

May 2012

 BLS

M O N T H L Y L A B O R  
**REVIEW**

U.S. Department of Labor

U.S. Bureau of Labor Statistics



**Older men:  
pushed into  
retirement in  
the 1970s and  
1980s by the  
baby boomers?**

*also in this issue:*

**Older workers and short-term  
jobs: employment patterns  
and determinants**

**Measuring annual change in  
household wealth with the  
Consumer Expenditure Survey**



U.S. Department of Labor  
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U.S. Bureau of Labor Statistics  
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*Monthly Labor Review*  
U.S. Bureau of Labor Statistics  
Room 2850  
Washington, DC 20212  
Telephone: (202) 691-7911  
Fax: (202) 691-5908  
E-mail: [mlr@bls.gov](mailto:mlr@bls.gov)

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Friday, June 1, 2012	8:30 AM	Employment Situation for May 2012
Wednesday, June 6, 2012	8:30 AM	Productivity and Costs for First Quarter 2012
Thursday, June 7, 2012	10:00 AM	Employer Costs for Employee Compensation for March 2012
Friday, June 8, 2012	10:00 AM	Persons with a Disability: Labor Force Characteristics for 2011
Tuesday, June 12, 2012	8:30 AM	U.S. Import and Export Price Indexes for May 2012
Wednesday, June 13, 2012	8:30 AM	Producer Price Index for May 2012
Thursday, June 14, 2012	8:30 AM	Consumer Price Index for May 2012
Thursday, June 14, 2012	8:30 AM	Real Earnings for May 2012
Friday, June 15, 2012	10:00 AM	Regional and State Employment and Unemployment for May 2012
Tuesday, June 19, 2012	10:00 AM	Job Openings and Labor Turnover Survey for April 2012
Wednesday, June 20, 2012	10:00 AM	Mass Layoffs for May 2012
Friday, June 22, 2012	10:00 AM	American Time Use Survey for 2011
Wednesday, June 27, 2012	10:00 AM	Metropolitan Area Employment and Unemployment for May 2012
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# MONTHLY LABOR REVIEW

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Volume 135, Number 5  
May 2012

**Older men: pushed into retirement in the 1970s and 1980s by the baby boomers?** 3

The retirement age of older men dropped during the 1970–1990 period but has risen in recent decades

*Diane J. Macunovich*

**Older workers and short-term jobs: employment patterns and determinants** 19

The retirement patterns for older workers who have never held a full-time career job are just as diverse as those for individuals with career jobs

*Kevin E. Cahill, Michael D. Giandrea, and Joseph F. Quinn*

**Measuring annual change in household wealth with the Consumer Expenditure Survey** 33

Comparing data from the Bureau's CE Survey with the Federal Reserve Board's Flow of Funds Accounts indicates that the CE effectively measures changes in household wealth

*Jeffrey D. Lundy*

## Regional Report

**Multiple jobholding in states in 2011** 41

*Jim Campbell*

## Departments

Labor month in review	2
Précis	43
Book review	46
Current labor statistics	48

<b>Editor-in-Chief</b> Michael D. Levi	<b>Executive Editor</b> Emily Liddel	<b>Managing Editor</b> Terry L. Schau	<b>Editors</b> Brian I. Baker Charlotte M. Irby Carol Boyd Leon	<b>Book Review Editor</b> James Titkemeyer	<b>Design and Layout</b> Catherine D. Bowman Edith W. Peters	<b>Contributors</b> Charlotte M. Irby Lawrence H. Leith James Titkemeyer
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# Older men: pushed into retirement in the 1970s and 1980s by the baby boomers?

*During the 1970–1990 period, baby boomers competed with older workers for part-time and part-year jobs, and the retirement age dropped; in more recent decades, the availability of “bridge jobs” may help explain the increase in age at retirement*

Diane J. Macunovich

**T**he post-World War II baby boomers began entering the labor market in the late 1960s, and their numbers swelled through the 1970s and into the 1980s. Their large size, relative to the size of the cohort of workers ages 45–54, forced a whole host of dislocations for the boomers: high unemployment, low relative wages, and increasing proportions forced into part-time and part-year work.<sup>1</sup> As this article will show, these dislocations reverberated among older workers, too.

The peak of the baby boom had entered the labor force by 1985, but the dislocations did not end there, because the bottleneck created by those in the peak continued to block the later-born boomers who followed. As a result, members of the baby boom did not escape the effects of their cohort’s large size even in their thirties, and even members of the relatively smaller cohorts following the peak of the boom continued to find themselves pushed into part-time and part-year work. However, as relative cohort size eased in the 1990s, many of these effects began to ease as well. In particular, the proportion of men ages 25–34 working part year and/or part time fell from 27 percent in 1992 to 19 percent in 2007, a proportion similar to its level before the entry of the baby boom into the job market.

At the same time that this was happening, the retirement rate rose fairly dramatically

in the 1970s and 1980s among men ages 55 and older, and their labor force participation rates fell accordingly. As shown below, the retirement rates peaked in 1993 and have declined somewhat since then:

*Percentage reporting themselves as retired*

	1968	1993	2009
Ages 55–61.....	2	9	7
Ages 62–64.....	10	33	23
Ages 65–69.....	31	60	49

In terms of the labor force participation rate, the decline for older men (whom we’ll define for purposes of this article as ages 55–69) was steady from the 1970s into the early 1990s. But in the mid-1990s, this decline tapered off, and rates remained fairly constant for a few years, after which they began an increase that has continued largely unabated. The increase in the labor force participation rate among men ages 65–69 has been particularly marked.

Evidence suggests that the correspondence between these two phenomena—strong increases in the period before 1985 in both part-time/part-year work among men ages 25–54 and retirement rates among men ages 55 and older, and declines in both after 1995—is not coincidental. It has been demonstrated in a number of studies that, to a great extent, older men do not retire directly from their career jobs. Instead, they tend to move through part-time and/

Diane J. Macunovich is chair of the department of economics at the University of Redlands, Redlands, CA. Email: [diane\\_macunovich@redlands.edu](mailto:diane_macunovich@redlands.edu).

or part-year bridge jobs before retiring; this is especially true for men in lower-wage jobs. And very often these bridge jobs do not occur in the same industry or even the same occupation as the career job, suggesting a fairly low level of transference of skills and human capital. Thus to at least some extent, these older men may have been competing for the same part-time, part-year jobs that the baby boomers were crowded into.

Early documentation of the increase in the retirement rate among older men was provided by Joseph F. Quinn in the late 1990s.<sup>2</sup> There is a voluminous literature on the rising patterns of retirement in the 1970s and 1980s among men ages 55–64, but much less attention has been paid to explaining the tapering off and decline in the retirement rate in the past two decades and to trends among men ages 65–69. This article is an attempt to address the long-term trend of labor force participation and retirement among men ages 55–69 in the approximately four decades from 1968 through 2009.

### Causes of changes in retirement rates

The most intensively examined factors with regard to early retirement appear to be changes in Social Security and pensions, and the availability of health insurance. Gary Engelhart and Anil Kumar found a statistically significant positive effect on labor force participation of the Senior Citizens' Freedom to Work Act of 2000, which abolished the Social Security earnings test for workers ages 65–69.<sup>3</sup> In a cross-country comparative analysis, David Wise determined that public provision for financial support in retirement has substantially affected the trend toward earlier retirement.<sup>4</sup> No attempt was made in that study to address the decline in rates that has occurred since the mid-1990s. However, Alan Krueger and Jörn-Steffen Pischke previously had suggested that Social Security may not have played an important role in rising retirement rates in the 1970s and 1980s. Their analysis looked at the “notch babies” born 1917–1921; upon retirement, this cohort experienced a decline in Social Security benefits relative to expectations, and yet continued to retire at earlier ages.<sup>5</sup>

On the other hand, another study asserted that changes in pensions and Social Security accounted for about one-quarter of the decline in retirement age in the 1970s and 1980s among men in their early sixties, but that these changes could not explain patterns among those ages 65 and over.<sup>6</sup> Leora Friedberg and Anthony Webb reported in a 2005 article that the increasing prevalence of defined contribution plans since the 1980s has caused workers to retire 2 years later, on average, than when defined

benefit plans predominated.<sup>7</sup> On a related note, Courtney C. Coile and Phillip P. Levine found that stock market exposure during the stock market boom and bust cycle between 1995 and 2002 had no significant effect on patterns of retirement.<sup>8</sup>

With regard to access to health insurance, Lynn A. Karoly and Jeannette A. Rogowski, using data from the Survey of Income and Program Participation, found a significant positive effect of the provision of post-retirement health insurance on the likelihood of early retirement.<sup>9</sup> This finding was echoed by David M. Blau and Donna B. Gilleskie using Health and Retirement Study data.<sup>10</sup> Similarly, a later study of health insurance costs found that the cost of post-retirement health insurance premiums had a negative and significant effect on retirement rates.<sup>11</sup>

At least two other studies looked at the effect of local (state-level) economic conditions on the retirement behavior of older workers. Dan A. Black and Xiaoli Liang found a negative effect of industry-level shocks (steel, coal, and manufacturing generally) on employment,<sup>12</sup> while a 2008 working paper discussed a significant effect of state-level economic indicators on differences across states in the labor force participation of 55–64 year olds.<sup>13</sup> However, neither the health insurance studies nor the state-level studies specifically addressed the changing pattern of labor force participation over time, which is that retirement rates have begun to decline after a long period of increase.

Of course, there are still other factors affecting a man's decision on whether or not to retire, such as the tendency of incomes to barely keep up with increases in the cost of living,<sup>14</sup> the tendency of men to synchronize their retirement with that of their wives, and the effects of longer life expectancy on a man's ability to support himself in old age. In addition, men often go back to part-time work after retiring.<sup>15</sup> Most relevant to the purposes of this study, however, is a set of papers that point to the increasing prevalence of “bridge” employment among older men—that is, the tendency to exit full-time, career jobs not directly into retirement, but rather into various forms of part-time work. Christopher J. Ruhm was perhaps the first to identify (and name) this phenomenon. In 1990, he reported finding that fewer than 40 percent of household heads retire directly from career jobs, and more than half partially retire—meaning that they move into part-time or part-year employment—at some point in their lives. He also stressed that this post-career work is frequently in jobs outside the industry and occupation of the career position. This may have changed, to some extent, in more recent years, however: 2008 working papers by Michael

D. Giandrea, Kevin E. Cahill, and Quinn suggest that transition within occupations may be more frequent—in particular, in moving to part-time self-employment—and younger cohorts seem to be following the same patterns as older cohorts.<sup>16</sup> In a 1994 article, Franco Peracchi and Finis Welch emphasized the complexity of the patterns of transitions, with workers both entering and exiting retirement into these types of part-time work. In addition, they found that the prevalence of reduced labor force participation was greatest among low-wage workers, and that the patterns of decreased participation among older workers paralleled those among younger workers during the 1970s and 1980s. This suggests some common underlying factor or factors affecting both older and younger workers, at least among those in low-wage jobs.

In a 1995 study, Ruhm used data from the Retirement History Survey to study men in 1969 and used data from a Harris survey (commissioned by the Commonwealth Fund) to study men in 1989. In the earlier cohort, he found that 62 percent who had left career jobs at age 54 or 55 were employed again at the later survey date, but in the later cohort this figure dropped to 41 percent. He found that departures from career jobs at ages 58 to 63 correlate with high re-employment probabilities.<sup>17</sup> Three other studies referred to this phenomenon as a “do-it-yourself” form of retirement.<sup>18</sup> The latest of these studies used the Health and Retirement Study and found that two-thirds of younger retirees transition to part-time work from career jobs.

