695	13,820,093	541,461,514	39,179	753
2007	159,816	14,016,190	571,713,553	40,790	784
	Federal government covered (UCFE)				
1998	47,252	2,782,888	$121,578,334	$43,688	$840
1999	49,661	2,786,567	123,409,672	44,287	852
2000	50,256	2,871,489	132,741,760	46,228	889
2001	50,993	2,752,619	134,713,843	48,940	941
2002	50,755	2,758,627	143,587,523	52,050	1,001
2003	51,753	2,764,275	149,932,170	54,239	1,043
2004	52,066	2,739,596	158,299,427	57,782	1,111
2005	52,895	2,733,675	163,647,568	59,864	1,151
2006	52,916	2,728,974	169,945,269	62,274	1,198
2007	63,699	2,726,300	176,857,794	64,871	1,248

NOTE: Data are final. Detail may not add to total due to rounding.

25. Annual data: Quarterly Census of Employment and Wages, establishment size and employment, private ownership, by supersector, first quarter 2007

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers[1]	5 to 9 workers	10 to 19 workers	20 to 49 workers	50 to 99 workers	100 to 249 workers	250 to 499 workers	500 to 999 workers	1,000 or more workers
Total all industries[2]										
Establishments, first quarter	8,572,894	5,189,837	1,407,987	933,910	648,489	220,564	124,980	30,568	11,049	5,510
Employment, March	112,536,714	7,670,620	9,326,775	12,610,385	19,566,806	15,156,364	18,718,813	10,438,705	7,479,948	11,568,298
Natural resources and mining										
Establishments, first quarter	124,002	69,260	23,451	15,289	10,137	3,250	1,842	519	190	64
Employment, March	1,686,694	111,702	155,044	205,780	304,936	222,684	278,952	179,598	126,338	101,660
Construction										
Establishments, first quarter	883,409	580,647	141,835	84,679	52,336	15,341	6,807	1,326	350	88
Employment, March	7,321,288	835,748	929,707	1,137,104	1,564,722	1,046,790	1,004,689	443,761	232,556	126,211
Manufacturing										
Establishments, first quarter	361,070	136,649	61,845	54,940	53,090	25,481	19,333	6,260	2,379	1,093
Employment, March	13,850,738	238,848	415,276	755,931	1,657,463	1,785,569	2,971,836	2,140,531	1,613,357	2,271,927
Trade, transportation, and utilities										
Establishments, first quarter	1,905,750	1,017,012	381,434	248,880	160,549	53,721	34,536	7,315	1,792	511
Employment, March	25,983,275	1,683,738	2,539,291	3,335,327	4,845,527	3,709,371	5,140,740	2,510,273	1,167,986	1,051,022
Information										
Establishments, first quarter	143,094	81,414	20,986	16,338	13,384	5,609	3,503	1,134	489	237
Employment, March	3,016,454	113,901	139,730	222,710	411,218	387,996	533,877	392,350	335,998	478,674
Financial activities										
Establishments, first quarter	863,784	563,670	155,984	81,849	40,668	12,037	6,313	1,863	939	461
Employment, March	8,146,274	890,816	1,029,911	1,080,148	1,210,332	822,627	945,396	645,988	648,691	872,365
Professional and business services										
Establishments, first quarter	1,456,681	989,991	196,645	125,014	83,127	32,388	20,412	5,902	2,263	939
Employment, March	17,612,073	1,375,429	1,292,744	1,685,085	2,520,739	2,243,595	3,102,005	2,012,609	1,535,591	1,844,276
Education and health services										
Establishments, first quarter	812,914	388,773	179,011	116,031	75,040	27,393	18,815	4,153	1,906	1,792
Employment, March	17,331,231	700,195	1,189,566	1,559,689	2,258,922	1,908,595	2,828,678	1,409,073	1,319,128	4,157,385
Leisure and hospitality										
Establishments, first quarter	716,126	275,121	120,795	132,408	134,766	39,766	10,681	1,639	646	304
Employment, March	12,949,319	439,080	815,688	1,858,394	4,054,666	2,648,733	1,510,212	551,528	438,008	633,010
Other services										
Establishments, first quarter	1,119,209	908,792	118,963	57,419	25,169	5,562	2,731	457	95	21
Employment, March	4,402,263	1,109,065	776,354	756,783	732,313	379,320	401,371	152,994	62,295	31,768

[1] Includes establishments that reported no workers in March 2007.

[2] Includes data for unclassified establishments, not shown separately.

NOTE: Data are final. Detail may not add to total due to rounding.

26. Average annual wages for 2006 and 2007 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2006	2007	Percent change, 2006-07
Metropolitan areas[4]	$44,165	$46,139	4.5
Abilene, TX	29,842	31,567	5.8
Aguadilla-Isabela-San Sebastian, PR	19,277	20,295	5.3
Akron, OH	38,088	39,499	3.7
Albany, GA	32,335	33,378	3.2
Albany-Schenectady-Troy, NY	41,027	42,191	2.8
Albuquerque, NM	36,934	38,191	3.4
Alexandria, LA	31,329	32,757	4.6
Allentown-Bethlehem-Easton, PA-NJ	39,787	41,784	5.0
Altoona, PA	30,394	31,988	5.2
Amarillo, TX	33,574	35,574	6.0
Ames, IA	35,331	37,041	4.8
Anchorage, AK	42,955	45,237	5.3
Anderson, IN	32,184	32,850	2.1
Anderson, SC	30,373	31,086	2.3
Ann Arbor, MI	47,186	49,427	4.7
Anniston-Oxford, AL	32,724	34,593	5.7
Appleton, WI	35,308	36,575	3.6
Asheville, NC	32,268	33,406	3.5
Athens-Clarke County, GA	33,485	34,256	2.3
Atlanta-Sandy Springs-Marietta, GA	45,889	48,111	4.8
Atlantic City, NJ	38,018	39,276	3.3
Auburn-Opelika, AL	30,468	31,554	3.6
Augusta-Richmond County, GA-SC	35,638	36,915	3.6
Austin-Round Rock, TX	45,737	46,458	1.6
Bakersfield, CA	36,020	38,254	6.2
Baltimore-Towson, MD	45,177	47,177	4.4
Bangor, ME	31,746	32,829	3.4
Barnstable Town, MA	36,437	37,691	3.4
Baton Rouge, LA	37,245	39,339	5.6
Battle Creek, MI	39,362	40,628	3.2
Bay City, MI	35,094	35,680	1.7
Beaumont-Port Arthur, TX	39,026	40,682	4.2
Bellingham, WA	32,618	34,239	5.0
Bend, OR	33,319	34,318	3.0
Billings, MT	33,270	35,372	6.3
Binghamton, NY	35,048	36,322	3.6
Birmingham-Hoover, AL	40,798	42,570	4.3
Bismarck, ND	32,550	34,118	4.8
Blacksburg-Christiansburg-Radford, VA	34,024	35,248	3.6
Bloomington, IN	30,913	32,028	3.6
Bloomington-Normal, IL	41,359	42,082	1.7
Boise City-Nampa, ID	36,734	37,553	2.2
Boston-Cambridge-Quincy, MA-NH	56,809	59,817	5.3
Boulder, CO	50,944	52,745	3.5
Bowling Green, KY	32,529	33,308	2.4
Bremerton-Silverdale, WA	37,694	39,506	4.8
Bridgeport-Stamford-Norwalk, CT	74,890	79,973	6.8
Brownsville-Harlingen, TX	25,795	27,126	5.2
Brunswick, GA	32,717	32,705	0.0
Buffalo-Niagara Falls, NY	36,950	38,218	3.4
Burlington, NC	32,835	33,132	0.9
Burlington-South Burlington, VT	40,548	41,907	3.4
Canton-Massillon, OH	33,132	34,091	2.9
Cape Coral-Fort Myers, FL	37,065	37,658	1.6
Carson City, NV	40,115	42,030	4.8
Casper, WY	38,307	41,105	7.3
Cedar Rapids, IA	38,976	41,059	5.3
Champaign-Urbana, IL	34,422	35,788	4.0
Charleston, WV	36,887	38,687	4.9
Charleston-North Charleston, SC	35,267	36,954	4.8
Charlotte-Gastonia-Concord, NC-SC	45,732	46,975	2.7
Charlottesville, VA	39,051	40,819	4.5
Chattanooga, TN-GA	35,358	36,522	3.3
Cheyenne, WY	35,306	36,191	2.5
Chicago-Naperville-Joliet, IL-IN-WI	48,631	50,823	4.5
Chico, CA	31,557	33,207	5.2
Cincinnati-Middletown, OH-KY-IN	41,447	42,969	3.7
Clarksville, TN-KY	30,949	32,216	4.1
Cleveland, TN	33,075	34,666	4.8
Cleveland-Elyria-Mentor, OH	41,325	42,783	3.5
Coeur d'Alene, ID	29,797	31,035	4.2
College Station-Bryan, TX	30,239	32,630	7.9
Colorado Springs, CO	38,325	39,745	3.7
Columbia, MO	32,207	33,266	3.3
Columbia, SC	35,209	36,293	3.1
Columbus, GA-AL	32,334	34,511	6.7
Columbus, IN	40,107	41,078	2.4
Columbus, OH	41,168	42,655	3.6
Corpus Christi, TX	35,399	37,186	5.0
Corvallis, OR	40,586	41,981	3.4

See footnotes at end of table.

26. Continued — Average annual wages for 2006 and 2007 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2006	2007	Percent change, 2006-07
Cumberland, MD-WV	$29,859	$31,373	5.1
Dallas-Fort Worth-Arlington, TX	47,525	49,627	4.4
Dalton, GA	33,266	34,433	3.5
Danville, IL	33,141	34,086	2.9
Danville, VA	28,870	30,212	4.6
Davenport-Moline-Rock Island, IA-IL	37,559	39,385	4.9
Dayton, OH	39,387	40,223	2.1
Decatur, AL	34,883	35,931	3.0
Decatur, IL	39,375	41,039	4.2
Deltona-Daytona Beach-Ormond Beach, FL	31,197	32,196	3.2
Denver-Aurora, CO	48,232	50,180	4.0
Des Moines, IA	41,358	42,895	3.7
Detroit-Warren-Livonia, MI	47,455	49,019	3.3
Dothan, AL	31,473	32,367	2.8
Dover, DE	34,571	35,978	4.1
Dubuque, IA	33,044	34,240	3.6
Duluth, MN-WI	33,677	35,202	4.5
Durham, NC	49,314	52,420	6.3
Eau Claire, WI	31,718	32,792	3.4
El Centro, CA	30,035	32,419	7.9
Elizabethtown, KY	32,072	32,701	2.0
Elkhart-Goshen, IN	35,878	36,566	1.9
Elmira, NY	33,968	34,879	2.7
El Paso, TX	29,903	31,354	4.9
Erie, PA	33,213	34,788	4.7
Eugene-Springfield, OR	33,257	34,329	3.2
Evansville, IN-KY	36,858	37,182	0.9
Fairbanks, AK	41,296	42,345	2.5
Fajardo, PR	21,002	22,075	5.1
Fargo, ND-MN	33,542	35,264	5.1
Farmington, NM	36,220	38,572	6.5
Fayetteville, NC	31,281	33,216	6.2
Fayetteville-Springdale-Rogers, AR-MO	35,734	37,325	4.5
Flagstaff, AZ	32,231	34,473	7.0
Flint, MI	39,409	39,310	-0.3
Florence, SC	33,610	34,305	2.1
Florence-Muscle Shoals, AL	29,518	30,699	4.0
Fond du Lac, WI	33,376	34,664	3.9
Fort Collins-Loveland, CO	37,940	39,335	3.7
Fort Smith, AR-OK	30,932	31,236	1.0
Fort Walton Beach-Crestview-Destin, FL	34,409	35,613	3.5
Fort Wayne, IN	35,641	36,542	2.5
Fresno, CA	33,504	35,111	4.8
Gadsden, AL	29,499	30,979	5.0
Gainesville, FL	34,573	36,243	4.8
Gainesville, GA	34,765	36,994	6.4
Glens Falls, NY	32,780	33,564	2.4
Goldsboro, NC	29,331	30,177	2.9
Grand Forks, ND-MN	29,234	30,745	5.2
Grand Junction, CO	33,729	36,221	7.4
Grand Rapids-Wyoming, MI	38,056	38,953	2.4
Great Falls, MT	29,542	31,009	5.0
Greeley, CO	35,144	37,066	5.5
Green Bay, WI	36,677	37,788	3.0
Greensboro-High Point, NC	35,898	37,213	3.7
Greenville, NC	32,432	33,703	3.9
Greenville, SC	35,471	36,536	3.0
Guayama, PR	24,551	26,094	6.3
Gulfport-Biloxi, MS	34,688	34,971	0.8
Hagerstown-Martinsburg, MD-WV	34,621	35,468	2.4
Hanford-Corcoran, CA	31,148	32,504	4.4
Harrisburg-Carlisle, PA	39,807	41,424	4.1
Harrisonburg, VA	31,522	32,718	3.8
Hartford-West Hartford-East Hartford, CT	51,282	54,188	5.7
Hattiesburg, MS	30,059	30,729	2.2
Hickory-Lenoir-Morganton, NC	31,323	32,364	3.3
Hinesville-Fort Stewart, GA	31,416	33,210	5.7
Holland-Grand Haven, MI	36,895	37,470	1.6
Honolulu, HI	39,009	40,748	4.5
Hot Springs, AR	27,684	28,448	2.8
Houma-Bayou Cane-Thibodaux, LA	38,417	41,604	8.3
Houston-Baytown-Sugar Land, TX	50,177	53,494	6.6
Huntington-Ashland, WV-KY-OH	32,648	33,973	4.1
Huntsville, AL	44,659	45,763	2.5
Idaho Falls, ID	31,632	29,878	-5.5
Indianapolis, IN	41,307	42,227	2.2
Iowa City, IA	35,913	37,457	4.3
Ithaca, NY	38,337	39,387	2.7
Jackson, MI	36,836	38,267	3.9
Jackson, MS	34,605	35,771	3.4

See footnotes at end of table.

26. Continued — Average annual wages for 2006 and 2007 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2006	2007	Percent change, 2006-07
Jackson, TN	$34,477	$35,059	1.7
Jacksonville, FL	40,192	41,437	3.1
Jacksonville, NC	25,854	27,005	4.5
Janesville, WI	36,732	36,790	0.2
Jefferson City, MO	31,771	32,903	3.6
Johnson City, TN	31,058	31,985	3.0
Johnstown, PA	29,972	31,384	4.7
Jonesboro, AR	28,972	30,378	4.9
Joplin, MO	30,111	31,068	3.2
Kalamazoo-Portage, MI	37,099	38,402	3.5
Kankakee-Bradley, IL	32,389	33,340	2.9
Kansas City, MO-KS	41,320	42,921	3.9
Kennewick-Richland-Pasco, WA	38,750	40,439	4.4
Killeen-Temple-Fort Hood, TX	31,511	32,915	4.5
Kingsport-Bristol-Bristol, TN-VA	35,100	36,399	3.7
Kingston, NY	33,697	35,018	3.9
Knoxville, TN	37,216	38,386	3.1
Kokomo, IN	45,808	47,269	3.2
La Crosse, WI-MN	31,819	32,949	3.6
Lafayette, IN	35,380	36,419	2.9
Lafayette, LA	38,170	40,684	6.6
Lake Charles, LA	35,883	37,447	4.4
Lakeland, FL	33,530	34,394	2.6
Lancaster, PA	36,171	37,043	2.4
Lansing-East Lansing, MI	39,890	40,866	2.4
Laredo, TX	28,051	29,009	3.4
Las Cruces, NM	29,969	31,422	4.8
Las Vegas-Paradise, NV	40,139	42,336	5.5
Lawrence, KS	29,896	30,830	3.1
Lawton, OK	29,830	30,617	2.6
Lebanon, PA	31,790	32,876	3.4
Lewiston, ID-WA	30,776	31,961	3.9
Lewiston-Auburn, ME	32,231	33,118	2.8
Lexington-Fayette, KY	37,926	39,290	3.6
Lima, OH	33,790	35,177	4.1
Lincoln, NE	33,703	34,750	3.1
Little Rock-North Little Rock, AR	36,169	39,305	8.7
Logan, UT-ID	26,766	27,810	3.9
Longview, TX	35,055	36,956	5.4
Longview, WA	35,140	37,101	5.6
Los Angeles-Long Beach-Santa Ana, CA	48,680	50,480	3.7
Louisville, KY-IN	38,673	40,125	3.8
Lubbock, TX	31,977	32,761	2.5
Lynchburg, VA	33,242	34,412	3.5
Macon, GA	34,126	34,243	0.3
Madera, CA	31,213	33,266	6.6
Madison, WI	40,007	41,201	3.0
Manchester-Nashua, NH	46,659	49,235	5.5
Mansfield, OH	33,171	33,109	-0.2
Mayaguez, PR	20,619	21,326	3.4
McAllen-Edinburg-Pharr, TX	26,712	27,651	3.5
Medford, OR	31,697	32,877	3.7
Memphis, TN-MS-AR	40,580	42,339	4.3
Merced, CA	31,147	32,351	3.9
Miami-Fort Lauderdale-Miami Beach, FL	42,175	43,428	3.0
Michigan City-La Porte, IN	31,383	32,570	3.8
Midland, TX	42,625	45,574	6.9
Milwaukee-Waukesha-West Allis, WI	42,049	43,261	2.9
Minneapolis-St. Paul-Bloomington, MN-WI	46,931	49,542	5.6
Missoula, MT	30,652	32,233	5.2
Mobile, AL	36,126	36,890	2.1
Modesto, CA	35,468	36,739	3.6
Monroe, LA	30,618	31,992	4.5
Monroe, MI	40,938	41,636	1.7
Montgomery, AL	35,383	36,223	2.4
Morgantown, WV	32,608	35,241	8.1
Morristown, TN	31,914	32,806	2.8
Mount Vernon-Anacortes, WA	32,851	34,620	5.4
Muncie, IN	30,691	31,326	2.1
Muskegon-Norton Shores, MI	33,949	34,982	3.0
Myrtle Beach-Conway-North Myrtle Beach, SC	27,905	28,576	2.4
Napa, CA	41,788	44,171	5.7
Naples-Marco Island, FL	39,320	41,300	5.0
Nashville-Davidson--Murfreesboro, TN	41,003	42,728	4.2
New Haven-Milford, CT	44,892	47,039	4.8
New Orleans-Metairie-Kenner, LA	42,434	43,255	1.9
New York-Northern New Jersey-Long Island, NY-NJ-PA	61,388	65,685	7.0
Niles-Benton Harbor, MI	36,967	38,140	3.2
Norwich-New London, CT	43,184	45,463	5.3
Ocala, FL	31,330	31,623	0.9

See footnotes at end of table.

26. Continued — Average annual wages for 2006 and 2007 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2006	2007	Percent change, 2006-07
Ocean City, NJ	$31,801	$32,452	2.0
Odessa, TX	37,144	41,758	12.4
Ogden-Clearfield, UT	32,890	34,067	3.6
Oklahoma City, OK	35,846	37,192	3.8
Olympia, WA	37,787	39,678	5.0
Omaha-Council Bluffs, NE-IA	38,139	39,273	3.0
Orlando, FL	37,776	38,633	2.3
Oshkosh-Neenah, WI	39,538	41,014	3.7
Owensboro, KY	32,491	33,593	3.4
Oxnard-Thousand Oaks-Ventura, CA	45,467	47,669	4.8
Palm Bay-Melbourne-Titusville, FL	39,778	40,975	3.0
Panama City-Lynn Haven, FL	33,341	33,950	1.8
Parkersburg-Marietta, WV-OH	32,213	33,547	4.1
Pascagoula, MS	36,287	39,131	7.8
Pensacola-Ferry Pass-Brent, FL	33,530	34,165	1.9
Peoria, IL	42,283	43,470	2.8
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	48,647	50,611	4.0
Phoenix-Mesa-Scottsdale, AZ	42,220	43,697	3.5
Pine Bluff, AR	32,115	33,094	3.0
Pittsburgh, PA	40,759	42,910	5.3
Pittsfield, MA	36,707	38,075	3.7
Pocatello, ID	28,418	29,268	3.0
Ponce, PR	20,266	21,019	3.7
Portland-South Portland-Biddeford, ME	36,979	38,497	4.1
Portland-Vancouver-Beaverton, OR-WA	42,607	44,335	4.1
Port St. Lucie-Fort Pierce, FL	34,408	36,375	5.7
Poughkeepsie-Newburgh-Middletown, NY	39,528	40,793	3.2
Prescott, AZ	30,625	32,048	4.6
Providence-New Bedford-Fall River, RI-MA	39,428	40,674	3.2
Provo-Orem, UT	32,308	34,141	5.7
Pueblo, CO	30,941	32,552	5.2
Punta Gorda, FL	32,370	32,833	1.4
Racine, WI	39,002	40,746	4.5
Raleigh-Cary, NC	41,205	42,801	3.9
Rapid City, SD	29,920	31,119	4.0
Reading, PA	38,048	39,945	5.0
Redding, CA	33,307	34,953	4.9
Reno-Sparks, NV	39,537	41,365	4.6
Richmond, VA	42,495	44,530	4.8
Riverside-San Bernardino-Ontario, CA	36,668	37,846	3.2
Roanoke, VA	33,912	35,419	4.4
Rochester, MN	42,941	44,786	4.3
Rochester, NY	39,481	40,752	3.2
Rockford, IL	37,424	38,304	2.4
Rocky Mount, NC	31,556	32,527	3.1
Rome, GA	34,850	33,041	-5.2
Sacramento--Arden-Arcade--Roseville, CA	44,552	46,385	4.1
Saginaw-Saginaw Township North, MI	37,747	37,507	-0.6
St. Cloud, MN	33,018	33,996	3.0
St. George, UT	28,034	29,052	3.6
St. Joseph, MO-KS	31,253	31,828	1.8
St. Louis, MO-IL	41,354	42,873	3.7
Salem, OR	32,764	33,986	3.7
Salinas, CA	37,974	39,419	3.8
Salisbury, MD	33,223	34,833	4.8
Salt Lake City, UT	38,630	40,935	6.0
San Angelo, TX	30,168	30,920	2.5
San Antonio, TX	36,763	38,274	4.1
San Diego-Carlsbad-San Marcos, CA	45,784	47,657	4.1
Sandusky, OH	33,526	33,471	-0.2
San Francisco-Oakland-Fremont, CA	61,343	64,559	5.2
San German-Cabo Rojo, PR	19,498	19,777	1.4
San Jose-Sunnyvale-Santa Clara, CA	76,608	82,038	7.1
San Juan-Caguas-Guaynabo, PR	24,812	25,939	4.5
San Luis Obispo-Paso Robles, CA	35,146	36,740	4.5
Santa Barbara-Santa Maria-Goleta, CA	40,326	41,967	4.1
Santa Cruz-Watsonville, CA	40,776	41,540	1.9
Santa Fe, NM	35,320	37,395	5.9
Santa Rosa-Petaluma, CA	41,533	42,824	3.1
Sarasota-Bradenton-Venice, FL	35,751	36,424	1.9
Savannah, GA	35,684	36,695	2.8
Scranton--Wilkes-Barre, PA	32,813	34,205	4.2
Seattle-Tacoma-Bellevue, WA	49,455	51,924	5.0
Sheboygan, WI	35,908	37,049	3.2
Sherman-Denison, TX	34,166	35,672	4.4
Shreveport-Bossier City, LA	33,678	34,892	3.6
Sioux City, IA-NE-SD	31,826	33,025	3.8
Sioux Falls, SD	34,542	36,056	4.4
South Bend-Mishawaka, IN-MI	35,089	36,266	3.4
Spartanburg, SC	37,077	37,967	2.4

See footnotes at end of table.

26. Continued — Average annual wages for 2006 and 2007 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2006	2007	Percent change, 2006-07
Spokane, WA	$34,016	$35,539	4.5
Springfield, IL	40,679	42,420	4.3
Springfield, MA	37,962	39,487	4.0
Springfield, MO	30,786	31,868	3.5
Springfield, OH	31,844	32,017	0.5
State College, PA	35,392	36,797	4.0
Stockton, CA	36,426	37,906	4.1
Sumter, SC	29,294	30,267	3.3
Syracuse, NY	38,081	39,620	4.0
Tallahassee, FL	35,018	36,543	4.4
Tampa-St. Petersburg-Clearwater, FL	38,016	39,215	3.2
Terre Haute, IN	31,341	32,349	3.2
Texarkana, TX-Texarkana, AR	32,545	34,079	4.7
Toledo, OH	37,039	38,538	4.0
Topeka, KS	34,806	36,109	3.7
Trenton-Ewing, NJ	54,274	56,645	4.4
Tucson, AZ	37,119	38,524	3.8
Tulsa, OK	37,637	38,942	3.5
Tuscaloosa, AL	35,613	36,737	3.2
Tyler, TX	36,173	37,184	2.8
Utica-Rome, NY	32,457	33,916	4.5
Valdosta, GA	26,794	27,842	3.9
Vallejo-Fairfield, CA	40,225	42,932	6.7
Vero Beach, FL	33,823	35,901	6.1
Victoria, TX	36,642	38,317	4.6
Vineland-Millville-Bridgeton, NJ	37,749	39,408	4.4
Virginia Beach-Norfolk-Newport News, VA-NC	36,071	37,734	4.6
Visalia-Porterville, CA	29,772	30,968	4.0
Waco, TX	33,450	34,679	3.7
Warner Robins, GA	38,087	39,220	3.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	58,057	60,711	4.6
Waterloo-Cedar Falls, IA	34,329	35,899	4.6
Wausau, WI	34,438	35,710	3.7
Weirton-Steubenville, WV-OH	31,416	32,893	4.7
Wenatchee, WA	28,340	29,475	4.0
Wheeling, WV-OH	30,620	31,169	1.8
Wichita, KS	38,763	39,662	2.3
Wichita Falls, TX	30,785	32,320	5.0
Williamsport, PA	31,431	32,506	3.4
Wilmington, NC	32,948	34,239	3.9
Winchester, VA-WV	34,895	36,016	3.2
Winston-Salem, NC	37,712	38,921	3.2
Worcester, MA	42,726	44,652	4.5
Yakima, WA	28,401	29,743	4.7
Yauco, PR	19,001	19,380	2.0
York-Hanover, PA	37,226	38,469	3.3
Youngstown-Warren-Boardman, OH-PA	33,852	34,698	2.5
Yuba City, CA	33,642	35,058	4.2
Yuma, AZ	28,369	30,147	6.3

[1] Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs.

[2] Includes data for Metropolitan Statistical Areas (MSA) as defined by OMB Bulletin No. 04-03 as of February 18, 2004.

[3] Each year's total is based on the MSA definition for the specific year. Annual changes include differences resulting from changes in MSA definitions.

[4] Totals do not include the six MSAs within Puerto Rico.

27. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1998[1]	1999[1]	2000[1]	2001[1]	2002	2003	2004	2005	2006	2007	2008
Civilian noninstitutional population	205,220	207,753	212,577	215,092	217,570	221,168	223,357	226,082	228,815	231,867	233,788
Civilian labor force	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320	151,428	153,124	154,287
Labor force participation rate	67.1	67.1	67.1	66.8	66.6	66.2	66.0	66.0	66.2	66.0	66.0
Employed	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730	144,427	146,047	145,362
Employment-population ratio	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7	63.1	63.0	62.2
Unemployed	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591	7,001	7,078	8,924
Unemployment rate	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.6	4.6	5.8
Not in the labor force	67,547	68,385	69,994	71,359	72,707	74,658	75,956	76,762	77,387	78,743	79,501

[1] Not strictly comparable with prior years.