### Bridge-jobs approach

The approach in the current study builds on this concept of “bridge jobs,” especially the findings that

- the majority of these bridge jobs are not in the same industry or occupation as the career job,<sup>19</sup> leading one to surmise that there is little transfer of skill or human capital from the career job to bridge job;
- the characteristics most highly correlated with the transition to bridge jobs are those associated with low-wage workers,<sup>20</sup> which again suggests lower levels of skill or human capital;
- the proportion of workers transitioning to bridge jobs declined significantly during 1969–1989, a period when retirement rates were rising and labor force participation rates were falling, suggesting that access to bridge jobs may have declined during this period; and
- the patterns of transitions among older workers par-

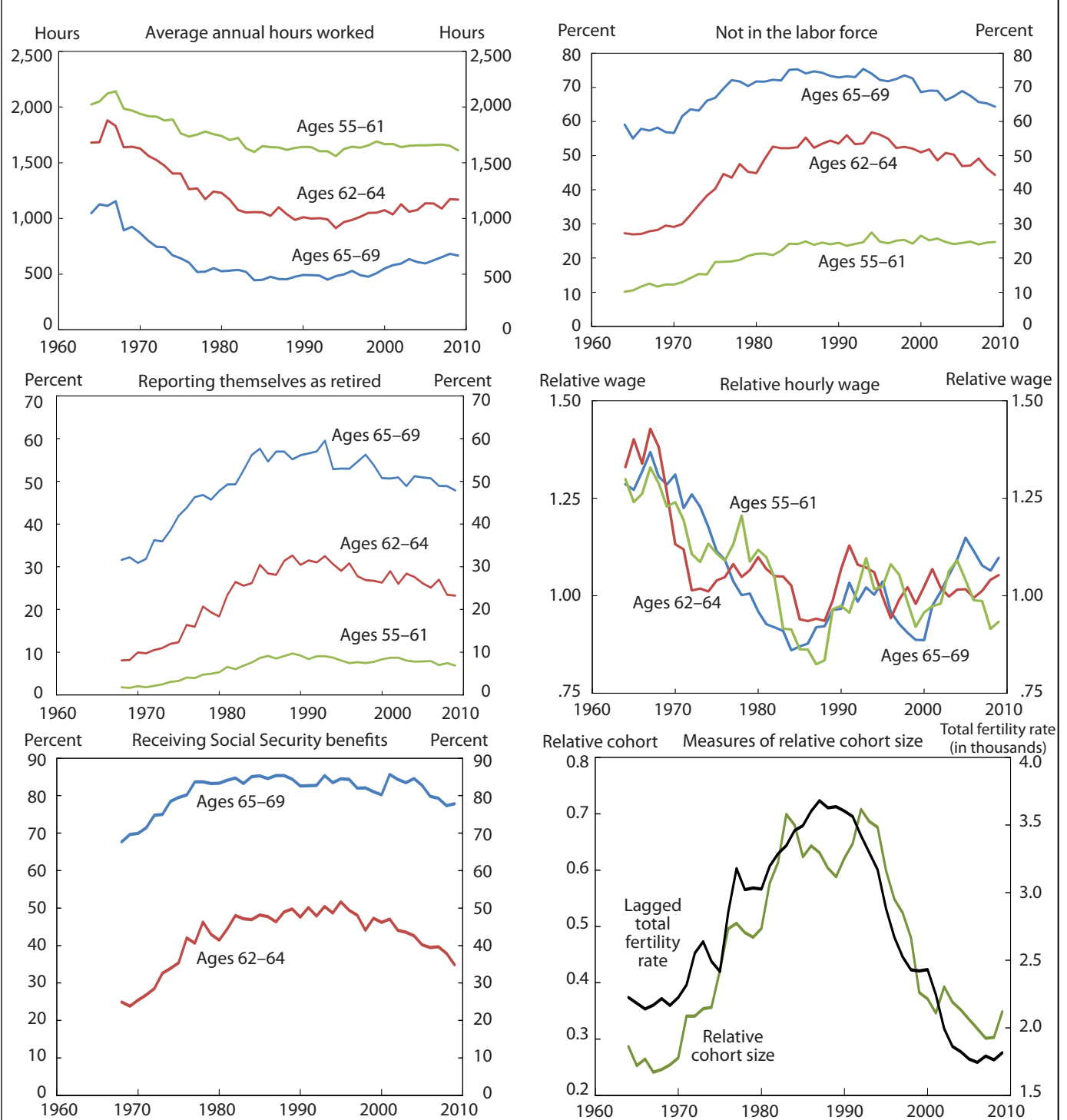
alleled those among younger workers in the 1970s and 1980s.<sup>21</sup>

These findings lead to the hypothesis that there may be a high level of competition and substitutability between older and younger workers for the types of part-time jobs typical of bridge jobs, and that some common factor affected both older and younger workers to an increasing degree during the 1970s and 1980s, and then attenuated in the 1990s and 2000s.

The “culprit” identified in this study—the common factor affecting both younger and older workers—is the post-World War II baby boom. Their large relative cohort size, as indicated by the large increase and then decrease in the total fertility rate (TFR) between 1946 and 1964, affected relative wages, unemployment, and the proportion of younger workers in part-time and/or part-year jobs, because of overcrowding in the cohort.<sup>22</sup> The relative cohort size measure used here for older males is consequently the ratio of 25–34 year old men working part-time and/or part-year to the number of men ages 55–69 in the labor force. (See chart 1.) Given the possibility of endogeneity in the contemporaneous relative cohort size variable, with workers moving geographically in response to labor market conditions, relative cohort size is instrumented—approximated—using a 30-year lag of the total fertility rate. The TFR 30 years earlier was the number of births to women of child bearing age, and 30 years later is a good representation of the ratio of men ages 25–34 relative to men ages 55–69. It has been used in previous studies as an exogenous instrument for relative cohort size.<sup>23</sup>

The rationale behind these measures is that older men are using part-time and part-year jobs as bridge jobs prior to retirement, and because there is little transfer of human capital from career jobs, older men are at least to some extent competing with younger men for these jobs. To the extent that older men find it difficult to find such jobs, they will be more likely to skip the bridge jobs and move directly into full retirement around the time they would otherwise have taken a bridge job—or, alternatively, they will be less likely to re-enter the labor force after retirement. Chart 1 displays the patterns of four labor force indicators for older men: average annual hours worked, the proportion not in the labor force, the proportion receiving Social Security benefits, and the proportion reporting themselves as retired. It should be noted that this last proportion is a self-reported variable that is derivative in the Current Population Survey (CPS). The CPS is not designed specifically to elicit statistics on retirement; rather, retirement is a reason that can be given for not

**Chart 1. Labor force and retirement characteristics of men ages 55–69**



NOTES: The relative wage is defined here as the average wage of part-year part-time workers relative to the average full-time wage of the previous 5-year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at ages 65–69, will compare the wage that he could earn in that bridge job, relative to the wage he has been earning in a full-time career job, at age 60–64. Relative cohort size is defined as the number of men ages 25–34 working part-year and/or part-time, relative to the number of men ages 55–69 in the labor force. "Reporting themselves as retired" is a self-reported variable, and is derivative in the CPS. That is, the CPS is not designed specifically to elicit statistics on retirement; rather, retirement is a reason that can be given for not having worked in the previous year.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

having worked in the previous year. It can be seen that major changes have occurred over the last 40 years, with older men withdrawing from the labor force in the period up to the mid-1980s, and reversing trends after the mid-1990s. The proportions out of the labor force rose from 12 percent, 28 percent, and 58 percent in 1968, to 24 percent, 53 percent, and 75 percent in 1985, for men ages 55–61, 62–64 and 65–69, respectively. The rate for men ages 55–61 then remained fairly constant, but the rates for the two older age groups declined to 44 percent and 64 percent by 2009. Average hours worked dropped by 8–15 percent for the three age groups between 1968 and the mid-1980s, and then rebounded afterward, with a 24 percent increase for the 65–69 year old group in the period from 1990 to 2008.

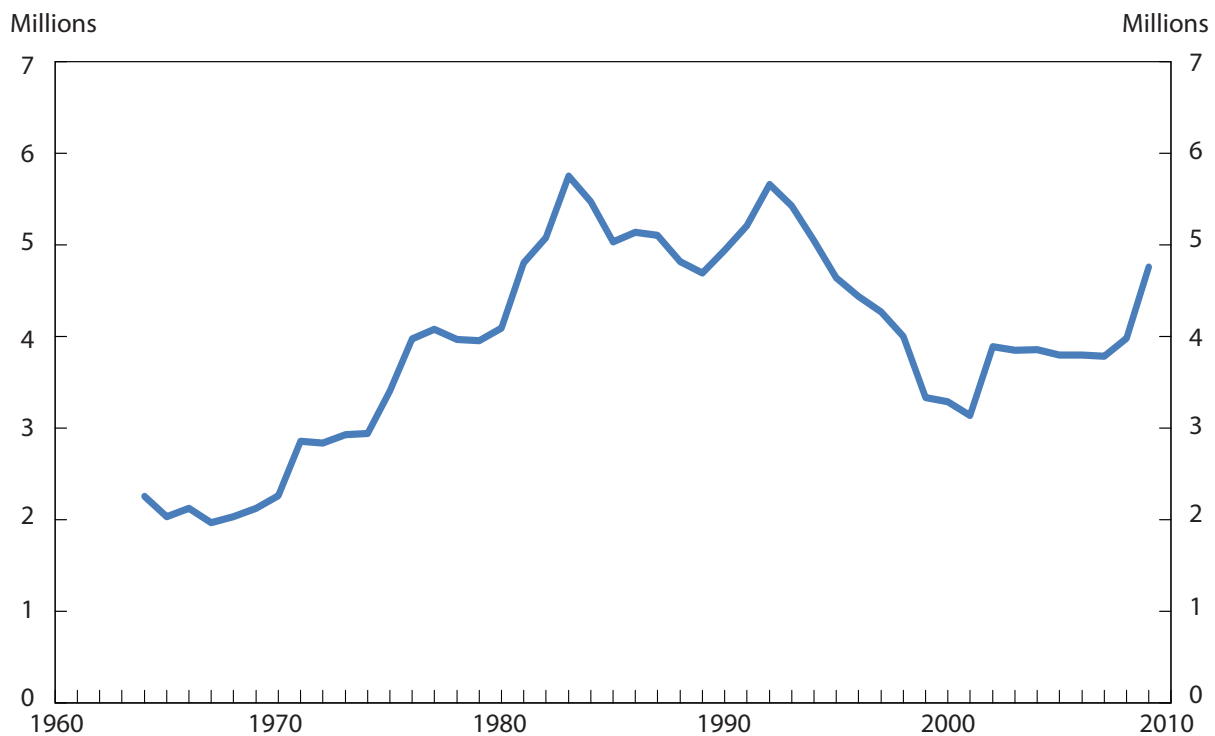
Although some of the large changes that took place among people in the 62–64 and 65–69 age groups after 1990 can probably be explained by increases in the Social Security earnings threshold that occurred over the period, increases in the delayed retirement credit between 1990 and 2008, and the removal of the earnings test for workers ages 65–69 by the Senior Citizens’ Freedom to Work Act in 2000, these Social Security changes cannot explain the

fact that the early declines in hours worked and increases in proportions reporting themselves as retired were halted well before 1990.

Also displayed in chart 1 is the relative cohort size variable (RCS) used to approximate the forces hypothesized to be influencing all three age groups: the ratio of the number of men age 25–34 working part year and/or part time to the number of men in the labor force ages 55–69. (The number of men ages 25–34 working part time or part year is shown in chart 2.) Superimposed on this pattern is a 30-year lag of the total fertility rate (TFR), which created the earlier pattern of births that produced the large cohort with its overcrowding and high proportions working part year and/or part time.

Finally, chart 1 displays men’s relative hourly wages, which declined precipitously in the period prior to 1985 at the same time that labor force participation declined and rates of retirement rose. The relative wage for each age group is defined here as the average wage of part-year and/or part-time workers relative to the average full-time wage of the age group they were in 5 years earlier. That is, the assumption is that a worker, in deciding whether to take a bridge job at, say, ages 55–59, will compare the

**Chart 2. Men ages 25–34 working part year and/or part time, 1964–2009**



SOURCES: Current Population Survey Annual Social and Economic Supplement.



wage that he could earn in that bridge job to the wage he has been earning in a full-time career job at ages 50–54. For men in the 55–61, 62–64 and 65–69 age groups, the ratio fell from 1.29, 1.38 and 1.18 in 1967 to 0.80, 0.92, and 0.85 at some time during the 1984–1987 period, respectively. It then recovered to 1.12, 1.00 and 1.11 in the 2001–2004 period, presumably as baby boomers moved on and the market for part-year, part-time jobs eased. Table 1 and chart 3 demonstrate the close inverse correspondence between the number of younger men working part year and/or part time, and these relative wages. The correspondence is weaker for men ages 62–64 (whose adjusted R-square is 0.41), but is considerably stronger for those ages 55–61 and 65–69 (with adjusted R-squares of 0.54 and 0.65, respectively). The table demonstrates the close correspondence between observed and predicted values, using just the number of younger part-year, part-time workers as an explanatory variable.

### Data and methodology

The data used in this analysis has been drawn exclusively from Current Population Survey (CPS) Annual Social and Economic Supplement data for 1968–2009, as prepared

in uniform files in CPS Utilities by Unicon.<sup>24</sup> Data covered all men ages 25–34 and 55–69, with the 25–34 age group used for the numerator of a relative cohort size variable, and men ages 55–69 in the labor force for the remainder of the analyses.<sup>25</sup>

The methodology employed is that of a typical labor supply model, but with relative cohort size variables added. The relative cohort size variable used was calculated as the number of 25–34 year old men working part year and/or part time relative to the number of men in the labor force ages 55–69 in each year and state.<sup>26</sup> Age-specific unemployment rates were calculated for each of the three groups—age 55–61, 62–64 and 65–69—calculated at the Metropolitan Statistical Area (MSA) level,<sup>27</sup> and regressions were run using individual-level micro data with these state- and MSA-level variables attached to each record. In addition, each age-group’s model was also tested with a 30-year lag of the total fertility rate as an instrument for the relative cohort size measure. Summary statistics describing the data are presented in appendix tables A-1 through A-3.

Four models were estimated for four labor supply indicators, separately for each of the three age groups. (See box.)

#### Equations for labor supply models

$$H = \beta_0 + \beta_1 \ln W + \beta_2 I_e + \beta_3 I_o + \beta_4 RCS_{State} + \beta_5 U_{MSA} + \beta_6 M + B'X + u \quad (1)$$

$$OLF = \gamma_0 + \gamma_1 \ln W + \gamma_2 I_e + \gamma_3 I_o + \gamma_4 RCS_{State} + \gamma_5 U_{MSA} + \gamma_6 M + \Gamma'X + u \quad (2)$$

$$R = \alpha_0 + \alpha_1 \ln W + \alpha_2 I_e + \alpha_3 I_o + \alpha_4 RCS_{State} + \alpha_5 U_{MSA} + \alpha_6 M + A'X + u \quad (3)$$

$$R_{SS} = \delta_0 + \delta_1 \ln W + \delta_2 I_e + \delta_3 I_o + \delta_4 RCS_{State} + \delta_5 U_{MSA} + \delta_6 M + \Delta'X + u \quad (4)$$

where

$H$  represents annual hours worked in the previous year (including those with zeroes);

$OLF$  represents a binary variable set to 1 for those out of the labor force;

$R$  represents a binary variable set to 1 for those identifying themselves as retired.<sup>28</sup>

$R_{SS}$  represents a binary variable set to 1 for those receiving Social Security benefits;

$W$  represents the man’s own (instrumented) hourly wage, in constant 2008 dollars;

$I_e$  represents the earnings of others in the family, defined as total family earnings minus own earnings, in constant 2008 dollars;

$I_o$  represents other income, which comprises interest, dividends, and rent, in 2008 dollars;

$RCS_{State}$  represents the year- and state-specific relative cohort size;

$U_{MSA}$  represents the age- and MSA-specific unemployment rate, in the year prior to the survey;

$M$  represents a binary variable set to 1 for those who are married with spouse present; and

$X$  is a vector of control variables.

**Table 1. Results of regressing the relative wage of older men on the number of men ages 25–34 working part year and/or part time**

	Men ages 55–61	Men ages 62–64	Men ages 65–69
Number of men ages 25–34 working part year and/or part time	–0.087 (–7.26)	–0.073 (–5.62)	–0.108 (–9.26)
Adjusted R-square	.5350	.4050	.6534
Number of observations	46	46	46

NOTES: All t-statistics are in parentheses. The relative wage is defined here as the average wage of part-year and/or part-time workers relative to the average full-time wage of the previous 5-year age group. That is, the assumption is that a worker, in deciding whether to take a bridge job at ages

55–59, will compare the wage that he could earn in that bridge job relative to the wage he has been earning in a full-time career job, at ages 50–54.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author’s calculations.

The control variables included single-year age dummies, 4 education dummies (with 16 years as the reference group), 3 race dummies (with non-Hispanic Whites as reference group), 20 state dummies,<sup>29</sup> a time trend, and 3 indicators of MSA status (principal city, balance of MSA, and non-MSA).

In addition, each of the models (1)–(4) was estimated for each age group, substituting a 30-year lag of the total fertility rate for the potentially endogenous relative cohort size variable. RCS could be endogenous, especially at the state level, if individuals move in response to changes in economic conditions. The lagged TFR, in contrast, is completely exogenous because it was determined 30 years earlier. And as previously explained, since the TFR represents the number of births relative to the number of women of childbearing age, a 30-year lag of the TFR will approximate the number of individuals ages 25–34 relative to those ages 55–69.

Finally, the models for those ages 62–64 and 65–69 were estimated with controls for the major changes in Social Security and age discrimination that occurred during the study period. For both age groups, these controls included a variable representing the changing levels of the age-specific earnings threshold imposed on the receipt of Social Security benefits. These thresholds are illustrated in chart 4. In addition, for those aged 65–69 the controls included

- a dummy for the years after 1990, the period in which the delayed retirement credit was increased;
- another for the period after 2000, when the Senior Citizens’ Freedom to Work Act was passed, removing the earnings threshold for those ages 65–69; and
- two dummies, one for the years following 1978 and another for the years following 1986, when the Age Discrimination in Employment Act was implemented.

*The methodology comprised three steps.* In the first, hourly wages were calculated—in 2008 dollars, using the Consumer Price Index—as total annual wages and salary in

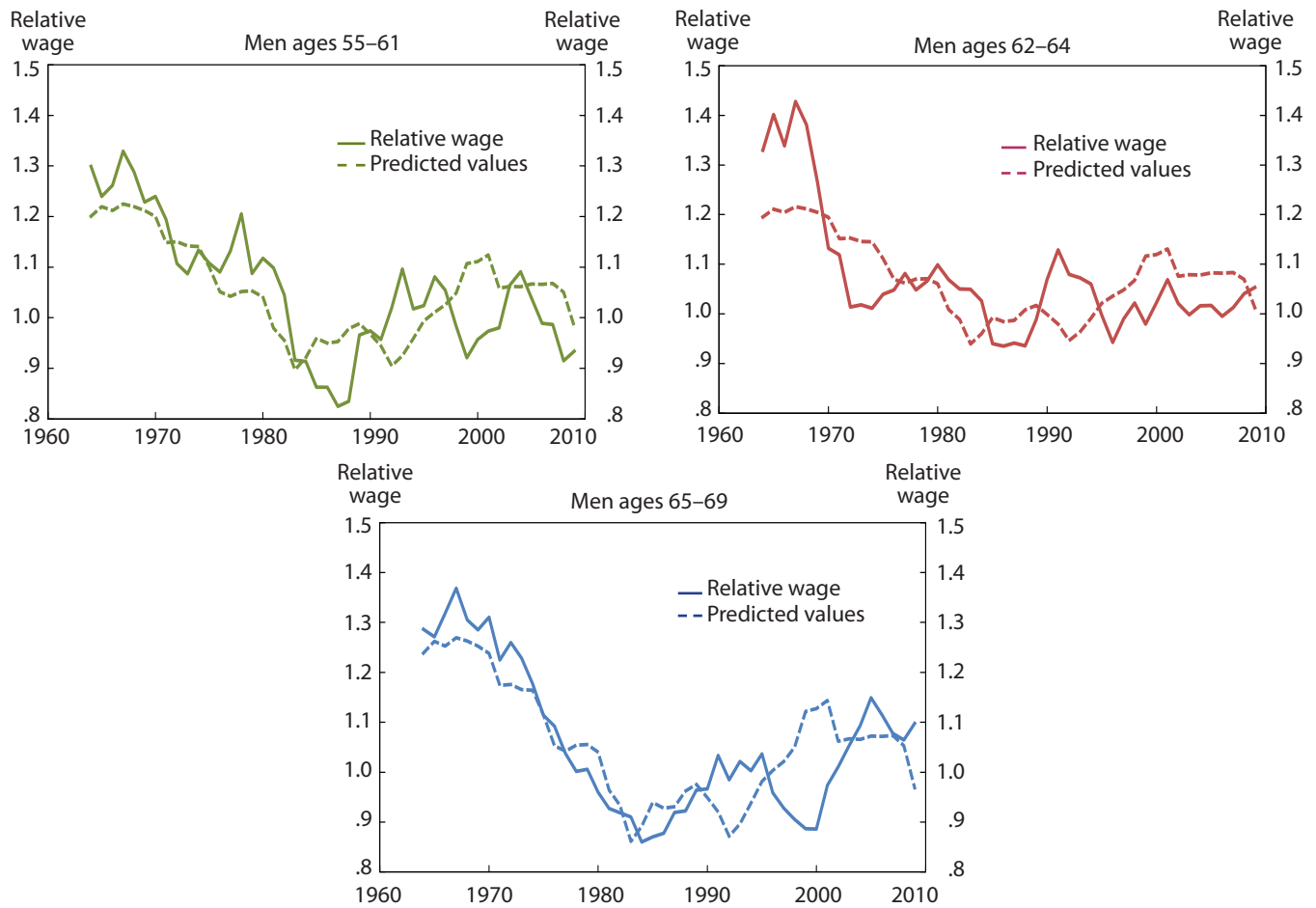
the previous year divided by annual hours worked, with the latter calculated as weeks worked times the usual number of hours worked per week in the previous year.<sup>30</sup>

The annual wages and salary were first multiplied by a factor of 1.45 if topcoded.<sup>31</sup> The hourly wage was imputed for those with no reported wage, as well as for the self-employed and those whose calculated wage fell outside the range of \$2.50—\$250 in 2008 dollars. The imputation process was based on separate regressions of the natural logarithm of wages (logwage) for those with fewer than 20 weeks worked and those with 20 or more weeks worked, separately for each age group. That is, it was assumed that wages should be imputed on the basis of the reported wage of those in groups with similar numbers of weeks worked.<sup>32</sup>

The imputation regressions were run separately in each of 14 groupings, with each grouping including 3 ages (for example, 55–57, 56–58, etc.). The 3-year groupings were used to achieve larger sample sizes for the imputation process, and the CPS March Supplement Weights were normalized to sum to 1 in each year, so that each year carried equal weight in the regressions. The regressions each included 4 age dummies, 2 year dummies, 4 education dummies, 3 race dummies, 20 state dummies, and 3 indicators of MSA status.

Then in the second step, because observed wages are endogenous—they depend on a worker’s occupation, industry, and hours worked—wages were instrumented. This was again done separately for each age group and time period by regressing logwage on 4 age dummies, 4 education dummies, 3 race dummies, 20 state dummies, and 3 indicators of MSA status. In addition, a series of dummy variables representing wage deciles was included, which served as excluded instruments in the final hours, participation, and retirement equations. As indicated in a 2007 study by Francine D. Blau and Lawrence M. Kahn, use of deciles “corrects to some degree for measurement error in the wage.”<sup>33</sup>

**Chart 3. Relative hourly wages of men ages 55–69**



SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

The third step involved estimating each of the equations in (1)–(4) separately for each age group, over the entire 42-year period. Equation (1) was treated as a weighted instrumental variable (IV) linear model, while equations (2), (3), and (4) were weighted IV binary probit models.

### Results

The results of this procedure are presented in tables 2 and 3 for each of the three age groups, 55–61, 62–64 and 65–69. Table 2 presents more complete results for annual hours worked, using standardized coefficients in order to see the relative strengths of the different variables. Table 3 presents just the estimated (marginal) effects of the relative cohort size and total fertility rate variables for the three “retirement” variables: the propensity to be out of the labor force, the propensity to report oneself as retired,<sup>34</sup> and the propensity to claim Social Security benefits.

In all cases, the coefficients on the RCS and TFR variables display the expected signs and all are highly significant. The variables have a strong negative effect on hours worked and positive effects on the probability of being out of the labor force, reporting themselves as retired, and claiming Social Security benefits. This is consistent with the hypothesis that overcrowding in the market for part-year and part-time jobs induces older men to reduce their labor force participation; that is, the competition for part-year and/or part-time jobs leads men to skip bridge jobs and move directly out of the labor force from career jobs.