28. Annual data: Employment levels by industry

[In thousands]

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total private employment	106,021	108,686	110,995	110,708	108,828	108,416	109,814	111,899	114,113	115,420	114,792
Total nonfarm employment	125,930	128,993	131,785	131,826	130,341	129,999	131,435	133,703	136,086	137,623	137,248
Goods-producing	24,354	24,465	24,649	23,873	22,557	21,816	21,882	22,190	22,531	22,221	21,404
Natural resources and mining	645	598	599	606	583	572	591	628	684	723	774
Construction	6,149	6,545	6,787	6,826	6,716	6,735	6,976	7,336	7,691	7,614	7,175
Manufacturing	17,560	17,322	17,263	16,441	15,259	14,510	14,315	14,226	14,155	13,884	13,455
Private service-providing	81,667	84,221	86,346	86,834	86,271	86,600	87,932	89,709	91,582	93,199	93,387
Trade, transportation, and utilities	25,186	25,771	26,225	25,983	25,497	25,287	25,533	25,959	26,276	26,608	26,332
Wholesale trade	5,795	5,893	5,933	5,773	5,652	5,608	5,663	5,764	5,905	6,028	6,012
Retail trade	14,609	14,970	15,280	15,239	15,025	14,917	15,058	15,280	15,353	15,491	15,265
Transportation and warehousing	4,168	4,300	4,410	4,372	4,224	4,185	4,249	4,361	4,470	4,536	4,495
Utilities	613	609	601	599	596	577	564	554	549	553	560
Information	3,218	3,419	3,630	3,629	3,395	3,188	3,118	3,061	3,038	3,029	2,987
Financial activities	7,462	7,648	7,687	7,808	7,847	7,977	8,031	8,153	8,328	8,308	8,192
Professional and business services	15,147	15,957	16,666	16,476	15,976	15,987	16,394	16,954	17,566	17,962	17,863
Education and health services	14,446	14,798	15,109	15,645	16,199	16,588	16,953	17,372	17,826	18,327	18,878
Leisure and hospitality	11,232	11,543	11,862	12,036	11,986	12,173	12,493	12,816	13,110	13,474	13,615
Other services	4,976	5,087	5,168	5,258	5,372	5,401	5,409	5,395	5,438	5,491	5,520
Government	19,909	20,307	20,790	21,118	21,513	21,583	21,621	21,804	21,974	22,203	22,457

29. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

Industry	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Private sector:											
Average weekly hours	34.5	34.3	34.3	34.0	33.9	33.7	33.7	33.8	33.9	33.8	33.6
Average hourly earnings (in dollars)	13.01	13.49	14.02	14.54	14.97	15.37	15.69	16.13	16.76	17.42	18.05
Average weekly earnings (in dollars)	448.56	463.15	481.01	493.79	506.75	518.06	529.09	544.33	567.87	589.72	606.84
Goods-producing:											
Average weekly hours	40.8	40.8	40.7	39.9	39.9	39.8	40.0	40.1	40.5	40.6	40.2
Average hourly earnings (in dollars)	14.23	14.71	15.27	15.78	16.33	16.80	17.19	17.60	18.02	18.67	19.31
Average weekly earnings (in dollars)	580.99	599.99	621.86	630.01	651.61	669.13	688.13	705.31	730.16	757.06	775.28
Natural resources and mining											
Average weekly hours	44.9	44.2	44.4	44.6	43.2	43.6	44.5	45.6	45.6	45.9	45.0
Average hourly earnings (in dollars)	16.20	16.33	16.55	17.00	17.19	17.56	18.07	18.72	19.90	20.96	22.42
Average weekly earnings (in dollars)	727.28	721.74	734.92	757.92	741.97	765.94	803.82	853.71	907.95	961.78	1008.27
Construction:											
Average weekly hours	38.8	39.0	39.2	38.7	38.4	38.4	38.3	38.6	39.0	39.0	38.5
Average hourly earnings (in dollars)	16.23	16.80	17.48	18.00	18.52	18.95	19.23	19.46	20.02	20.95	21.86
Average weekly earnings (in dollars)	629.75	655.11	685.78	695.89	711.82	726.83	735.55	750.22	781.21	816.06	841.46
Manufacturing:											
Average weekly hours	41.4	41.4	41.3	40.3	40.5	40.4	40.8	40.7	41.1	41.2	40.8
Average hourly earnings (in dollars)	13.45	13.85	14.32	14.76	15.29	15.74	16.14	16.56	16.81	17.26	17.72
Average weekly earnings (in dollars)	557.09	573.25	590.77	595.19	618.75	635.99	658.49	673.33	691.02	711.36	723.51
Private service-providing:											
Average weekly hours	32.8	32.7	32.7	32.5	32.5	32.3	32.3	32.4	32.5	32.4	32.3
Average hourly earnings (in dollars)	12.61	13.09	13.62	14.18	14.59	14.99	15.29	15.74	16.42	17.10	17.73
Average weekly earnings (in dollars)	413.50	427.98	445.74	461.08	473.80	484.68	494.22	509.58	532.78	554.78	572.96
Trade, transportation, and utilities:											
Average weekly hours	34.2	33.9	33.8	33.5	33.6	33.6	33.5	33.4	33.4	33.3	33.2
Average hourly earnings (in dollars)	12.39	12.82	13.31	13.70	14.02	14.34	14.58	14.92	15.39	15.79	16.19
Average weekly earnings (in dollars)	423.30	434.31	449.88	459.53	471.27	481.14	488.42	498.43	514.34	526.38	537.00
Wholesale trade:											
Average weekly hours	38.6	38.6	38.8	38.4	38.0	37.9	37.8	37.7	38.0	38.2	38.2
Average hourly earnings (in dollars)	15.07	15.62	16.28	16.77	16.98	17.36	17.65	18.16	18.91	19.59	20.13
Average weekly earnings (in dollars)	582.21	602.77	631.40	643.45	644.38	657.29	667.09	685.00	718.63	748.90	769.74
Retail trade:											
Average weekly hours	30.9	30.8	30.7	30.7	30.9	30.9	30.7	30.6	30.5	30.2	30.0
Average hourly earnings (in dollars)	10.05	10.45	10.86	11.29	11.67	11.90	12.08	12.36	12.57	12.76	12.90
Average weekly earnings (in dollars)	582.21	602.77	631.40	643.45	644.38	657.29	667.09	685.00	718.63	748.90	769.74
Transportation and warehousing:											
Average weekly hours	38.7	37.6	37.4	36.7	36.8	36.8	37.2	37.0	36.9	36.9	36.4
Average hourly earnings (in dollars)	14.12	14.55	15.05	15.33	15.76	16.25	16.52	16.70	17.28	17.73	18.39
Average weekly earnings (in dollars)	546.86	547.97	562.31	562.70	579.75	598.41	614.82	618.58	636.97	654.83	669.44
Utilities:											
Average weekly hours	42.0	42.0	42.0	41.4	40.9	41.1	40.9	41.1	41.4	42.4	42.6
Average hourly earnings (in dollars)	21.48	22.03	22.75	23.58	23.96	24.77	25.61	26.68	27.40	27.87	28.84
Average weekly earnings (in dollars)	902.94	924.59	955.66	977.18	979.09	1017.27	1048.44	1095.90	1135.34	1182.17	1230.08
Information:											
Average weekly hours	36.6	36.7	36.8	36.9	36.5	36.2	36.3	36.5	36.6	36.5	36.7
Average hourly earnings (in dollars)	17.67	18.40	19.07	19.80	20.20	21.01	21.40	22.06	23.23	23.94	24.74
Average weekly earnings (in dollars)	646.34	675.47	700.86	730.88	737.77	760.45	777.25	805.08	850.42	873.63	907.02
Financial activities:											
Average weekly hours	36.0	35.8	35.9	35.8	35.6	35.5	35.5	35.9	35.7	35.9	35.9
Average hourly earnings (in dollars)	13.93	14.47	14.98	15.59	16.17	17.14	17.52	17.95	18.80	19.64	20.28
Average weekly earnings (in dollars)	500.98	517.57	537.37	557.92	575.54	609.08	622.87	644.99	672.21	705.29	727.38
Professional and business services:											
Average weekly hours	34.3	34.4	34.5	34.2	34.2	34.1	34.2	34.2	34.6	34.8	34.8
Average hourly earnings (in dollars)	14.27	14.85	15.52	16.33	16.81	17.21	17.48	18.08	19.13	20.13	21.15
Average weekly earnings (in dollars)	490.00	510.99	535.07	557.84	574.66	587.02	597.56	618.87	662.27	700.15	736.55
Education and health services:											
Average weekly hours	32.2	32.1	32.2	32.3	32.4	32.3	32.4	32.6	32.5	32.6	32.5
Average hourly earnings (in dollars)	13.00	13.44	13.95	14.64	15.21	15.64	16.15	16.71	17.38	18.11	18.78
Average weekly earnings (in dollars)	418.82	431.35	449.29	473.39	492.74	505.69	523.78	544.59	564.94	590.18	611.03
Leisure and hospitality:											
Average weekly hours	26.2	26.1	26.1	25.8	25.8	25.6	25.7	25.7	25.7	25.5	25.2
Average hourly earnings (in dollars)	7.67	7.96	8.32	8.57	8.81	9.00	9.15	9.38	9.75	10.41	10.83
Average weekly earnings (in dollars)	200.82	208.05	217.20	220.73	227.17	230.42	234.86	241.36	250.34	265.45	272.97
Other services:											
Average weekly hours	32.6	32.5	32.5	32.3	32.0	31.4	31.0	30.9	30.9	30.9	30.8
Average hourly earnings (in dollars)	11.79	12.26	12.73	13.27	13.72	13.84	13.98	14.34	14.77	15.42	15.86
Average weekly earnings (in dollars)	384.25	398.77	413.41	428.64	439.76	434.41	433.04	443.37	456.50	476.80	488.22

NOTE: Data reflect the conversion to the 2002 version of the North American Industry Classification System (NAICS), replacing the Standard Industrial Classification (SIC) system. NAICS-based data by industry are not comparable with SIC-based data.

30. Employment Cost Index, compensation[1], by occupation and industry group

[December 2005 = 100]

Series	2007 June	2007 Sept.	2007 Dec.	2008 Mar.	2008 June	2008 Sept.	2008 Dec.	2009 Mar.	2009 June	Percent change 3 months ended June 2009	Percent change 12 months ended June 2009
Civilian workers[2]	105.0	106.1	106.7	107.6	108.3	109.2	109.5	109.9	110.3	0.4	1.8
Workers by occupational group											
Management, professional, and related	105.5	106.7	107.2	108.3	109.0	110.1	110.4	110.9	111.1	.2	1.9
Management, business, and financial	105.2	106.2	106.6	108.2	108.9	109.7	109.8	110.0	110.1	.1	1.1
Professional and related	105.7	107.0	107.6	108.4	109.0	110.4	110.7	111.3	111.6	.3	2.4
Sales and office	104.8	105.5	106.4	106.8	107.7	108.2	108.3	108.4	108.7	.3	.9
Sales and related	103.6	104.1	105.2	105.0	106.1	106.0	105.5	104.3	104.5	.2	-1.5
Office and administrative support	105.5	106.4	107.1	108.0	108.6	109.5	110.0	110.8	111.3	.5	2.5
Natural resources, construction, and maintenance	105.1	106.1	106.8	107.7	108.4	109.3	109.8	110.1	110.7	.5	2.1
Construction and extraction	105.7	106.5	107.4	108.5	109.6	110.3	110.8	111.0	111.6	.5	1.8
Installation, maintenance, and repair	104.4	105.6	106.2	106.7	107.0	108.0	108.6	109.1	109.5	.4	2.3
Production, transportation, and material moving	103.5	104.2	104.7	105.6	106.2	106.9	107.2	108.0	108.5	.5	2.2
Production	102.8	103.3	104.1	104.8	105.3	105.9	106.2	107.2	107.7	.5	2.3
Transportation and material moving	104.4	105.3	105.6	106.6	107.3	108.1	108.4	108.9	109.5	.6	2.1
Service occupations	105.5	106.9	107.7	108.4	109.1	110.2	110.6	111.5	111.9	.4	2.6
Workers by industry											
Goods-producing	103.9	104.4	105.0	106.1	106.8	107.3	107.5	108.0	108.2	.2	1.3
Manufacturing	102.9	103.2	103.8	104.7	105.1	105.6	105.9	106.5	106.7	.2	1.5
Service-providing	105.2	106.4	107.0	107.8	108.5	109.5	109.8	110.3	110.6	.3	1.9
Education and health services	105.5	107.2	107.9	108.6	109.2	110.8	111.1	111.7	112.2	.4	2.7
Health care and social assistance	106.1	107.1	107.9	108.9	109.6	110.4	110.8	111.7	112.2	.4	2.4
Hospitals	105.7	106.7	107.5	108.4	109.2	110.2	110.8	111.7	112.3	.5	2.8
Nursing and residential care facilities	105.0	105.6	106.3	107.3	108.2	109.0	109.6	110.3	110.8	.5	2.4
Education services	104.9	107.3	107.9	108.3	108.9	111.1	111.3	111.8	112.1	.3	2.9
Elementary and secondary schools	105.0	107.4	107.9	108.2	108.8	111.1	111.4	111.9	112.1	.2	3.0
Public administration[3]	106.6	108.0	109.1	109.7	110.1	111.6	112.0	113.0	113.8	.7	3.4
Private industry workers	104.9	105.7	106.3	107.3	108.0	108.7	108.9	109.3	109.6	.3	1.5
Workers by occupational group											
Management, professional, and related	105.5	106.4	106.8	108.1	108.9	109.6	109.9	110.4	110.5	.1	1.5
Management, business, and financial	105.1	106.0	106.3	108.0	108.7	109.3	109.5	109.6	109.7	.1	.9
Professional and related	105.9	106.7	107.3	108.3	109.0	109.9	110.3	111.0	111.1	.1	1.9
Sales and office	104.7	105.3	106.1	106.6	107.5	107.9	107.9	107.9	108.3	.4	.7
Sales and related	103.6	104.2	105.2	105.0	106.2	106.0	105.5	104.3	104.5	.2	-1.6
Office and administrative support	105.4	106.0	106.7	107.8	108.5	109.2	109.6	110.5	110.9	.4	2.2
Natural resources, construction, and maintenance	105.0	105.9	106.7	107.6	108.3	109.0	109.6	109.9	110.3	.4	1.8
Construction and extraction	105.7	106.5	107.4	108.6	109.7	110.3	110.8	110.9	111.5	.5	1.6
Installation, maintenance, and repair	104.1	105.2	105.8	106.3	106.6	107.4	108.1	108.6	108.9	.3	2.2
Production, transportation, and material moving	103.3	103.9	104.5	105.5	106.0	106.6	106.9	107.7	108.1	.4	2.0
Production	102.8	103.2	104.0	104.8	105.2	105.8	106.1	107.1	107.6	.5	2.3
Transportation and material moving	104.1	104.9	105.3	106.4	107.2	107.7	107.9	108.4	108.9	.5	1.6
Service occupations	105.2	106.4	107.0	107.8	108.7	109.4	109.8	110.7	110.9	.2	2.0
Workers by industry and occupational group											
Goods-producing industries	103.9	104.4	105.0	106.1	106.8	107.2	107.5	107.9	108.2	.3	1.3
Management, professional, and related	103.8	104.3	104.4	106.1	106.6	106.7	106.6	106.8	106.7	-.1	.1
Sales and office	103.7	104.1	104.8	105.1	106.3	106.7	107.1	107.3	107.4	.1	1.0
Natural resources, construction, and maintenance	105.3	106.1	107.0	108.1	109.0	109.8	110.4	110.4	110.9	.5	1.7
Production, transportation, and material moving	102.9	103.3	104.0	104.8	105.3	105.8	106.2	107.0	107.5	.5	2.1
Construction	105.9	106.9	107.6	108.9	110.1	110.6	110.9	110.9	111.2	.3	1.0
Manufacturing	102.9	103.2	103.8	104.7	105.1	105.6	105.9	106.5	106.7	.2	1.5
Management, professional, and related	103.3	103.3	103.5	104.9	105.2	105.4	105.4	105.7	105.7	.0	.5
Sales and office	103.2	103.5	104.3	105.0	106.1	106.7	107.0	107.3	107.1	-.2	.9
Natural resources, construction, and maintenance	102.4	102.8	103.9	104.6	104.5	105.3	106.0	106.6	107.1	.5	2.5
Production, transportation, and material moving	102.6	103.1	103.8	104.5	105.0	105.5	105.8	106.7	107.2	.5	2.1
Service-providing industries	105.2	106.1	106.7	107.7	108.5	109.1	109.4	109.8	110.1	.3	1.5
Management, professional, and related	105.9	106.8	107.3	108.5	109.3	110.2	110.6	111.1	111.2	.1	1.7
Sales and office	104.8	105.4	106.3	106.8	107.7	108.0	108.0	108.0	108.4	.4	.6
Natural resources, construction, and maintenance	104.5	105.7	106.2	106.7	107.3	107.8	108.4	109.0	109.5	.5	2.1
Production, transportation, and material moving	104.0	104.7	105.2	106.4	107.0	107.6	107.8	108.5	109.0	.5	1.9
Service occupations	105.3	106.4	107.1	107.9	108.7	109.5	109.8	110.7	111.0	.3	2.1
Trade, transportation, and utilities	104.2	104.7	105.5	106.1	107.3	107.6	107.5	107.8	108.1	.3	.7

See footnotes at end of table.

30. Continued—Employment Cost Index, compensation[1], by occupation and industry group

[December 2005 = 100]

Series	2007			2008				2009		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2009	
Wholesale trade	104.6	104.2	105.3	105.7	107.2	107.1	106.8	107.1	106.9	-0.2	-0.3
Retail trade	103.9	105.1	106.1	106.6	107.6	108.2	108.1	108.3	108.8	.5	1.1
Transportation and warehousing	104.0	104.5	104.5	105.6	106.4	106.8	106.9	107.4	107.9	.5	1.4
Utilities	104.7	105.0	105.6	106.5	108.1	108.1	108.9	109.6	110.9	1.2	2.6
Information	105.6	105.8	106.1	106.1	106.2	107.2	107.4	107.7	107.5	-.2	1.2
Financial activities	104.6	105.4	105.6	106.8	107.3	107.4	107.1	106.8	107.9	1.0	.6
Finance and insurance	104.9	105.7	106.1	107.0	107.7	107.6	107.2	106.9	108.1	1.1	.4
Real estate and rental and leasing	103.0	104.1	103.7	105.5	105.7	106.4	106.6	106.6	106.9	.3	1.1
Professional and business services	105.9	106.9	107.5	109.0	109.9	110.8	111.6	111.9	111.9	.0	1.8
Education and health services	105.7	106.9	107.7	108.6	109.4	110.3	110.6	111.5	111.9	.4	2.3
Education services	104.9	106.7	107.5	108.1	109.1	111.4	111.3	111.9	112.0	.1	2.7
Health care and social assistance	105.9	106.9	107.8	108.8	109.4	110.1	110.5	111.5	111.9	.4	2.3
Hospitals	105.6	106.5	107.3	108.2	109.1	110.1	110.7	111.5	112.0	.4	2.7
Leisure and hospitality	106.0	107.5	108.1	109.0	109.3	110.6	111.4	112.2	112.0	-.2	2.5
Accommodation and food services	106.4	108.1	108.6	109.5	110.0	111.4	112.1	113.0	112.6	-.4	2.4
Other services, except public administration	106.1	107.1	107.6	108.7	109.4	109.9	109.9	110.8	110.8	.0	1.3
State and local government workers	105.7	107.6	108.4	108.9	109.4	111.3	111.6	112.3	112.9	.5	3.2
Workers by occupational group											
Management, professional, and related	105.4	107.5	108.3	108.8	109.3	111.3	111.6	112.0	112.6	.5	3.0
Professional and related	105.3	107.5	108.2	108.6	109.1	111.1	111.4	111.9	112.4	.4	3.0
Sales and office	106.2	107.9	108.6	108.8	109.3	111.0	111.3	112.4	113.0	.5	3.4
Office and administrative support	106.4	108.2	108.9	109.3	109.8	111.4	111.8	112.8	113.3	.4	3.2
Service occupations	106.3	108.0	109.1	109.7	110.0	111.9	112.4	113.4	114.0	.5	3.6
Workers by industry											
Education and health services	105.3	107.5	108.2	108.6	109.1	111.2	111.5	111.9	112.4	.4	3.0
Education services	105.0	107.4	108.0	108.4	108.8	111.0	111.2	111.8	112.1	.3	3.0
Schools	104.9	107.4	108.0	108.4	108.8	111.0	111.2	111.8	112.1	.3	3.0
Elementary and secondary schools	105.0	107.4	108.0	108.3	108.8	111.1	111.4	112.0	112.2	.2	3.1
Health care and social assistance	107.6	108.6	109.3	110.1	111.1	112.7	113.2	113.3	114.8	1.3	3.3
Hospitals	106.3	107.5	108.2	109.2	109.7	110.8	111.3	112.4	113.5	1.0	3.5
Public administration[3]	106.6	108.0	109.1	109.7	110.1	111.6	112.0	113.0	113.8	.7	3.4

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

NOTE: The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

31. Employment Cost Index, wages and salaries, by occupation and industry group

[December 2005 = 100]

Series	2007			2008				2009		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2009	
Civilian workers[1]	105.0	106.0	106.7	107.6	108.4	109.3	109.6	110.0	110.4	0.4	1.8
Workers by occupational group											
Management, professional, and related	105.4	106.6	107.1	108.2	109.0	110.1	110.5	111.0	111.2	.2	2.0
Management, business, and financial	105.4	106.4	106.7	108.2	109.0	109.8	110.1	110.4	110.5	.1	1.4
Professional and related	105.3	106.7	107.4	108.3	109.0	110.3	110.7	111.2	111.5	.3	2.3
Sales and office	104.8	105.4	106.2	106.7	107.7	108.1	108.1	108.1	108.6	.5	.8
Sales and related	103.9	104.3	105.5	105.2	106.6	106.3	105.6	104.3	104.7	.4	-1.8
Office and administrative support	105.3	106.1	106.8	107.8	108.5	109.3	109.8	110.6	111.2	.5	2.5
Natural resources, construction, and maintenance	105.1	106.3	107.1	108.1	109.0	109.9	110.6	110.7	111.2	.5	2.0
Construction and extraction	105.7	106.6	107.7	109.0	109.9	110.7	111.3	111.4	111.8	.4	1.7
Installation, maintenance, and repair	104.4	105.8	106.4	107.0	107.8	108.8	109.6	110.0	110.5	.5	2.5
Production, transportation, and material moving	103.9	104.7	105.1	106.1	106.9	107.7	108.0	108.5	109.0	.5	2.0
Production	103.6	104.3	104.7	105.7	106.5	107.2	107.5	108.2	108.7	.5	2.1
Transportation and material moving	104.2	105.1	105.5	106.6	107.3	108.2	108.5	108.8	109.5	.6	2.1
Service occupations	105.3	106.5	107.3	108.0	108.7	109.9	110.3	111.2	111.6	.4	2.7
Workers by industry											
Goods-producing	104.7	105.4	106.0	107.1	108.0	108.6	109.0	109.2	109.5	.3	1.4
Manufacturing	103.9	104.5	104.9	105.9	106.7	107.4	107.7	108.1	108.4	.3	1.6
Service-providing	105.1	106.2	106.8	107.7	108.5	109.4	109.7	110.2	110.5	.3	1.8
Education and health services	104.9	106.6	107.4	108.0	108.7	110.2	110.5	111.0	111.4	.4	2.5
Health care and social assistance	105.9	107.1	107.9	108.9	109.6	110.4	110.9	111.7	112.2	.4	2.4
Hospitals	105.6	106.7	107.4	108.4	109.4	110.5	111.3	112.0	112.6	.5	2.9
Nursing and residential care facilities	104.7	105.8	106.4	107.4	108.1	109.1	109.7	110.3	110.9	.5	2.6
Education services	104.0	106.2	106.9	107.3	107.9	110.0	110.2	110.5	110.7	.2	2.6
Elementary and secondary schools	103.8	106.0	106.6	107.0	107.5	109.9	110.1	110.4	110.5	.1	2.8
Public administration[2]	105.2	106.4	107.4	108.2	108.6	109.9	110.4	111.3	112.3	.9	3.4
Private industry workers	105.1	106.0	106.6	107.6	108.4	109.1	109.4	109.8	110.1	.3	1.6
Workers by occupational group											
Management, professional, and related	105.8	106.7	107.2	108.5	109.3	110.1	110.5	111.1	111.1	.0	1.6
Management, business, and financial	105.5	106.3	106.6	108.2	109.0	109.7	110.0	110.3	110.3	.0	1.2
Professional and related	106.0	107.0	107.6	108.7	109.5	110.4	110.9	111.6	111.8	.2	2.1
Sales and office	104.8	105.3	106.2	106.7	107.7	108.0	108.0	107.9	108.3	.4	.6
Sales and related	104.0	104.4	105.5	105.3	106.6	106.4	105.7	104.3	104.7	.4	-1.8
Office and administrative support	105.4	106.0	106.7	107.7	108.5	109.2	109.7	110.6	111.1	.5	2.4
Natural resources, construction, and maintenance	105.1	106.2	107.1	108.1	109.0	109.8	110.5	110.6	111.0	.4	1.8
Construction and extraction	105.8	106.7	107.8	109.2	110.1	110.8	111.5	111.4	111.7	.3	1.5
Installation, maintenance, and repair	104.2	105.6	106.1	106.8	107.6	108.5	109.3	109.7	110.2	.5	2.4
Production, transportation, and material moving	103.8	104.5	105.0	106.0	106.8	107.5	107.8	108.3	108.8	.5	1.9
Production	103.6	104.2	104.6	105.6	106.4	107.2	107.4	108.1	108.5	.4	2.0
Transportation and material moving	104.1	105.0	105.4	106.5	107.4	108.0	108.3	108.5	109.2	.6	1.7
Service occupations	105.3	106.5	107.1	107.9	108.8	109.7	110.1	111.0	111.2	.2	2.2
Workers by industry and occupational group											
Goods-producing industries	104.7	105.4	106.0	107.1	108.0	108.6	109.0	109.2	109.5	.3	1.4
Management, professional, and related	105.3	105.9	106.0	107.7	108.4	108.7	108.8	109.3	109.3	.0	.8
Sales and office	104.1	104.7	105.5	105.8	107.2	107.6	107.9	108.1	108.3	.2	1.0
Natural resources, construction, and maintenance	105.6	106.5	107.6	108.8	109.6	110.5	111.3	111.1	111.4	.3	1.6
Production, transportation, and material moving	103.7	104.4	104.8	105.7	106.6	107.3	107.6	108.0	108.5	.5	1.8
Construction	106.0	107.0	107.8	109.0	110.0	110.6	111.1	111.2	111.4	.2	1.3
Manufacturing	103.9	104.5	104.9	105.9	106.7	107.4	107.7	108.1	108.4	.3	1.6
Management, professional, and related	104.6	105.0	105.3	106.7	107.2	107.6	107.8	108.4	108.5	.1	1.2
Sales and office	103.2	103.9	104.7	105.5	106.9	107.6	108.1	108.2	108.2	.0	1.2
Natural resources, construction, and maintenance	104.3	105.0	105.9	106.8	107.1	108.1	109.0	108.8	109.2	.4	2.0
Production, transportation, and material moving	103.6	104.2	104.5	105.4	106.3	107.1	107.3	107.7	108.2	.5	1.8
Service-providing industries	105.3	106.1	106.8	107.7	108.6	109.3	109.6	110.0	110.3	.3	1.6
Management, professional, and related	105.9	106.8	107.4	108.6	109.4	110.3	110.8	111.4	111.5	.1	1.9
Sales and office	104.9	105.4	106.3	106.8	107.7	108.0	108.0	107.9	108.3	.4	.6
Natural resources, construction, and maintenance	104.3	105.7	106.3	106.9	108.0	108.6	109.3	109.9	110.5	.5	2.3
Production, transportation, and material moving	104.0	104.6	105.2	106.3	107.1	107.8	108.1	108.6	109.3	.6	2.1
Service occupations	105.3	106.6	107.2	108.0	108.8	109.7	110.1	111.0	111.3	.3	2.3
Trade, transportation, and utilities	104.3	104.6	105.5	105.9	107.2	107.5	107.4	107.8	108.2	.4	.9

31. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[December 2005 = 100]

Series	2007			2008				2009		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2009	
Wholesale trade	104.8	104.0	105.2	105.2	107.2	106.8	106.4	106.8	106.5	-0.3	-0.7
Retail trade	104.2	105.1	106.1	106.4	107.6	108.1	108.1	108.3	108.9	.6	1.2
Transportation and warehousing	103.7	104.1	104.2	105.0	106.0	106.7	106.9	107.2	107.9	.7	1.8
Utilities	105.5	106.1	106.8	108.0	109.3	109.3	109.6	111.0	112.0	.9	2.5
Information	104.9	105.2	105.3	105.3	106.3	107.3	107.5	107.8	108.1	.3	1.7
Financial activities	104.9	106.0	105.9	107.2	107.7	107.7	107.2	106.8	107.9	1.0	.2
Finance and insurance	105.5	106.5	106.6	107.9	108.4	108.2	107.6	107.1	108.5	1.3	.1
Real estate and rental and leasing	102.4	103.6	103.1	104.5	104.7	105.3	105.7	105.6	105.8	.2	1.1
Professional and business services	105.9	106.7	107.5	109.1	110.0	111.0	111.9	112.3	112.2	-.1	2.0
Education and health services	105.6	106.9	107.7	108.6	109.2	110.2	110.6	111.4	111.8	.4	2.4
Education services	104.6	106.4	107.4	107.9	108.6	110.8	110.8	111.1	111.2	.1	2.4
Health care and social assistance	105.8	107.0	107.8	108.7	109.4	110.1	110.6	111.5	111.9	.4	2.3
Hospitals	105.4	106.5	107.2	108.2	109.2	110.3	111.1	111.8	112.3	.4	2.8
Leisure and hospitality	106.4	108.1	108.8	109.7	109.9	111.4	112.3	113.1	112.8	-.3	2.6
Accommodation and food services	106.5	108.4	109.0	110.0	110.4	111.9	112.8	113.7	113.2	-.4	2.5
Other services, except public administration	106.1	107.3	107.9	109.2	109.9	110.4	110.4	111.4	111.4	.0	1.4
State and local government workers	104.6	106.4	107.1	107.7	108.2	110.1	110.4	110.9	111.5	.5	3.0
Workers by occupational group											
Management, professional, and related	104.3	106.3	107.0	107.6	108.2	110.1	110.4	110.7	111.2	.5	2.8
Professional and related	104.2	106.3	107.0	107.5	108.1	110.1	110.3	110.6	111.1	.5	2.8
Sales and office	104.8	106.3	107.0	107.4	107.9	109.3	109.7	110.5	111.2	.6	3.1
Office and administrative support	105.0	106.5	107.3	107.8	108.3	109.7	110.1	111.0	111.6	.5	3.0
Service occupations	105.2	106.5	107.7	108.3	108.6	110.4	110.9	112.0	112.7	.6	3.8
Workers by industry											
Education and health services	104.2	106.3	107.1	107.5	108.1	110.2	110.5	110.7	111.1	.4	2.8
Education services	103.9	106.1	106.8	107.2	107.7	109.9	110.1	110.4	110.7	.3	2.8
Schools	103.9	106.1	106.8	107.2	107.7	109.9	110.1	110.4	110.7	.3	2.8
Elementary and secondary schools	103.8	106.0	106.6	106.9	107.5	109.8	110.1	110.3	110.5	.2	2.8
Health care and social assistance	107.2	108.2	109.2	110.1	111.0	112.8	113.4	113.1	114.8	1.5	3.4
Hospitals	106.5	107.6	108.6	109.8	110.3	111.4	112.1	112.8	114.0	1.1	3.4
Public administration [2]	105.2	106.4	107.4	108.2	108.6	109.9	110.4	111.3	112.3	.9	3.4

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

NOTE: The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

32. Employment Cost Index, benefits, by occupation and industry group

[December 2005 = 100]

Series	2007			2008				2009		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2009	
Civilian workers	105.1	106.1	106.8	107.6	108.1	108.9	109.1	109.7	110.0	0.3	1.8
Private industry workers	104.3	105.0	105.6	106.5	107.0	107.5	107.7	108.2	108.4	.2	1.3
Workers by occupational group											
Management, professional, and related	104.9	105.6	106.0	107.3	107.9	108.5	108.5	108.8	108.8	.0	.8
Sales and office	104.3	105.2	106.0	106.5	107.0	107.6	107.8	108.0	108.1	.1	1.0
Natural resources, construction, and maintenance	104.8	105.3	105.9	106.5	107.0	107.5	107.7	108.2	108.8	.6	1.7
Production, transportation, and material moving	102.4	102.7	103.7	104.4	104.5	104.8	105.1	106.4	106.8	.4	2.2
Service occupations	105.1	106.0	106.7	107.6	108.5	108.7	108.8	109.7	110.0	.3	1.4
Workers by industry											
Goods-producing	102.2	102.4	103.2	104.0	104.4	104.6	104.7	105.4	105.7	.3	1.2
Manufacturing	101.0	100.7	101.7	102.3	102.2	102.3	102.5	103.5	103.6	.1	1.4
Service-providing	105.2	106.0	106.6	107.6	108.1	108.7	108.9	109.3	109.5	.2	1.3
State and local government workers	108.0	110.3	111.0	111.4	111.8	113.9	114.2	115.2	115.8	.5	3.6

NOTE: The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

33. Employment Cost Index, private industry workers by bargaining status and region

[December 2005 = 100]

Series	2007			2008				2009		Percent change	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	3 months ended	12 months ended
										June 2009	
COMPENSATION											
Workers by bargaining status[1]											
Union	103.9	104.4	105.1	105.9	106.7	107.4	108.0	109.1	109.8	0.6	2.9
Goods-producing	102.8	103.1	104.0	104.6	105.6	106.2	106.9	108.0	108.9	.8	3.1
Manufacturing	100.0	100.0	101.0	101.4	101.7	102.1	102.8	104.4	104.8	.4	3.0
Service-providing	104.7	105.4	106.0	107.0	107.5	108.3	108.8	109.9	110.6	.6	2.9
Nonunion	105.1	105.9	106.5	107.5	108.3	108.9	109.1	109.4	109.6	.2	1.2
Goods-producing	104.2	104.8	105.4	106.5	107.1	107.6	107.7	107.9	108.0	.1	.8
Manufacturing	103.7	104.1	104.6	105.6	106.2	106.6	106.8	107.1	107.3	.2	1.0
Service-providing	105.3	106.2	106.8	107.7	108.6	109.2	109.4	109.8	110.0	.2	1.3
Workers by region[1]											
Northeast	105.1	106.2	106.8	107.4	108.1	108.7	109.5	109.8	110.2	.4	1.9
South	105.3	106.1	106.7	107.8	108.5	109.1	109.3	109.8	110.1	.3	1.5
Midwest	104.2	104.6	105.3	106.0	107.0	107.4	107.6	107.9	108.1	.2	1.0
West	104.9	105.7	106.5	107.8	108.4	109.3	109.4	109.9	110.1	.2	1.6
WAGES AND SALARIES											
Workers by bargaining status[1]											
Union	103.7	104.4	104.7	105.5	106.7	107.4	108.1	108.8	109.6	.7	2.7
Goods-producing	103.6	104.3	104.3	105.2	106.4	107.1	107.7	108.2	108.8	.6	2.3
Manufacturing	102.5	102.9	102.6	103.4	104.4	104.9	105.5	106.0	106.4	.4	1.9
Service-providing	103.8	104.6	104.9	105.8	106.9	107.7	108.3	109.2	110.1	.8	3.0
Nonunion	105.3	106.2	106.9	107.9	108.7	109.4	109.6	110.0	110.2	.2	1.4
Goods-producing	105.0	105.8	106.4	107.7	108.4	109.0	109.3	109.5	109.7	.2	1.2
Manufacturing	104.2	104.9	105.5	106.6	107.3	108.0	108.2	108.6	108.9	.3	1.5
Service-providing	105.4	106.3	107.0	107.9	108.8	109.4	109.7	110.1	110.3	.2	1.4
Workers by region[1]											
Northeast	105.0	106.1	106.6	107.5	108.2	108.7	109.6	109.9	110.3	.4	1.9
South	105.6	106.5	107.0	108.1	109.1	109.8	110.0	110.4	110.7	.3	1.5
Midwest	104.4	105.0	105.6	106.3	107.5	107.9	108.0	108.4	108.6	.2	1.0
West	105.4	106.2	107.0	108.3	108.9	109.9	110.1	110.5	110.8	.3	1.7

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the Monthly Labor Review Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

NOTE: The Employment Cost Index data reflect the conversion to the 2002 North American Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. Series based on NAICS and SOC became the official BLS estimates starting in March 2006.