The strength of the estimated effects varies across age groups and across the four variables. For the 65–69 age group, the effects are strongest on hours worked, with elasticities of  $-.371$  (for RCS) and  $-.717$  (for TFR), although these elasticities are reduced somewhat, to  $-.232$  (for RCS) and  $-.640$  (for TFR), when the Social Security Administration controls are added in. For the

**Table 2. Independent variable regression results for annual hours worked (including zeroes, standardized coefficients)**

Value	Men ages 55–61		Men ages 62–64				Men ages 65–69			
Lagged total fertility rate	-.059 (-23.3)	—	-.113 (-27.7)	—	-.112 (-27.0)	—	-.106 (-30.6)	—	-.094 (-14.1)	—
Relative cohort size (state-year specific)	—	-.072 (-26.6)	—	-.114 (-26.5)	—	-.113 (-25.9)	—	-.100 (-28.1)	—	-.063 (-13.5)
Logwage	.088 (28.9)	.087 (28.6)	.010 (2.3)	.008 (1.7)	.010 (2.3)	.008 (1.7)	-.055 (-15.3)	-.058 (-16.1)	-.057 (-15.4)	-.059 (-15.8)
Others' earnings (thousands)	.107 (40.4)	.107 (40.1)	.162 (29.7)	.161 (29.7)	.162 (29.7)	.161 (29.7)	.198 (36.4)	.199 (36.5)	.198 (36.4)	.198 (36.4)
Other income (thousands)	-.017 (-5.8)	-.018 (-6.1)	-.023 (-5.2)	-.027 (-6.0)	-.023 (-5.2)	-.027 (-6.0)	.007 (1.7)	.003 (0.6)	.007 (1.8)	.006 (1.4)
Married?	.116 (40.8)	.117 (41.0)	.074 (17.8)	.074 (17.8)	.074 (17.8)	.074 (17.8)	.025 (7.4)	.025 (7.5)	.025 (7.4)	.026 (7.5)
Time trend	-.149 (-55.4)	-.130 (-50.9)	-.225 (-50.8)	-.188 (-44.3)	-.235 (-16.3)	-.191 (-13.0)	-.151 (-37.5)	-.116 (-30.5)	-.259 (-18.4)	-.230 (-16.4)
SSA earnings threshold	—	—	—	—	.010 (0.7)	.003 (0.2)	—	—	-.016 (-2.4)	-.036 (-5.3)
Delayed retirement benefit 1990?	—	—	—	—	—	—	—	—	.008 (1.0)	.046 (6.5)
Freedom to Work Act 2000?	—	—	—	—	—	—	—	—	.042 (4.3)	.048 (4.9)
Age discrimination in employment 1978?	—	—	—	—	—	—	—	—	.035 (4.6)	.013 (1.9)
Age discrimination in employment 1986?	—	—	—	—	—	—	—	—	.049 (6.9)	.022 (3.2)
Adjusted R-square	.1148	.1156	.1258	.1244	.1258	.1244	.1177	.1160	.1186	.1181
TFR elasticity	-.152	—	-.465	—	-.463	—	-.717	—	-.640	—
Relative cohort size elasticity	—	-.101	—	-.254	—	-.254	—	-.371	—	-.232
Number of observations	207,478	201,147	74,156	73,971	74,156	73,971	106,870	106,550	106,870	106,550

NOTES: Reported hours worked are for years 1967–2008. Standardized coefficients and t-statistics are in parentheses. All regressions included 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA resi-

dency status. Dash indicates not applicable.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

55–61 age group, the estimated effects are strongest for the likelihood of reporting oneself as retired: .373 (for RCS) and .802 (for TFR). For those ages 62–64, the effects are very strong for both the propensity to report oneself as retired, with elasticities of .396 for the RCS and .833 for the TFR, and the propensity to claim Social Security benefits, .327 for the RCS and .677 for the TFR. (These effects on reporting oneself as retired and claiming Social Security benefits were both after controlling for the Social Security earnings threshold; the effects are actually increased by adding this control.) Overall, the effects of the two cohort size variables are actually strongest for the 62–64 age group. The weakest estimated elasticities were for hours worked among those in the 55–61 age group

(-.09 for RCS and -.15 for TFR).

The estimated effect of the earnings threshold is not significant for any of the four variables for the 62–64 age group,<sup>35</sup> but the earnings threshold exerted a negative effect on hours worked for the 65–69 age group (with a corresponding positive effect of the Freedom to Work Act after 2000). In the case of the other three variables for those ages 65–69, the threshold has a statistically significant positive effect only for the propensity to report oneself as retired, but only with the RCS—not with the TFR. Of the four dummy variables for those ages 65–69, only that for the Freedom to Work Act has consistently significant effects; the effects are positive for hours worked and negative for the other three variables.

**Table 3. Independent variable binary probit estimated coefficients on relative cohort size measures for three retirement indicators (marginal effects)**

Value	Men ages 55–61	Men ages 62–64		Men ages 65–69	
		Without SSA controls	With SSA controls	Without SSA controls	With SSA controls
<b>Not in the labor force</b>					
Lagged total fertility rate	0.034 (19.4) [.424]	0.095 (26.4) [.550]	0.095 (25.8) [.546]	0.064 (23.5) [.251]	0.052 (9.7) [.204]
Relative cohort size (state-year specific)	.130 (23.6) [.286]	.306 (26.1) [.309]	.307 (25.7) [.310]	.215 (23.6) [.148]	.148 (12.3) [.102]
<b>Retired (as self-reported)<sup>1</sup></b>					
Lagged total fertility rate	0.021 (21.1) [.802]	0.075 (24.8) [.732]	0.076 (24.6) [.833]	0.079 (26.2) [.429]	0.059 (9.8) [.317]
Relative cohort size (state-year specific)	.055 (18.8) [.373]	.202 (21.3) [.392]	.204 (21.1) [.396]	.226 (23.1) [.216]	.117 (9.0) [.112]
<b>Claiming Social Security benefits</b>					
Lagged total fertility rate	—	0.104 (29.1) [.673]	0.105 (28.7) [.677]	0.05 (21.9) [.168]	0.065 (14.7) [.219]
Relative cohort size (state-year specific)	—	.287 (24.8) [.326]	.288 (24.4) [.327]	.133 (17.5) [.079]	.098 (9.8) [.058]

<sup>1</sup> Represents a binary variable set to 1 for those identifying themselves as retired. This is a self-reported variable, and is derivative in the CPS. That is, the CPS is not designed specifically to elicit statistics on retirement; rather, retirement is a reason that can be given for not having worked in the previous year.

NOTES: Regarding marginal effects, t-statistics are in parentheses, and elasticities are in brackets. All regressions included the variables displayed in table 1 plus 20 dummies for state groupings, age dummies, 4 education dummies, 3 race dummies, an MSA-specific unemployment rate, and 3 indicators of MSA residency status. Dash indicates not applicable.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

In terms of own-wage elasticities, there is a marked difference across age groups. For hours worked, the effect is strongly positive for those ages 55–61, barely significant for those ages 62–64, and strongly negative for those ages 65–69, as shown on table 2. Conversely, in results available from the author, the effect on the propensity to be out of the labor force, and to report oneself as retired, is strongly negative for those ages 55–61, not significant for those ages 62–64, and strongly positive for those ages 65–69. There is a consistent, strongly negative effect in the older age groups for the propensity to claim Social Security benefits.

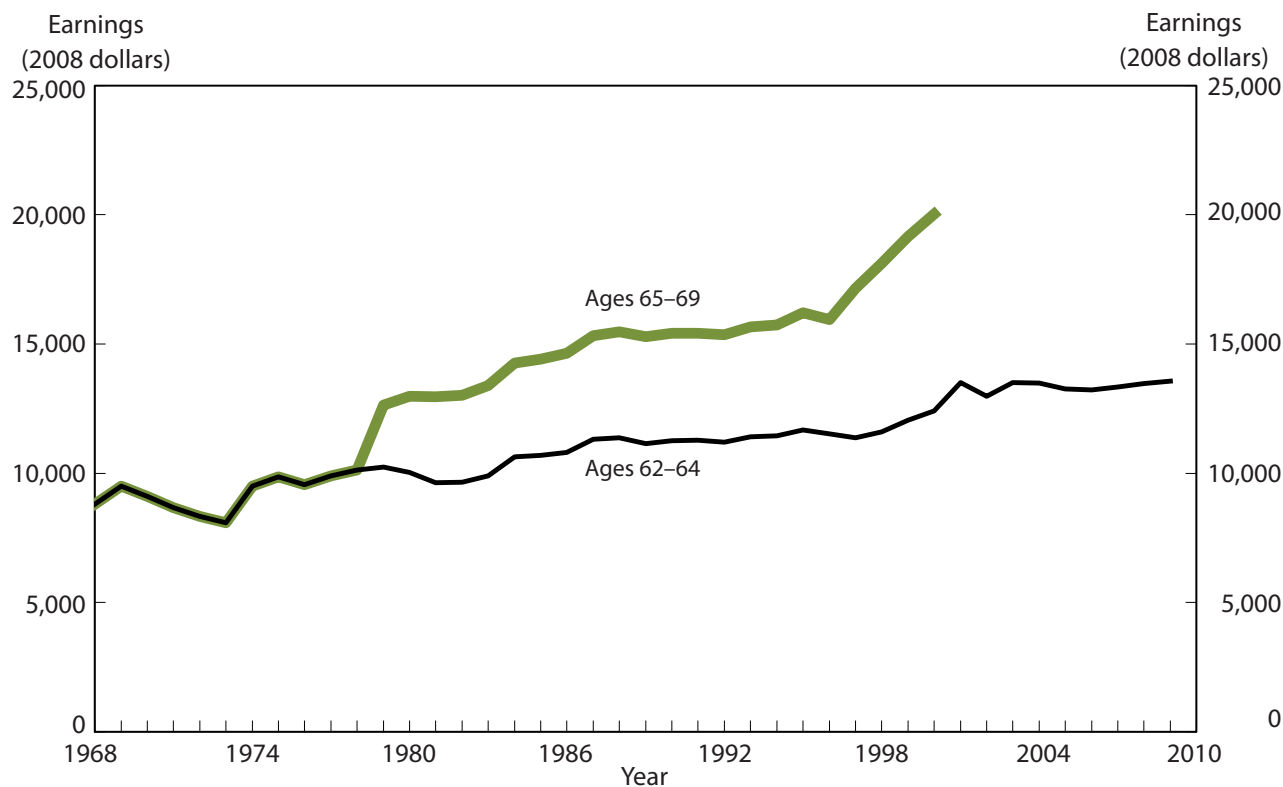
Marriage has consistent strong effects across all three age groups for hours worked (positive) and propensity to be out of the labor force (negative). In terms of the propensity to report oneself as retired, the effect for the two older age groups is not significant, and it is only barely negatively significant for the 55–61 age group. For claiming Social Security benefits, the effect is strongly negative for those ages 62–64, and strongly positive for those ages 65–69. The effect of “others’ earnings,” presumably in most cases a wife’s earnings, is consistently and significantly positive for hours worked for all age groups, and is negative for the

three retirement indicators. These two effects—the effect of marriage generally and of a wife’s employment—suggest support for the hypothesis that men tend not to retire when their wives are still in the labor force.

As might be expected, other income, including such items as interest, rent, and dividends, has a negative effect on hours worked and a positive effect on the other three variables for the two younger age groups. For those ages 65–69, however, the effects are only significant for the two retirement variables. The effect of the time trend is strongly negative on hours worked and positive on the other three indicators, even after controlling for other variables.

Table 4 is an attempt to estimate the real-world significance of the relative cohort size variables. The table indicates the maximum positive and negative changes that occurred in each of the four variables for each age group (using the means reported in appendix tables A-1 through A-3), and then estimates the percentage of those changes that might be attributed to changes in the two relative cohort size variables, using the estimated marginal effects of the RCS variables. In the case of annual hours worked,

**Chart 4. Social Security earnings thresholds for workers ages 62–64 and 65–69**



SOURCE: Social Security Administration, "Annual Statistical Supplement 2010, table 2.A29.

the decreases occurred in the first half of the study period, while the increases occurred in the second half of the period. The opposite is true for the other three variables.

Overall, the effects seem to be most realistic for the first half of the period, when hours worked were declining and the other three variables were increasing. In that period, each of the RCS and TFR variables is estimated to account for an average of about 29 percent of the observed changes over all four variables and three age groups. The lowest proportions were for those reporting themselves as retired, where each of the two cohort size variables accounted for about 22 percent of the observed changes.

In general, the two variables overpredict changes in the second half of the period, when hours worked were increasing and the other three variables were decreasing. On average, the RCS explains 124 percent of the changes in the second half of the period, while the TFR explains 171 percent of the observed changes in that period. However, looking just at the two older age groups, the RCS explains an average of 80 percent of the observed second-half changes, while the TFR explains 138 percent. Excluding

the proportion reporting themselves as retired, for the two older age groups in the second half of the period, the RCS explains 72 percent of the observed changes, while the TFR explains 120 percent of the observed changes. This tendency to overpredict in the second half of the period could be the effect of a "stickiness" in behavior once the pattern of earlier retirement had been set by the earlier cohorts.

Recapping the results in table 4, for the two older age groups, the RCS appears to provide the most realistic estimates, as it predicts 29 percent of the changes in the first half of the period and 80 percent of the changes in the second half of the period.

Finally, table 5 looks at the potential explanatory power of the relative cohort size variables for men with lower levels of education—that is, fewer than thirteen years, or at most a high school education. The hypothesis in estimating these effects was that, if bridge jobs are generally lower-skilled jobs, then men with lower levels of education would be more likely to move into them. Thus the competition with younger workers might be greater for

**Table 4. Potential explanatory power of the relative cohort size variables for men ages 55–69**

Category	Men ages 55–61		Men ages 62–64		Men ages 65–69	
	Max increase	Max decrease	Max increase	Max decrease	Max increase	Max decrease
Average annual hours worked	63.3	305.3	183.8	664.2	184.0	393.8
Percent explained by changes in RCS	169.3	37.3	100.0	29.4	54.6	26.9
Percent explained by changes in TFR	167.3	20.9	119.6	19.9	128.9	44.7
Proportion not in the labor force	.133	.010	.268	.091	.164	.097
Percent explained by changes in RCS	31.1	390.0	36.6	101.0	33.8	54.2
Percent explained by changes in TFR	17.3	380.0	23.9	116.6	40.8	92.8
Proportion reporting themselves as retired <sup>1</sup>	.080	.010	.242	.055	.243	.044
Percent explained by changes in RCS	21.9	170.0	26.8	110.9	18.0	94.4
Percent explained by changes in TFR	17.2	230.0	21.1	153.1	30.9	229.7
Proportion claiming Social Security benefits	—	—	.247	.123	.147	.067
Percent explained by changes in RCS	—	—	37.2	70.0	24.9	51.9
Percent explained by changes in TFR	—	—	28.4	94.9	56.9	168.2

<sup>1</sup> Represents a binary variable set to 1 for those identifying themselves as retired in a CPS question about why they did not work in the previous year.  
 NOTES: This table uses the averages and proportions reported in tables A-1 through A-3 and estimated marginal effects from the regressions reported in tables 2 and 3. For men ages 62–64 and 65–69, the marginals used are those estimated in equations controlling for the various changes in Social Security regulations. The estimated effects are larger when these changes are not controlled for. Dash indicates not applicable.  
 SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

**Table 5. Potential explanatory power of the relative cohort size variables for men ages 55–69 with fewer than 13 years of education**

Category	Men ages 55–61		Men ages 62–64		Men ages 65–69	
	Max increase	Max decrease	Max increase	Max decrease	Max increase	Max decrease
Average annual hours worked	61.9	417.5	162.6	756.8	152.4	420.6
Percent explained by changes in RCS	183.6	28.9	116.6	26.6	57.2	22.0
Percent explained by changes in TFR	278.2	31.1	229.1	37.1	175.3	47.9
Proportion not in the labor force	.146	0	.198	.080	.074	.069
Percent explained by changes in RCS	32.4	(?)	49.8	115.9	66.2	66.7
Percent explained by changes in TFR	33.4	—	66.1	217.1	91.4	130.0
Proportion reporting themselves as retired <sup>1</sup>	.080	.022	.242	.068	.261	.071
Percent explained by changes in RCS	25.0	90.9	30.3	101.7	18.1	63.0
Percent explained by changes in TFR	39.2	189.1	46.6	219.7	30.4	150.4
Proportion claiming Social Security benefits	—	—	.289	.113	.149	.073
Percent explained by changes in RCS	—	—	33.8	81.2	74.1	41.8
Percent explained by changes in TFR	—	—	52.3	177.4	54.9	151.0

<sup>1</sup> Represents a binary variable set to 1 for those identifying themselves as retired in a CPS question about why they did not work in the previous year.  
<sup>2</sup> The proportion of men ages 55–61 with less education who were not in the labor force continued increasing after 1990.  
 NOTES: This table uses the averages and proportions reported in table A-4 and estimated marginal effects which are available upon request from the author. For men ages 62–64 and 65–69, the marginals used are those estimated in equations controlling for the various changes in Social Security regulations. The estimated effects are larger when these effects are not controlled for. Dash indicates not applicable.  
 SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

this group. In addition, this group might be less likely to have adequate savings or pensions for support in retirement, and therefore might be more likely to move into bridge jobs rather than directly into retirement.

Table 5 is based on separate regressions, not shown here, but available from the author on request. The averages and proportions observed over the years for those with lower levels of education are reported in appendix table A-4. Using both the marginal effects in the estimated equations and the observed changes in the relative cohort size variables, table 5 attempts to explain the changes observed in

table A-4. In general, the explanatory power of the relative cohort size variables is better for this group, with changes in the RCS explaining about 37 percent of the changes in the first half of the period (compared with 29 percent for men at all levels of education) and 92 percent in the second half of the period (compared with 124 percent for all men). Changes in the TFR explain about 34 percent in the first half (compared with 29 percent for all men) and 192 percent in the second half (compared with 171 percent for all men). The best explanatory power for this education group occurs with the RCS for the two older age groups, in

this case for the proportion out of the labor force (58 percent in the first half and 91 percent in the second) and the proportion claiming Social Security benefits (54 percent in the first half and 62 percent in the second.)

THIS STUDY HAS MADE USE of a measure of relative cohort size: the number of 25–34 year old men working part year and/or part time relative to the number of 55–69 year old men in the labor force. For purposes of analysis, the measure was calculated, using March Current Population Survey (CPS) data, for each man at the level of his state. This relative cohort size measure might be thought of as a direct function of a 30-year lag of the total fertility rate, a measure often used to illustrate the effects of the post-World War II baby boom. This correspondence relates to the fact that the TFR indicates the number of children per woman of childbearing age, so that a 30-year lag can be thought of as an exogenous representation of the ratio of 25–34 year olds relative to 55–69 year olds.

More importantly, the relative cohort size measure has been shown here to be a highly significant factor—both statistically and substantively—affecting older men’s annual hours worked, labor force participation, propensity to report themselves as retired, and propensity to claim Social Security benefits. In general terms, relative cohort size can be said to have generated about 29 percent of the observed changes in these variables in the period up to about 1990. The variable does, however, somewhat overpredict observed changes in the period since 1990, with the ratio of 25–34 year old part-time workers relative to 55–69 year olds in the labor force overpredicting by 24 percent the observed changes in these four variables in the later period.

For men with at most a high school education—such men are most likely to work in bridge jobs—the explanatory power of the relative cohort size variable is somewhat better, explaining about 37 percent of changes in the early period and 92 percent in the second. The explanatory power is best for men in the age groups 62–64 and 65–69; for the proportion out of the labor force and proportion claiming Social Security benefits among these age groups, the RCS variable explains on average 56 percent of changes in the first part of the study period and 76 percent in the second period.

However, a significant portion of the sharp decline in annual hours worked and labor force participation in the 1970s remains unexplained, indicating the considerable role played by the other factors that have been identified as important in affecting older men’s decision to retire: access to health insurance, and changes in Social Security and pensions.

We have begun to experience the entry of the “echo boom” into the labor market, and one might initially expect that this would once again tend to motivate older workers to retire at higher rates as the echo boom moves into its twenties and thirties. However, the ratio of these young workers to older workers will remain low because the older workers will themselves be members of the large baby boom cohort. Hence, it remains to be seen whether it is the absolute or the relative size of the younger cohort which is significant in affecting patterns in the older cohort, or whether the large size of the retiring cohort itself may affect its labor force participation patterns. Any attempt to tease out the effects will have to differentiate them from the effects of the recent recession and diminution of 401(k)s. □

## NOTES

<sup>1</sup> Diane J. Macunovich, “The Fortunes of One’s Birth: Relative Cohort Size and the Youth Labor Market in the U.S.,” *Journal of Population Economics*, June 1999, pp. 215–272 and *Birth Quake: The Baby Boom and Its Aftershocks* (Chicago: University of Chicago Press, 2002).

<sup>2</sup> Joseph F. Quinn, *Retirement Trends and Patterns in the 1990s: The End of an Era?* Boston College Working Papers In Economics, no. 385, 1997; *New Paths to Retirement*, no. 406, 1998; and *Has the Early Retirement Trend Reversed?* no. 424, 1999.

<sup>3</sup> Gary Englehart and Anil Kumar, “The Repeal of the Retirement Earnings Test and the Labor Supply of Older Men,” *Journal of Pension Economics and Finance*, October 2009, pp. 429–450.

<sup>4</sup> David A. Wise, “Social Security Provisions and the Labor Force Participation of Older Workers,” *Population and Development Review*, supplement to vol. 30, 2004, pp. 176–205.

<sup>5</sup> Alan Krueger and Jörn-Steffen Pischke, “The Effect of Social Security on Labor Supply: A Cohort Analysis of the Notch Generation,” *Journal of Labor Economics*, University of Chicago Press, October 1992, pp. 412–437.

<sup>6</sup> Patricia M. Anderson, Alan L. Gustman, and Thomas L. Steinmeier, “Trends in Male Labor Force Participation and Retirement: Some Evidence on the Role of Pensions and Social Security in the 1970s and 1980s,” *Journal of Labor Economics*, University of Chicago Press, October 1999, pp. 757–783.

<sup>7</sup> Leora Friedberg and Anthony Webb, “Retirement and the Evolution of the Pension Structure,” *The Journal of Human Resources*, Spring 2005, pp. 281–308.

<sup>8</sup> Courtney C. Coile and Phillip P. Levine, “Bulls, Bears and Retirement Behavior,” *Industrial and Labor Relations Review*, Cornell University, April 2006, pp. 408–429.



## Retirement Patterns Among Men

<sup>9</sup> Lynn A. Karoly and Jeannette A. Rogowski, “The Effects of Access to Post-Retirement Health Insurance on the Decision to Retire Early,” *Industrial and Labor Relations Review*, October 1994, pp. 103–123.

<sup>10</sup> David M. Blau and Donna B. Gilleskie, “Retiree Health Insurance and the Labor Force Behavior of Older Men in the 1990s,” *The Review of Economics and Statistics*, February 2001, pp. 64–80.

<sup>11</sup> Richard W. Johnson, Amy J. Davidoff, and Kevin Perese, “Health Insurance Costs and Early Retirement Decisions,” *Industrial and Labor Relations Review*, Cornell University, July 2003, pp. 716–729.

<sup>12</sup> Dan A. Black and Xiaoli B. Liang, “Local Labor Market Conditions and Retirement Behavior,” Working Paper 2005–08, Center for Retirement Research at Boston College, May 2005.

<sup>13</sup> Alicia H. Munnell, Mauricio Soto, Robert K. Triest, and Natalia A. Zhivan, *How Much Do State Economics and Other Characteristics Affect Retirement Behavior?* Working Paper 2008–12, Center for Retirement Research at Boston College, 2008.

<sup>14</sup> The average income of men ages 45–54 increased between 1970 and 2010 by only 2.5 percent in real terms. Over a 40-year timespan, we would expect improvements in productivity to lead to more growth than this.

<sup>15</sup> Kevin E. Cahill, Michael D. Giandrea, and Joseph F. Quinn, “Re-entering the labor force after retirement,” *Monthly Labor Review*, June 2011, pp. 34–41.

<sup>16</sup> Michael D. Giandrea, Kevin E. Cahill, and Joseph F. Quinn, *Self-Employment Transitions Among Older American Workers with Career Jobs*, Boston College Working Papers in Economics, no. 684, 2008; and *Bridge Jobs: A Comparison Across Cohorts*, Boston College Working Papers in Economics, no. 670, 2008.

<sup>17</sup> Christopher J. Ruhm, “Secular changes in the work and retirement patterns of older men,” *The Journal of Human Resources*, Spring 1995, pp. 362–385.

<sup>18</sup> Quinn, *New Paths to Retirement and Has the Early Retirement Trend Reversed?* Giandrea et al., *A Micro-Level Analysis of Recent Trends in Labor Force Participation among Older Workers*, Working Paper 2008–08, Center for Retirement Research at Boston College, 2008.

<sup>19</sup> Christopher J. Ruhm, “Bridge jobs and partial retirement,” *Journal of Labor Economics*, University of Chicago Press, October 1990, pp. 482–501.

<sup>20</sup> Franco Peracchi and Finis Welch, “Trends in labor force transitions of older men and women,” *Journal of Labor Economics*, April 1994, pp. 210–242.

<sup>21</sup> Peracchi and Welch, “Trends in labor force transitions.”

<sup>22</sup> Macunovich, “The Fortunes of One’s Birth” and *Birth Quake*.

<sup>23</sup> See Macunovich, “The Fortunes of One’s Birth.”

<sup>24</sup> Data used from Unicon Corporation’s CPS utilities were for the years 1968–2009.

<sup>25</sup> Those in the military were excluded from the analysis, however.

<sup>26</sup> There were 51 separate jurisdictions (50 states and the District of Columbia) identified from 1977 to 2009, 22 from 1973 to 1976, and 30 from 1968 to 1972.

<sup>27</sup> MSA was not available prior to 1977, so state-level variables were used, specific to each age group, for those years. After 2004, BLS changed from MSAs to Consolidated Statistical Areas (CSA). The resulting number of levels used in each year was 21 for 1969–1976, 45 for 1977–1985, 248 for 1986–2004, 281 for 2005, and 265 for 2006–2009. For those not living in an MSA, the state-level variable was used.

<sup>28</sup> As noted previously, the binary variable “retired” is a self-reported variable that is derivative in the CPS. The CPS is not designed specifically to elicit statistics on retirement; rather, retirement is a reason that can be given for not having worked in the previous year.

<sup>29</sup> There were 21 state groupings that were consistently available during all 42 years.

<sup>30</sup> Because the variable “hours worked per week in the previous year” was not available prior to 1976 and weeks worked in the previous year were available only in groupings, an imputation algorithm developed by Finis Welch in 1979 was used to allocate hours and weeks worked for these years. Details are available from the author upon request. Also, see Finis Welch, “Effects of Cohort Size on Earnings: The Baby Boom Babies’ Financial Bust,” *Journal of Political Economy*, The University of Chicago Press, October 1979, pp. S65–S97.

<sup>31</sup> This technique was used by Francine D. Blau and Lawrence M. Kahn in “Changes in the Labor Supply Behavior of Married Women, 1980–2000,” *Journal of Labor Economics*, University of Chicago Press, July 2007, pp. 393–438.

<sup>32</sup> The same technique was used in Blau and Kahn, “Changes in the Labor Supply Behavior.”

<sup>33</sup> Blau and Kahn, “Changes in the Labor Supply Behavior,” p. 406.