34. National Compensation Survey: Retirement benefits in private industry by access, participation, and selected series, 2003–2007

Series	Year				
	2003	2004	2005	2006	2007 [1]
All retirement					
Percentage of workers with access					
All workers	57	59	60	60	61
White-collar occupations[2]	67	69	70	69	-
Management, professional, and related	-	-	-	-	76
Sales and office	-	-	-	-	64
Blue-collar occupations[2]	59	59	60	62	-
Natural resources, construction, and maintenance	-	-	-	-	61
Production, transportation, and material moving	-	-	-	-	65
Service occupations	28	31	32	34	36
Full-time	67	68	69	69	70
Part-time	24	27	27	29	31
Union	86	84	88	84	84
Non-union	54	56	56	57	58
Average wage less than $15 per hour	45	46	46	47	47
Average wage $15 per hour or higher	76	77	78	77	76
Goods-producing industries	70	70	71	73	70
Service-providing industries	53	55	56	56	58
Establishments with 1-99 workers	42	44	44	44	45
Establishments with 100 or more workers	75	77	78	78	78
Percentage of workers participating					
All workers	49	50	50	51	51
White-collar occupations[2]	59	61	61	60	-
Management, professional, and related	-	-	-	-	69
Sales and office	-	-	-	-	54
Blue-collar occupations[2]	50	50	51	52	-
Natural resources, construction, and maintenance	-	-	-	-	51
Production, transportation, and material moving	-	-	-	-	54
Service occupations	21	22	22	24	25
Full-time	58	60	60	60	60
Part-time	18	20	19	21	23
Union	83	81	85	80	81
Non-union	45	47	46	47	47
Average wage less than $15 per hour	35	36	35	36	36
Average wage $15 per hour or higher	70	71	71	70	69
Goods-producing industries	63	63	64	64	61
Service-providing industries	45	47	47	47	48
Establishments with 1-99 workers	35	37	37	37	37
Establishments with 100 or more workers	65	67	67	67	66
Take-up rate (all workers)[3]	-	-	85	85	84
Defined Benefit					
Percentage of workers with access					
All workers	20	21	22	21	21
White-collar occupations[2]	23	24	25	23	-
Management, professional, and related	-	-	-	-	29
Sales and office	-	-	-	-	19
Blue-collar occupations[2]	24	26	26	25	-
Natural resources, construction, and maintenance	-	-	-	-	26
Production, transportation, and material moving	-	-	-	-	26
Service occupations	8	6	7	8	8
Full-time	24	25	25	24	24
Part-time	8	9	10	9	10
Union	74	70	73	70	69
Non-union	15	16	16	15	15
Average wage less than $15 per hour	12	11	12	11	11
Average wage $15 per hour or higher	34	35	35	34	33
Goods-producing industries	31	32	33	32	29
Service-providing industries	17	18	19	18	19
Establishments with 1-99 workers	9	9	10	9	9
Establishments with 100 or more workers	34	35	37	35	34

See footnotes at end of table.

34. Continued—National Compensation Survey: Retirement benefits in private industry by access, participation, and selected series, 2003–2007

Series	Year				
	2003	2004	2005	2006	2007 [1]
Percentage of workers participating					
All workers	20	21	21	20	20
White-collar occupations[2]	22	24	24	22	-
Management, professional, and related	-	-	-	-	28
Sales and office	-	-	-	-	17
Blue-collar occupations[2]	24	25	26	25	-
Natural resources, construction, and maintenance	-	-	-	-	25
Production, transportation, and material moving	-	-	-	-	25
Service occupations	7	6	7	7	7
Full-time	24	24	25	23	23
Part-time	8	9	9	8	9
Union	72	69	72	68	67
Non-union	15	15	15	14	15
Average wage less than $15 per hour	11	11	11	10	10
Average wage $15 per hour or higher	33	35	34	33	32
Goods-producing industries	31	31	32	31	28
Service-providing industries	16	18	18	17	18
Establishments with 1-99 workers	8	9	9	9	9
Establishments with 100 or more workers	33	34	36	33	32
Take-up rate (all workers)[3]	-	-	97	96	95
Defined Contribution					
Percentage of workers with access					
All workers	51	53	53	54	55
White-collar occupations[2]	62	64	64	65	-
Management, professional, and related	-	-	-	-	71
Sales and office	-	-	-	-	60
Blue-collar occupations[2]	49	49	50	53	-
Natural resources, construction, and maintenance	-	-	-	-	51
Production, transportation, and material moving	-	-	-	-	56
Service occupations	23	27	28	30	32
Full-time	60	62	62	63	64
Part-time	21	23	23	25	27
Union	45	48	49	50	49
Non-union	51	53	54	55	56
Average wage less than $15 per hour	40	41	41	43	44
Average wage $15 per hour or higher	67	68	69	69	69
Goods-producing industries	60	60	61	63	62
Service-providing industries	48	50	51	52	53
Establishments with 1-99 workers	38	40	40	41	42
Establishments with 100 or more workers	65	68	69	70	70
Percentage of workers participating					
All workers	40	42	42	43	43
White-collar occupations[2]	51	53	53	53	-
Management, professional, and related	-	-	-	-	60
Sales and office	-	-	-	-	47
Blue-collar occupations[2]	38	38	38	40	-
Natural resources, construction, and maintenance	-	-	-	-	40
Production, transportation, and material moving	-	-	-	-	41
Service occupations	16	18	18	20	20
Full-time	48	50	50	51	50
Part-time	14	14	14	16	18
Union	39	42	43	44	41
Non-union	40	42	41	43	43
Average wage less than $15 per hour	29	30	29	31	30
Average wage $15 per hour or higher	57	59	59	58	57
Goods-producing industries	49	49	50	51	49
Service-providing industries	37	40	39	40	41
Establishments with 1-99 workers	31	32	32	33	33
Establishments with 100 or more workers	51	53	53	54	53
Take-up rate (all workers)[3]	-	-	78	79	77

See footnotes at end of table.

34. Continued—National Compensation Survey: Retirement benefits in private industry by access, participation, and selected series, 2003–2007

Series	Year				
	2003	2004	2005	2006	2007 [1]
Employee Contribution Requirement					
Employee contribution required	-	-	61	61	65
Employee contribution not required	-	-	31	33	35
Not determinable	-	-	8	6	0
Percent of establishments					
Offering retirement plans	47	48	51	48	46
Offering defined benefit plans	10	10	11	10	10
Offering defined contribution plans	45	46	48	47	44

[1] The 2002 North American Industry Classification System (NAICS) replaced the 1987 Standard Industrial Classification (SIC) System. Estimates for goods-producing and service-providing (formerly service-producing) industries are considered comparable. Also introduced was the 2000 Standard Occupational Classification (SOC) to replace the 1990 Census of Population system. Only service occupations are considered comparable.

[2] The white-collar and blue-collar occupation series were discontinued effective 2007.

[3] The take-up rate is an estimate of the percentage of workers with access to a plan who participate in the plan.

Note: Where applicable, dashes indicate no employees in this category or data do not meet publication criteria.

35. National Compensation Survey: Health insurance benefits in private industry by access, particpation, and selected series, 2003-2007

Series	Year				
	2003	2004	2005	2006	2007 [1]
Medical insurance					
Percentage of workers with access					
All workers	60	69	70	71	71
White-collar occupations[2]	65	76	77	77	-
Management, professional, and related	-	-	-	-	85
Sales and office	-	-	-	-	71
Blue-collar occupations[2]	64	76	77	77	-
Natural resources, construction, and maintenance	-	-	-	-	76
Production, transportation, and material moving	-	-	-	-	78
Service occupations	38	42	44	45	46
Full-time	73	84	85	85	85
Part-time	17	20	22	22	24
Union	67	89	92	89	88
Non-union	59	67	68	68	69
Average wage less than $15 per hour	51	57	58	57	57
Average wage $15 per hour or higher	74	86	87	88	87
Goods-producing industries	68	83	85	86	85
Service-providing industries	57	65	66	66	67
Establishments with 1-99 workers	49	58	59	59	59
Establishments with 100 or more workers	72	82	84	84	84
Percentage of workers participating					
All workers	45	53	53	52	52
White-collar occupations[2]	50	59	58	57	-
Management, professional, and related	-	-	-	-	67
Sales and office	-	-	-	-	48
Blue-collar occupations[2]	51	60	61	60	-
Natural resources, construction, and maintenance	-	-	-	-	61
Production, transportation, and material moving	-	-	-	-	60
Service occupations	22	24	27	27	28
Full-time	56	66	66	64	64
Part-time	9	11	12	13	12
Union	60	81	83	80	78
Non-union	44	50	49	49	49
Average wage less than $15 per hour	35	40	39	38	37
Average wage $15 per hour or higher	61	71	72	71	70
Goods-producing industries	57	69	70	70	68
Service-providing industries	42	48	48	47	47
Establishments with 1-99 workers	36	43	43	43	42
Establishments with 100 or more workers	55	64	65	63	62
Take-up rate (all workers)[3]	-	-	75	74	73
Dental					
Percentage of workers with access					
All workers	40	46	46	46	46
White-collar occupations[2]	47	53	54	53	-
Management, professional, and related	-	-	-	-	62
Sales and office	-	-	-	-	47
Blue-collar occupations[2]	40	47	47	46	-
Natural resources, construction, and maintenance	-	-	-	-	43
Production, transportation, and material moving	-	-	-	-	49
Service occupations	22	25	25	27	28
Full-time	49	56	56	55	56
Part-time	9	13	14	15	16
Union	57	73	73	69	68
Non-union	38	43	43	43	44
Average wage less than $15 per hour	30	34	34	34	34
Average wage $15 per hour or higher	55	63	62	62	61
Goods-producing industries	48	56	56	56	54
Service-providing industries	37	43	43	43	44
Establishments with 1-99 workers	27	31	31	31	30
Establishments with 100 or more workers	55	64	65	64	64

See footnotes at end of table.

35. Continued—National Compensation Survey: Health insurance benefits in private industry by access, particpation, and selected series, 2003-2007

Series	Year				
	2003	2004	2005	2006	2007 [1]
Percentage of workers participating					
All workers	32	37	36	36	36
White-collar occupations[2]	37	43	42	41	-
Management, professional, and related	-	-	-	-	51
Sales and office	-	-	-	-	33
Blue-collar occupations[2]	33	40	39	38	-
Natural resources, construction, and maintenance	-	-	-	-	36
Production, transportation, and material moving	-	-	-	-	38
Service occupations	15	16	17	18	20
Full-time	40	46	45	44	44
Part-time	6	8	9	10	9
Union	51	68	67	63	62
Non-union	30	33	33	33	33
Average wage less than $15 per hour	22	26	24	23	23
Average wage $15 per hour or higher	47	53	52	52	51
Goods-producing industries	42	49	49	49	45
Service-providing industries	29	33	33	32	33
Establishments with 1-99 workers	21	24	24	24	24
Establishments with 100 or more workers	44	52	51	50	49
Take-up rate (all workers)[3]	-	-	78	78	77
Vision care					
Percentage of workers with access	25	29	29	29	29
Percentage of workers participating	19	22	22	22	22
Outpatient Prescription drug coverage					
Percentage of workers with access	-	-	64	67	68
Percentage of workers participating	-	-	48	49	49
Percent of estalishments offering healthcare benefits	58	61	63	62	60
Percentage of medical premium paid by Employer and Employee					
Single coverage					
Employer share	82	82	82	82	81
Employee share	18	18	18	18	19
Family coverage					
Employer share	70	69	71	70	71
Employee share	30	31	29	30	29

[1] The 2002 North American Industry Classification System (NAICS) replaced the 1987 Standard Industrial Classification (SIC) System. Estimates for goods-producing and service-providing (formerly service-producing) industries are considered comparable. Also introduced was the 2000 Standard Occupational Classification (SOC) to replace the 1990 Census of Population system. Only service occupations are considered comparable.

[2] The white-collar and blue-collar occupation series were discontinued effective 2007.

[3] The take-up rate is an estimate of the percentage of workers with access to a plan who participate in the plan.

Note: Where applicable, dashes indicate no employees in this category or data do not meet publication criteria.

36. National Compensation Survey: Percent of workers in private industry with access to selected benefits, 2003-2007

Benefit	Year				
	2003	2004	2005	2006	2007
Life insurance	50	51	52	52	58
Short-term disabilty insurance	39	39	40	39	39
Long-term disability insurance	30	30	30	30	31
Long-term care insurance	11	11	11	12	12
Flexible work place	4	4	4	4	5
Section 125 cafeteria benefits					
Flexible benefits	-	-	17	17	17
Dependent care reimbursement account	-	-	29	30	31
Healthcare reimbursement account	-	-	31	32	33
Health Savings Account	-	-	5	6	8
Employee assistance program	-	-	40	40	42
Paid leave					
Holidays	79	77	77	76	77
Vacations	79	77	77	77	77
Sick leave	-	59	58	57	57
Personal leave	-	-	36	37	38
Family leave					
Paid family leave	-	-	7	8	8
Unpaid family leave	-	-	81	82	83
Employer assistance for child care	18	14	14	15	15
Nonproduction bonuses	49	47	47	46	47

Note: Where applicable, dashes indicate no employees in this category or data do not meet publication criteria.

37. Work stoppages involving 1,000 workers or more

Measure	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June[p]
Number of stoppages:															
Beginning in period	21	15	2	1	2	2	1	0	0	0	0	0	0	0	1
In effect during period	23	16	2	1	2	2	2	1	0	0	0	0	0	0	1
Workers involved:															
Beginning in period (in thousands)	189.2	72.2	4.2	8.5	7.0	28.2	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
In effect during period (in thousands)	220.9	136.8	4.2	8.5	7.0	28.2	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
Days idle:															
Number (in thousands)	1264.8	1954.1	12.3	42.5	100.6	469.8	600.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0
Percent of estimated working time [1]	0.01	0.01	0	0	0	0.02	0.02	0	0	0	0	0	0	0	0

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in "Total economy measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

NOTE: p = preliminary.

38. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	207.342	215.303	218.815	219.964	219.086	218.783	216.573	212.425	210.228	211.143	212.193	212.709	213.240	213.856	215.693
All items (1967 = 100)	621.106	644.951	655.474	658.915	656.284	655.376	648.758	636.332	629.751	632.491	635.637	637.182	638.771	640.616	646.121
Food and beverages	203.300	214.225	213.383	215.326	216.419	217.672	218.705	218.752	218.839	219.729	219.333	218.794	218.364	218.076	218.030
Food	202.916	214.106	213.243	215.299	216.422	217.696	218.738	218.749	218.805	219.675	219.205	218.600	218.162	217.826	217.740
Food at home	201.245	214.125	213.171	215.785	217.259	218.629	219.660	219.086	218.683	219.744	218.389	217.110	215.783	215.088	214.824
Cereals and bakery products	222.107	244.853	245.758	250.321	250.080	250.924	252.832	252.723	253.063	254.445	254.187	253.698	252.709	252.714	253.008
Meats, poultry, fish, and eggs	195.616	204.653	202.914	205.075	207.488	209.937	210.706	209.602	208.890	208.616	207.963	206.348	205.699	203.789	204.031
Dairy and related products[1]	194.770	210.396	209.117	213.981	214.748	213.533	212.733	213.102	210.838	209.632	204.537	199.687	197.124	196.055	194.197
Fruits and vegetables	262.628	278.932	277.957	280.209	283.296	285.986	285.484	283.677	281.706	282.601	278.721	274.759	274.297	274.006	272.608
Nonalcoholic beverages and beverage materials	153.432	160.045	158.320	159.346	160.055	161.499	163.727	163.015	162.750	164.882	164.213	165.656	162.889	162.803	162.571
Other foods at home	173.275	184.166	183.804	185.725	186.991	187.944	189.348	189.301	190.203	192.492	192.404	192.234	191.352	191.144	191.328
Sugar and sweets	176.772	186.577	185.558	187.067	187.813	189.929	190.515	191.756	193.312	197.429	196.676	197.137	197.301	196.403	197.009
Fats and oils	172.921	196.751	196.150	201.205	203.059	206.274	208.300	205.806	206.710	206.886	205.359	204.776	200.464	200.679	201.127
Other foods	188.244	198.103	197.888	199.566	200.961	201.388	202.993	203.058	203.902	206.343	206.621	206.367	205.734	205.587	205.654
Other miscellaneous foods[1,2]	115.105	119.924	118.453	120.510	121.033	121.144	122.699	123.543	123.791	124.012	122.580	122.402	122.883	122.838	122.224
Food away from home[1]	206.659	215.769	215.015	216.376	217.063	218.225	219.290	220.043	220.684	221.319	221.968	222.216	222.905	223.023	223.163
Other food away from home[1,2]	144.068	150.640	149.873	151.120	151.133	152.040	153.544	153.978	154.062	153.402	154.726	154.414	155.099	155.099	155.841
Alcoholic beverages	207.026	214.484	213.912	214.394	215.094	216.055	216.972	217.492	217.975	219.113	219.682	219.999	219.671	220.005	220.477
Housing	209.586	216.264	217.941	219.610	219.148	218.184	217.383	216.467	216.073	216.928	217.180	217.374	217.126	216.971	218.071
Shelter	240.611	246.666	247.083	248.075	247.985	247.737	247.844	247.463	247.085	248.292	248.878	249.597	249.855	249.779	250.243
Rent of primary residence	234.679	243.271	242.640	243.367	244.181	244.926	245.855	246.681	247.278	247.974	248.305	248.639	248.899	249.069	249.092
Lodging away from home	142.813	143.664	148.621	153.032	149.146	143.597	141.140	133.555	129.157	133.559	135.809	137.715	137.700	135.680	138.318
Owners' equivalent rent of primary residence[3]	246.235	252.426	252.170	252.504	252.957	253.493	253.902	254.669	254.875	255.500	255.779	256.321	256.622	256.875	256.981
Tenants' and household insurance[1,2]	117.004	118.843	119.092	118.764	118.562	119.944	119.916	120.232	120.019	120.402	120.683	120.737	120.675	120.728	121.083
Fuels and utilities	200.632	220.018	231.412	239.039	235.650	228.450	221.199	216.285	215.184	215.232	213.520	210.501	207.175	206.358	212.677
Fuels	181.744	200.808	213.762	221.742	217.455	209.501	201.176	195.599	194.335	194.149	192.168	188.736	184.903	183.783	190.647
Fuel oil and other fuels	251.453	334.405	389.423	395.706	367.794	349.164	318.667	281.869	256.209	247.163	242.264	230.837	228.107	225.164	232.638
Gas (piped) and electricity	186.262	202.212	213.375	221.805	218.656	210.950	203.503	199.435	199.487	199.791	197.886	194.752	190.686	189.619	196.754
Household furnishings and operations	126.875	127.800	127.625	127.884	128.013	128.584	128.789	128.554	128.535	128.761	129.170	129.669	129.654	129.644	129.623
Apparel	118.998	118.907	117.019	114.357	116.376	121.168	122.243	121.262	117.078	114.764	118.825	122.545	123.208	121.751	118.799
Men's and boys' apparel	112.368	113.032	112.011	109.669	110.180	112.720	115.067	114.239	110.767	110.797	115.202	117.748	117.195	117.146	112.849
Women's and girls' apparel	110.296	107.460	104.312	100.049	104.211	111.774	111.833	110.588	105.456	100.638	105.777	111.079	111.871	109.460	106.455
Infants' and toddlers' apparel[1]	113.948	113.762	111.555	109.218	109.558	113.494	116.158	116.010	112.568	112.321	113.544	115.548	117.084	114.142	113.915
Footwear	122.374	124.157	123.568	122.421	121.982	124.907	126.442	126.788	124.093	122.363	124.301	126.707	128.057	127.519	125.515
Transportation	184.682	195.549	211.787	212.806	206.739	203.861	192.709	173.644	164.628	166.738	169.542	169.647	171.987	175.997	183.735
Private transportation	180.778	191.039	207.257	208.038	201.779	199.153	187.976	168.527	159.411	161.788	164.871	165.023	167.516	171.757	179.649
New and used motor vehicles[2]	94.303	93.291	93.598	93.650	93.260	92.480	92.071	91.618	91.408	91.831	92.224	92.109	92.381	92.701	93.020
New vehicles	136.254	134.194	134.516	134.397	133.404	132.399	132.264	132.359	132.308	133.273	134.186	134.611	134.863	135.162	135.719
Used cars and trucks[1]	135.747	133.951	135.980	135.840	135.405	132.916	129.733	126.869	125.883	124.863	122.837	121.061	121.213	122.650	124.323
Motor fuel	239.070	279.652	347.418	349.731	323.822	315.078	268.537	187.189	149.132	156.604	167.395	168.404	177.272	193.609	225.021
Gasoline (all types)	237.959	277.457	344.981	347.357	321.511	313.535	266.382	184.235	146.102	154.488	166.118	167.826	176.704	193.727	225.526
Motor vehicle parts and equipment	121.583	128.747	127.824	129.118	130.327	131.048	131.917	132.947	133.077	133.414	134.108	134.484	134.640	134.347	134.270
Motor vehicle maintenance and repair	222.963	233.859	233.162	234.788	236.125	237.121	238.227	239.048	239.356	241.076	241.689	242.118	242.649	242.488	242.683
Public transportation	230.002	250.549	264.681	270.002	268.487	261.318	252.323	243.385	237.638	234.394	231.529	230.735	229.827	228.878	232.540
Medical care	351.054	364.065	363.616	363.963	364.477	365.036	365.746	366.613	367.133	369.830	372.405	373.189	374.170	375.026	375.093
Medical care commodities	289.999	296.045	295.194	294.777	295.003	295.461	295.791	297.317	298.361	299.998	302.184	302.908	303.979	304.697	304.683
Medical care services	369.302	384.943	384.685	385.361	385.990	386.579	387.440	387.992	388.267	391.365	394.047	394.837	395.753	396.648	396.750
Professional services	300.792	310.968	311.317	311.926	312.396	312.527	312.914	313.328	313.886	315.603	316.992	317.460	317.661	319.333	319.652
Hospital and related services	498.922	533.953	531.606	533.558	535.501	537.728	540.853	543.183	543.585	551.305	558.373	560.995	564.785	564.112	564.406
Recreation[2]	111.443	113.254	112.991	113.277	113.786	114.032	114.169	114.078	113.674	113.822	114.461	114.625	114.261	114.264	114.643
Video and audio[1,2]	102.949	102.632	102.306	102.203	102.546	102.706	102.193	101.831	101.629	101.347	101.704	102.000	102.300	101.947	101.871
Education and communication[2]	119.577	123.631	122.828	123.445	124.653	125.505	125.686	125.758	125.921	126.151	126.190	126.187	126.273	126.467	126.519
Education[2]	171.388	181.277	178.385	179.229	183.184	186.148	186.669	186.733	186.916	187.175	187.256	187.298	187.416	187.853	188.179
Educational books and supplies	420.418	450.187	443.309	444.382	458.989	462.787	463.825	462.694	464.544	468.432	469.996	472.185	472.507	472.588	476.974
Tuition, other school fees, and child care	494.079	522.098	513.743	516.264	527.230	536.082	537.606	537.906	538.309	538.765	538.878	538.813	539.149	540.498	541.119
Communication[1,2]	83.367	84.185	84.394	84.840	84.701	84.524	84.535	84.601	84.737	84.928	84.945	84.922	84.985	85.049	84.975
Information and information processing[1,2]	80.720	81.352	81.513	81.965	81.815	81.635	81.652	81.723	81.886	82.030	82.052	82.022	82.090	82.038	81.909
Telephone services[1,2]	98.247	100.451	100.677	101.339	101.301	101.311	101.407	101.538	101.688	101.880	101.895	101.991	102.072	102.267	102.182
Information and information processing other than telephone services[1,4]	10.597	10.061	10.071	10.087	10.012	9.901	9.874	9.867	9.906	9.919	9.926	9.872	9.881	9.775	9.731
Personal computers and peripheral equipment[1,2]	108.411	94.944	95.663	94.711	92.921	90.797	89.945	88.984	88.529	88.522	87.696	86.213	85.714	84.366	83.476
Other goods and services	333.328	345.381	345.885	346.810	346.990	348.166	349.276	349.040	349.220	350.259	351.223	361.156	370.606	369.901	370.595
Tobacco and smoking products	554.184	588.682	589.904	596.782	597.361	597.581	599.744	599.820	602.644	607.403	611.549	679.078	742.443	740.311	746.283
Personal care[1]	195.622	201.279	201.537	201.545	201.623	202.486	203.107	202.921	202.774	203.080	203.391	204.117	204.896	204.578	204.503
Personal care products[1]	158.285	159.290	158.868	158.989	159.252	159.643	159.826	161.000	161.397	162.588	162.508	162.696	163.777	163.051	162.301
Personal care services[1]	216.559	223.669	223.520	223.719	224.151	224.614	225.564	226.197	226.281	225.734	225.895	227.982	227.913	227.607	227.572

See footnotes at end of table.

38. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers

U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Miscellaneous personal services	324.984	338.921	340.547	340.077	341.053	343.431	343.131	340.174	339.698	340.608	341.188	341.570	342.641	343.051	344.232
Commodity and service group:															
Commodities	167.509	174.764	180.534	181.087	179.148	179.117	175.257	167.673	163.582	164.360	165.891	166.645	167.816	169.060	171.593
Food and beverages	203.300	214.225	213.383	215.326	216.419	217.672	218.705	218.752	218.839	219.729	219.333	218.794	218.364	218.076	218.030
Commodities less food and beverages	147.515	153.034	161.337	161.301	158.179	157.621	151.874	141.397	135.720	136.427	138.702	139.962	141.753	143.587	147.099
Nondurables less food and beverages	182.526	196.192	213.489	213.363	207.284	206.919	195.127	173.346	161.681	162.938	167.560	170.200	173.855	177.480	184.581
Apparel	118.998	118.907	117.019	114.357	116.376	121.168	122.243	121.262	117.078	114.764	118.825	122.545	123.208	121.751	118.799
Non durables less food, beverages, and apparel	226.224	248.809	278.584	280.062	268.740	265.100	244.935	209.569	192.948	196.490	201.554	203.557	209.177	216.090	229.692
Durables	112.473	110.877	111.232	111.275	110.779	110.077	109.677	109.191	108.811	109.025	109.221	109.264	109.404	109.650	109.983
Services	246.848	255.498	256.668	258.422	258.638	258.059	257.559	256.967	256.731	257.780	258.328	258.597	258.466	258.433	259.544
Rent of shelter[3]	250.813	257.152	257.585	258.637	258.547	258.255	258.368	257.961	257.567	258.830	259.440	260.197	260.469	260.388	260.869
Transportation services	233.731	244.074	245.759	247.869	248.806	248.047	247.762	247.030	246.287	247.006	248.114	247.912	248.696	248.628	249.194
Other services	285.559	295.780	294.668	295.677	297.923	299.598	299.923	299.996	300.067	300.614	301.471	302.024	301.668	302.132	303.000
Special indexes:															
All items less food	208.098	215.528	219.757	220.758	219.552	218.991	216.250	211.421	208.855	209.777	211.076	211.775	212.464	213.236	215.389
All items less shelter	196.639	205.453	210.242	211.468	210.264	209.936	206.776	201.075	198.127	198.936	200.184	200.626	201.271	202.171	204.578
All items less medical care	200.080	207.777	211.408	212.576	211.653	211.321	209.021	204.721	202.442	203.281	204.265	204.766	205.275	205.876	207.764
Commodities less food	149.720	155.310	163.385	163.364	160.341	159.825	154.250	144.055	138.536	139.258	141.491	142.728	144.464	146.261	149.697
Nondurables less food	184.012	197.297	213.538	213.447	207.769	207.483	196.442	175.979	165.032	166.282	170.665	173.167	176.587	180.017	186.726
Nondurables less food and apparel	223.411	244.443	271.235	272.612	262.470	259.278	241.183	209.344	194.403	197.704	202.323	204.159	209.195	215.459	227.768
Nondurables	193.468	205.901	214.783	215.628	212.882	213.274	207.435	195.773	189.557	190.649	192.943	194.105	195.864	197.673	201.461
Services less rent of shelter[3]	260.764	273.000	275.200	277.982	278.606	277.615	276.297	275.425	275.370	276.227	276.739	276.407	275.752	275.777	277.777
Services less medical care services	236.847	244.987	246.219	248.007	248.198	247.563	246.997	246.351	246.090	247.013	247.439	247.675	247.490	247.406	248.557
Energy	207.723	236.666	275.621	280.833	266.283	258.020	231.561	189.938	171.158	174.622	178.741	177.454	179.704	186.909	205.408
All items less energy	208.925	214.751	214.600	215.335	215.873	216.397	216.695	216.417	215.930	216.586	217.325	218.033	218.388	218.323	218.440
All items less food and energy	210.729	215.572	215.553	216.045	216.476	216.862	217.023	216.690	216.100	216.719	217.685	218.639	219.143	219.128	219.283
Commodities less food and energy	140.053	140.246	139.925	139.535	139.785	140.528	140.659	140.236	139.228	139.111	140.270	141.662	142.489	142.360	141.990
Energy commodities	241.018	284.352	351.886	354.423	328.240	318.918	272.921	193.395	155.745	162.395	172.428	172.787	181.102	196.528	226.881
Services less energy	253.058	261.017	261.216	262.323	262.867	262.980	263.156	262.901	262.636	263.759	264.547	265.147	265.399	265.466	265.993
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	202.767	211.053	215.223	216.304	215.247	214.935	212.182	207.296	204.813	205.700	206.708	207.218	207.925	208.774	210.972
All items (1967 = 100)	603.982	628.661	641.082	644.303	641.155	640.226	632.025	617.472	610.075	612.719	615.719	617.239	619.344	621.875	628.422
Food and beverages	202.531	213.546	212.700	214.662	215.850	217.098	218.141	218.178	218.269	219.123	218.645	218.119	217.653	217.308	217.258
Food	202.134	213.376	212.514	214.577	215.812	217.090	218.120	218.114	218.155	218.998	218.449	217.855	217.376	216.975	216.890
Food at home	200.273	213.017	212.079	214.679	216.214	217.594	218.600	217.956	217.498	218.485	217.111	215.922	214.654	213.876	213.657
Cereals and bakery products	222.409	245.472	246.493	250.972	250.842	251.448	253.561	253.498	253.759	255.055	254.775	254.395	253.556	253.430	253.701
Meats, poultry, fish, and eggs	195.193	204.255	202.424	204.557	207.211	209.515	210.314	209.297	208.639	208.161	207.656	206.094	205.527	203.409	203.503
Dairy and related products[1]	194.474	209.773	208.510	213.582	214.139	212.841	211.808	212.184	209.922	208.530	203.023	198.048	195.714	194.694	192.898
Fruits and vegetables	260.484	276.759	276.641	278.885	282.171	284.612	283.549	281.279	278.835	279.906	275.884	271.727	271.771	271.530	270.653
Nonalcoholic beverages and beverage materials	152.786	159.324	157.309	158.527	159.024	160.850	163.265	162.472	162.280	164.514	163.821	165.437	162.464	162.468	162.167
Other foods at home	172.630	183.637	183.342	185.174	186.458	187.467	188.806	188.685	189.527	191.782	191.620	191.594	190.650	190.401	190.657
Sugar and sweets	175.323	185.494	184.378	186.054	186.860	188.914	189.574	190.501	192.120	195.867	195.395	196.015	195.858	194.928	195.773
Fats and oils	173.640	197.512	197.155	201.821	203.721	207.069	208.973	206.870	207.439	207.400	206.185	205.693	201.474	201.470	202.004
Other foods	188.405	198.303	198.153	199.722	201.119	201.632	203.138	203.126	203.937	206.490	206.547	206.468	205.820	205.641	205.759
Other miscellaneous foods[1,2]	115.356	120.348	118.879	121.015	121.443	121.589	123.026	123.837	124.144	124.477	122.994	122.837	123.112	123.126	122.537
Food away from home[1]	206.412	215.613	214.851	216.177	217.002	218.147	219.219	220.107	220.847	221.497	222.101	222.336	222.957	223.082	223.186
Other food away from home[1,2]	143.462	149.731	149.306	150.232	150.301	151.321	152.910	153.464	153.646	153.397	154.520	154.054	154.414	154.409	155.091
Alcoholic beverages	207.097	214.579	213.976	214.440	214.931	215.728	216.953	217.626	218.445	219.458	220.029	220.500	220.243	220.729	221.179
Housing	204.795	211.839	213.441	215.026	214.743	213.954	213.156	212.591	212.452	213.078	213.192	213.213	212.885	212.881	214.034
Shelter	232.998	239.128	239.198	239.845	240.038	240.163	240.517	240.740	240.752	241.651	242.051	242.605	242.857	242.941	243.238
Rent of primary residence	233.806	242.196	241.623	242.276	243.010	243.741	244.624	245.425	246.026	246.696	246.991	247.285	247.517	247.710	247.691
Lodging away from home[2]	142.339	143.164	148.378	152.248	148.368	142.591	140.763	133.747	129.982	134.235	136.255	138.008	138.008	136.113	139.246
Owners' equivalent rent of primary residence[3]	223.175	228.758	228.536	228.824	229.219	229.670	230.028	230.743	230.926	231.503	231.746	232.235	232.503	232.739	232.837
Tenants' and household insurance[1,2]	117.366	119.136	119.293	119.006	118.894	120.279	120.258	120.589	120.360	120.715	120.960	121.099	121.084	121.160	121.529
Fuels and utilities	198.863	217.883	228.843	236.381	233.373	226.709	219.325	214.700	213.861	213.882	212.353	209.400	205.840	205.270	211.929
Fuels	179.031	197.537	209.843	217.640	213.807	206.544	198.191	193.000	192.050	191.852	190.110	186.809	182.795	181.977	189.108
Fuel oil and other fuels	251.121	331.784	381.903	388.208	363.535	345.907	317.012	283.747	260.185	251.976	246.781	236.237	232.068	229.019	235.869
Gas (piped) and electricity	184.357	200.265	211.398	219.612	216.557	209.442	201.651	197.507	197.545	197.703	196.040	192.922	188.735	187.982	195.445
Household furnishings and operations	122.477	123.635	123.434	123.798	123.944	124.500	124.719	124.466	124.314	124.454	124.865	125.337	125.458	125.589	125.526
Apparel	118.518	118.735	116.706	113.978	116.214	120.990	121.957	121.149	117.006	114.969	118.766	122.162	122.709	121.364	118.547
Men's and boys' apparel	112.224	113.490	112.395	109.969	110.513	112.973	115.495	114.651	111.232	111.879	116.332	118.735	117.834	117.687	113.416
Women's and girls' apparel	110.202	107.489	104.062	99.772	104.584	112.304	111.880	110.612	105.413	100.751	105.538	110.380	110.990	108.637	105.676
Infants' and toddlers' apparel[1]	116.278	116.266	114.057	111.502	111.593	115.764	118.496	118.611	115.003	114.775	116.001	117.944	119.873	116.912	116.645
Footwear	122.062	124.102	123.381	122.380	122.026	124.873	126.352	126.689	124.152	122.753	124.494	126.858	128.312	127.802	126.150
Transportation	184.344	195.692	213.633	214.533	207.796	204.785	192.198	170.870	160.914	163.215	165.976	165.978	168.539	173.055	181.730
Private transportation	181.496	192.492	210.423	211.201	204.348	201.476	188.871	167.301	157.272	159.719	162.645	162.659	165.299	169.957	178.734
New and used motor vehicles[2]	93.300	92.146	92.714	92.686	92.287	91.305	90.530	89.783	89.482	89.774	89.728	89.418	89.620	90.039	90.588

See footnotes at end of table.

38. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
New vehicles	137.415	135.338	135.728	135.556	134.540	133.504	133.351	133.380	133.317	134.490	135.248	135.744	135.911	136.113	136.800
Used cars and trucks [1]	136.586	134.731	136.790	136.639	136.186	133.669	130.444	127.540	126.526	125.485	123.443	121.669	121.850	123.339	125.056
Motor fuel	239.900	280.817	348.762	351.124	325.116	316.717	269.639	187.770	149.650	157.265	168.028	169.060	177.982	194.339	225.876
Gasoline (all types)	238.879	278.728	346.459	348.888	322.930	315.324	267.580	184.855	146.644	155.204	166.831	168.574	177.510	194.569	226.515
Motor vehicle parts and equipment	121.356	128.776	127.750	128.997	130.228	131.072	132.088	133.125	133.295	133.645	134.264	134.485	134.614	134.439	134.273
Motor vehicle maintenance and repair	225.535	236.353	235.550	237.324	238.583	239.571	240.688	241.509	241.855	243.594	244.219	244.650	245.180	245.036	245.129
Public transportation	228.531	247.865	261.779	266.259	264.755	258.142	249.168	240.496	235.199	232.422	229.404	229.034	228.525	227.522	230.926
Medical care	350.882	364.208	363.628	363.942	364.652	365.250	366.000	366.800	367.301	370.001	372.630	373.541	374.599	375.420	375.479
Medical care commodities	282.558	287.970	287.033	286.562	286.880	287.397	287.725	289.046	290.080	291.710	293.917	294.728	295.699	296.431	296.369
Medical care services	370.111	386.317	385.911	386.560	387.420	388.036	388.947	389.493	389.744	392.831	395.563	396.489	397.553	398.387	398.497
Professional services	303.169	313.446	313.618	314.235	314.893	314.977	315.458	315.825	316.435	318.110	319.663	320.231	320.407	322.043	322.346
Hospital and related services	493.740	530.193	527.948	529.798	532.065	534.394	537.382	539.864	540.101	547.655	554.390	557.167	561.516	560.906	561.337
Recreation [2]	108.572	110.143	109.905	110.198	110.698	110.904	110.947	110.826	110.487	110.630	111.257	111.436	111.182	111.152	111.471
Video and audio [1,2]	102.559	102.654	102.306	102.267	102.643	102.819	102.267	101.974	101.810	101.488	101.857	102.153	102.516	102.214	102.193
Education and communication [2]	116.301	119.827	119.264	119.852	120.809	121.439	121.569	121.636	121.819	122.025	122.092	122.087	122.152	122.293	122.333
Education [2]	169.280	178.892	176.148	176.879	180.819	183.613	184.091	184.115	184.352	184.642	184.765	184.824	184.892	185.291	185.626
Educational books and supplies	423.730	452.880	445.740	446.741	461.104	465.570	466.885	465.576	467.179	471.061	473.012	474.880	474.950	475.213	480.024
Tuition, other school fees, and child care	477.589	504.163	496.449	498.598	509.241	517.389	518.726	518.938	519.500	519.987	520.159	520.146	520.348	521.550	522.076
Communication [1,2]	85.782	86.807	87.017	87.490	87.369	87.224	87.226	87.300	87.444	87.599	87.640	87.615	87.671	87.712	87.652
Information and information processing [1,2]	83.928	84.828	85.007	85.484	85.355	85.208	85.214	85.292	85.454	85.581	85.624	85.595	85.655	85.624	85.524
Telephone services [1,2]	98.373	100.502	100.723	101.375	101.339	101.350	101.436	101.564	101.720	101.876	101.890	101.977	102.048	102.231	102.153
Information and information processing other than telephone services [1,4]	11.062	10.567	10.585	10.600	10.525	10.414	10.375	10.367	10.406	10.418	10.442	10.378	10.385	10.271	10.238
Personal computers and peripheral equipment [1,2]	108.164	94.863	95.766	94.691	92.931	90.722	89.690	88.631	88.176	88.178	87.622	86.004	85.406	84.017	83.278
Other goods and services	344.004	357.906	358.419	359.961	360.102	361.125	362.354	362.550	362.986	364.333	365.522	380.208	394.902	394.061	395.052
Tobacco and smoking products	555.502	591.100	592.248	599.180	599.823	600.293	602.533	602.881	605.662	610.503	615.012	682.115	747.906	746.009	752.078
Personal care [1]	193.590	199.170	199.404	199.495	199.501	200.284	200.930	201.036	200.918	201.209	201.426	202.099	203.010	202.631	202.406
Personal care products [1]	158.268	159.410	159.052	159.237	159.345	159.730	159.914	160.994	161.295	162.683	162.543	162.516	163.911	163.119	162.165
Personal care services [1]	216.823	223.978	223.838	223.994	224.464	224.910	225.800	226.433	226.578	225.951	226.088	228.201	228.119	227.829	227.800
Miscellaneous personal services	326.100	340.533	341.921	341.763	342.974	345.175	344.622	342.853	342.530	343.022	343.443	344.021	345.016	345.326	346.411
Commodity and service group:															
Commodities	169.554	177.618	184.495	185.105	182.846	182.647	177.906	168.926	164.233	165.151	166.673	167.514	169.005	170.532	173.662
Food and beverages	202.531	213.546	212.700	214.662	215.850	217.098	218.141	218.178	218.269	219.123	218.645	218.119	217.653	217.308	217.258
Commodities less food and beverages	150.865	157.481	167.344	167.376	163.761	162.971	155.982	143.544	137.015	137.932	140.235	141.615	143.871	146.125	150.477
Nondurables less food and beverages	189.507	205.279	225.585	225.595	218.454	217.828	203.762	178.209	164.879	166.694	171.698	174.838	179.415	183.813	192.478
Apparel	118.518	118.735	116.706	113.978	116.214	120.990	121.957	121.149	117.006	114.969	118.766	122.162	122.709	121.364	118.547
Nondurables less food, beverages, and apparel	237.858	263.756	298.593	300.341	287.124	283.056	259.204	217.500	198.108	202.400	208.255	211.287	218.502	226.621	242.726
Durables	112.640	111.217	111.769	111.820	111.357	110.451	109.782	109.038	108.576	108.689	108.592	108.413	108.596	108.933	109.430
Services	241.696	250.272	251.365	252.991	253.304	252.861	252.369	252.144	252.176	253.033	253.456	253.591	253.403	253.482	254.624
Rent of shelter [3]	224.617	230.555	230.620	231.255	231.445	231.541	231.885	232.096	232.112	232.981	233.365	233.903	234.148	234.229	234.511
Transporatation services	233.420	242.563	243.395	245.005	246.041	245.722	246.003	246.126	245.881	246.931	248.029	247.862	248.809	248.795	249.312
Other services	275.218	284.319	283.449	284.449	286.389	287.792	287.898	288.082	288.227	288.627	289.432	290.043	289.738	290.116	290.845
Special indexes:															
All items less food	202.698	210.452	215.498	216.407	214.950	214.361	210.949	205.214	202.292	203.186	204.465	205.167	206.081	207.148	209.744
All items less shelter	193.940	203.102	208.817	210.069	208.544	208.068	204.149	197.342	193.918	194.811	196.052	196.551	197.432	198.571	201.488
All items less medical care	196.564	204.626	208.906	210.002	208.900	208.563	205.726	200.707	198.153	198.978	199.928	200.421	201.112	201.955	204.200
Commodities less food	152.875	159.538	169.169	169.213	165.689	164.937	158.132	145.985	139.620	140.543	142.809	144.172	146.371	148.589	152.856
Nondurables less food	190.698	206.047	225.276	225.309	218.562	218.010	204.734	180.533	167.933	169.708	174.484	177.487	181.815	186.012	194.254
Nondurables less food and apparel	234.201	258.423	290.127	291.760	279.753	276.112	254.473	216.516	198.909	202.906	208.291	211.094	217.649	225.091	239.808
Nondurables	196.772	210.333	220.813	221.740	218.473	218.725	211.680	198.009	190.910	192.284	194.740	196.174	198.408	200.601	205.219
Services less rent of shelter [3]	230.876	241.567	243.780	246.411	246.834	245.787	244.331	243.599	243.646	244.376	244.791	244.413	243.718	243.784	245.833
Services less medical care services	232.195	240.275	241.422	243.071	243.354	242.868	242.316	242.058	242.079	242.819	243.128	243.223	242.980	243.022	244.196
Energy	208.066	237.414	277.597	282.579	267.624	259.864	232.106	188.375	168.726	172.463	177.033	175.947	178.485	186.321	205.662
All items less energy	203.002	208.719	208.458	209.062	209.718	210.325	210.649	210.541	210.168	210.707	211.279	211.989	212.472	212.462	212.552
All items less food and energy	203.554	208.147	208.007	208.317	208.857	209.329	209.511	209.383	208.925	209.404	210.203	211.178	211.857	211.926	212.051
Commodities less food and energy	140.612	141.084	140.878	140.492	140.802	141.428	141.375	140.793	139.731	139.614	140.554	142.077	143.237	143.170	142.943
Energy commodities	241.257	284.270	351.873	354.402	328.310	319.507	272.894	192.494	154.744	161.781	171.978	172.563	181.021	196.706	227.444
Services less energy	247.888	255.598	255.513	256.365	257.072	257.411	257.774	258.008	258.039	258.976	259.643	260.158	260.439	260.615	261.014

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

NOTE: Index applied to a month as a whole, not to any specific date.

39. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

	Pricing schedule[1]	All Urban Consumers 2009						Urban Wage Earners 2009					
		Jan.	Feb.	Mar.	Apr.	May	June	Jan.	Feb.	Mar.	Apr.	May	June
U.S. city average	M	211.143	212.193	212.709	213.240	213.856	215.693	205.700	206.708	207.218	207.925	208.774	210.972
Region and area size[2]													
Northeast urban	M	225.436	226.754	227.309	227.840	228.136	229.930	221.704	222.945	223.626	224.252	224.748	226.695
Size A—More than 1,500,000	M	227.852	229.262	229.749	230.400	230.611	232.058	222.707	224.084	224.597	225.214	225.657	227.337
Size B/C—50,000 to 1,500,000[3]	M	133.308	133.967	134.411	134.547	134.857	136.488	133.345	133.908	134.558	134.951	135.329	136.888
Midwest urban[4]	M	200.815	201.453	202.021	202.327	203.195	205.350	195.245	195.813	196.453	196.933	197.971	200.487
Size A—More than 1,500,000	M	202.001	202.639	203.240	203.463	204.443	206.308	195.621	196.147	196.855	197.192	198.271	200.356
Size B/C—50,000 to 1,500,000[3]	M	128.636	129.057	129.334	129.604	129.967	131.640	127.768	128.167	128.468	128.968	129.524	131.554
Size D—Nonmetropolitan (less than 50,000)	M	195.843	196.421	197.267	197.644	198.911	201.157	192.907	193.527	194.393	194.651	196.047	198.674
South urban	M	204.288	205.343	206.001	206.657	207.265	209.343	200.067	201.150	201.737	202.619	203.500	205.968
Size A—More than 1,500,000	M	207.035	207.929	208.529	208.934	209.235	211.390	203.519	204.501	205.066	205.733	206.271	208.909
Size B/C—50,000 to 1,500,000[3]	M	129.615	130.380	130.873	131.370	131.777	133.056	127.529	128.276	128.686	129.309	129.885	131.382
Size D—Nonmetropolitan (less than 50,000)	M	205.766	206.671	206.927	207.898	209.563	211.815	204.316	205.337	205.744	206.921	208.989	211.721
West urban	M	215.923	217.095	217.357	217.910	218.567	219.865	209.367	210.492	210.661	211.386	212.263	213.973
Size A—More than 1,500,000	M	219.806	220.955	221.124	221.790	222.659	223.908	211.857	212.890	212.965	213.646	214.734	216.395
Size B/C—50,000 to 1,500,000[3]	M	130.682	131.636	131.775	131.912	131.990	132.952	129.639	130.649	130.674	131.103	131.389	132.517
Size classes:													
A[5]	M	193.412	194.354	194.750	195.207	195.745	197.214	191.023	191.927	192.327	192.861	193.597	195.414
B/C[3]	M	130.135	130.855	131.230	131.557	131.876	133.220	128.783	129.488	129.833	130.361	130.847	132.384
D	M	203.409	203.999	204.672	205.421	206.717	208.543	200.057	200.681	201.485	202.351	203.883	206.327
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI	M	207.616	207.367	207.462	207.886	209.809	211.010	200.222	199.944	200.218	200.607	202.464	203.691
Los Angeles–Riverside–Orange County, CA	M	220.719	221.439	221.376	221.693	222.522	223.906	212.454	213.234	213.013	213.405	214.446	216.145
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	233.402	234.663	235.067	235.582	235.975	237.172	227.503	228.653	229.064	229.639	230.307	231.916
Boston–Brockton–Nashua, MA–NH–ME–CT	1	230.806	–	232.155	–	231.891	–	230.095	–	231.884	–	231.420	–
Cleveland–Akron, OH	1	198.232	–	199.457	–	200.196	–	188.798	–	190.107	–	191.297	–
Dallas–Ft Worth, TX	1	198.623	–	200.039	–	199.311	–	199.416	–	200.770	–	200.955	–
Washington–Baltimore, DC–MD–VA–WV[7]	1	137.598	–	138.620	–	139.311	–	136.359	–	137.539	–	138.510	–
Atlanta, GA	2	–	199.190	–	199.210	–	203.585	–	197.528	–	197.676	–	202.632
Detroit–Ann Arbor–Flint, MI	2	–	201.913	–	202.373	–	204.537	–	196.191	–	197.239	–	199.977
Houston–Galveston–Brazoria, TX	2	–	187.972	–	189.701	–	192.325	–	185.015	–	186.970	–	189.979
Miami–Ft. Lauderdale, FL	2	–	220.589	–	220.740	–	221.485	–	217.635	–	217.900	–	219.091
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	–	220.262	–	221.686	–	223.810	–	219.356	–	220.732	–	223.361
San Francisco–Oakland–San Jose, CA	2	–	222.166	–	223.854	–	225.692	–	216.797	–	218.587	–	220.996
Seattle–Tacoma–Bremerton, WA	2	–	224.737	–	225.918	–	227.257	–	218.752	–	220.208	–	221.993

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:
M—Every month.
1—January, March, May, July, September, and November.
2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the *CPI Detailed Report*: Anchorage, AK; Cincinnatti, OH–KY–IN; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Port-land–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date. Dash indicates data not available.

40. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

Series	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Consumer Price Index for All Urban Consumers:											
All items:											
Index	163.0	166.6	172.2	177.1	179.9	184.0	188.9	195.3	201.6	207.342	215.303
Percent change	1.6	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.8	3.8
Food and beverages:											
Index	161.1	164.6	168.4	173.6	176.8	180.5	186.6	191.2	195.7	203.300	214.225
Percent change	2.2	2.2	2.3	3.1	1.8	2.1	3.3	2.5	2.4	3.9	5.4
Housing:											
Index	160.4	163.9	169.6	176.4	180.3	184.8	189.5	195.7	203.2	209.586	216.264
Percent change	2.3	2.2	3.5	4.0	2.2	2.5	2.5	3.3	3.8	3.1	3.2
Apparel:											
Index	133.0	131.3	129.6	127.3	124.0	120.9	120.4	119.5	119.5	118.998	118.907
Percent change	.1	–1.3	–1.3	–1.8	–2.6	–2.5	–.4	–.7	.0	-0.4	-0.1
Transportation:											
Index	141.6	144.4	153.3	154.3	152.9	157.6	163.1	173.9	180.9	184.682	195.549
Percent change	–1.9	2.0	6.2	0.7	–.9	3.1	3.5	6.6	4.0	2.1	5.9
Medical care:											
Index	242.1	250.6	260.8	272.8	285.6	297.1	310.1	323.2	336.2	351.054	364.065
Percent change	3.2	3.5	4.1	4.6	4.7	4.0	4.4	4.2	4.0	4.4	3.7
Other goods and services:											
Index	237.7	258.3	271.1	282.6	293.2	298.7	304.7	313.4	321.7	333.328	345.381
Percent change	5.7	8.7	5.0	4.2	3.8	1.9	2.0	2.9	2.6	3.6	3.6
Consumer Price Index for Urban Wage Earners and Clerical Workers:											
All items:											
Index	159.7	163.2	168.9	173.5	175.9	179.8	184.5	191.0	197.1	202.767	211.053
Percent change	1.3	2.2	3.5	2.7	1.4	2.2	5.1	1.1	3.2	2.9	4.1

41. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2008							2009					
	2007	2008	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p	Mayp	Junep
Finished goods	166.6	177.1	182.4	185.1	182.2	182.2	177.4	172.0	168.8	170.4	169.9	168.9	169.9	170.8	174.1
Finished consumer goods	173.5	186.3	193.8	197.2	193.2	193.0	185.5	178.2	173.7	175.8	175.2	173.9	175.5	176.8	181.3
Finished consumer foods	167.0	178.3	180.0	181.0	181.3	181.5	180.7	179.8	177.7	177.7	175.0	174.0	175.8	173.9	176.0
Finished consumer goods excluding foods	175.6	189.1	199.0	203.4	197.5	197.2	187.0	177.0	171.5	174.4	174.5	173.1	174.6	176.9	182.2
Nondurable goods less food	191.7	210.5	226.4	233.1	223.9	223.4	205.4	190.6	182.1	186.5	186.6	184.6	186.8	190.5	198.0
Durable goods	138.3	141.2	139.7	139.6	140.2	140.3	144.8	144.2	144.4	144.3	144.3	144.2	144.3	144.1	144.7
Capital equipment	149.5	153.8	152.7	153.3	153.9	154.3	157.0	156.9	157.2	157.4	157.2	157.0	156.6	156.3	156.6
Intermediate materials, supplies, and components	170.7	188.3	197.2	203.1	199.4	198.6	189.0	179.2	171.6	171.4	169.7	168.1	167.7	168.7	172.6
Materials and components for manufacturing	162.4	177.2	182.4	187.4	188.7	186.7	180.3	171.1	163.7	162.7	161.0	160.2	158.4	158.2	160.7
Materials for food manufacturing	161.4	180.4	185.4	187.6	187.5	185.2	179.4	175.5	170.8	167.3	164.3	163.6	164.1	166.1	166.1
Materials for nondurable manufacturing	184.0	214.3	222.8	234.8	238.6	234.7	222.4	200.6	185.0	186.8	185.6	184.8	181.3	180.9	189.2
Materials for durable manufacturing	189.8	203.3	215.4	219.2	218.9	214.5	202.2	190.0	178.6	172.8	168.2	166.0	162.7	162.0	162.9
Components for manufacturing	136.3	140.3	140.1	141.3	141.9	142.4	142.5	142.3	141.9	141.7	141.5	141.2	140.6	140.6	140.6
Materials and components for construction	192.5	205.4	206.5	209.8	212.9	214.0	212.2	210.2	207.9	207.0	204.8	204.2	202.5	202.2	202.2
Processed fuels and lubricants	173.9	206.2	238.4	250.1	225.2	224.5	193.9	168.7	151.2	153.4	150.7	145.0	148.6	153.9	167.0
Containers	180.3	191.8	189.2	191.9	195.0	198.4	199.1	199.0	198.1	200.8	199.5	198.4	196.7	195.5	195.4
Supplies	161.7	173.8	174.6	178.3	178.9	179.0	177.0	175.3	173.4	172.9	172.3	172.0	171.8	172.2	172.8
Crude materials for further processing	207.1	251.8	301.2	313.3	274.6	254.2	212.0	183.3	172.6	170.2	160.7	159.9	164.8	172.5	180.8
Foodstuffs and feedstuffs	146.7	163.4	178.1	178.9	170.6	167.6	147.9	144.2	135.5	136.1	133.3	130.5	136.7	140.8	141.2
Crude nonfood materials	246.3	313.9	393.0	414.9	350.0	314.2	253.9	203.2	191.6	186.5	171.5	172.7	175.8	186.3	201.5
Special groupings:															
Finished goods, excluding foods	166.2	176.6	182.8	185.9	182.2	182.1	176.3	169.6	166.1	168.0	168.0	167.0	167.9	169.3	172.8
Finished energy goods	156.3	178.7	204.6	214.0	198.6	197.0	167.8	144.1	130.6	136.4	136.3	132.4	135.7	141.6	153.1
Finished goods less energy	162.8	169.8	169.4	170.2	170.8	171.2	173.1	172.7	172.3	172.7	172.1	171.9	172.3	171.7	172.4
Finished consumer goods less energy	168.7	176.9	176.8	177.7	178.3	178.7	180.2	179.7	179.0	179.4	178.6	178.5	179.3	178.5	179.5
Finished goods less food and energy	161.7	167.2	166.0	166.7	167.4	167.9	170.8	170.6	170.8	171.3	171.3	171.4	171.3	171.1	171.5
Finished consumer goods less food and energy	170.0	176.4	175.2	175.9	176.6	177.2	180.2	180.0	180.1	180.7	181.0	181.4	181.5	181.3	181.8
Consumer nondurable goods less food and energy	197.0	206.8	206.0	207.6	208.5	209.7	210.7	210.9	211.0	212.4	212.9	213.8	214.0	213.8	214.1
Intermediate materials less foods and feeds	171.5	188.7	197.8	203.6	199.7	199.1	189.5	179.4	171.8	171.8	170.1	168.4	167.9	168.8	172.8
Intermediate foods and feeds	154.4	181.6	186.6	195.5	194.3	190.0	179.9	174.7	167.9	165.8	164.6	164.0	164.4	167.3	169.6
Intermediate energy goods	174.6	208.1	240.3	253.5	231.3	227.5	197.4	167.3	147.7	152.2	149.3	142.6	146.2	151.4	167.8
Intermediate goods less energy	167.6	180.9	183.9	187.9	188.9	188.8	184.5	179.8	175.3	174.0	172.7	172.3	170.9	170.9	171.6
Intermediate materials less foods and energy	168.4	180.9	183.8	187.5	188.7	188.8	184.8	180.2	175.9	174.6	173.4	173.0	171.5	171.2	171.7
Crude energy materials	232.8	309.4	400.4	426.5	339.1	303.7	244.4	194.9	181.1	173.0	152.1	153.8	158.2	166.4	184.1
Crude materials less energy	182.6	205.4	228.2	231.7	222.3	211.7	182.0	167.6	159.8	161.2	158.8	155.7	160.6	167.2	168.7
Crude nonfood materials less energy	282.6	324.4	373.8	386.1	374.2	337.5	276.7	224.8	221.3	225.2	224.9	221.7	220.5	235.4	240.9

p = preliminary.

42. Producer Price Indexes for the net output of major industry groups

[December 2003 = 100, unless otherwise indicated]

NAICS	Industry	2008							2009					
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.p	Apr.p	Mayp	Junep
	Total mining industries (December 1984=100)	341.4	363.8	299.2	273.4	223.3	184.9	174.8	173.4	159.0	157.2	161.1	168.3	181.0
211	Oil and gas extraction (December 1985=100)	456.0	490.4	383.6	341.2	259.4	199.5	184.1	180.3	154.1	152.9	159.4	170.1	191.7
212	Mining, except oil and gas	185.8	191.8	190.4	188.9	184.1	174.7	173.0	178.4	184.7	181.6	184.6	188.9	189.6
213	Mining support activities	173.1	175.9	177.1	177.6	179.3	179.9	177.0	174.0	172.0	168.2	162.2	159.5	154.3
	Total manufacturing industries (December 1984=100)	182.0	185.6	182.6	182.9	176.8	169.4	164.1	164.7	163.9	163.0	163.8	165.6	168.5
311	Food manufacturing (December 1984=100)	176.1	180.3	180.5	179.2	176.4	173.4	171.1	170.1	168.7	167.7	168.5	170.4	171.4
312	Beverage and tobacco manufacturing	114.1	115.0	114.8	115.2	116.1	116.0	116.3	117.6	119.2	120.3	119.9	119.3	119.5
313	Textile mills	111.7	112.6	114.2	114.9	114.9	114.7	113.5	113.4	113.0	112.7	112.9	112.2	112.4
315	Apparel manufacturing	102.1	102.3	102.5	102.7	103.0	103.2	103.2	103.5	103.5	103.8	103.7	103.8	103.5
316	Leather and allied product manufacturing (December 1984=100)	153.4	153.8	154.1	154.8	154.6	154.3	154.3	154.3	154.7	155.0	154.5	153.4	153.6
321	Wood products manufacturing	109.2	108.9	109.1	109.1	107.6	106.7	106.2	105.0	104.0	103.0	102.7	102.3	102.1
322	Paper manufacturing	120.9	121.8	124.5	126.6	127.3	127.2	127.0	126.7	126.0	125.6	124.6	123.1	122.3
323	Printing and related support activities	109.5	109.8	110.0	110.4	110.3	110.2	110.3	110.2	109.6	109.4	109.5	109.3	109.0
324	Petroleum and coal products manufacturing (December 1984=100)	406.0	429.6	382.2	382.6	300.0	221.4	167.0	178.6	176.4	166.6	182.5	205.2	238.4
325	Chemical manufacturing (December 1984=100)	228.5	234.5	238.2	240.4	239.3	234.5	229.7	226.7	225.1	226.9	224.0	222.9	223.3
326	Plastics and rubber products manufacturing (December 1984=100)	159.4	162.9	165.2	166.9	167.8	166.9	165.0	163.4	161.6	160.6	160.5	160.4	159.8
331	Primary metal manufacturing (December 1984=100)	227.8	232.7	233.5	228.9	214.9	199.9	185.6	177.6	173.3	169.1	163.8	162.2	163.7
332	Fabricated metal product manufacturing (December 1984=100)	174.7	177.2	178.8	179.6	179.6	179.3	178.5	178.9	177.7	176.6	175.1	174.7	174.3
333	Machinery manufacturing	116.4	117.9	118.3	118.8	119.4	119.9	120.0	120.5	120.4	120.5	120.3	120.3	120.2
334	Computer and electronic products manufacturing	92.8	92.8	92.7	92.7	92.7	92.6	92.4	92.5	92.4	92.3	92.5	92.5	92.3
335	Electrical equipment, appliance, and components manufacturing	128.2	129.1	129.3	129.8	129.4	127.3	126.9	126.8	126.8	126.9	127.7	128.3	128.4
336	Transportation equipment manufacturing	105.9	105.9	106.5	106.6	110.4	110.0	110.1	110.0	109.9	109.5	109.2	108.9	109.5
337	Furniture and related product manufacturing (December 1984=100)	171.3	172.3	173.5	174.3	175.1	175.3	175.7	176.1	177.0	176.9	176.5	176.5	177.0
339	Miscellaneous manufacturing	109.9	110.8	110.5	110.4	110.6	110.4	110.8	111.4	111.4	111.6	111.1	111.5	111.5
	Retail trade													
441	Motor vehicle and parts dealers	118.1	118.4	117.5	117.6	116.8	118.5	117.1	116.9	118.4	117.2	118.5	118.3	119.3
442	Furniture and home furnishings stores	119.6	120.3	122.0	121.1	121.0	120.8	120.6	120.8	121.0	120.7	121.4	123.7	121.9
443	Electronics and appliance stores	105.8	106.5	111.0	110.8	108.9	108.1	107.8	107.8	103.7	102.4	106.9	104.6	103.0
446	Health and personal care stores	127.8	133.8	133.3	134.0	134.6	136.4	136.4	136.0	136.0	137.9	139.7	137.4	136.5
447	Gasoline stations (June 2001=100)	67.6	77.2	72.7	81.7	76.8	76.3	77.7	68.9	71.0	62.4	59.2	59.2	69.6
454	Nonstore retailers	141.8	140.6	162.4	150.6	148.7	154.1	155.2	150.9	153.9	159.0	146.5	142.5	140.0
	Transportation and warehousing													
481	Air transportation (December 1992=100)	213.5	213.6	213.0	208.6	209.3	203.8	198.5	198.4	190.5	184.9	186.7	176.1	177.0
483	Water transportation	127.0	130.4	133.7	135.1	135.0	130.6	128.0	122.4	118.5	117.5	118.0	117.5	110.6
491	Postal service (June 1989=100)	180.5	180.5	180.5	180.5	180.5	180.5	180.5	180.5	181.6	181.6	181.6	186.8	186.8
	Utilities													
221	Utilities	141.7	146.8	145.7	140.8	136.0	133.4	133.1	133.9	132.9	130.2	126.7	126.9	129.1
	Health care and social assistance													
6211	Office of physicians (December 1996=100)	123.2	123.5	123.6	123.7	124.0	124.3	124.2	125.6	125.6	125.7	125.8	125.7	125.9
6215	Medical and diagnostic laboratories	106.9	106.9	106.9	107.6	107.7	107.7	107.8	108.3	108.7	108.4	109.0	108.8	108.7
6216	Home health care services (December 1996=100)	125.4	125.6	126.3	126.5	127.3	127.3	127.4	127.2	127.6	127.4	127.2	127.3	127.7
622	Hospitals (December 1992=100)	162.6	163.2	163.2	163.0	164.9	164.9	165.3	166.5	166.8	166.4	166.6	166.9	167.1
6231	Nursing care facilities	118.6	119.4	119.7	119.8	120.6	120.6	120.7	122.0	122.2	121.7	122.6	122.7	123.1
62321	Residential mental retardation facilities	118.5	118.6	118.7	118.9	119.1	119.2	119.2	120.3	120.3	120.4	120.5	121.5	121.1
	Other services industries													
511	Publishing industries, except Internet	110.4	111.0	111.1	110.2	110.9	111.1	110.7	111.9	111.9	111.4	111.5	111.7	111.8
515	Broadcasting, except Internet	104.4	103.9	105.5	107.0	112.0	111.5	109.3	107.9	108.1	109.3	106.6	107.1	107.4
517	Telecommunications	101.1	101.0	101.5	101.5	101.2	101.2	101.4	101.2	101.1	101.0	100.6	101.8	101.2
5182	Data processing and related services	100.8	100.9	101.0	101.1	101.3	101.3	101.3	101.0	100.9	100.8	100.9	100.9	101.0
523	Security, commodity contracts, and like activity	120.2	119.1	120.2	120.5	117.7	115.8	115.2	113.5	111.7	108.4	110.9	111.8	110.9
53112	Lessors or nonresidental buildings (except miniwarehouse)	110.4	110.9	112.7	111.7	111.5	111.7	112.8	111.0	109.0	110.1	109.1	109.0	109.4
5312	Offices of real estate agents and brokers	106.9	106.8	104.4	103.8	103.1	103.0	102.8	101.6	101.6	101.6	101.9	101.9	101.9
5313	Real estate support activities	108.2	109.2	109.3	108.6	109.2	108.2	109.8	109.9	108.6	110.8	109.6	109.7	108.9
5321	Automotive equipment rental and leasing (June 2001=100)	125.4	136.7	135.0	131.3	128.2	126.9	123.7	128.3	133.0	133.0	134.9	134.6	138.1
5411	Legal services (December 1996=100)	161.1	161.5	161.5	162.6	163.2	163.2	163.2	164.8	165.5	166.0	166.1	166.1	166.2
541211	Offices of certified public accountants	112.7	115.3	115.5	115.4	115.6	115.0	115.7	115.3	115.2	115.3	115.2	115.3	115.3
5413	Architectural, engineering, and related services (December 1996=100)	141.3	141.6	141.6	141.6	141.8	141.8	141.9	142.9	142.9	142.3	142.9	142.9	142.9
54181	Advertising agencies	106.3	106.3	106.3	106.3	106.3	106.3	106.3	105.6	105.4	105.3	105.4	105.4	105.2
5613	Employment services (December 1996=100)	122.8	123.0	123.4	123.1	123.6	124.1	124.2	123.8	124.0	123.2	124.1	123.3	123.8
56151	Travel agencies	98.8	98.8	98.8	101.4	101.4	101.4	101.4	101.4	101.8	102.6	99.7	99.7	100.2
56172	Janitorial services	109.1	109.0	109.3	109.4	109.4	109.4	109.1	109.6	109.7	109.5	109.6	109.6	109.7
5621	Waste collection	112.6	112.3	113.3	114.0	113.0	113.3	111.3	112.2	113.3	116.4	116.3	115.8	115.0
721	Accommodation (December 1996=100)	147.0	149.9	150.9	146.9	145.6	144.3	141.6	140.6	139.9	142.3	142.0	143.8	144.6

p = preliminary.

43. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

Index	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Finished goods											
Total	130.7	133.0	138.0	140.7	138.9	143.3	148.5	155.7	160.4	166.6	177.1
Foods	134.3	135.1	137.2	141.3	140.1	145.9	152.7	155.7	156.7	167.0	178.3
Energy	75.1	78.8	94.1	96.7	88.8	102.0	113.0	132.6	145.9	156.3	178.7
Other	143.7	146.1	148.0	150.0	150.2	150.5	152.7	156.4	158.7	161.7	167.2
Intermediate materials, supplies, and components											
Total	123.0	123.2	129.2	129.7	127.8	133.7	142.6	154.0	164.0	170.7	188.3
Foods	123.2	120.8	119.2	124.3	123.2	134.4	145.0	146.0	146.2	161.4	180.4
Energy	80.8	84.3	101.7	104.1	95.9	111.9	123.2	149.2	162.8	174.6	208.1
Other	133.5	133.1	136.6	136.4	135.8	138.5	146.5	154.6	163.8	168.4	180.9
Crude materials for further processing											
Total	96.8	98.2	120.6	121.0	108.1	135.3	159.0	182.2	184.8	207.1	251.8
Foods	103.9	98.7	100.2	106.1	99.5	113.5	127.0	122.7	119.3	146.7	163.4
Energy	68.6	78.5	122.1	122.3	102.0	147.2	174.6	234.0	226.9	232.8	309.4
Other	84.5	91.1	118.0	101.5	101.0	116.9	149.2	176.7	210.0	238.7	308.5

44. U.S. export price indexes by end-use category

[2000 = 100]

Category	2008							2009					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
ALL COMMODITIES	126.1	128.0	125.9	124.9	122.3	118.4	115.8	116.6	116.3	115.5	116.1	116.7	118.0
Foods, feeds, and beverages	198.0	211.5	189.6	190.4	175.0	164.8	155.1	165.4	162.1	156.7	162.8	167.0	175.2
Agricultural foods, feeds, and beverages	204.0	218.9	194.7	195.6	178.3	166.9	156.6	167.6	164.1	158.3	165.0	170.0	178.9
Nonagricultural (fish, beverages) food products	146.1	147.0	145.7	145.5	147.8	148.3	143.5	147.9	145.7	144.4	145.4	141.7	143.7
Industrial supplies and materials	173.2	177.8	174.0	169.4	161.8	148.2	139.6	139.0	137.9	136.5	136.9	138.1	141.2
Agricultural industrial supplies and materials	158.0	162.8	160.9	157.4	148.5	134.2	126.1	125.6	126.2	122.9	123.5	133.3	136.2
Fuels and lubricants	297.2	312.3	275.8	267.2	239.2	193.4	166.8	165.8	156.2	146.9	156.9	160.5	174.1
Nonagricultural supplies and materials, excluding fuel and building materials	161.6	165.1	165.3	160.8	155.5	145.6	138.8	138.2	138.2	138.2	137.2	137.6	139.3
Selected building materials	113.8	114.5	115.2	115.4	116.6	115.6	115.1	115.5	115.3	114.0	113.3	112.0	112.1
Capital goods	102.0	101.9	101.9	101.8	101.7	101.6	101.5	102.1	102.3	102.3	102.8	103.0	103.2
Electric and electrical generating equipment	108.9	109.3	109.2	109.5	109.7	109.2	109.0	107.3	106.7	106.8	106.7	106.9	106.8
Nonelectrical machinery	94.2	94.0	94.1	93.9	93.6	93.5	93.3	93.7	94.0	93.8	94.3	94.4	94.5
Automotive vehicles, parts, and engines	107.4	107.7	107.8	107.9	108.2	108.1	108.0	108.4	108.1	108.2	108.1	108.1	108.0
Consumer goods, excluding automotive	108.2	108.5	109.0	109.3	109.9	109.1	109.0	109.2	109.3	108.5	107.6	108.0	108.5
Nondurables, manufactured	110.1	109.8	109.6	109.0	108.9	107.4	107.2	108.8	109.0	107.1	107.3	108.0	108.8
Durables, manufactured	105.2	106.0	107.2	108.7	109.9	109.8	109.7	109.7	109.8	109.9	107.6	107.9	108.0
Agricultural commodities	195.2	208.2	188.2	188.3	172.5	160.6	150.8	159.7	157.0	151.6	157.2	163.0	170.8
Nonagricultural commodities	121.2	122.3	121.5	120.4	118.7	115.4	113.2	113.5	113.3	112.9	113.1	113.4	114.3

45. U.S. import price indexes by end-use category

[2000 = 100]

Category	2008							2009					
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
ALL COMMODITIES	145.5	147.5	143.0	137.8	129.6	120.0	114.5	113.0	113.0	113.6	114.9	116.5	120.2
Foods, feeds, and beverages	147.7	149.7	150.4	147.9	146.0	139.5	142.3	142.3	137.8	137.0	139.0	139.3	140.0
Agricultural foods, feeds, and beverages	165.1	167.6	167.9	165.1	162.8	154.4	159.4	159.0	153.0	151.3	154.5	155.2	155.8
Nonagricultural (fish, beverages) food products	108.4	109.1	110.9	109.1	108.0	105.8	103.8	104.5	103.4	104.8	103.9	103.4	104.1
Industrial supplies and materials	283.0	290.7	270.7	248.9	213.5	174.6	150.4	143.7	144.9	149.3	154.3	161.7	178.3
Fuels and lubricants	423.7	437.6	392.0	346.3	274.1	197.8	153.9	146.6	150.5	162.3	174.4	188.6	223.8
Petroleum and petroleum products	450.3	465.0	419.5	371.5	288.9	201.6	150.8	143.8	151.6	168.5	185.5	202.7	243.8
Paper and paper base stocks	117.3	118.9	119.7	119.9	116.4	115.1	113.2	110.3	108.8	106.6	104.5	103.3	101.9
Materials associated with nondurable supplies and materials	152.9	157.4	159.6	162.4	160.2	155.0	148.5	138.8	137.1	136.7	135.3	139.5	138.7
Selected building materials	119.2	121.3	122.1	122.7	120.4	118.8	118.1	117.2	116.5	116.2	115.3	114.5	115.8
Unfinished metals associated with durable goods	273.2	273.4	270.3	255.4	236.7	209.3	185.7	176.5	175.9	171.6	170.9	171.9	176.5
Nonmetals associated with durable goods	107.6	110.7	111.8	111.4	110.9	110.4	109.0	107.1	106.2	105.2	104.6	103.8	103.7
Capital goods	93.2	93.4	93.4	93.3	93.3	92.9	92.7	92.7	92.3	91.8	91.9	91.9	91.8
Electric and electrical generating equipment	112.0	112.7	113.0	112.9	112.3	111.8	111.4	111.1	110.3	109.4	109.2	110.0	110.2
Nonelectrical machinery	88.2	88.4	88.3	88.2	88.1	87.7	87.5	87.5	87.2	86.6	86.8	86.7	86.6
Automotive vehicles, parts, and engines	107.9	108.1	108.3	108.1	108.3	107.9	107.8	108.0	107.9	107.7	107.7	107.9	108.0
Consumer goods, excluding automotive	104.9	105.1	105.2	105.1	105.1	104.6	104.4	104.4	104.4	103.9	104.1	104.1	104.2
Nondurables, manufactured	107.9	108.2	108.4	108.2	108.1	108.0	108.2	108.9	108.9	108.4	108.4	108.2	108.3
Durables, manufactured	101.5	101.7	101.7	101.8	101.8	101.1	100.7	100.1	100.0	99.8	100.0	100.1	100.3
Nonmanufactured consumer goods	106.6	106.7	106.6	106.6	105.9	103.2	103.6	102.7	104.4	101.2	102.7	101.3	101.4

46. U.S. international price Indexes for selected categories of services

[2000 = 100, unless indicated otherwise]

Category	2007			2008				2009	
	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June
Import air freight	132.3	134.2	141.8	144.4	158.7	157.1	138.5	132.9	133.9
Export air freight	117.0	119.8	127.1	132.0	140.8	144.3	135.0	124.1	117.4
Import air passenger fares (Dec. 2006 = 100)	144.6	140.2	135.3	131.3	171.6	161.3	157.3	134.9	147.3
Export air passenger fares (Dec. 2006 = 100)	147.3	154.6	155.7	156.4	171.4	171.9	164.6	141.7	135.9

47. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

Item	2006			2007				2008				2009	
	II	III	IV	I	II	III	IV	I	II	III	IV	I	II
Business													
Output per hour of all persons	138.7	138.0	138.7	139.0	140.2	142.1	142.6	142.7	143.8	143.9	144.2	144.3	146.5
Compensation per hour	169.1	169.7	173.3	175.2	176.5	177.8	179.6	180.3	181.0	183.0	184.2	183.0	183.1
Real compensation per hour	120.3	119.7	122.5	122.7	122.4	122.6	122.1	121.2	120.4	119.9	123.3	123.3	122.9
Unit labor costs	121.9	123.0	124.9	126.0	125.9	125.1	125.9	126.3	125.9	127.2	127.7	126.9	125.0
Unit nonlabor payments	136.7	137.3	135.1	136.7	139.4	141.9	141.9	141.7	143.8	145.4	143.6	146.9	149.9
Implicit price deflator	127.4	128.3	128.7	130.0	130.9	131.4	131.9	132.1	132.5	134.0	133.6	134.3	134.3
Nonfarm business													
Output per hour of all persons	137.7	137.0	137.8	138.2	139.2	141.1	141.8	141.7	142.8	142.8	143.1	143.2	145.5
Compensation per hour	168.0	168.6	172.3	174.2	175.1	176.3	178.5	179.2	179.8	181.8	183.1	182.0	182.1
Real compensation per hour	119.6	118.9	121.8	122.1	121.4	121.5	121.3	120.5	119.6	119.1	122.6	122.6	122.2
Unit labor costs	122.0	123.0	125.0	126.0	125.8	125.0	125.9	126.4	125.9	127.3	128.0	127.1	125.2
Unit nonlabor payments	139.0	139.5	136.9	138.2	140.9	143.3	143.0	142.5	144.9	146.6	145.3	149.2	152.3
Implicit price deflator	128.3	129.1	129.3	130.5	131.4	131.7	132.2	132.3	132.9	134.4	134.3	135.2	135.1
Nonfinancial corporations													
Output per hour of all employees	142.1	143.4	143.6	143.5	144.5	144.1	145.9	145.0	147.4	148.6	148.0	145.8	–
Compensation per hour	159.4	159.8	162.5	164.2	165.2	166.2	168.3	168.6	169.7	171.8	173.7	172.6	–
Real compensation per hour	113.4	112.7	114.9	115.0	114.6	114.5	114.4	113.4	112.9	112.5	116.3	116.2	–
Total unit costs	114.0	113.5	115.3	116.8	117.2	118.6	118.7	119.8	118.9	119.4	121.8	123.8	–
Unit labor costs	112.2	111.4	113.2	114.4	114.4	115.3	115.3	116.3	115.1	115.6	117.3	118.4	–
Unit nonlabor costs	118.9	119.1	120.9	123.1	124.9	127.4	127.9	129.1	129.2	129.8	134.1	138.6	–
Unit profits	175.8	191.4	175.8	171.2	171.8	155.6	149.9	133.0	134.7	145.3	129.5	127.1	–
Unit nonlabor payments	134.4	138.7	135.9	136.2	137.7	135.1	133.9	130.2	130.7	134.0	132.8	135.5	–
Implicit price deflator	119.6	120.6	120.8	121.8	122.2	122.0	121.6	121.0	120.4	121.8	122.5	124.1	–
Manufacturing													
Output per hour of all persons	172.5	174.4	175.3	176.9	178.2	180.1	181.6	182.8	181.6	180.3	178.1	177.0	179.2
Compensation per hour	148.8	149.4	153.0	156.1	156.1	156.1	158.6	158.6	159.7	161.4	166.0	166.9	169.3
Real compensation per hour	105.9	105.4	108.2	109.3	108.2	107.6	107.8	106.6	106.2	105.7	111.2	112.4	113.7
Unit labor costs	86.3	85.7	87.3	88.2	87.6	86.7	87.3	86.8	87.9	89.5	93.2	94.3	94.5

NOTE: Dash indicates data not available.

48. Annual indexes of multifactor productivity and related measures, selected years

[2000 = 100, unless otherwise indicated]

Item	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Private business													
Productivity:													
Output per hour of all persons	90.0	91.7	94.3	97.2	100.0	102.8	107.1	111.2	114.5	116.6	117.6	119.5	122.7
Output per unit of capital services	105.3	105.3	103.8	102.3	100.0	96.0	94.7	95.5	97.2	98.1	98.4	97.7	95.6
Multifactor productivity	95.3	96.2	97.4	98.8	100.0	100.4	102.5	105.4	108.2	109.7	110.3	110.7	112.0
Output	82.8	87.2	91.5	96.2	100.0	100.5	102.0	105.2	109.7	113.6	117.1	119.5	120.4
Inputs:													
Labor input	90.8	94.4	96.5	98.8	100.0	98.2	96.2	95.8	96.9	98.8	101.2	102.3	100.3
Capital services	78.7	82.9	88.2	94.1	100.0	104.6	107.7	110.2	112.9	115.8	119.1	122.3	125.9
Combined units of labor and capital input	86.9	90.7	93.9	97.4	100.0	100.0	99.5	99.9	101.4	103.6	106.2	108.0	107.6
Capital per hour of all persons	85.5	87.1	90.9	95.0	100.0	107.0	113.1	116.5	117.8	118.9	119.6	122.3	128.3
Private nonfarm business													
Productivity:													
Output per hour of all persons	90.5	92.0	94.5	97.3	100.0	102.7	107.1	111.1	114.2	116.1	117.2	118.9	122.3
Output per unit of capital services	106.1	105.8	104.2	102.6	100.0	96.0	94.5	95.2	96.9	97.7	97.9	97.0	95.1
Multifactor productivity	95.8	96.5	97.7	99.0	100.0	100.4	102.5	105.2	108.0	109.3	109.9	110.1	111.4
Output	82.8	87.2	91.5	96.3	100.0	100.5	102.1	105.2	109.6	113.5	117.1	119.4	120.4
Inputs:													
Labor input	90.4	94.0	96.3	98.8	100.0	98.4	96.4	96.0	97.1	99.1	101.6	102.8	100.9
Capital services	78.1	82.4	87.8	93.9	100.0	104.7	107.9	110.5	113.1	116.1	119.6	123.1	126.7
Combined units of labor and capital input	86.5	90.4	93.7	97.3	100.0	100.2	99.6	100.0	101.5	103.8	106.6	108.4	108.1
Capital per hour of all persons	85.3	86.9	90.7	94.8	100.0	107.0	113.2	116.7	117.8	118.9	119.7	122.6	128.8
Manufacturing [1996 = 100]													
Productivity:													
Output per hour of all persons	82.7	87.3	92.0	96.1	100.0	101.6	108.6	115.3	117.9	123.5	125.0	–	–
Output per unit of capital services	98.0	100.6	100.7	100.4	100.0	93.5	92.3	93.2	95.4	98.9	100.2	–	–
Multifactor productivity	91.2	93.8	95.9	96.7	100.0	98.7	102.4	105.2	108.0	108.4	110.1	–	–
Output	83.1	89.2	93.8	97.4	100.0	94.9	94.3	95.2	96.9	100.4	102.3	–	–
Inputs:												–	–
Hours of all persons	100.4	102.2	101.9	101.3	100.0	93.5	86.8	82.6	82.2	81.3	81.8	–	–
Capital services	84.8	88.7	93.2	97.0	100.0	101.5	102.1	102.1	101.6	101.5	102.0	–	–
Energy	110.4	108.2	105.4	105.5	100.0	90.6	89.3	84.4	84.0	91.6	86.6	–	–
Nonenergy materials	86.0	92.9	97.7	102.6	100.0	93.3	88.4	87.7	87.3	92.4	91.5	–	–
Purchased business services	88.5	92.1	95.0	100.0	100.0	100.7	98.2	99.1	97.0	104.5	106.6	–	–
Combined units of all factor inputs	91.1	95.1	97.8	100.7	100.0	96.2	92.1	90.5	89.7	92.7	92.9	–	–

NOTE: Dash indicates data not available.

49. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

Item	1963	1973	1983	1993	2000	2001	2002	2003	2004	2005	2006	2007	2008
Business													
Output per hour of all persons	55.0	73.4	83.0	100.4	116.1	119.1	123.9	128.7	132.4	134.8	136.1	138.2	141.9
Compensation per hour	15.6	28.9	66.3	102.2	134.7	140.3	145.3	151.2	157.0	163.2	169.4	176.5	182.8
Real compensation per hour	66.6	85.1	90.5	99.8	112.0	113.5	115.7	117.7	119.0	119.7	120.3	121.9	121.6
Unit labor costs	28.4	39.4	79.8	101.8	116.0	117.9	117.3	117.5	118.5	121.0	124.5	127.7	128.8
Unit nonlabor payments	26.6	37.5	76.3	102.6	107.2	110.0	114.2	118.3	124.6	130.5	134.8	137.7	142.1
Implicit price deflator	27.7	38.7	78.5	102.1	112.7	114.9	116.1	117.8	120.8	124.6	128.3	131.4	133.8
Nonfarm business													
Output per hour of all persons	57.8	75.3	84.5	100.4	115.7	118.6	123.5	128.0	131.6	133.9	135.1	137.0	140.9
Compensation per hour	16.1	29.1	66.6	102.0	134.2	139.5	144.6	150.4	156.0	162.1	168.3	175.2	181.7
Real compensation per hour	68.7	85.5	91.1	99.5	111.6	112.8	115.1	117.1	118.2	118.9	119.5	121.0	120.8
Unit labor costs	27.8	38.6	78.9	101.6	116.0	117.7	117.1	117.5	118.5	121.1	124.5	127.9	129.0
Unit nonlabor payments	26.3	35.3	76.1	103.1	108.7	111.6	116.0	119.6	125.5	132.1	136.8	138.4	143.3
Implicit price deflator	27.3	37.4	77.9	102.1	113.3	115.4	116.7	118.3	121.1	125.1	129.1	131.7	134.2
Nonfinancial corporations													
Output per hour of all employees	62.6	74.8	85.7	100.3	122.5	124.7	129.7	134.6	139.7	143.4	146.0	147.1	151.2
Compensation per hour	17.9	31.0	68.9	101.8	133.0	138.6	143.6	149.5	154.0	159.6	165.4	172.2	178.9
Real compensation per hour	76.4	91.2	94.2	99.3	110.6	112.1	114.3	116.4	116.8	117.1	117.5	118.9	119.0
Total unit costs	27.2	39.9	80.7	101.0	107.4	111.6	110.7	111.0	110.0	111.7	113.6	117.4	119.1
Unit labor costs	28.6	41.4	80.4	101.4	108.6	111.2	110.7	111.0	110.3	111.3	113.3	117.1	118.3
Unit nonlabor costs	23.4	35.7	81.6	99.9	104.2	112.6	110.8	111.1	109.3	112.7	114.6	118.3	121.3
Unit profits	57.3	54.9	91.2	114.1	108.7	82.2	98.0	109.9	144.8	163.0	183.5	167.3	149.9
Unit nonlabor payments	32.5	40.8	84.2	103.7	105.4	104.5	107.4	110.7	118.8	126.2	133.0	131.4	129.0
Implicit price deflator	29.9	41.2	81.7	102.2	107.5	108.9	109.6	110.9	113.1	116.3	119.9	121.9	121.9
Manufacturing													
Output per hour of all persons	–	–	–	102.6	139.1	141.2	151.0	160.4	164.0	171.9	173.7	179.2	180.7
Compensation per hour	–	–	–	102.0	134.7	137.8	147.8	158.2	161.5	164.5	171.2	177.4	184.7
Real compensation per hour	–	–	–	99.6	112.0	111.5	117.7	123.2	122.5	120.7	121.6	122.5	122.8
Unit labor costs	–	–	–	99.5	96.9	97.6	97.9	98.7	98.5	95.7	98.6	99.0	102.2
Unit nonlabor payments	–	–	–	101.1	103.5	102.0	100.3	102.9	110.2	122.2	126.6	–	–
Implicit price deflator	–	–	–	100.6	101.4	100.6	99.5	101.5	106.4	113.5	117.4	–	–

Dash indicates data not available.