<sup>34</sup> See endnote 26.

<sup>35</sup> The detailed regression results for the three variables reported in table 3 are available from the author upon request.

## APPENDIX: Supplementary tables

<b>Table A-1. Summary statistics for men ages 55–61</b>									
Category	1969–1971	1974–1976	1979–1981	1984–1986	1989–1991	1994–1996	1999–2001	2007–2009	1968–2009
Average annual hours worked <sup>1</sup>	1,942.9	1,795.9	1,732.9	1626.0	1,637.6	1,606.7	1,670.0	1,636.6	1,704.7
Proportion not in the labor force	.124	.176	.211	.243	.241	.257	.255	.247	.219
Proportion retired <sup>2</sup>	.018	.035	.056	.085	.091	.096	.098	.086	.071
Relative cohort size <sup>3</sup>	.295	.422	.559	.669	.624	.613	.364	.314	.498
Lagged total fertility rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.033	.043	.035	.054	.048	.048	.033	.050	.044
Logwage	2.924	3.021	3.100	3.070	3.061	3.056	3.097	3.079	3.063
Other's earnings <sup>4</sup>	21,074	20,862	22,394	22,470	26,083	25,785	29,767	31,242	25,653
Other income <sup>5</sup>	—	—	4,830	6,467	6,783	6,204	7,405	5,310	4,743
Proportion married	.867	.828	.828	.819	.792	.786	.748	.715	.798
Fewer than 12 years of school	.548	.446	.368	.343	.268	.203	.144	.104	.295
12 years of school	.265	.335	.334	.335	.363	.341	.333	.294	.322
13–15 years of school	.086	.101	.125	.119	.139	.204	.224	.267	.163
16 years of school	.053	.065	.098	.106	.108	.141	.159	.199	.119
More than 16 years of school	.048	.053	.075	.097	.122	.111	.140	.136	.101
Black	.026	.077	.083	.090	.093	.091	.088	.097	.081
Hispanic	.008	.025	.033	.045	.060	.065	.075	.087	.051
Other	.003	.011	.015	.019	.025	.032	.042	.054	.026
Sample size	13,973	12,467	16,566	14,960	13,212	11,682	11,901	22,463	209,436

<sup>1</sup> Includes those with 0 hours. Hours were imputed for years before 1976 using the algorithm from Finis Welch, "Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust," *Journal of Political Economy*, October 1979.

<sup>2</sup> As self-reported: reason given for not working.

<sup>3</sup> Number of men ages 25–34 working part time and/or part year divided by number of men in the labor force ages 55–69.

<sup>4</sup> Total family earnings minus own earnings.

<sup>5</sup> Interest, dividends, and rent. Data not available in first two periods.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

<b>Table A-2. Summary statistics for men ages 62–64</b>									
Category	1969–1971	1974–1976	1979–1981	1984–1986	1989–1991	1994–1996	1999–2001	2007–2009	1968–2009
Average annual hours worked <sup>1</sup>	1,611.3	1,355.6	1,212.6	1,044.8	995.1	947.1	1,040.0	1,130.9	1,163.0
Proportion not in labor force	.295	.411	.464	.533	.548	.563	.523	.472	.472
Proportion retired <sup>2</sup>	.093	.135	.204	.284	.317	.335	.309	.280	.280
Proportion claiming Social Security benefits	.253	.371	.429	.476	.491	.500	.469	.377	.422
Relative cohort size <sup>3</sup>	.295	.422	.559	.669	.624	.613	.364	.314	.498
Lagged total fertility rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.028	.048	.039	.051	.041	.050	.033	.048	.043
Logwage	2.882	2.941	3.011	3.004	3.076	2.855	3.007	3.123	3.001
Others' earnings <sup>4</sup>	17,878	17,791	18,759	17,730	20,477	19,739	25,078	26,483	20,763
Other income <sup>5</sup>	—	—	5,549	7,859	8,454	6,424	6,934	6,433	5,358
Proportion married	.831	.823	.824	.808	.805	.796	.774	.754	.801
Fewer than 12 years of school	.612	.543	.435	.368	.331	.242	.198	.116	.347
12 years of school	.210	.266	.322	.337	.322	.329	.334	.287	.307
13–15 years of school	.079	.091	.116	.117	.138	.190	.208	.248	.148
16 years of school	.099	.050	.071	.098	.113	.130	.141	.194	.107
More than 16 years of school	.049	.050	.056	.080	.096	.109	.119	.155	.091
Black	.025	.087	.081	.084	.089	.087	.085	.082	.078
Hispanic	.006	.025	.026	.042	.048	.061	.074	.078	.046
Other	.003	.008	.012	.020	.022	.022	.039	.048	.024
Sample size	8,495	10,707	10,402	9,801	8,956	7,378	6,771	12,282	128,820

<sup>1</sup> Includes those with 0 hours. Hours were imputed for years before 1976 using the algorithm from Finis Welch, "Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust," *Journal of Political Economy*, October 1979.

<sup>2</sup> As self-reported: reason given for not working.

<sup>3</sup> Number of men ages 25–34 working part time and/or part year divided by number of men in the labor force ages 55–69.

<sup>4</sup> Total family earnings minus own earnings.

<sup>5</sup> Interest, dividends, and rent. Data not available in first two periods.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

Retirement Patterns Among Men

<b>Table A-3. Summary statistics for men ages 65–69</b>									
Category	1969–1971	1974–1976	1979–1981	1984–1986	1989–1991	1994–1996	1999–2001	2007–2009	1968–2009
Average annual hours worked <sup>1</sup>	863.7	637.8	541.0	469.9	518.6	538.8	574.8	653.9	585.1
Proportion not in the labor force	.584	.676	.713	.748	.732	.727	.701	.651	.697
Proportion retired <sup>2</sup>	.317	.414	.476	.562	.559	.560	.548	.516	.503
Proportion receiving Social Security benefits	.703	.794	.836	.850	.832	.841	.823	.783	.812
Relative cohort size <sup>3</sup>	.295	.422	.559	.669	.624	.613	.364	.314	.498
Lagged total fertility rate	2.236	2.588	3.085	3.519	3.600	2.906	2.366	1.791	2.731
Unemployment rate	.040	.062	.045	.042	.032	.035	.033	.051	.044
Logwage	2.681	2.762	2.815	2.894	2.873	2.923	2.967	2.905	2.861
Other's earnings <sup>4</sup>	12,309	11,698	11,398	11,236	12,761	13,769	16,347	17,475	13,237
Other income <sup>5</sup>	—	—	7,166	9,589	10,223	7,818	10,279	8,287	6,914
Proportion married	.778	.814	.798	.796	.794	.777	.778	.767	.788
Fewer than 12 years of school	.696	.609	.544	.440	.377	.300	.237	.156	.409
12 years of school	.157	.207	.260	.326	.320	.324	.326	.339	.287
13–15 years of school	.056	.081	.089	.103	.125	.174	.199	.210	.133
16 years of school	.054	.058	.059	.064	.097	.116	.139	.154	.095
More than 16 years of school	.037	.045	.048	.067	.081	.086	.099	.141	.076
Black	.025	.089	.087	.080	.081	.078	.089	.081	.079
Hispanic	.006	.023	.028	.035	.045	.058	.067	.073	.042
Other	.003	.010	.015	.019	.027	.023	.039	.054	.025
Sample size	6,524	8,877	8,537	7,990	7,736	6,503	5,540	9,110	106,870

<sup>1</sup> Includes those with 0 hours. Hours were imputed for years before 1976 using the algorithm from Finis Welch, "Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust," *Journal of Political Economy*, October 1979.

<sup>2</sup> As self-reported: reason given for not working.

<sup>3</sup> Number of men ages 25–34 working part time and/or part year divided by number of men in the labor force ages 55–69.

<sup>4</sup> Total family earnings minus own earnings

<sup>5</sup> Interest, dividends, and rent. Data not available in first two periods.

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

<b>Table A-4. Labor force characteristics for men with fewer than 13 years of education</b>									
Category	1969–1971	1974–1976	1979–1981	1984–1986	1989–1991	1994–1996	1999–2001	2007–2009	1968–2009
<b>Men ages 55–61</b>									
Annual hours worked	1,893.4	1,741.0	1,634.2	1,516.5	1,512.9	1,475.9	1,485.7	1,414.0	1,579.2
Proportion not in the labor force	.134	.193	.244	.279	.280	.300	.319	.329	.262
Proportion reporting themselves as retired	.017	.032	.060	.089	.097	.079	.089	.075	.067
<b>Men ages 62–64</b>									
Annual hours worked	1,550.4	1,288.7	1,124.8	919.1	881.7	793.6	910.3	956.2	1,046.1
Proportion not in the labor force	.321	.440	.498	.588	.601	.638	.589	.558	.529
Proportion reporting themselves as retired	.096	.134	.213	.302	.338	.324	.294	.270	.249
Proportion claiming Social Security benefits	.275	.398	.470	.526	.545	.564	.529	.451	.473
<b>Men ages 65–69</b>									
Annual hours worked	807.9	564.3	474.1	392.5	396.7	387.3	446.0	539.7	493.9
Proportion not in the labor force	.603	.711	.746	.785	.773	.785	.750	.716	.737
Proportion reporting themselves as retired	.323	.424	.489	.584	.581	.562	.546	.513	.511
Proportion claiming Social Security benefits	.729	.824	.858	.878	.860	.870	.844	.805	.837

SOURCES: Current Population Survey Annual Social and Economic Supplement and author's calculations.

## Older workers and short-term jobs: patterns and determinants

*Data from the longitudinal Health and Retirement Study indicate that, among older Americans with work experience since age 50, approximately 12 percent of men and 32 percent of women never held a full-time career job; the retirement patterns of these non-full-time career older workers are diverse, just as they are for individuals with career jobs*

Kevin E. Cahill,  
Michael D. Giandrea,  
and  
Joseph F. Quinn

The retirement patterns of career workers have been studied extensively. One of the main findings of this literature is that a majority of older Americans with career jobs make at least one job change prior to leaving the labor force; only a minority leave a career job and the labor force simultaneously.<sup>1</sup> Kevin Cahill, Michael Giandrea, and Joseph Quinn found that 60 percent of older workers who left full-time career employment moved to short-duration or part-time employment (known as *bridge jobs*) before exiting the labor force.<sup>2</sup> In another paper, these authors found that a substantial minority (approximately 10 percent) of individuals with wage-and-salary career jobs move into self-employment later in life.<sup>3</sup> Likewise, evidence suggests that many workers (approximately 15 percent) with career jobs reenter the labor force after “retiring,” that these reentry decisions are often voluntary, and that they are frequently anticipated prior to the workers’ leaving career employment.<sup>4</sup> Collectively, these findings suggest that many career workers change jobs later in life and exit the labor force gradually.

An important question is whether the findings also apply to individuals who have never held a full-time career job. This question is relevant because a sizable fraction of older American workers—approximately 12 percent of men and about one-third of women—did not have a career job.<sup>5</sup> Thus, policy decisions based upon the existing literature may have different and unintended consequences for workers with intermittent work histories and a more tenuous connection to the labor force. For example, policies that promote work later in life are often proposed as a way to alleviate the financial burden of an aging population. As the ratio of workers to retirees shifts from about 3 to 1 today to near 2 to 1 by 2030, policymakers may keep looking for ways to encourage continued labor force participation among individuals who have reached traditional retirement ages.<sup>6</sup>

Retirement studies often analyze factors, such as wealth, private pensions, and employer-provided health insurance, that are more likely to be important to full-time career workers than they are to others. For example, Courtney Coile and Phillip Levine used data from the Health and Retirement Study, the Current Population Survey, and the Survey of Consumer Finances to examine the effect of wealth on labor force activ-

Kevin E. Cahill is a research economist at the Sloan Center on Aging & Work at Boston College, Chestnut Hill, MA; Joseph F. Quinn is the James P. McIntyre Professor of Economics in the Department of Economics at Boston College and is also affiliated with the Sloan Center on Aging & Work; Michael D. Giandrea is a research economist in the Office of Productivity and Technology, Bureau of Labor Statistics, Washington, DC. Email: giandrea.michael@bls.gov. All views expressed in this paper are those of the authors and do not necessarily reflect the views or policies of the Bureau of Labor Statistics. The Alfred P. Sloan Foundation supported this research through a grant to the Sloan Center on Aging & Work at Boston College.

ity,<sup>7</sup> and several studies from the 1990s addressed the role of defined-benefit pensions in the labor force behavior of older workers.<sup>8</sup> More recent studies have examined the impact of defined-contribution plans on retirement outcomes, but these, too, are still unlikely to apply to many non-full-time career workers.<sup>9</sup> Similarly, many studies have focused on the impact of health insurance on the work-vs.-leisure decisions of older Americans, but this coverage is also unlikely to apply to most part-time or short-duration workers.<sup>10</sup>

Other studies that do address topics related to non-career workers by and large do not focus on older individuals, or they focus on short-term involuntary job losses late in life. For example, examining how intermittent work histories affect the wages of women, Julie Hotchkiss and Melinda Pitts found that intermittency resulted in a wage penalty even at low levels of labor force absence.<sup>11</sup> In another study, Jay Stewart used data from the Current Population Survey and the National Longitudinal Survey of Youth to examine the work histories of noncareer men and found that it was generally the same cadre of men who did not work from year to year. Stewart, however, did not follow these men through retirement.<sup>12</sup> Two other papers, one by Julie Whittaker and the other by Sewin Chan and Ann Huff Stevens, focus on unemployment among older workers and the likelihood that they will drop out of the labor force permanently after a spell of unemployment.<sup>13</sup> Although these two papers examine the role that retirement income sources play in the labor force outcomes of older workers, a topic that is relevant to the present study, the research presented in them focuses on individuals who experienced a spell of nonemployment later in life, as opposed to those with an entire work history without full-time career employment.