50. Annual indexes of output per hour for selected NAICS industries

[1997=100]

NAICS	Industry	1987	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Mining												
21	Mining	85.3	100.0	103.5	111.4	111.0	109.1	113.5	116.0	106.8	96.0	87.3	81.7
211	Oil and gas extraction	80.1	100.0	101.2	107.9	119.4	121.6	123.8	130.1	111.7	107.8	100.4	97.0
2111	Oil and gas extraction	80.1	100.0	101.2	107.9	119.4	121.6	123.8	130.1	111.7	107.8	100.4	97.0
212	Mining, except oil and gas	69.3	100.0	104.5	105.8	106.3	109.0	110.7	113.8	116.2	114.2	111.0	105.2
2121	Coal mining	57.8	100.0	106.5	110.3	115.8	114.3	111.7	113.4	113.4	107.8	99.8	101.0
2122	Metal ore mining	71.0	100.0	108.9	112.3	121.5	132.2	138.2	142.2	137.1	129.9	123.1	104.2
2123	Nonmetallic mineral mining and quarrying	88.0	100.0	101.2	101.2	96.1	99.4	103.6	108.3	114.3	118.4	120.0	109.8
213	Support activities for mining	79.4	100.0	96.0	98.5	100.9	110.4	103.5	136.3	170.3	144.9	147.0	156.8
2131	Support activities for mining	79.4	100.0	96.0	98.5	100.9	110.4	103.5	136.3	170.3	144.9	147.0	156.8
	Utilities												
2211	Power generation and supply	65.6	100.0	103.7	103.5	107.0	106.4	102.9	105.1	107.5	114.3	115.4	113.3
2212	Natural gas distribution	67.8	100.0	99.0	102.7	113.2	110.1	115.4	114.1	118.3	122.2	119.1	119.7
	Manufacturing												
311	Food	94.1	100.0	103.9	105.9	107.1	109.5	113.8	116.8	117.3	123.3	121.1	-
3111	Animal food	83.6	100.0	109.0	110.9	109.7	131.4	142.7	165.8	149.5	165.5	150.4	-
3112	Grain and oilseed milling	81.1	100.0	107.5	116.1	113.1	119.5	122.4	123.9	130.3	133.0	130.7	-
3113	Sugar and confectionery products	87.6	100.0	103.5	106.5	109.9	108.6	108.0	112.5	118.2	130.7	129.2	-
3114	Fruit and vegetable preserving and specialty	92.4	100.0	107.1	109.5	111.8	121.4	126.9	123.0	126.2	132.0	126.9	-
3115	Dairy products	82.7	100.0	100.0	93.6	95.9	97.1	105.0	110.5	107.4	109.6	110.2	-
3116	Animal slaughtering and processing	97.4	100.0	100.0	101.2	102.6	103.7	107.3	106.6	108.0	117.4	116.9	-
3117	Seafood product preparation and packaging	123.1	100.0	120.2	131.6	140.5	153.0	169.8	173.2	162.2	186.1	203.8	-
3118	Bakeries and tortilla manufacturing	100.9	100.0	103.8	108.6	108.3	109.9	108.9	109.3	113.8	115.4	110.5	-
3119	Other food products	97.5	100.0	107.8	111.4	112.6	106.2	111.9	118.8	119.3	116.2	116.3	-
312	Beverages and tobacco products	78.1	100.0	97.6	87.3	88.3	89.5	82.6	90.9	94.7	100.5	94.0	-
3121	Beverages	77.1	100.0	99.0	90.7	90.8	92.7	99.4	108.3	114.1	120.3	112.0	-
3122	Tobacco and tobacco products	71.9	100.0	98.5	91.0	95.9	98.2	67.0	78.7	82.4	93.1	94.9	-
313	Textile mills	73.7	100.0	102.6	106.2	106.7	109.5	125.3	136.1	138.6	152.8	150.5	-
3131	Fiber, yarn, and thread mills	66.5	100.0	102.1	103.9	101.3	109.1	133.3	148.8	154.1	143.5	139.7	-
3132	Fabric mills	68.0	100.0	104.2	110.0	110.1	110.3	125.4	137.3	138.6	164.2	170.5	-
3133	Textile and fabric finishing mills	91.3	100.0	101.2	102.2	104.4	108.5	119.8	125.1	127.7	139.8	126.2	-
314	Textile product mills	93.0	100.0	98.7	102.5	107.1	104.5	107.3	112.7	123.4	128.0	121.1	-
3141	Textile furnishings mills	91.2	100.0	99.3	99.1	104.5	103.1	105.5	114.4	122.3	125.7	117.3	-
3149	Other textile product mills	92.2	100.0	96.7	107.6	108.9	103.1	105.1	104.2	120.4	128.9	126.1	-
315	Apparel	71.9	100.0	101.8	111.7	116.8	116.5	102.9	112.4	103.4	110.9	114.0	-
3151	Apparel knitting mills	76.2	100.0	96.1	101.4	108.9	105.6	112.0	105.6	96.6	120.0	123.7	-
3152	Cut and sew apparel	69.8	100.0	102.3	114.6	119.8	119.5	103.9	117.2	108.4	113.5	117.6	-
3159	Accessories and other apparel	97.8	100.0	109.0	99.3	98.3	105.2	76.1	78.7	70.8	74.0	67.3	-
316	Leather and allied products	71.6	100.0	106.6	112.7	120.3	122.4	97.7	99.8	109.5	123.6	132.5	-
3161	Leather and hide tanning and finishing	94.0	100.0	100.3	98.1	100.1	100.3	81.2	82.2	93.5	118.7	118.1	-
3162	Footwear	76.7	100.0	102.1	117.3	122.3	130.7	102.7	104.8	100.7	105.6	115.4	-
3169	Other leather products	92.3	100.0	113.3	110.4	122.8	117.6	96.2	100.3	127.7	149.7	174.6	-
321	Wood products	95.0	100.0	101.2	102.9	102.7	106.1	113.6	114.7	115.6	123.1	124.9	-
3211	Sawmills and wood preservation	77.6	100.0	100.3	104.7	105.4	108.8	114.4	121.3	118.2	127.3	129.7	-
3212	Plywood and engineered wood products	99.7	100.0	105.1	98.7	98.8	105.2	110.3	107.0	102.9	110.2	117.4	-
3219	Other wood products	103.0	100.0	101.0	104.5	103.0	104.7	113.9	113.9	119.6	126.3	125.3	-
322	Paper and paper products	85.8	100.0	102.3	104.1	106.3	106.8	114.2	118.9	123.4	124.5	127.3	-
3221	Pulp, paper, and paperboard mills	81.7	100.0	102.5	111.1	116.3	119.9	133.1	141.4	148.0	147.7	151.1	-
3222	Converted paper products	89.0	100.0	102.5	100.1	101.1	100.5	105.6	109.6	112.9	114.8	116.6	-
323	Printing and related support activities	97.6	100.0	100.6	102.8	104.6	105.3	110.2	111.1	114.5	119.5	121.1	-
3231	Printing and related support activities	97.6	100.0	100.6	102.8	104.6	105.3	110.2	111.1	114.5	119.5	121.1	-
324	Petroleum and coal products	71.1	100.0	102.2	107.1	113.5	112.1	118.0	119.2	123.4	123.8	122.8	-
3241	Petroleum and coal products	71.1	100.0	102.2	107.1	113.5	112.1	118.0	119.2	123.4	123.8	122.8	-
325	Chemicals	85.9	100.0	99.9	103.5	106.6	105.3	114.2	118.4	125.8	134.1	137.5	-
3251	Basic chemicals	94.6	100.0	102.8	115.7	117.5	108.8	123.8	136.0	154.4	165.2	169.3	-
3252	Resin, rubber, and artificial fibers	77.4	100.0	106.0	109.8	109.8	106.2	123.1	122.2	121.9	130.5	134.9	-
3253	Agricultural chemicals	80.4	100.0	98.8	87.4	92.1	90.0	99.2	108.4	117.4	132.5	130.7	-
3254	Pharmaceuticals and medicines	87.3	100.0	93.8	95.7	95.6	99.5	97.4	101.5	104.1	110.0	115.0	-
3255	Paints, coatings, and adhesives	89.4	100.0	100.1	100.3	100.8	105.6	108.9	115.2	119.1	120.8	115.4	-
3256	Soap, cleaning compounds, and toiletries	84.4	100.0	98.0	93.0	102.8	106.0	124.1	118.2	135.3	153.1	162.9	-
3259	Other chemical products and preparations	75.4	100.0	99.2	109.3	119.7	110.4	120.8	123.0	121.3	123.5	118.1	-
326	Plastics and rubber products	80.9	100.0	103.2	107.9	110.2	112.3	120.8	126.0	128.7	132.6	132.8	-
3261	Plastics products	83.1	100.0	104.2	109.9	112.3	114.6	123.8	129.5	131.9	135.6	133.8	-
3262	Rubber products	75.5	100.0	99.4	100.2	101.7	102.3	107.1	111.0	114.4	118.7	124.9	-
327	Nonmetallic mineral products	87.6	100.0	103.7	104.3	102.5	100.0	104.6	111.2	108.7	115.3	114.6	-
3271	Clay products and refractories	86.9	100.0	101.2	102.7	102.9	98.4	99.7	103.5	109.2	114.6	111.9	-

50. Continued - Annual indexes of output per hour for selected NAICS industries

[1997=100]

NAICS	Industry	1987	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
3272	Glass and glass products	82.4	100.0	101.3	106.7	108.1	102.9	107.5	115.3	113.8	123.1	132.9	-
3273	Cement and concrete products	93.6	100.0	105.1	105.9	101.6	98.0	102.4	108.3	102.8	106.5	103.1	-
3274	Lime and gypsum products	88.2	100.0	114.9	104.4	98.5	101.8	99.0	107.1	104.7	119.3	116.5	-
3279	Other nonmetallic mineral products	83.0	100.0	99.0	95.6	96.6	98.6	106.9	113.6	110.6	118.9	116.3	-
331	Primary metals	81.0	100.0	102.0	102.8	101.3	101.0	115.2	118.2	132.0	135.5	134.3	-
3311	Iron and steel mills and ferroalloy production	64.8	100.0	101.3	104.8	106.0	104.4	125.1	130.4	164.9	163.1	163.5	-
3312	Steel products from purchased steel	79.7	100.0	100.6	93.8	96.4	97.9	96.8	93.9	88.6	90.8	86.1	-
3313	Alumina and aluminum production	90.5	100.0	101.5	103.5	96.6	96.2	124.5	126.8	137.3	154.4	151.7	-
3314	Other nonferrous metal production	96.8	100.0	111.3	108.4	102.3	99.5	107.6	120.6	123.1	122.3	115.7	-
3315	Foundries	81.4	100.0	101.2	104.5	103.6	107.4	116.7	116.3	123.9	128.6	131.8	-
332	Fabricated metal products	87.3	100.0	101.3	103.0	104.8	104.8	110.9	114.4	113.4	116.9	119.7	-
3321	Forging and stamping	85.4	100.0	103.5	110.9	121.1	120.7	125.0	133.1	142.0	147.6	152.7	-
3322	Cutlery and handtools	86.3	100.0	99.9	108.0	105.9	110.3	113.4	113.2	107.6	114.1	116.6	-
3323	Architectural and structural metals	88.7	100.0	100.9	102.0	100.6	101.6	106.0	108.8	105.4	109.2	113.5	-
3324	Boilers, tanks, and shipping containers	86.0	100.0	100.0	96.5	94.2	94.4	98.9	101.6	93.6	95.7	96.6	-
3325	Hardware	88.7	100.0	100.5	105.2	114.3	113.5	115.5	125.4	126.0	131.8	131.1	-
3326	Spring and wire products	82.2	100.0	110.6	111.4	112.6	111.9	125.7	135.3	133.8	143.2	140.6	-
3327	Machine shops and threaded products	76.9	100.0	99.6	104.2	108.2	108.8	114.8	115.7	114.6	116.3	117.1	-
3328	Coating, engraving, and heat treating metals	75.5	100.0	100.9	101.0	105.5	107.3	116.1	118.3	125.3	136.5	135.5	-
3329	Other fabricated metal products	91.0	100.0	101.9	99.6	99.9	96.7	106.5	111.6	111.2	112.5	117.7	-
333	Machinery	82.3	100.0	102.9	104.7	111.5	109.0	116.6	125.2	127.0	134.1	137.4	-
3331	Agriculture, construction, and mining machinery	74.6	100.0	103.3	94.3	100.3	100.3	103.7	116.1	125.4	129.4	129.1	-
3332	Industrial machinery	75.1	100.0	95.1	105.8	130.0	105.8	117.6	117.0	126.5	122.4	135.3	-
3333	Commercial and service industry machinery	87.0	100.0	106.3	110.0	101.3	94.5	97.8	104.7	106.5	115.1	122.3	-
3334	HVAC and commercial refrigeration equipment	84.0	100.0	106.2	110.2	107.9	110.8	118.6	130.0	132.8	137.1	133.4	-
3335	Metalworking machinery	85.1	100.0	99.1	100.3	106.1	103.3	112.7	115.2	117.1	127.3	128.3	-
3336	Turbine and power transmission equipment	80.2	100.0	105.0	110.8	114.9	126.9	130.7	143.0	126.4	132.5	128.5	-
3339	Other general purpose machinery	83.5	100.0	103.7	106.0	113.7	110.5	117.9	128.1	127.1	138.4	143.8	-
334	Computer and electronic products	28.4	100.0	118.4	149.5	181.8	181.4	188.0	217.2	244.3	259.6	282.2	-
3341	Computer and peripheral equipment	11.0	100.0	140.4	195.9	235.0	252.2	297.4	373.4	415.1	543.3	715.7	-
3342	Communications equipment	39.8	100.0	107.1	135.4	164.1	152.9	128.2	143.1	148.4	143.7	178.2	-
3343	Audio and video equipment	61.7	100.0	105.4	119.6	126.3	128.4	150.1	171.0	239.3	230.2	240.7	-
3344	Semiconductors and electronic components	17.0	100.0	125.8	173.9	232.2	230.0	263.1	321.6	360.0	381.6	380.4	-
3345	Electronic instruments	70.2	100.0	102.3	106.7	116.7	119.3	118.1	125.3	145.4	146.6	150.6	-
3346	Magnetic media manufacturing and reproduction	85.7	100.0	106.4	108.9	105.8	99.8	110.4	126.1	142.6	142.1	137.7	-
335	Electrical equipment and appliances	75.5	100.0	103.9	106.6	111.5	111.4	113.4	117.2	123.3	130.0	129.4	-
3351	Electric lighting equipment	91.1	100.0	104.4	102.8	102.0	106.7	112.4	111.4	122.7	130.3	136.7	-
3352	Household appliances	73.3	100.0	105.2	104.0	117.2	124.6	132.3	146.7	159.6	164.5	173.2	-
3353	Electrical equipment	68.7	100.0	100.2	98.7	99.4	101.0	101.8	103.4	110.8	118.5	118.1	-
3359	Other electrical equipment and components	78.8	100.0	105.8	114.7	119.7	113.1	114.0	116.2	115.6	121.6	115.7	-
336	Transportation equipment	81.6	100.0	109.7	118.0	109.4	113.6	127.4	137.5	134.9	140.9	142.4	-
3361	Motor vehicles	75.4	100.0	113.4	122.6	109.7	110.0	126.0	140.7	142.1	148.4	163.8	-
3362	Motor vehicle bodies and trailers	85.0	100.0	102.9	103.1	98.8	88.7	105.4	109.8	110.7	114.2	110.9	-
3363	Motor vehicle parts	78.7	100.0	104.9	110.0	112.3	114.8	130.5	137.0	138.0	144.1	143.7	-
3364	Aerospace products and parts	87.2	100.0	119.1	120.8	103.4	115.7	118.6	119.0	113.2	125.0	117.9	-
3365	Railroad rolling stock	55.6	100.0	103.3	116.5	118.5	126.1	146.1	139.8	131.5	137.3	148.0	-
3366	Ship and boat building	95.5	100.0	99.3	112.0	122.0	121.5	131.0	133.9	138.7	131.7	127.3	-
3369	Other transportation equipment	73.8	100.0	111.5	113.8	132.4	140.2	150.9	163.0	168.3	184.1	197.8	-
337	Furniture and related products	84.8	100.0	102.0	101.6	101.4	103.4	112.6	117.0	118.4	125.0	127.8	-
3371	Household and institutional furniture	85.2	100.0	102.2	103.1	101.9	105.5	111.8	114.7	113.6	120.8	124.0	-
3372	Office furniture and fixtures	85.8	100.0	100.0	98.2	100.2	98.0	115.9	125.2	130.7	134.9	134.4	-
3379	Other furniture related products	86.3	100.0	106.9	102.0	99.5	105.0	110.2	110.0	121.3	128.3	130.8	-
339	Miscellaneous manufacturing	81.1	100.0	105.2	107.8	114.7	116.6	124.2	132.7	134.9	144.6	149.8	-
3391	Medical equipment and supplies	76.3	100.0	109.0	111.1	115.5	120.7	129.1	138.9	139.5	148.5	152.8	-
3399	Other miscellaneous manufacturing	85.4	100.0	102.1	105.0	113.6	111.8	118.0	124.7	128.6	137.8	143.2	-
	Wholesale trade												
42	Wholesale trade	73.2	100.0	103.4	111.2	116.5	117.7	123.3	127.5	134.8	135.8	138.6	141.5
423	Durable goods	62.3	100.0	107.1	119.2	125.0	128.9	140.2	146.6	161.5	167.4	174.5	178.4
4231	Motor vehicles and parts	74.5	100.0	106.4	120.4	116.7	120.0	133.4	137.6	143.5	146.5	162.7	161.8
4232	Furniture and furnishings	80.5	100.0	99.9	102.3	112.5	110.7	116.0	123.9	130.0	127.1	130.6	131.1
4233	Lumber and construction supplies	109.1	100.0	105.4	109.3	107.7	116.6	123.9	133.0	139.4	140.2	135.4	124.5
4234	Commercial equipment	28.0	100.0	125.5	162.0	181.9	217.9	264.9	299.1	352.8	402.0	447.3	508.5
4235	Metals and minerals	101.7	100.0	100.9	94.0	93.9	94.4	96.3	97.5	106.3	104.2	99.9	94.4
4236	Electric goods	42.8	100.0	105.9	127.5	152.8	147.6	159.5	165.7	194.1	204.6	222.1	235.1
4237	Hardware and plumbing	82.2	100.0	101.8	104.4	103.7	100.5	102.6	103.9	107.3	104.5	105.6	105.8
4238	Machinery and supplies	74.1	100.0	104.3	102.9	105.5	102.9	100.3	103.4	112.4	117.6	121.2	121.5

50. Continued - Annual indexes of output per hour for selected NAICS industries

[1997=100]

NAICS	Industry	1987	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
4239	Miscellaneous durable goods	89.8	100.0	100.8	113.7	114.7	116.8	124.6	119.6	135.0	135.5	122.3	118.4
424	Nondurable goods	91.0	100.0	99.1	100.8	105.1	105.1	105.8	110.5	113.6	114.3	113.1	115.0
4241	Paper and paper products	85.6	100.0	98.4	100.1	100.9	104.6	116.6	119.7	130.9	141.7	136.9	146.5
4242	Druggists' goods	70.7	100.0	94.2	93.1	85.9	84.9	89.8	100.2	105.8	112.1	109.7	104.3
4243	Apparel and piece goods	86.3	100.0	103.6	105.1	108.8	115.2	122.8	125.9	131.0	140.8	146.6	148.3
4244	Grocery and related products	87.9	100.0	101.1	101.0	102.4	101.9	98.6	104.9	104.1	103.4	103.8	109.7
4245	Farm product raw materials	81.6	100.0	94.3	101.6	105.1	102.1	98.1	98.2	109.3	111.0	117.9	125.1
4246	Chemicals	90.4	100.0	97.1	93.3	87.9	85.3	89.1	92.2	91.2	87.4	85.1	86.4
4247	Petroleum	84.4	100.0	88.5	102.9	138.1	140.6	153.6	151.1	163.2	153.3	149.4	149.1
4248	Alcoholic beverages	99.3	100.0	106.5	105.6	108.4	106.4	106.8	107.9	103.1	104.0	107.4	108.5
4249	Miscellaneous nondurable goods	111.2	100.0	105.4	106.8	115.0	111.9	106.1	109.8	120.7	124.1	121.9	117.1
425	Electronic markets and agents and brokers	64.3	100.0	102.4	112.3	120.1	110.7	109.8	104.5	101.6	91.5	95.0	98.3
4251	Electronic markets and agents and brokers	64.3	100.0	102.4	112.3	120.1	110.7	109.8	104.5	101.6	91.5	95.0	98.3
	Retail trade												
44-45	Retail trade	79.2	100.0	105.7	112.7	116.1	120.1	125.6	131.6	137.9	141.3	147.3	152.7
441	Motor vehicle and parts dealers	78.4	100.0	106.4	115.1	114.3	116.0	119.9	124.3	127.3	126.7	129.3	132.2
4411	Automobile dealers	79.2	100.0	106.5	116.3	113.7	115.5	117.2	119.5	124.7	123.5	125.8	129.8
4412	Other motor vehicle dealers	74.1	100.0	109.6	114.8	115.3	124.6	133.6	133.8	143.3	134.6	142.6	146.9
4413	Auto parts, accessories, and tire stores	71.8	100.0	105.1	107.6	108.4	101.3	107.7	115.1	110.1	115.5	115.9	112.0
442	Furniture and home furnishings stores	75.1	100.0	104.1	110.8	115.9	122.4	129.3	134.6	146.7	150.5	158.2	168.7
4421	Furniture stores	77.3	100.0	104.3	107.5	112.0	119.7	125.2	128.8	139.2	142.3	151.1	156.6
4422	Home furnishings stores	71.3	100.0	104.1	115.2	121.0	126.1	134.9	142.6	156.8	161.4	168.3	184.6
443	Electronics and appliance stores	38.0	100.0	122.6	150.6	173.7	196.7	233.5	292.7	334.1	367.5	412.0	471.1
4431	Electronics and appliance stores	38.0	100.0	122.6	150.6	173.7	196.7	233.5	292.7	334.1	367.5	412.0	471.1
444	Building material and garden supply stores	75.8	100.0	107.4	113.8	113.3	116.8	120.8	127.1	134.6	134.8	137.9	142.2
4441	Building material and supplies dealers	77.6	100.0	108.3	115.3	115.1	116.7	121.3	127.4	134.0	134.9	138.0	140.0
4442	Lawn and garden equipment and supplies stores	66.9	100.0	102.4	105.5	103.1	118.4	118.3	125.7	140.1	134.7	138.3	162.1
445	Food and beverage stores	110.8	100.0	99.9	101.9	101.0	103.8	104.7	107.2	112.9	117.9	120.6	123.8
4451	Grocery stores	111.1	100.0	99.6	102.5	101.1	103.3	104.8	106.7	112.2	116.8	118.2	120.6
4452	Specialty food stores	138.5	100.0	100.5	96.4	98.5	108.2	105.3	112.2	120.3	125.3	139.4	145.4
4453	Beer, wine, and liquor stores	93.6	100.0	104.6	99.1	105.7	107.1	110.1	117.0	127.8	139.8	146.1	156.8
446	Health and personal care stores	84.0	100.0	104.0	107.1	112.2	116.2	122.9	129.5	134.3	133.4	139.3	139.0
4461	Health and personal care stores	84.0	100.0	104.0	107.1	112.2	116.2	122.9	129.5	134.3	133.4	139.3	139.0
447	Gasoline stations	83.9	100.0	106.7	110.7	107.7	112.9	125.1	119.9	122.2	124.7	124.9	129.3
4471	Gasoline stations	83.9	100.0	106.7	110.7	107.7	112.9	125.1	119.9	122.2	124.7	124.9	129.3
448	Clothing and clothing accessories stores	66.3	100.0	106.3	114.0	123.5	126.4	131.3	138.9	139.1	147.6	162.4	176.6
4481	Clothing stores	67.1	100.0	108.7	114.2	125.0	130.3	136.0	141.8	140.9	153.0	169.4	186.9
4482	Shoe stores	65.3	100.0	94.2	104.9	110.0	111.5	125.2	132.5	124.8	132.0	145.1	141.6
4483	Jewelry, luggage, and leather goods stores	64.5	100.0	108.7	122.5	130.5	123.9	118.7	132.9	144.3	138.9	148.3	162.9
451	Sporting goods, hobby, book, and music stores	74.9	100.0	107.9	114.0	121.1	127.1	127.6	131.5	151.1	163.5	170.5	167.8
4511	Sporting goods and musical instrument stores	73.2	100.0	111.5	119.8	129.4	134.5	136.0	141.1	166.0	179.3	191.4	189.2
4512	Book, periodical, and music stores	78.9	100.0	101.0	103.2	105.8	113.0	111.6	113.7	123.6	134.3	132.4	128.3
452	General merchandise stores	73.5	100.0	105.3	113.4	120.2	124.8	129.1	136.9	140.7	145.0	149.8	152.5
4521	Department stores	87.2	100.0	100.4	104.5	106.2	103.8	102.0	106.8	109.0	110.0	112.7	107.0
4529	Other general merchandise stores	54.8	100.0	114.7	131.0	147.3	164.7	179.3	188.8	192.9	199.8	204.8	219.3
453	Miscellaneous store retailers	65.1	100.0	108.9	111.3	114.1	112.6	119.1	126.1	130.8	139.2	155.0	160.8
4531	Florists	77.6	100.0	102.3	116.2	115.2	102.7	113.8	108.9	103.4	123.7	145.1	132.9
4532	Office supplies, stationery and gift stores	61.4	100.0	111.5	119.2	127.3	132.3	141.5	153.9	172.8	182.4	204.8	224.5
4533	Used merchandise stores	64.5	100.0	119.1	113.4	116.5	121.9	142.0	149.7	152.6	156.6	167.6	182.0
4539	Other miscellaneous store retailers	68.3	100.0	105.3	103.0	104.4	96.9	94.4	99.9	96.9	101.6	114.0	115.4
454	Nonstore retailers	50.7	100.0	114.3	128.9	152.2	163.6	182.1	195.5	215.5	220.6	261.9	290.8
4541	Electronic shopping and mail-order houses	39.4	100.0	120.2	142.6	160.2	179.6	212.7	243.6	273.0	290.1	355.9	397.2
4542	Vending machine operators	95.5	100.0	106.3	105.4	111.1	95.7	91.3	102.3	110.5	114.4	125.7	132.4
4543	Direct selling establishments	70.8	100.0	101.9	104.3	122.5	127.9	135.1	127.0	130.3	119.6	127.5	138.4
	Transportation and warehousing												
481	Air transportation	78.0	100.0	96.4	95.9	97.7	92.5	101.7	112.1	126.3	135.9	142.9	145.4
482111	Line-haul railroads	58.9	100.0	102.1	105.5	114.3	121.9	131.9	138.5	141.4	136.3	144.2	137.7
48412	General freight trucking, long-distance	85.7	100.0	99.4	99.1	101.9	103.2	107.0	110.7	110.7	113.3	113.3	115.3
48421	Used household and office goods moving	106.7	100.0	91.0	96.1	94.8	84.0	81.6	86.2	88.6	88.5	88.9	93.2
491	U.S. Postal service	90.9	100.0	101.6	102.8	105.5	106.3	106.4	107.8	110.0	111.2	111.3	112.0
4911	U.S. Postal service	90.9	100.0	101.6	102.8	105.5	106.3	106.4	107.8	110.0	111.2	111.3	112.0
492	Couriers and messengers	148.3	100.0	114.8	122.2	128.8	132.6	143.2	146.4	138.5	136.5	140.3	132.5
493	Warehousing and storage	-	100.0	106.4	107.7	109.3	115.3	122.1	124.8	122.5	123.5	119.4	115.5
4931	Warehousing and storage	-	100.0	106.4	107.7	109.3	115.3	122.1	124.8	122.5	123.5	119.4	115.5
49311	General warehousing and storage	-	100.0	112.1	112.9	115.8	126.3	136.1	138.9	130.9	132.0	130.1	124.2
49312	Refrigerated warehousing and storage	-	100.0	97.9	103.4	95.4	85.4	87.2	92.2	99.3	88.8	80.4	85.1

50. Continued - Annual indexes of output per hour for selected NAICS industries

[1997=100]

NAICS	Industry	1987	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
	Information												
511	Publishing industries, except internet	64.1	100.0	116.1	116.3	117.1	116.6	117.2	126.4	130.7	136.7	144.3	150.1
5111	Newspaper, book, and directory publishers	105.0	100.0	103.9	104.1	107.7	105.8	104.7	109.6	106.7	107.9	112.2	114.1
5112	Software publishers	10.2	100.0	134.8	129.2	119.2	117.4	122.1	138.1	160.6	173.5	178.7	184.6
51213	Motion picture and video exhibition	90.7	100.0	99.8	101.8	106.5	101.6	99.8	100.4	103.6	102.4	107.3	110.6
515	Broadcasting, except internet	99.5	100.0	100.8	102.9	103.6	99.2	104.0	107.9	112.5	116.1	123.1	132.8
5151	Radio and television broadcasting	98.1	100.0	91.5	92.6	92.1	89.6	95.1	94.6	96.6	99.0	106.8	110.8
5152	Cable and other subscription programming	105.6	100.0	136.2	139.1	141.2	128.1	129.8	146.0	158.7	163.7	168.1	192.5
5171	Wired telecommunications carriers	56.9	100.0	107.7	116.7	122.7	116.7	124.1	130.5	131.9	138.3	142.4	142.2
5172	Wireless telecommunications carriers	75.6	100.0	110.5	145.2	152.8	191.9	217.9	242.6	292.4	381.9	431.6	456.5
5175	Cable and other program distribution	105.2	100.0	97.1	95.8	91.6	87.7	95.0	101.3	113.8	110.5	110.7	123.8
	Finance and insurance												
52211	Commercial banking	73.6	100.0	97.7	100.8	104.8	102.4	106.9	111.7	117.8	119.3	122.7	123.8
	Real estate and rental and leasing												
532111	Passenger car rental	92.7	100.0	100.1	112.2	112.3	111.1	114.6	121.1	118.2	109.8	111.4	130.1
53212	Truck, trailer, and RV rental and leasing	60.3	100.0	115.4	121.0	121.8	113.5	114.0	116.3	137.7	147.1	168.9	173.8
53223	Video tape and disc rental	77.0	100.0	113.2	129.4	134.9	133.3	130.3	148.5	154.5	144.2	176.2	223.0
	Professional and technical services												
541213	Tax preparation services	82.9	100.0	107.6	105.8	100.9	94.4	111.4	110.0	99.9	103.7	103.2	117.4
54131	Architectural services	90.0	100.0	111.4	106.8	107.6	111.0	107.6	112.6	118.3	119.8	118.9	124.5
54133	Engineering services	90.2	100.0	98.2	98.0	102.0	100.1	100.5	100.5	107.8	112.3	113.1	110.0
54181	Advertising agencies	95.9	100.0	89.2	97.9	107.5	106.9	113.1	121.1	133.5	132.9	134.1	139.1
541921	Photography studios, portrait	98.1	100.0	124.8	109.8	108.9	102.2	97.6	104.2	93.1	93.6	98.8	104.5
	Administrative and waste services												
56131	Employment placement agencies	-	100.0	86.8	93.2	89.8	99.6	116.8	115.4	119.8	116.0	123.8	132.8
56151	Travel agencies	89.3	100.0	111.4	115.5	119.4	115.2	127.6	147.2	167.2	179.2	183.4	190.6
56172	Janitorial services	75.1	100.0	95.3	98.6	101.0	102.1	105.6	118.8	116.6	120.7	116.1	122.3
	Health care and social assistance												
6215	Medical and diagnostic laboratories	-	100.0	118.8	124.7	131.9	135.3	137.6	140.8	140.8	137.8	139.7	136.0
621511	Medical laboratories	-	100.0	117.2	121.4	127.4	127.7	123.1	128.6	130.7	125.8	127.3	130.0
621512	Diagnostic imaging centers	-	100.0	121.4	129.7	139.9	148.3	163.3	160.0	153.5	154.1	156.8	138.9
	Arts, entertainment, and recreation												
71311	Amusement and theme parks	111.9	100.0	110.5	105.2	106.0	93.0	106.5	113.2	101.4	109.9	97.7	103.2
71395	Bowling centers	106.0	100.0	89.9	89.4	93.4	94.3	96.4	102.4	107.9	106.5	102.6	122.8
	Accommodation and food services												
72	Accommodation and food services	93.1	100.0	100.7	102.2	105.8	104.7	105.7	107.3	109.0	108.6	108.7	107.9
721	Accommodation	85.8	100.0	100.0	105.3	110.3	107.9	112.0	113.1	119.2	114.3	110.8	109.0
7211	Traveler accommodation	84.8	100.0	99.6	105.4	111.2	108.4	112.2	113.2	119.4	114.9	110.9	109.0
722	Food services and drinking places	96.0	100.0	101.0	100.9	103.5	103.8	104.4	106.3	107.0	107.9	109.1	108.7
7221	Full-service restaurants	92.1	100.0	100.9	100.8	103.0	103.6	104.4	104.2	104.8	105.2	105.5	104.0
7222	Limited-service eating places	96.5	100.0	101.2	100.4	102.0	102.5	102.7	105.4	106.8	107.4	109.1	109.1
7223	Special food services	89.9	100.0	100.6	105.2	115.0	115.3	114.9	117.6	118.0	119.2	117.9	120.4
7224	Drinking places, alcoholic beverages	136.7	100.0	99.7	98.8	100.6	97.6	102.9	118.6	112.2	120.6	134.2	137.6
	Other services												
8111	Automotive repair and maintenance	85.9	100.0	103.6	106.1	109.4	108.9	103.7	104.1	112.0	112.1	111.4	110.4
81142	Reupholstery and furniture repair	105.3	100.0	95.8	105.0	105.5	105.0	102.0	97.2	99.8	101.4	100.0	105.8
81211	Hair, nail, and skin care services	83.5	100.0	108.6	108.6	108.2	114.6	110.4	119.7	125.0	130.0	129.8	134.5
81221	Funeral homes and funeral services	103.7	100.0	106.8	103.3	94.8	91.8	94.6	95.7	92.9	93.1	99.5	97.0
8123	Drycleaning and laundry services	97.1	100.0	100.1	105.0	107.6	110.9	112.5	103.8	110.6	121.1	119.7	114.6
81292	Photofinishing	95.8	100.0	69.3	76.3	73.8	81.2	100.5	100.5	102.0	112.4	111.3	110.2

NOTE: Dash indicates data are not available.