This article combines two strands of the literature by examining the labor force behavior of older individuals with a history of short-duration jobs and comparing their behavior with that of older career workers. The next section provides a brief description of the dataset used—the Health and Retirement Study (HRS)—and the research methods employed. The third section examines demographic and economic characteristics and labor force outcomes, by career job status, and the last section summarizes and discusses the main findings.

## Data and methods

The HRS is a rich, nationally representative dataset with an initial base of more than 12,600 individuals

born between 1931 and 1941 (hence aged 51–61 in 1992).<sup>14</sup> The data are longitudinal, with interviews conducted every 2 years since 1992. Attrition across waves ranged from 4 percent to 9 percent per year, and after 16 years about 62 percent of the original HRS core sample remained.

The analysis that follows focuses on men and women who have never held a full-time career job, defined here as a job in which an individual works 1,600 or more hours per year for at least 10 years. To identify these individuals, information from the initial 1992 interview is combined with employment information from subsequent interviews to construct a labor force history for each individual. Questions in the first interview ask about a respondent's current job and all previous jobs that lasted 5 or more years. If a respondent was not working at the time of the first interview, he or she was asked about the most recent job held, if any. The large majority of men and women responding to the HRS had work experience later in life, as shown in table 1. More than 90 percent of men and nearly 80 percent of women had worked since age 50. Those with work experience since age 50 were stratified according to whether they had ever held a full-time career job. A sizable minority of individuals with work experience after age 50—12 percent of men and 32 percent of women—had not held a full-time career position.

## Results

*Demographic and economic characteristics by full-time career job status.* The demographic and economic characteristics

**Table 1. Sample size, by gender, survey participation, and work status, respondents ages 51–61 in 1992**

Survey participation and work status	Total	Men	Women
Participated in first wave:			
<i>n</i>	12,652	5,869	6,873
Worked since age 50:			
<i>n</i>	10,639	5,353	5,286
Percentage of all respondents	84	91	78
No full-time career job in work history:			
<i>n</i>	2,298	633	1,665
Percentage of respondents who have worked since age 50	22	12	32
Full-time career job in work history:			
<i>n</i>	8,312	4,719	3,593
Percentage of respondents who have worked since age 50	78	88	68

NOTE: Full-time career job status could not be determined for 1 man and 28 women, all of whom were deleted from the sample.

SOURCE: Authors' calculations based on Health and Retirement Study.

examined, stratified by gender and full-time career job status, are based on responses from the first interview in 1992. On average, for HRS respondents in 1992 who had worked since age 50, those who had never held a full-time career job were older and in poorer health than those who did hold a full-time career job, and the former also were less likely to have a college degree. (See table 2.)<sup>15</sup> Men without full-time career job experience were less likely to

be married than men with such experience, but their female counterparts were slightly more likely to be married. One-half of the men who never had a full-time career job had an employed spouse, compared with 57 percent of those with full-time career job experience. This statistic may indicate that employment and attachment to the labor force are complementary among spouses, as some of the literature suggests.<sup>16</sup> The lower marriage rates among

**Table 2. Demographic characteristics in 1992, by gender and full-time career job status, respondents with work experience since age 50**

[In percent]

Characteristic	Total	Men			Women		
		All men	No full-time career job in work history	Full-time career job in work history	All women	No full-time career job in work history	Full-time career job in work history
Age: <sup>1</sup>							
Younger than 54	37	29	20	30	45	33	51
54–57	29	29	27	30	29	32	27
58–61	25	25	31	25	25	33	21
62 and older	9	17	22	16	2	2	2
Subjective health status: <sup>1</sup>							
Excellent or very good	54	52	36	54	56	48	59
Good	29	30	33	30	27	27	28
Fair or poor	18	18	31	17	17	25	13
Educational attainment: <sup>1</sup>							
College degree	19	22	18	23	16	12	18
Less than college degree	81	78	82	77	84	88	82
Marital status: <sup>1</sup>							
Married	82	88	81	89	75	77	74
Not married	18	12	19	11	25	23	26
Children: <sup>2</sup>							
Dependent children	15	17	19	16	14	12	15
No dependent children	85	83	81	84	86	88	85
Spouse's health status: <sup>3</sup>							
Excellent or very good	53	56	48	56	51	50	51
Good	28	27	29	27	29	31	29
Fair or poor	18	17	23	16	20	19	20
Spouse's employment status: <sup>3</sup>							
Employed spouse	55	56	50	57	55	53	55
No employed spouse	45	44	50	43	45	47	45
<i>n</i>	10,639	5,352	633	4,719	5,258	1,665	3,593

<sup>1</sup> Difference by full-time career job status is significant at  $p < .01$  among both men and women.

<sup>2</sup> Difference by full-time career job status is significant at  $p < .05$  among women.

<sup>3</sup> Difference by full-time career job status is significant at  $p < .01$

among men.

NOTE: Detailed entries may not sum to totals because of rounding. Sample size *n* for spouse's health status is 4,602 for men and 3,814 for women.

SOURCE: Authors' calculations based on Health and Retirement Study.

women likely reflect a combination of women marrying older men, on average, and higher mortality rates among men.

The economic characteristics of the HRS respondents as of 1992 are presented in table 3. Men and women without a full-time career job in their work history were less likely than those with career jobs to have health insurance and also much less likely to have a defined-benefit or a defined-contribution pension on the job they reported in the first wave. In fact, two-thirds of these men and more than three-quarters of the women had no pension, compared with 31 percent of the men and 39 percent of the women with career job experience.

Consistent with their lower levels of education, men and women who never held a full-time career job were almost twice as likely as those with a full-time career job to be employed in a blue-collar position that did not require highly skilled labor.<sup>17</sup> Moreover, the wage distributions of those with and those without a full-time career job in their work history were significantly different for both men and women. Men who never had a full-time career job were 3 times as likely as full-time career men to be making \$6 to \$10 per hour on their 1992 job and were half as likely to be earning between \$20 and \$50 per hour. Women who never held a full-time career job were about twice as likely as women who did to earn between \$6 and \$10 per hour and nearly half as likely to earn between \$20 and \$50 per hour.

Individuals without full-time career jobs also had lower levels of wealth than others. More than one-half of the men with no full-time career job in their work history had nonpension financial wealth of less than \$25,000, compared with about one-third of men with a career job. At the other end of the wealth spectrum, less than one-quarter of the men with no full-time career job in their work history had nonpension financial wealth of \$100,000 or more, compared with more than one-third of men with full-time career job experience. Among men, increased labor force attachment is associated with increased nonpension wealth, a relationship consistent with more and larger paychecks providing increased opportunities for saving. Among women, however, differences in nonpension financial wealth by full-time career job status were much less pronounced. This finding may reflect the extent to which wealth among women is dependent on marital status.

*Retirement outcomes.* The labor force outcomes examined in this article include work status and work intensity (i.e., part-time versus full-time work) at the time of each biennial HRS interview and the number and types

of job switches since the first interview. Not surprisingly, respondents were less likely to be working in later survey waves, regardless of career job status. (See chart 1). The patterns for men and women were remarkably similar, although women were somewhat more likely to be working in most survey years, reflecting in part the facts that (1) women with work experience since age 50 were, as a whole, younger than their male counterparts and (2) the spouses could be younger than the minimum age in the age range for respondents. In all survey years for both men and women, individuals with a full-time career job in their work history were significantly more likely to be working than those without.

Although the work status patterns of HRS respondents were similar by full-time career job status (i.e., a gradual monotonic decline in employment with age), those with and those without full-time career jobs in their work histories had different experiences with respect to part-time employment. (See chart 2.) As the respondents aged, part-time employment became increasingly common among individuals with a full-time career job in their work history, with substantial numbers of them moving into part-time work. When the career job respondents were 51 to 61 years old in 1992, only 10 percent of the men and 15 percent of the women were working part time. These percentages increased steadily to 50 or more percent (of a reduced number who were working at all) by 2008. In contrast, at the time of the first interview, the percentage of individuals who had never had a full-time career job and who were working part time was much higher (66 percent among men and 84 percent among women), and the percentage remained high and relatively stable (near 60 percent or above for men and 75 percent or above for women) through 2008. Those without full-time job experience are primarily part-time workers when they reach age 50 and beyond.

Job switching is also an important part of labor force transitions later in life. Table 4 shows the number of job switches since 1992 among those respondents who were working at the time of the first interview. Overall, men and women without full-time career jobs were significantly less likely to still be on their 1992 job (or to be last observed on their 1992 job) in 2008 and were significantly more likely to have left the labor force directly from their 1992 job, compared with those who had had a full-time career job in their work history. These two differences in behavior largely offset each other, so the numbers of job switches since 1992 were similar by career job status for both men and women: about one-third had one or two job switches, and relatively few respondents—6 or 7 percent—had more

**Table 3. Economic characteristics in 1992, by gender and full-time career job status, respondents with work experience since age 50**

[In percent]

Characteristic	Total	Men			Women		
		All men	No full-time career job in work history	Full-time career job in work history	All women	No full-time career job in work history	Full-time career job in work history
Health insurance status: <sup>1</sup>							
Not covered on first-wave job	14	13	28	11	14	21	11
Covered and would maintain coverage	78	79	67	80	78	76	79
Covered and would lose coverage	8	9	5	9	8	3	10
Pension status: <sup>1</sup>							
Defined benefit only	37	44	20	47	30	14	38
Defined contribution only	16	16	11	17	17	9	21
Defined benefit and defined contribution	4	5	3	5	2	1	3
No pension	43	35	67	31	51	77	39
Worker status: <sup>2</sup>							
Self-employed	14	18	21	17	11	12	10
Wage and salary	86	82	79	83	89	88	90
Occupation status: <sup>1</sup>							
White collar, highly skilled	31	32	28	33	29	20	31
White collar, other	26	16	16	16	37	32	38
Blue collar, highly skilled	24	37	32	38	11	9	11
Blue collar, other	19	15	25	14	24	39	20
Wage rate: <sup>1</sup>							
\$6.00–\$9.99/hour	17	12	30	10	22	37	18
\$10.00–\$19.99/hour	29	21	26	21	36	36	36
\$20.00–\$49.99/hour	38	44	23	46	33	20	37
\$50.00/hour or more	16	23	21	23	8	7	9
Wealth: <sup>3</sup>							
\$0 or less	9	8	19	6	11	13	10
\$1–\$24,999	32	30	37	30	33	33	33
\$25,000–\$49,999	13	14	11	14	13	11	14
\$50,000–\$99,999	15	15	11	16	14	13	15
\$100,00–\$499,999	24	25	16	26	23	22	23
\$500,00 or more	7	8	7	8	6	8	5
Homeownership status: <sup>3</sup>							
Do not own home	18	16	30	15	19	22	18
Own home	82	84	70	85	81	78	82
<i>n</i>	10,639	5,352	633	4,719	5,258	1,665	3,593

<sup>1</sup> Percentages based on respondents who were working in first wave; difference by full-time career job status is significant at  $p < .01$  among both men and women.

<sup>2</sup> Percentages based on respondents who were working in first wave; difference by full-time career job status is significant at  $p < .05$  among both men and women.