51. Unemployment rates, approximating U.S. concepts, 10 countries, seasonally adjusted

[Percent]

Country	2006	2007	2006				2007				2008		
			I	II	III	IV	I	II	III	IV	I	II	III
United States	4.6	4.6	4.7	4.7	4.7	4.4	4.5	4.5	4.7	4.8	4.9	5.3	6.0
Canada	5.5	5.3	5.7	5.4	5.6	5.4	5.4	5.3	5.2	5.2	5.2	5.3	5.3
Australia	4.8	4.4	5.0	4.9	4.7	4.5	4.5	4.3	4.3	4.3	4.1	4.3	4.2
Japan	4.2	3.9	4.2	4.2	4.2	4.1	4.0	3.8	3.8	3.9	3.9	4.0	4.1
France	9.5	8.6	9.9	9.5	9.5	9.2	9.1	8.7	8.5	8.2	8.0	8.0	8.3
Germany	10.4	8.7	11.1	10.6	10.1	9.6	9.3	8.9	8.5	8.1	7.8	7.6	7.5
Italy	6.9	6.2	7.3	6.9	6.7	6.5	6.2	6.1	6.2	6.4	6.7	6.8	-
Netherlands	3.9	3.2	4.3	3.9	3.8	3.8	3.6	3.2	3.0	3.0	2.9	2.8	2.5
Sweden	7.0	6.1	7.3	7.3	6.7	6.5	6.4	6.1	5.8	5.9	5.8	5.8	5.9
United Kingdom	5.5	5.4	5.3	5.5	5.5	5.5	5.5	5.4	5.3	5.2	5.3	5.4	-

NOTE: Dash indicates data not available.

Quarterly figures for France, Germany, Italy, and the Netherlands are calculated by applying annual adjustment factors to current published data and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. Quarterly figures for Sweden are BLS seasonally adjusted estimates derived from Swedish not seasonally adjusted data. For further qualifications and historical annual data, see the BLS report *International comparisons of annual labor force statistics, 10 countries* (on the internet at **http://www.bls.gov/fls/flscomparelf.htm**). For monthly unemployment rates, as well as the quarterly and annual rates published in this table, see the BLS report *Unemployment rates in 10 countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted* (on the Internet at **http://www.bls.gov/fls/flsjec.pdf**). Unemployment rates may differ between the two reports mentioned, because the former is updated annually, whereas the latter is updated monthly and reflects the most recent revisions in source data.

52. Annual data: employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

Employment status and country	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Civilian labor force											
United States	136,297	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320	151,428	153,124
Canada	14,884	15,135	15,403	15,637	15,891	16,366	16,733	16,955	17,108	17,351	17,696
Australia	9,204	9,339	9,414	9,590	9,744	9,893	10,079	10,221	10,506	10,699	10,949
Japan	67,200	67,240	67,090	66,990	66,860	66,240	66,010	65,770	65,850	65,960	66,080
France	25,116	25,434	25,791	26,099	26,393	26,646	26,851	26,937	27,092	27,322	27,535
Germany	39,415	39,752	39,375	39,302	39,459	39,413	39,276	39,711	40,760	41,250	41,416
Italy	22,753	23,004	23,176	23,361	23,524	23,728	24,020	24,084	24,179	24,395	24,459
Netherlands	7,612	7,744	7,881	8,052	8,199	8,345	8,379	8,439	8,459	8,541	8,686
Sweden	4,414	4,401	4,423	4,482	4,522	4,537	4,557	4,571	4,694	4,748	4,823
United Kingdom	28,403	28,474	28,786	28,962	29,092	29,343	29,564	29,802	30,138	30,600	30,790
Participation rate[1]											
United States	67.1	67.1	67.1	67.1	66.8	66.6	66.2	66.0	66.0	66.2	66.0
Canada	65.1	65.4	65.9	66.0	66.1	67.1	67.7	67.7	67.4	67.4	67.7
Australia	64.3	64.3	64.0	64.4	64.4	64.3	64.6	64.6	65.3	65.6	66.0
Japan	63.2	62.8	62.4	62.0	61.6	60.8	60.3	60.0	60.0	60.0	60.0
France	55.6	56.0	56.3	56.6	56.7	56.8	56.8	56.6	56.5	56.6	56.7
Germany	57.3	57.7	56.9	56.7	56.7	56.4	56.0	56.4	57.6	58.2	58.4
Italy	47.3	47.7	47.9	48.1	48.3	48.5	49.1	49.1	48.7	48.9	48.6
Netherlands	61.1	61.8	62.5	63.4	64.0	64.7	64.6	64.8	64.7	65.1	65.9
Sweden	63.2	62.8	62.7	63.7	63.6	63.9	63.8	63.6	64.8	64.9	65.3
United Kingdom	62.5	62.4	62.8	62.8	62.7	62.9	62.9	63.0	63.1	63.5	63.4
Employed											
United States	129,558	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730	144,427	146,047
Canada	13,637	13,973	14,331	14,681	14,866	15,223	15,586	15,861	16,080	16,393	16,767
Australia	8,444	8,618	8,762	8,989	9,086	9,264	9,480	9,668	9,975	10,186	10,470
Japan	64,900	64,450	63,920	63,790	63,460	62,650	62,510	62,640	62,910	63,210	63,510
France	22,176	22,597	23,080	23,714	24,167	24,312	24,373	24,354	24,493	24,717	25,162
Germany	35,508	36,059	36,042	36,236	36,350	36,018	35,615	35,604	36,185	36,978	37,815
Italy	20,169	20,370	20,617	20,973	21,359	21,666	21,972	22,124	22,290	22,721	22,953
Netherlands	7,189	7,408	7,605	7,813	8,014	8,114	8,069	8,052	8,056	8,205	8,408
Sweden	3,969	4,033	4,110	4,222	4,295	4,303	4,293	4,271	4,334	4,416	4,530
United Kingdom	26,413	26,684	27,058	27,375	27,603	27,815	28,077	28,379	28,674	28,930	29,138
Employment-population ratio[2]											
United States	63.8	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7	63.1	63.0
Canada	59.6	60.4	61.3	62.0	61.9	62.4	63.1	63.3	63.4	63.6	64.2
Australia	59.0	59.3	59.6	60.3	60.0	60.2	60.7	61.1	62.0	62.5	63.1
Japan	61.0	60.2	59.4	59.0	58.4	57.5	57.1	57.1	57.3	57.5	57.6
France	49.1	49.7	50.4	51.4	51.9	51.8	51.5	51.1	51.1	51.2	51.8
Germany	51.6	52.3	52.1	52.2	52.2	51.5	50.8	50.6	51.2	52.2	53.3
Italy	41.9	42.2	42.6	43.2	43.8	44.3	44.9	45.1	44.9	45.5	45.6
Netherlands	57.7	59.1	60.3	61.5	62.6	62.9	62.2	61.8	61.6	62.5	63.8
Sweden	56.8	57.6	58.3	60.0	60.4	60.6	60.1	59.4	59.9	60.4	61.3
United Kingdom	58.1	58.5	59.0	59.4	59.5	59.6	59.8	60.0	60.0	60.1	60.0
Unemployed											
United States	6,739	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591	7,001	7,078
Canada	1,248	1,162	1,072	956	1,026	1,143	1,147	1,093	1,028	958	929
Australia	759	721	652	602	658	629	599	553	531	512	478
Japan	2,300	2,790	3,170	3,200	3,400	3,590	3,500	3,130	2,940	2,750	2,570
France	2,940	2,837	2,711	2,385	2,226	2,334	2,478	2,583	2,599	2,605	2,374
Germany	3,907	3,693	3,333	3,065	3,110	3,396	3,661	4,107	4,575	4,272	3,601
Italy	2,584	2,634	2,559	2,388	2,164	2,062	2,048	1,960	1,889	1,673	1,506
Netherlands	423	337	277	239	186	231	310	387	402	336	278
Sweden	445	368	313	260	227	234	264	300	361	332	293
United Kingdom	1,991	1,790	1,728	1,587	1,488	1,528	1,488	1,422	1,463	1,670	1,652
Unemployment rate											
United States	4.9	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.6	4.6
Canada	8.4	7.7	7.0	6.1	6.5	7.0	6.9	6.4	6.0	5.5	5.3
Australia	8.3	7.7	6.9	6.3	6.8	6.4	5.9	5.4	5.1	4.8	4.4
Japan	3.4	4.1	4.7	4.8	5.1	5.4	5.3	4.8	4.5	4.2	3.9
France	11.7	11.2	10.5	9.1	8.4	8.8	9.2	9.6	9.6	9.5	8.6
Germany	9.9	9.3	8.5	7.8	7.9	8.6	9.3	10.3	11.2	10.4	8.7
Italy	11.4	11.5	11.0	10.2	9.2	8.7	8.5	8.1	7.8	6.9	6.2
Netherlands	5.6	4.4	3.5	3.0	2.3	2.8	3.7	4.6	4.8	3.9	3.2
Sweden	10.1	8.4	7.1	5.8	5.0	5.2	5.8	6.6	7.7	7.0	6.1
United Kingdom	7.0	6.3	6.0	5.5	5.1	5.2	5.0	4.8	4.9	5.5	5.4

[1] Labor force as a percent of the working-age population.

[2] Employment as a percent of the working-age population.

NOTE: There are breaks in series for the United States (1997, 1998, 1999, 2000, 2003, 2004), Australia (2001), Germany (1999, 2005), the Netherlands (2000, 2003), and Sweden (2005). For further qualifications and historical annual data, see the BLS report *International comparisons of annual labor force statistics, 10 countries* (on the Internet at **http://www.bls.gov/fls/flscomparelf.htm**). Unemployment rates may differ from those in the BLS report *Unemployment rates in 10 countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted* (on the Internet at **http://www.bls.gov/fls/flsjec.pdf**), because the former is updated annually, whereas the latter is updated monthly and reflects the most recent revisions in source data.

53. Annual indexes of manufacturing productivity and related measures, 17 economies

[1996 = 100]

Measure and economy	1980	1990	1993	1994	1995	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Output per hour																
United States	58.6	80.1	88.1	92.7	96.2	104.2	111.5	117.1	126.1	127.4	140.9	149.8	159.0	162.2	169.9	177.8
Canada	66.5	85.2	94.0	99.3	100.5	104.5	109.6	114.2	121.1	118.5	120.5	121.1	122.4	126.6	129.3	132.8
Australia	72.5	91.1	95.8	98.4	97.1	102.0	106.9	108.5	115.1	117.9	122.9	125.2	126.8	127.6	128.8	131.3
Japan	54.8	81.3	87.6	89.0	95.6	103.5	104.5	107.3	113.0	110.6	114.7	122.5	131.0	139.6	141.0	145.8
Korea, Rep. of	–	58.0	75.9	82.8	90.9	112.8	125.7	139.8	151.7	150.6	165.3	176.8	197.2	212.1	233.5	253.9
Singapore	–	68.2	82.3	89.5	95.5	103.2	111.2	122.5	130.8	122.9	133.8	138.7	147.3	149.9	153.5	147.5
Taiwan	40.4	73.9	83.4	86.6	93.0	104.1	109.2	116.0	122.2	127.7	139.2	143.6	150.9	162.3	173.4	188.5
Belgium	57.2	84.7	89.6	94.4	98.6	106.3	107.6	106.8	110.9	111.0	114.6	117.8	123.7	127.0	131.8	137.6
Denmark	75.3	90.3	92.0	103.4	103.4	108.0	107.4	109.1	113.0	113.2	113.9	118.7	125.5	129.6	135.5	136.0
France	56.9	84.2	90.0	95.9	99.7	105.9	111.4	116.2	124.5	127.0	132.4	138.4	142.2	148.7	154.6	158.5
Germany	67.1	86.1	89.1	95.8	97.3	105.9	106.3	108.9	116.5	119.5	120.7	125.0	129.7	137.1	148.6	155.9
Italy	60.1	82.5	87.2	94.9	99.5	102.0	100.6	101.4	106.7	107.0	105.7	103.5	105.0	106.4	105.9	105.4
Netherlands	57.2	81.4	86.2	94.1	97.9	100.3	103.2	107.4	115.2	115.7	119.2	121.7	129.9	135.8	140.2	144.0
Norway	77.3	96.8	98.3	98.3	97.1	100.2	97.7	101.1	104.2	107.1	110.2	119.7	126.8	131.2	128.5	128.2
Spain	62.8	86.8	94.9	97.8	101.2	101.0	102.7	104.5	105.6	108.0	108.4	111.1	113.2	115.4	117.7	122.2
Sweden	60.0	73.9	82.6	91.1	96.8	109.1	115.6	126.2	134.8	131.0	145.3	157.1	173.9	184.7	202.0	203.0
United Kingdom	55.9	87.8	100.1	102.7	101.0	102.0	102.9	108.0	115.4	119.4	123.0	128.2	136.2	141.9	149.1	153.0
Output																
United States	60.5	80.7	85.7	92.2	96.4	106.1	113.2	118.1	125.5	118.5	121.8	123.2	130.1	131.2	138.4	142.4
Canada	71.2	88.7	87.7	94.4	98.7	106.3	111.7	121.0	133.1	128.0	129.0	128.3	130.9	132.9	132.3	131.1
Australia	80.2	93.1	92.7	97.5	96.9	102.3	105.2	105.0	110.0	108.9	114.2	116.2	116.3	115.8	114.7	118.4
Japan	59.0	94.3	93.5	92.1	95.9	102.5	97.1	96.7	101.8	96.2	94.7	99.8	105.6	111.1	114.9	119.1
Korea, Rep. of	20.5	63.2	75.5	84.1	94.0	104.9	96.6	117.6	137.6	140.6	151.2	159.6	177.3	189.8	205.9	219.3
Singapore	–	66.2	78.5	88.4	97.3	104.3	103.5	117.0	134.7	119.1	129.1	132.9	151.3	165.7	185.4	196.2
Taiwan	38.2	76.7	85.0	90.1	95.0	105.7	109.1	117.1	125.7	116.4	126.7	133.5	146.5	156.7	167.9	185.3
Belgium	74.8	96.6	92.8	97.0	99.6	104.8	106.5	106.9	111.6	111.8	110.9	109.3	113.2	113.1	116.3	119.3
Denmark	85.6	94.7	90.3	100.0	104.8	108.2	109.1	110.0	113.9	114.0	110.7	107.6	109.3	109.9	114.5	118.6
France	83.2	97.5	93.8	96.8	100.3	104.7	109.7	113.4	118.6	119.8	119.7	121.9	123.0	125.9	127.2	128.8
Germany	92.3	107.2	99.9	103.1	102.1	104.4	105.6	106.6	113.9	115.8	113.4	114.2	118.3	122.3	131.2	139.2
Italy	74.7	92.6	89.9	95.9	100.5	101.5	102.4	102.2	106.5	106.2	105.0	102.2	103.0	102.5	103.7	104.8
Netherlands	68.7	89.2	90.2	95.0	98.6	101.4	104.8	108.7	116.0	115.8	115.9	114.6	118.5	120.9	124.1	128.1
Norway	96.7	92.9	93.2	95.7	96.1	104.3	103.6	103.5	102.9	102.2	101.6	105.0	111.0	115.9	119.4	125.7
Spain	75.5	94.6	92.4	94.0	97.6	106.4	112.9	119.3	124.6	128.6	128.4	130.0	130.9	132.4	134.8	138.6
Sweden	67.1	80.4	74.1	85.5	96.8	107.8	116.7	127.6	138.1	134.9	143.4	150.4	164.2	171.8	185.3	189.6
United Kingdom	80.3	96.9	93.4	97.8	99.3	101.8	102.4	103.6	105.9	104.5	102.2	101.9	104.2	104.0	105.8	106.5
Total hours																
United States	103.3	100.7	97.3	99.5	100.2	101.8	101.5	100.9	99.6	93.0	86.5	82.2	81.8	80.9	81.5	80.1
Canada	107.0	104.1	93.3	95.1	98.3	101.6	101.9	105.9	109.9	107.9	107.1	105.9	106.9	105.0	102.3	98.7
Australia	110.6	102.2	96.9	99.1	99.8	100.3	98.4	96.7	95.6	92.4	92.9	92.8	91.7	90.7	89.1	90.2
Japan	107.6	115.9	106.7	103.5	100.4	99.1	92.9	90.2	90.1	87.0	82.6	81.4	80.6	79.6	81.5	81.6
Korea, Rep. of	–	109.0	99.5	101.6	103.3	93.0	76.8	84.1	90.7	93.3	91.5	90.2	89.9	89.5	88.2	86.4
Singapore	–	96.9	95.3	98.8	101.9	101.1	93.1	95.6	103.0	96.9	96.5	95.8	102.8	110.5	120.8	133.0
Taiwan	94.5	103.7	101.9	104.0	102.2	101.6	99.9	101.0	102.9	91.1	91.1	92.9	97.1	96.5	96.8	98.3
Belgium	130.9	114.1	103.5	102.8	101.0	98.6	98.9	100.0	100.7	100.7	96.8	92.8	91.5	89.0	88.2	86.7
Denmark	113.7	104.8	98.1	96.7	101.4	100.2	101.5	100.8	100.8	100.7	97.2	90.7	87.1	84.8	84.5	87.2
France	146.3	115.8	104.1	101.0	100.6	98.9	98.5	97.6	95.3	94.3	90.4	88.1	86.5	84.7	82.3	81.2
Germany	137.4	124.6	112.1	107.6	105.0	98.6	99.4	97.9	97.7	96.9	94.0	91.4	91.2	89.2	88.3	89.3
Italy	124.3	112.2	103.1	101.1	100.9	99.5	101.8	100.8	99.9	99.3	99.3	98.8	98.1	96.4	97.9	99.4
Netherlands	120.1	109.6	104.6	100.9	100.7	101.0	101.5	101.2	100.7	100.1	97.2	94.1	91.2	89.0	88.5	88.9
Norway	125.1	96.0	94.8	97.3	99.0	104.1	106.1	102.4	98.8	95.4	92.3	87.7	87.5	88.4	92.9	98.0
Spain	120.3	109.0	97.4	96.1	96.4	105.4	109.9	114.1	118.0	119.0	118.4	117.0	115.6	114.7	114.6	113.4
Sweden	111.8	108.8	89.7	93.9	100.0	98.8	100.9	101.1	102.4	103.0	98.7	95.7	94.4	93.0	91.7	93.4
United Kingdom	143.8	110.4	93.3	95.2	98.3	99.8	99.6	95.9	91.8	87.5	83.1	79.5	76.5	73.3	71.0	69.6
Hourly compensation (national currency basis)																
United States	51.2	82.7	93.3	96.3	98.1	102.6	108.6	112.9	123.2	126.1	135.2	144.7	147.7	150.5	156.7	162.2
Canada	43.8	82.4	93.5	96.2	98.5	102.4	107.7	110.0	113.6	116.7	120.6	125.5	129.9	135.5	139.7	144.6
Australia	–	79.5	88.9	90.0	95.6	102.7	106.9	111.2	116.1	123.5	129.0	134.1	141.1	150.1	160.2	168.6
Japan	53.7	83.0	94.1	96.0	99.2	103.3	105.9	105.7	105.1	106.5	107.2	104.9	105.9	106.8	105.6	105.4
Korea, Rep. of	–	36.1	61.6	70.8	85.9	108.7	118.4	119.0	127.1	131.1	144.4	151.5	173.0	186.8	202.9	218.6
Singapore	–	64.6	84.3	89.1	93.1	104.4	110.5	101.0	103.7	111.8	114.9	115.6	112.5	111.3	108.7	104.1
Taiwan	23.1	66.5	82.6	86.6	93.8	103.1	107.0	108.9	111.0	118.1	114.4	116.3	118.2	122.8	126.7	130.6
Belgium	47.5	81.4	94.8	95.5	98.2	103.8	105.3	106.7	108.5	113.1	118.0	122.0	125.2	129.0	133.7	140.7
Denmark	39.5	83.1	90.9	94.1	96.0	103.4	106.1	108.8	110.9	116.2	121.2	129.4	134.4	142.0	149.0	152.9
France	34.6	78.9	91.8	95.3	98.1	102.9	103.7	107.0	112.8	115.8	122.8	125.7	129.7	134.4	140.9	145.0
Germany	43.3	72.3	86.7	90.6	95.5	102.0	103.4	105.8	111.3	114.7	117.5	120.2	120.8	122.4	127.4	129.5
Italy	22.6	70.5	85.1	89.6	94.9	104.7	102.8	105.4	108.1	111.8	115.0	119.3	123.4	127.4	129.9	132.7
Netherlands	52.3	78.8	91.6	95.6	98.1	102.6	106.9	110.5	115.9	120.8	127.5	132.6	138.2	140.3	144.2	148.5
Norway	34.3	81.2	89.2	91.9	96.0	104.5	110.6	116.9	123.5	130.9	138.8	144.5	149.2	156.2	165.8	173.7
Spain	23.1	65.9	90.3	93.6	97.6	102.4	103.2	102.9	104.5	108.7	111.8	117.4	121.5	127.3	132.7	139.2
Sweden	32.9	77.4	85.8	88.0	92.8	105.4	109.4	112.8	117.2	122.8	129.4	135.2	138.9	143.6	147.8	154.8
United Kingdom	33.4	82.8	96.2	98.6	100.3	104.4	112.3	118.9	126.2	131.8	139.1	146.1	153.2	163.2	173.7	174.9

See notes at end of table.

53. Continued— Annual indexes of manufacturing productivity and related measures, 17 economies

[1996 = 100]

Measure and economy	1980	1990	1993	1994	1995	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Unit labor costs (national currency basis)																
United States	87.4	103.3	106.0	103.9	102.0	98.5	97.4	96.4	97.7	99.0	96.0	96.6	92.9	92.8	92.2	91.2
Canada	65.9	96.7	99.5	96.9	98.0	98.0	98.3	96.3	93.8	98.5	100.0	103.6	106.1	107.1	108.0	108.9
Australia	–	87.3	92.8	91.5	98.4	100.7	100.0	102.4	100.9	104.8	105.0	107.1	111.3	117.6	124.4	128.4
Japan	98.0	102.1	107.5	107.9	103.8	99.8	101.3	98.6	93.0	96.2	93.5	85.6	80.8	76.5	74.9	72.3
Korea, Rep. of	33.6	62.3	81.2	85.5	94.5	96.4	94.2	85.1	83.8	87.0	87.3	85.7	87.8	88.1	86.9	86.1
Singapore	–	94.7	102.5	99.5	97.5	101.2	99.3	82.5	79.3	91.0	85.9	83.3	76.4	74.2	70.8	70.6
Taiwan	57.1	89.9	99.1	100.0	100.9	99.0	97.9	93.9	90.9	92.5	82.2	81.0	78.4	75.7	73.1	69.2
Belgium	83.0	96.1	105.7	101.2	99.6	97.6	97.9	99.9	97.9	101.9	103.0	103.5	101.2	101.5	101.4	102.3
Denmark	52.5	91.9	98.9	91.0	92.9	95.7	98.8	99.7	98.1	102.7	106.4	109.0	107.0	109.6	109.9	112.4
France	60.9	93.7	102.0	99.4	98.5	97.2	93.1	92.1	90.6	91.2	92.8	90.8	91.2	90.4	91.2	91.5
Germany	64.5	84.0	97.3	94.6	98.2	96.3	97.3	97.1	95.5	96.0	97.4	96.1	93.2	89.3	85.8	83.1
Italy	37.6	85.4	97.5	94.4	95.3	102.7	102.2	104.0	101.4	104.5	108.7	115.3	117.6	119.8	122.6	125.8
Netherlands	91.5	96.8	106.3	101.6	100.3	102.3	103.6	102.9	100.6	104.4	106.9	108.9	106.3	103.3	102.9	103.1
Norway	44.4	83.9	90.7	93.4	98.9	104.2	113.2	115.7	118.5	122.2	126.0	120.7	117.6	119.1	129.0	135.5
Spain	36.8	76.0	95.1	95.7	96.5	101.4	100.4	98.5	99.0	100.6	103.1	105.6	107.3	110.3	112.7	113.9
Sweden	54.9	104.8	103.9	96.6	95.8	96.6	94.7	89.4	86.9	93.8	89.1	86.1	79.9	77.8	73.2	76.3
United Kingdom	59.8	94.3	96.1	96.0	99.4	102.4	109.2	110.1	109.4	110.4	113.1	113.9	112.4	115.1	116.6	114.3
Unit labor costs (U.S. dollar basis)																
United States	87.4	103.3	106.0	103.9	102.0	98.5	97.4	96.4	97.7	99.0	96.0	96.6	92.9	92.8	92.2	91.2
Canada	76.8	113.1	105.2	96.7	97.4	96.5	90.4	88.4	86.1	86.7	86.9	100.9	111.2	120.5	129.9	138.4
Australia	–	87.1	80.6	85.5	93.1	95.7	80.4	84.5	75.0	69.2	72.9	89.3	104.7	114.6	119.7	137.6
Japan	47.0	76.6	105.2	114.8	120.2	89.7	84.1	94.3	93.9	86.1	81.2	80.3	81.3	75.6	70.1	66.7
Korea, Rep. of	44.6	70.5	81.1	85.3	98.4	81.9	54.1	57.6	59.6	54.2	56.2	57.9	61.7	69.3	73.3	74.6
Singapore	–	73.7	89.4	91.9	97.0	96.0	83.7	68.6	64.8	71.6	67.6	67.4	63.7	62.9	62.8	66.1
Taiwan	43.6	91.8	103.0	103.8	104.6	94.5	80.2	79.8	79.9	75.1	65.4	64.6	64.5	64.7	61.7	57.9
Belgium	87.9	89.1	94.7	93.7	104.7	84.4	83.5	81.7	69.4	70.0	74.8	90.0	96.6	97.0	97.8	107.6
Denmark	54.1	86.2	88.4	83.1	96.2	84.0	85.5	82.7	70.3	71.5	78.2	96.1	103.7	106.0	107.3	119.8
France	73.7	88.0	92.1	91.7	101.0	85.2	80.7	76.5	65.2	63.7	68.4	80.2	88.5	87.8	89.3	97.8
Germany	53.4	78.2	88.5	87.8	103.2	83.5	83.2	79.6	67.8	66.1	70.8	83.7	89.2	85.5	82.9	87.6
Italy	67.7	110.0	95.6	90.4	90.2	93.0	90.8	88.2	74.6	74.5	81.9	104.0	116.5	118.8	122.7	137.5
Netherlands	77.7	89.6	96.4	94.1	105.4	88.4	88.0	83.9	71.1	71.5	77.4	94.3	101.2	98.4	98.9	108.1
Norway	58.1	86.6	82.6	85.5	100.8	95.0	96.8	95.7	86.9	87.8	101.9	110.1	112.7	119.4	130.0	149.4
Spain	65.0	94.4	94.5	90.5	98.0	87.6	85.1	79.9	69.6	68.6	74.2	91.1	101.6	104.5	107.8	118.9
Sweden	87.0	118.7	89.4	84.0	90.0	84.7	79.8	72.5	63.6	60.8	61.4	71.5	72.9	69.8	66.6	75.7
United Kingdom	89.1	107.8	92.5	94.3	100.5	107.4	116.0	114.1	106.3	101.9	108.9	119.3	132.0	134.2	137.7	146.7

NOTE: Data for Germany for years before 1993 are for the former West Germany. Data for 1993 onward are for unified Germany. Dash indicates data not available.

54. Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 full-time workers[3]												
	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]	2001[4]
PRIVATE SECTOR[5]													
Total cases	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3	6.1	5.7
Lost workday cases	4.0	4.1	3.9	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0	3.0	2.8
Lost workdays	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]													
Total cases	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3	7.1	7.3
Lost workday cases	5.7	5.9	5.4	5.4	5.0	4.7	4.3	3.9	4.1	3.9	3.4	3.6	3.6
Lost workdays	100.9	112.2	108.3	126.9	–	–	–	–	–	–	–	–	–
Mining													
Total cases	8.5	8.3	7.4	7.3	6.8	6.3	6.2	5.4	5.9	4.9	4.4	4.7	4.0
Lost workday cases	4.8	5.0	4.5	4.1	3.9	3.9	3.9	3.2	3.7	2.9	2.7	3.0	2.4
Lost workdays	137.2	119.5	129.6	204.7	–	–	–	–	–	–	–	–	–
Construction													
Total cases	14.3	14.2	13.0	13.1	12.2	11.8	10.6	9.9	9.5	8.8	8.6	8.3	7.9
Lost workday cases	6.8	6.7	6.1	5.8	5.5	5.5	4.9	4.5	4.4	4.0	4.2	4.1	4.0
Lost workdays	143.3	147.9	148.1	161.9	–	–	–	–	–	–	–	–	–
General building contractors:													
Total cases	13.9	13.4	12.0	12.2	11.5	10.9	9.8	9.0	8.5	8.4	8.0	7.8	6.9
Lost workday cases	6.5	6.4	5.5	5.4	5.1	5.1	4.4	4.0	3.7	3.9	3.7	3.9	3.5
Lost workdays	137.3	137.6	132.0	142.7	–	–	–	–	–	–	–	–	–
Heavy construction, except building:													
Total cases	13.8	13.8	12.8	12.1	11.1	10.2	9.9	9.0	8.7	8.2	7.8	7.6	7.8
Lost workday cases	6.5	6.3	6.0	5.4	5.1	5.0	4.8	4.3	4.3	4.1	3.8	3.7	4.0
Lost workdays	147.1	144.6	160.1	165.8	–	–	–	–	–	–	–	–	–
Special trades contractors:													
Total cases	14.6	14.7	13.5	13.8	12.8	12.5	11.1	10.4	10.0	9.1	8.9	8.6	8.2
Lost workday cases	6.9	6.9	6.3	6.1	5.8	5.8	5.0	4.8	4.7	4.1	4.4	4.3	4.1
Lost workdays	144.9	153.1	151.3	168.3	–	–	–	–	–	–	–	–	–
Manufacturing													
Total cases	13.1	13.2	12.7	12.5	12.1	12.2	11.6	10.6	10.3	9.7	9.2	9.0	8.1
Lost workday cases	5.8	5.8	5.6	5.4	5.3	5.5	5.3	4.9	4.8	4.7	4.6	4.5	4.1
Lost workdays	113.0	120.7	121.5	124.6	–	–	–	–	–	–	–	–	–
Durable goods:													
Total cases	14.1	14.2	13.6	13.4	13.1	13.5	12.8	11.6	11.3	10.7	10.1	–	8.8
Lost workday cases	6.0	6.0	5.7	5.5	5.4	5.7	5.6	5.1	5.1	5.0	4.8	–	4.3
Lost workdays	116.5	123.3	122.9	126.7	–	–	–	–	–	–	–	–	–
Lumber and wood products:													
Total cases	18.4	18.1	16.8	16.3	15.9	15.7	14.9	14.2	13.5	13.2	13.0	12.1	10.6
Lost workday cases	9.4	8.8	8.3	7.6	7.6	7.7	7.0	6.8	6.5	6.8	6.7	6.1	5.5
Lost workdays	177.5	172.5	172.0	165.8	–	–	–	–	–	–	–	–	–
Furniture and fixtures:													
Total cases	16.1	16.9	15.9	14.8	14.6	15.0	13.9	12.2	12.0	11.4	11.5	11.2	11.0
Lost workday cases	7.2	7.8	7.2	6.6	6.5	7.0	6.4	5.4	5.8	5.7	5.9	5.9	5.7
Lost workdays	–	–	–	128.4	–	–	–	–	–	–	–	–	–
Stone, clay, and glass products:													
Total cases	15.5	15.4	14.8	13.6	13.8	13.2	12.3	12.4	11.8	11.8	10.7	10.4	10.1
Lost workday cases	7.4	7.3	6.8	6.1	6.3	6.5	5.7	6.0	5.7	6.0	5.4	5.5	5.1
Lost workdays	149.8	160.5	156.0	152.2	–	–	–	–	–	–	–	–	–
Primary metal industries:													
Total cases	18.7	19.0	17.7	17.5	17.0	16.8	16.5	15.0	15.0	14.0	12.9	12.6	10.7
Lost workday cases	8.1	8.1	7.4	7.1	7.3	7.2	7.2	6.8	7.2	7.0	6.3	6.3	5.3
Lost workdays	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–	–	11.1
Fabricated metal products:													
Total cases	18.5	18.7	17.4	16.8	16.2	16.4	15.8	14.4	14.2	13.9	12.6	11.9	11.1
Lost workday cases	7.9	7.9	7.1	6.6	6.7	6.7	6.9	6.2	6.4	6.5	6.0	5.5	5.3
Lost workdays	147.6	155.7	146.6	144.0	–	–	–	–	–	–	–	–	–
Industrial machinery and equipment:													
Total cases	12.1	12.0	11.2	11.1	11.1	11.6	11.2	9.9	10.0	9.5	8.5	8.2	11.0
Lost workday cases	4.8	4.7	4.4	4.2	4.2	4.4	4.4	4.0	4.1	4.0	3.7	3.6	6.0
Lost workdays	86.8	88.9	86.6	87.7	–	–	–	–	–	–	–	–	–
Electronic and other electrical equipment:													
Total cases	9.1	9.1	8.6	8.4	8.3	8.3	7.6	6.8	6.6	5.9	5.7	5.7	5.0
Lost workday cases	3.9	3.8	3.7	3.6	3.5	3.6	3.3	3.1	3.1	2.8	2.8	2.9	2.5
Lost workdays	77.5	79.4	83.0	81.2	–	–	–	–	–	–	–	–	–
Transportation equipment:													
Total cases	17.7	17.8	18.3	18.7	18.5	19.6	18.6	16.3	15.4	14.6	13.7	13.7	12.6
Lost workday cases	6.8	6.9	7.0	7.1	7.1	7.8	7.9	7.0	6.6	6.6	6.4	6.3	6.0
Lost workdays	138.6	153.7	166.1	186.6	–	–	–	–	–	–	–	–	–
Instruments and related products:													
Total cases	5.6	5.9	6.0	5.9	5.6	5.9	5.3	5.1	4.8	4.0	4.0	4.5	4.0
Lost workday cases	2.5	2.7	2.7	2.7	2.5	2.7	2.4	2.3	2.3	1.9	1.8	2.2	2.0
Lost workdays	55.4	57.8	64.4	65.3	–	–	–	–	–	–	–	–	–
Miscellaneous manufacturing industries:													
Total cases	11.1	11.3	11.3	10.7	10.0	9.9	9.1	9.5	8.9	8.1	8.4	7.2	6.4
Lost workday cases	5.1	5.1	5.1	5.0	4.6	4.5	4.3	4.4	4.2	3.9	4.0	3.6	3.2
Lost workdays	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–	–	–

See footnotes at end of table.

54. Continued—Occupational injury and illness rates by industry,[1] United States

Industry and type of case[2]	Incidence rates per 100 workers [3]												
	1989 [1]	1990	1991	1992	1993 [4]	1994 [4]	1995 [4]	1996 [4]	1997 [4]	1998 [4]	1999 [4]	2000 [4]	2001 [4]
Nondurable goods:													
Total cases	11.6	11.7	11.5	11.3	10.7	10.5	9.9	9.2	8.8	8.2	7.8	7.8	6.8
Lost workday cases	5.5	5.6	5.5	5.3	5.0	5.1	4.9	4.6	4.4	4.3	4.2	4.2	3.8
Lost workdays	107.8	116.9	119.7	121.8	–	–	–	–	–	-	–	–	–
Food and kindred products:													
Total cases	18.5	20.0	19.5	18.8	17.6	17.1	16.3	15.0	14.5	13.6	12.7	12.4	10.9
Lost workday cases	9.3	9.9	9.9	9.5	8.9	9.2	8.7	8.0	8.0	7.5	7.3	7.3	6.3
Lost workdays	174.7	202.6	207.2	211.9	–	–	–	–	–	-	–	–	–
Tobacco products:													
Total cases	8.7	7.7	6.4	6.0	5.8	5.3	5.6	6.7	5.9	6.4	5.5	6.2	6.7
Lost workday cases	3.4	3.2	2.8	2.4	2.3	2.4	2.6	2.8	2.7	3.4	2.2	3.1	4.2
Lost workdays	64.2	62.3	52.0	42.9	–	–	–	–	–	-	–	–	–
Textile mill products:													
Total cases	10.3	9.6	10.1	9.9	9.7	8.7	8.2	7.8	6.7	7.4	6.4	6.0	5.2
Lost workday cases	4.2	4.0	4.4	4.2	4.1	4.0	4.1	3.6	3.1	3.4	3.2	3.2	2.7
Lost workdays	81.4	85.1	88.3	87.1	–	–	–	–	–	–	–	–	–
Apparel and other textile products:													
Total cases	8.6	8.8	9.2	9.5	9.0	8.9	8.2	7.4	7.0	6.2	5.8	6.1	5.0
Lost workday cases	3.8	3.9	4.2	4.0	3.8	3.9	3.6	3.3	3.1	2.6	2.8	3.0	2.4
Lost workdays	80.5	92.1	99.9	104.6	–	–	–	–	–	-	–	–	–
Paper and allied products:													
Total cases	12.7	12.1	11.2	11.0	9.9	9.6	8.5	7.9	7.3	7.1	7.0	6.5	6.0
Lost workday cases	5.8	5.5	5.0	5.0	4.6	4.5	4.2	3.8	3.7	3.7	3.7	3.4	3.2
Lost workdays	132.9	124.8	122.7	125.9	–	–	–	–	–	–	–	–	–
Printing and publishing:													
Total cases	6.9	6.9	6.7	7.3	6.9	6.7	6.4	6.0	5.7	5.4	5.0	5.1	4.6
Lost workday cases	3.3	3.3	3.2	3.2	3.1	3.0	3.0	2.8	2.7	2.8	2.6	2.6	2.4
Lost workdays	63.8	69.8	74.5	74.8	–	–	–	–	–	–	–	–	–
Chemicals and allied products:													
Total cases	7.0	6.5	6.4	6.0	5.9	5.7	5.5	4.8	4.8	4.2	4.4	4.2	4.0
Lost workday cases	3.2	3.1	3.1	2.8	2.7	2.8	2.7	2.4	2.3	2.1	2.3	2.2	2.1
Lost workdays	63.4	61.6	62.4	64.2	–	–	–	–	–	–	–	–	–
Petroleum and coal products:													
Total cases	6.6	6.6	6.2	5.9	5.2	4.7	4.8	4.6	4.3	3.9	4.1	3.7	2.9
Lost workday cases	3.3	3.1	2.9	2.8	2.5	2.3	2.4	2.5	2.2	1.8	1.8	1.9	1.4
Lost workdays	68.1	77.3	68.2	71.2	–	–	–	–	–	–	–	–	–
Rubber and miscellaneous plastics products:													
Total cases	16.2	16.2	15.1	14.5	13.9	14.0	12.9	12.3	11.9	11.2	10.1	10.7	8.7
Lost workday cases	8.0	7.8	7.2	6.8	6.5	6.7	6.5	6.3	5.8	5.8	5.5	5.8	4.8
Lost workdays	147.2	151.3	150.9	153.3	–	–	–	–	–	–	–	–	–
Leather and leather products:													
Total cases	13.6	12.1	12.5	12.1	12.1	12.0	11.4	10.7	10.6	9.8	10.3	9.0	8.7
Lost workday cases	6.5	5.9	5.9	5.4	5.5	5.3	4.8	4.5	4.3	4.5	5.0	4.3	4.4
Lost workdays	130.4	152.3	140.8	128.5	–	–	–	–	–	–	–	–	–
Transportation and public utilities													
Total cases	9.2	9.6	9.3	9.1	9.5	9.3	9.1	8.7	8.2	7.3	7.3	6.9	6.9
Lost workday cases	5.3	5.5	5.4	5.1	5.4	5.5	5.2	5.1	4.8	4.3	4.4	4.3	4.3
Lost workdays	121.5	134.1	140.0	144.0	–	–	–	–	–	–	–	–	–
Wholesale and retail trade													
Total cases	8.0	7.9	7.6	8.4	8.1	7.9	7.5	6.8	6.7	6.5	6.1	5.9	6.6
Lost workday cases	3.6	3.5	3.4	3.5	3.4	3.4	3.2	2.9	3.0	2.8	2.7	2.7	2.5
Lost workdays	63.5	65.6	72.0	80.1	–	–	–	–	–	–	–	–	–
Wholesale trade:													
Total cases	7.7	7.4	7.2	7.6	7.8	7.7	7.5	6.6	6.5	6.5	6.3	5.8	5.3
Lost workday cases	4.0	3.7	3.7	3.6	3.7	3.8	3.6	3.4	3.2	3.3	3.3	3.1	2.8
Lost workdays	71.9	71.5	79.2	82.4	–	–	–	–	–	–	–	–	–
Retail trade:													
Total cases	8.1	8.1	7.7	8.7	8.2	7.9	7.5	6.9	6.8	6.5	6.1	5.9	5.7
Lost workday cases	3.4	3.4	3.3	3.4	3.3	3.3	3.0	2.8	2.9	2.7	2.5	2.5	2.4
Lost workdays	60.0	63.2	69.1	79.2	–	–	–	–	–	–	–	–	–
Finance, insurance, and real estate													
Total cases	2.0	2.4	2.4	2.9	2.9	2.7	2.6	2.4	2.2	.7	1.8	1.9	1.8
Lost workday cases	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8	.8	.7
Lost workdays	17.6	27.3	24.1	32.9	–	–	–	–	–	–	–	–	–
Services													
Total cases	5.5	6.0	6.2	7.1	6.7	6.5	6.4	6.0	5.6	5.2	4.9	4.9	4.6
Lost workday cases	2.7	2.8	2.8	3.0	2.8	2.8	2.8	2.6	2.5	2.4	2.2	2.2	2.2
Lost workdays	51.2	56.4	60.0	68.6	–	–	–	–	–	–	–	–	–

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:
N = number of injuries and illnesses or lost workdays;
EH = total hours worked by all employees during the calendar year; and
200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

NOTE: Dash indicates data not available.

55. Fatal occupational injuries by event or exposure, 1996-2005

Event or exposure[1]	1996-2000 (average)	2001-2005 (average)[2]	2005[3]	
			Number	Percent
All events	6,094	5,704	5,734	100
Transportation incidents	2,608	2,451	2,493	43
Highway	1,408	1,394	1,437	25
Collision between vehicles, mobile equipment	685	686	718	13
Moving in same direction	117	151	175	3
Moving in opposite directions, oncoming	247	254	265	5
Moving in intersection	151	137	134	2
Vehicle struck stationary object or equipment on side of road	264	310	345	6
Noncollision	372	335	318	6
Jack-knifed or overturned--no collision	298	274	273	5
Nonhighway (farm, industrial premises)	378	335	340	6
Noncollision accident	321	277	281	5
Overturned	212	175	182	3
Worker struck by vehicle, mobile equipment	376	369	391	7
Worker struck by vehicle, mobile equipment in roadway	129	136	140	2
Worker struck by vehicle, mobile equipment in parking lot or non-road area	171	166	176	3
Water vehicle	105	82	88	2
Aircraft	263	206	149	3
Assaults and violent acts	1,015	850	792	14
Homicides	766	602	567	10
Shooting	617	465	441	8
Suicide, self-inflicted injury	216	207	180	3
Contact with objects and equipment	1,005	952	1,005	18
Struck by object	567	560	607	11
Struck by falling object	364	345	385	7
Struck by rolling, sliding objects on floor or ground level	77	89	94	2
Caught in or compressed by equipment or objects	293	256	278	5
Caught in running equipment or machinery	157	128	121	2
Caught in or crushed in collapsing materials	128	118	109	2
Falls	714	763	770	13
Fall to lower level	636	669	664	12
Fall from ladder	106	125	129	2
Fall from roof	153	154	160	3
Fall to lower level, n.e.c.	117	123	117	2
Exposure to harmful substances or environments	535	498	501	9
Contact with electric current	290	265	251	4
Contact with overhead power lines	132	118	112	2
Exposure to caustic, noxious, or allergenic substances	112	114	136	2
Oxygen deficiency	92	74	59	1
Fires and explosions	196	174	159	3
Fires--unintended or uncontrolled	103	95	93	2
Explosion	92	78	65	1

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Manual.
[2] Excludes fatalities from the Sept. 11, 2001, terrorist attacks.
[3] The BLS news release of August 10, 2006, reported a total of 5,702 fatal work injuries for calendar year 2005. Since then, an additional 32 job-related fatalities were identified, bringing the total job-related fatality count for 2005 to 5,734.

NOTE: Totals for all years are revised and final. Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. N.e.c. means "not elsewhere classified."

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State, New York City, District of Columbia, and Federal agencies, Census of Fatal Occupational Injuries.

Recent Modification of Imputation Methods for National Compensation Survey Benefits Data

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Originally Posted: August 28, 2009

The NCS modified its methodology for imputing benefits data for March 2009 because prior methods allowed for errors in imputed data to be carried forward from one quarter to the next.

Introduction

The Bureau of Labor Statistics (BLS) collects and publishes a variety of data on employee benefits as part of the National Compensation Survey (NCS) program. The NCS modified its methodology for imputing benefits data for March 2009 because prior methods allowed for errors in imputed data to be carried forward from one quarter to the next. This article describes the NCS imputation methodology for benefits data item nonresponse, notes the change to the imputation process that is applied to the data from the March 2009 quarter, and explains why the change is necessary.

Background

The NCS comprises a sample of private industry and State and local government establishments that are selected using a multistage sample design. All sampled establishments are asked to supply data on wages, and a subset also provides data on employer-provided benefits and associated costs. During the initial contact with a sampled establishment, the NCS selects occupations and collects data for these sampled occupations, along with establishment information. The establishment is periodically recontacted to determine if there are any changes in the data collected previously.[1] The NCS is a voluntary survey, so selected establishments can decline to participate or can participate partially by supplying responses to only certain survey items.

As in any sample survey, estimates generated as part of the NCS program are subject to both sampling error and nonsampling error. Sampling error occurs because a sample makes up only a part of the population being studied; different samples of the population can produce different estimates.[2] Standard errors are calculated for benefit estimates to serve as a measure of sampling error. Nonsampling error is error coming from sources other than the sampling process. The primary sources of nonsampling error are survey nonresponse, mistakes in data collection, and data processing errors. Nonsampling error is generally not measured, but the NCS employs procedures to mitigate nonsampling error, such as weight adjustments for nonresponse and quality assurance programs to reduce collection and processing errors.

The NCS has three kinds of nonresponse: establishment, occupational, and item nonresponse. Establishment nonresponse is addressed by adjusting the weights of responding establishments (respondents) that are similar to the nonresponding establishments. Occupational nonresponse is handled in a similar fashion; that is, weights of responding occupations, in the same establishment or another, are adjusted to represent similar occupations for which data were not provided.

Item nonresponse happens when a respondent supplies some, but not all, data for an occupation. For example, a respondent may know the provisions of the retirement plans offered, but be unable or unwilling to supply the percentage of workers who participate in each type of plan. Item nonresponse is addressed with item imputation. Imputation of data is a process by which a missing data element is assigned a value obtained from a responding unit with similar characteristics.

Imputation Methodology For NCS Benefits Data

There are several methods of imputation that can be used to address item nonresponse, including regression modeling, cell mean imputation, and nearest neighbor imputation. The NCS benefits program uses a nearest neighbor, within-cell approach to impute for missing participation, access, and provisions data.[3] In this method, imputation classes, or cells, are formed

based on auxiliary data. The auxiliary data used by the NCS are establishment and occupational characteristics known for all units and include the following:

1. Census region (Midwest, South, Northeast, or West)
2. Two-digit North American Industry Classification System (NAICS) code
3. Full-time/part-time status
4. Union/nonunion status
5. Occupational grouping (based on the Standard Occupational Classification System)
6. Industry grouping (based on the NAICS)
7. Establishment size (based on the establishments number of employees)
8. Selected benefit provisions[4]
9. Ownership (private industry or public sector)
10. Benefit type[5]

An “unusable” unit, or recipient, receives (is assigned) the value for the characteristic of interest from a “usable” unit, or donor, within the same cell that is “nearest” to the unusable unit; “nearness” is defined as the minimum absolute difference in reported employment between the recipient and donors within a cell. If a donor unit is not found when all variables are used to form the imputation cells, then the cells are redefined by disregarding one of the variables, thus expanding the pool of donors. For the NCS, the first variable dropped is census region.

At this point, if a donor unit is not found, then the imputation cells are redefined again by ignoring the two-digit NAICS code. The process of dropping variables to increase the donor pool continues using a predetermined hierarchy until a donor unit is identified. The list of auxiliary characteristics given above provides the order in which the variables are dropped.

It should be noted that benefit type and ownership are never dropped. In rare situations a recipient will not find a donor, even when the imputation cell is based only on benefit type and ownership. If this happens, the data item will remain missing.

Exhibit 1 shows the selection of a donor unit for a recipient in nearest neighbor, within-cell imputation. Suppose unit R1 is a recipient and units D1, D2, and D3 are donors in the imputation process used to impute missing participation for defined benefit retirement plans. The imputation cell is formed based on the following characteristics: benefit type, ownership, selected benefit provisions, establishment size, industry grouping, occupational grouping, union/nonunion status, full-time/part-time status, two-digit North American Industry Classification System (NAICS) code, and census region. The reported employment of each unit is also given.

Exhibit 1. Donor selection in nearest neighbor, within-cell imputation

Unit	Benefit Type	Owner-ship	Benefit Provision	Establish-ment Size	Industry Grouping	Occupa-tional Grouping	Union / Nonunion	Full-time / Part-time	Two-digit NAICS	Census Region	Reported Employ-ment
R1 (recipient)	Defined benefit	Private industry	No employee contribution required	Less than 100 employees	Wholesale & Retail Trade	Office & Adminis-trative Support Occupations	Nonunion	Full-time	Wholesale Trade	Midwest	50
D1 (donor)	Defined benefit	Private industry	No employee contribution required	Less than 100 employees	Wholesale & Retail Trade	Office & Adminis-trative Support Occupations	Nonunion	Full-time	Wholesale Trade	South	25

Unit	Benefit Type	Owner-ship	Benefit Provision	Establish-ment Size	Industry Grouping	Occupa-tional Grouping	Union / Nonunion	Full-time / Part-time	Two-digit NAICS	Census Region	Reported Employ-ment
D2 (donor)	Defined benefit	Private industry	No employee contribution required	Less than 100 employees	Wholesale & Retail Trade	Office & Adminis-trative Support Occupations	Nonunion	Full-time	Wholesale Trade	West	65
D3 (donor)	Defined benefit	Private industry	No employee contribution required	Less than 100 employees	Wholesale & Retail Trade	Office & Adminis-trative Support Occupations	Nonunion	Full-time	Retail Trade	West	55

There are no donor units that match the recipient unit based on all of the variables used to form the imputation cell. By ignoring census region and only considering the remaining cell variables, there are now two potential donors, specifically D1 and D2. Unit D3 is not a potential donor based on the cell formation including the two-digit NAICS because its value does not match that of R1. In order to determine which unit, D1 or D2, will serve as the donor for R1, the minimum absolute difference in reported employment between the donor and recipient is calculated. The absolute difference in employment between R1 and D1 is 25, while the absolute difference in employment between R1 and D2 is 15. Because 15 is the minimum, D2 is determined to be the donor for R1 because it is the donor "nearest" to the recipient within the cell.

Imputation At Initiation And Update Collection

At initiation--the first collection cycle for the establishment--the nearest neighbor, within-cell imputation methodology is used to fill in missing benefits access, participation, and provisions data, as needed. If there are missing benefits data in subsequent data collection, imputed data will generally be the value from the prior collection period, even if that value was imputed. NCS first introduced the "carrying forward" of prior collected or prior imputed data in the publication *National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2007*.[6] The benefit publications for March 2003 through March 2006 relied solely on nearest neighbor, within-cell imputation.

Consider the example shown in exhibit 2. Unit B is initiated in cycle 1 and is missing a provision related to its life insurance plan. The life insurance plan is known to use a "multiple of earnings" formula that has a maximum payout amount, but the maximum is not known. Nearest neighbor, within-cell imputation is used at initiation to fill in the missing maximum so that the unit can be used in estimation. Unit A, a donor unit, is matched to unit B because they have the same type of life insurance plan, as well as similar establishment and occupational characteristics. All provisions are known for unit A, so the maximum life insurance value coded for unit A is used to fill in the missing life insurance maximum for unit B.

Exhibit 2. Example of nearest neighbor, within-cell imputation at initiation (cycle 1)

Prior to imputation:					
Cycle	**Unit**	**Type of Life Insurance**	**Is there a maximum?**	**Maximum value?**	
1	A (donor)	Multiple of Earnings Formula	Yes	$70,000	
1	B (recipient)	Multiple of Earnings Formula	Yes	Unknown	
After imputation:					
Cycle	**Unit**	**Type of life insurance**	**Is there a maximum?**	**Maximum value**	**Source of maximum value**

Prior to imputation:					
1	A (donor)	Multiple of Earnings Formula	Yes	$70,000	Collected
1	B (recipient)	Multiple of Earnings Formula	Yes	$70,000	Imputed from Unit A

Exhibit 3 shows the imputation of unit B at update collection by carrying forward the prior imputed data. At the next collection period, cycle 2, the respondent is still unable or unwilling to supply the maximum value associated with the life insurance plan for unit B. Because the provision was previously imputed to be $70,000, unit B retains or carries forward the maximum of $70,000.

Exhibit 3. Example of imputation at update collection by carrying forward prior imputed data (cycle 2)

Prior to imputation:					
Cycle	**Unit**	**Type of Life Insurance**	**Is there a maximum?**	**Maximum value?**	
2	B (recipient)	Multiple of Earnings Formula	Yes	Unknown	
After imputation:					
Cycle	**Unit**	**Type of life insurance**	**Is there a maximum?**	**Maximum value**	**Source of maximum value**
2	B (recipient)	Multiple of Earnings Formula	Yes	$70,000	Imputed from Unit B, Cycle 1 (carried forward)

Effect Of Nonsampling Error On Imputation

In addition to nonresponse, collection and processing errors are sources of nonsampling error that impact all surveys. Errors can occur when an interviewer fails to ask for all data items or incorrectly records a data element. Also, a respondent may misunderstand the survey question and supply an incorrect answer. To limit the number of data errors, the NCS program has a number of quality assurance programs in place, including computer edits of data, systematic review of collection units, and data collection reinterviews. Also, data collectors are extensively trained so that high standards in data collection are maintained.

Data errors in collection impact survey estimates by increasing the amount of nonsampling error. These data errors affect the imputation process when the erroneous data are assigned to a recipient record. With the application of the “carry forward” methodology in the benefit portion of the NCS program, there is the potential for data errors to remain in the imputed data, cycle after cycle, even if the data on the collected unit are corrected. Without some kind of change to the imputation methods, data errors on imputed records could be repeated in the data for the rest of the time the establishment is in the survey.

Consider the example discussed previously in which unit A, the donor used at initiation, had a maximum life insurance amount of $70,000. At update collection in cycle 3, it is discovered that the life insurance maximum amount is really $700,000, not $70,000. The data coder corrects the collected data on unit A, but due to the imputed data, the maximum amount for unit B will continue to be $70,000 because the prior imputed value of $70,000 is carried forward. Exhibit 4 illustrates this scenario.

Exhibit 4. Example of imputation at update collection by carrying forward prior imputed data (cycle 3), original donor unit is corrected

Prior to imputation:					
Cycle	**Unit**	**Type of Life Insurance**	**Is there a maximum?**	**Maximum value**	
3	A (donor)	Multiple of Earnings Formula	Yes	$700,000	
3	B (recipient)	Multiple of Earnings Formula	Yes	Unknown	
After imputation:					
Cycle	**Unit**	**Type of life insurance**	**Is there a maximum?**	**Maximum value**	**Source of maximum value**
3	A (donor)	Multiple of Earnings Formula	Yes	$700,000	Collected
3	B (recipient)	Multiple of Earnings Formula	Yes	$70,000	Imputed from Unit B, Cycle 2 (carried forward)

Minimization Of Nonsampling Error In The March 2009 Quarter

To address the potential problem of carrying forward erroneous data, a change in the imputation methodology was needed, especially given that the NCS has greatly expanded the number of detailed estimates available. Percentile estimates (10th, 25th, 50th — median, 75th, 90th) of a given quantity, such as the maximum value of multiple of earnings formula life insurance plans, are of particular risk of nonsampling error because coding errors are often found among the extreme values or outliers, which could show up in the 10th or 90th percentiles.

To help minimize nonsampling error, the NCS has conducted additional reviews of the collected benefits data over the last several quarters. Also, the NCS modified its computer programs that assign missing participation, access, and benefit provisions data, starting with data collected and updated in the March 2009 quarter. These computer programs were changed so that all data items for a recipient unit were imputed using the nearest neighbor, within-cell methodology. That is, no prior imputed or collected data were carried forward for recipients of benefits participation, access, and provisions imputation.

Using the earlier example, exhibit 5 provides an example of imputation at update collection in which no prior data were carried forward. It shows that at update collection in Cycle 4, when all recipients are imputed using nearest neighbor, within-cell imputation, the maximum value assigned to unit B is no longer $70,000.

Exhibit 5. Example of imputation at update collection using nearest neighbor, within-cell imputation (cycle 4)

Prior to imputation:					
Cycle	**Unit**	**Type of Life Insurance**	**Is there a maximum?**	**Maximum value**	
4	A (donor)	Multiple of Earnings Formula	Yes	$700,000	
4	B (recipient)	Multiple of Earnings Formula	Yes	Unknown	
After imputation:					
Cycle	**Unit**	**Type of life insurance**	**Is there a maximum?**	**Maximum value**	**Source of maximum value**
4	A (donor)	Multiple of Earnings Formula	Yes	$700,000	Collected
4	B (recipient)	Multiple of Earnings Formula	Yes	$700,000	Imputed from Unit A

Conclusion

The NCS benefits imputation methodology for the imputation of missing access, participation, and provisions data included a process that carried forward collected or imputed data from previous collection cycles. This proved to be a potential source of additional nonsampling error. To address this problem, the NCS modified its imputation methodology for the March 2009 quarter so that prior imputed or prior collected data are not carried forward. The BLS is committed to publishing accurate, timely, and relevant data; as such, the NCS program not only strives for accuracy of its collected data through validation, but also through regular evaluation of its methods, including imputation techniques, to find ways to improve the quality of its published data. The first benefits estimates using the modified imputation methodology were published in July 2009.[7]

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Notes

1 Generally, sampled establishments remain in NCS sample for five years before being replaced by a new panel. For more information on the sample selection process, see Larry Ernst, Christopher Guciardo, Chester Ponikowski, and Jason Tehonica, "*Sample Allocation and Selection for the National Compensation Survey*," Proceedings of the Section on Survey Research Methods, 2002, American Statistical Association, available online at: http://www.bls.gov/osmr/pdf/st020150.pdf. Additional information can also be found in the *BLS Handbook of Methods*, Chapter 8, National Compensation Survey, Description of the Survey, available online at: http://www.bls.gov/opub/hom/homch8_b.htm.

2 *BLS Handbook of Methods*, Chapter 8, National Compensation Survey, Reliability of Estimates, available online at: http://www.bls.gov/opub/hom/homch8_d.htm.

3 Separate imputation processes are used to impute for missing access, missing participation, and missing benefit provisions, as needed. Access is a measure used to indicate whether employees have a benefit plan available for their use while participation is used to indicate the percentage of those employees who actually participate in the plan. Benefit provisions are characteristics or features of a benefit plan such as the type of life insurance or the employee contribution requirement of a defined benefit retirement plan.

4 Benefit provisions data are used to define the cells if they are known for recipients. For example, in participation imputation for life insurance, if the type of life insurance plan (for example, a multiple of earnings formula) is known for a recipient, then it will be used in forming the imputation cell. If the type of life insurance is not known for the recipient, then this variable is not used in the formation of the imputation cell.

5 For a more comprehensive description of the imputation of benefits data in the NCS, see James A. Buszuwski, Daniel J. Elmore, Lawrence R. Ernst, Michael K. Lettau, Lowell G. Mason, Steven P. Paben, and Chester H. Ponikowski, "*Imputation of Benefit Related Data for the National Compensation Survey*," Proceedings of the Section on Survey Research Methods, 2003, American Statistical Association, available on the internet at http://www.bls.gov/osmr/abstract/st/st030190.htm.

6 See National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2007, Summary 07-05.

7 See the BLS Economic News Release, *Employee Benefits in the United States, March 2009*, at http://www.bls.gov/news.release/ebs2.nr0.htm.