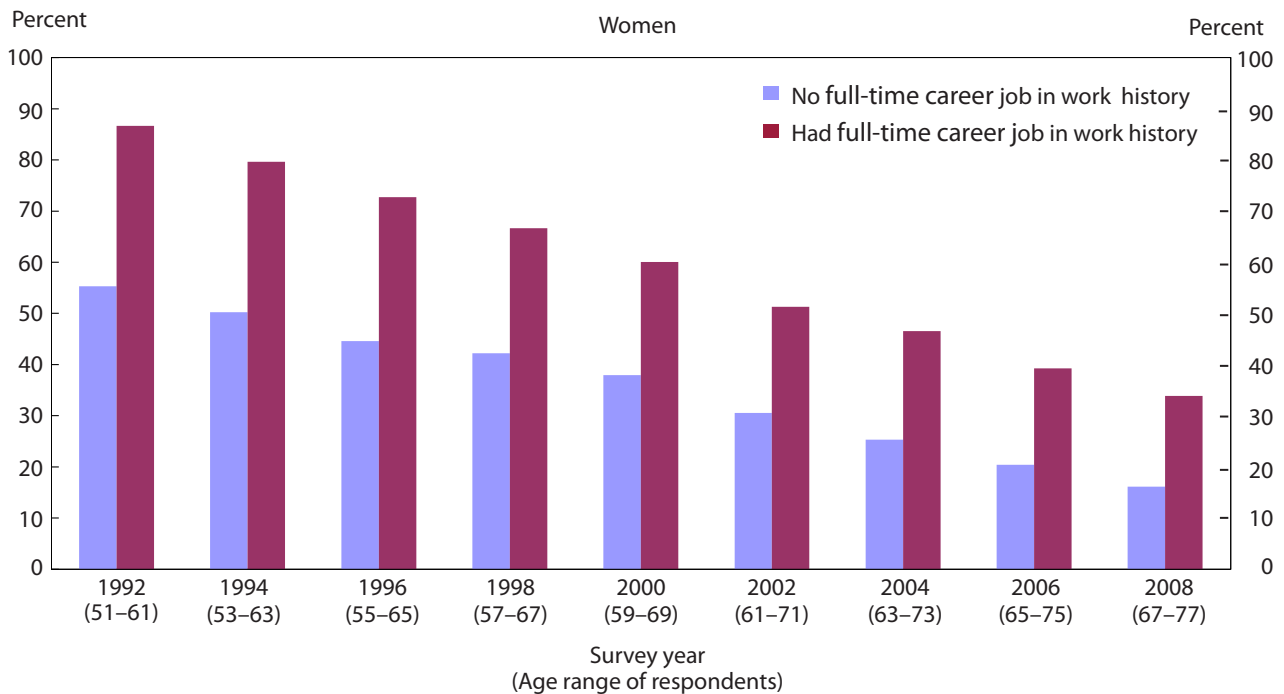
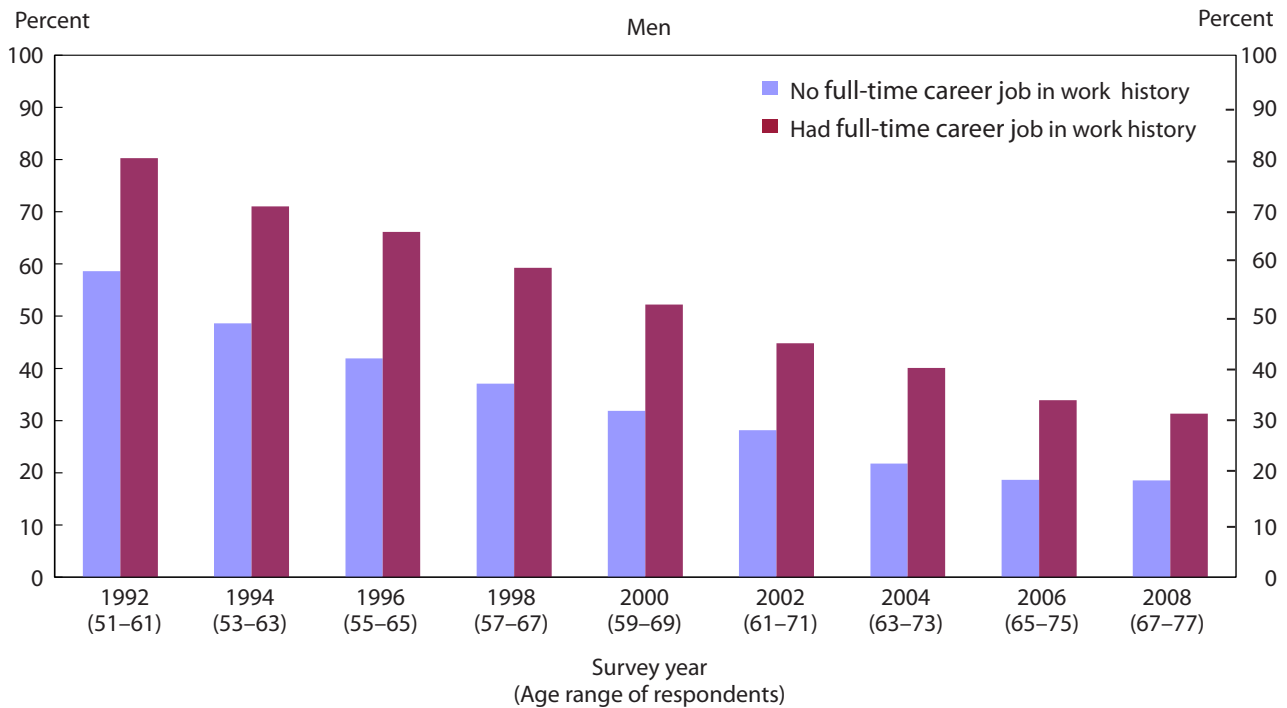
<sup>3</sup> Difference by full-time career job status is significant at  $p < .01$  among both men and women.

NOTE: Detailed entries may not sum to totals because of rounding. Sample size for health insurance status is 4,959 for men and 4,767 for women. Sample size for occupation status is 4,159 for men and 4,058 for women.

SOURCE: Authors' calculations based on Health and Retirement Study.

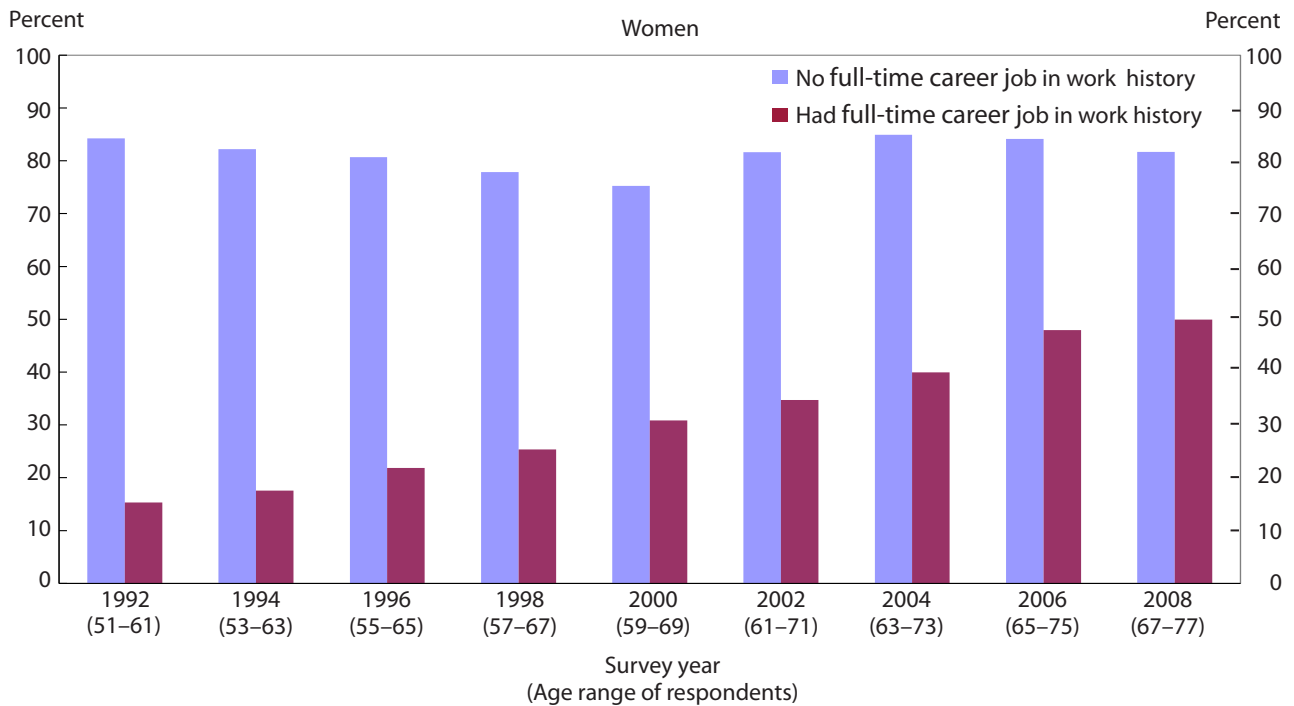
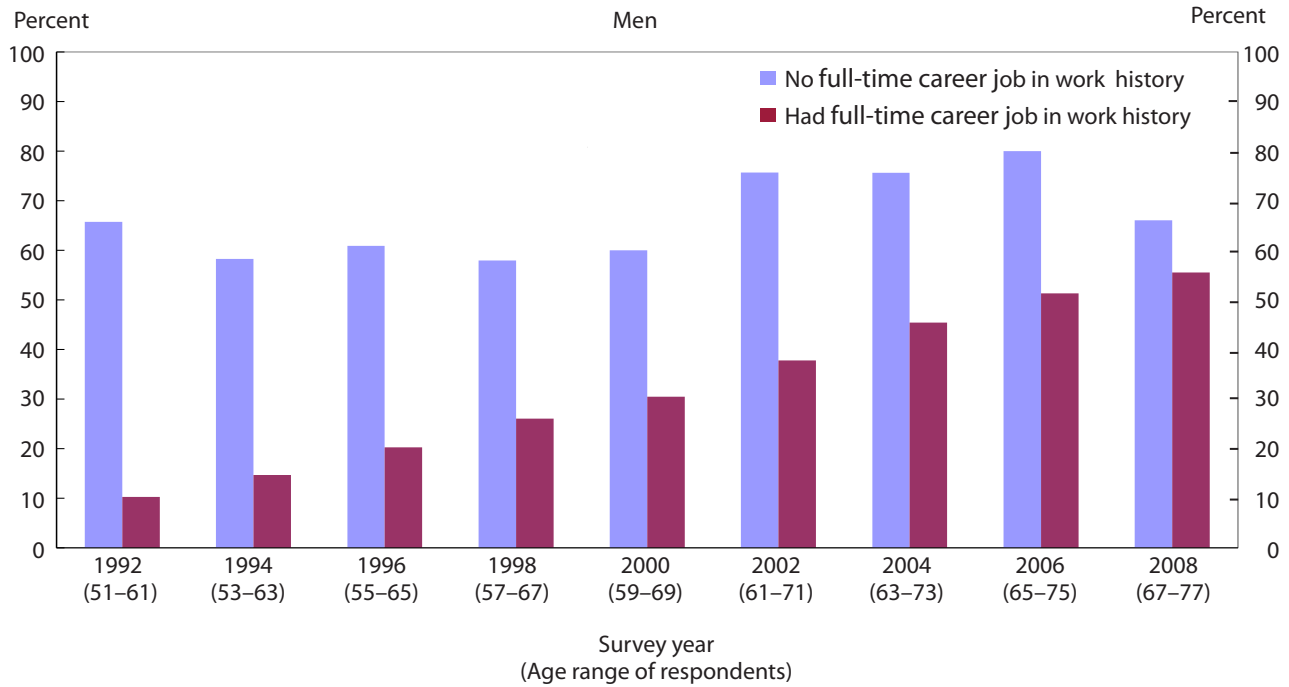


**Chart 1. Percentage working, by full-time career job status, 1992–2008, respondents who have worked since age 50**



SOURCE: Authors' calculations based on Health and Retirement Study.

**Chart 2. Percentage working part time, by full-time career job status, 1992–2008, respondents who are working in each wave**



SOURCE: Authors' calculations based on Health and Retirement Study.

**Table 4. Number of observed job switches since 1992, by gender and full-time career job status, respondents working in 1992**

[In percent]							
First-wave job status and number of job switches <sup>1</sup>	Total	Men			Women		
		All men	No full-time career job in work history	Full-time career job in work history	All women	No full-time career job in work history	Full-time career job in work history
Still on, or last observed on, first-wave job	17	17	8	18	16	11	18
Exited directly from first-wave job	43	43	53	42	43	50	42
Number of job switches:							
1	23	24	26	24	23	23	23
2	10	10	8	10	10	10	10
3	4	4	3	4	4	3	4
4 or more	3	2	3	2	3	3	3
<i>n</i>	8,206	4,173	371	3,802	4,033	921	3,112

<sup>1</sup> Difference by full-time career job status is significant at  $p < .01$  among both men and women.

NOTE: Detailed entries may not sum to totals because of rounding.  
SOURCE: Authors' calculations based on Health and Retirement Study.

than two job changes, since the first interview.

Table 5 details the types of job changes among those who were working in 1992. Slightly more than one-third of men and women who had work experience since age 50 and who were working full time in 1992 moved from full-time to part-time work, with non-full-time career job respondents being somewhat more likely than career respondents to do so. Switches from self-employment to wage-and-salary work were more than twice as likely as switches from wage-and-salary employment to self-employment.<sup>18</sup> Specifically, 26 percent of men and 31 percent of women who were self-employed in 1992 subsequently reported a switch to wage-and-salary work, whereas 13 percent of men and 10 percent of women who were wage-and-salary workers in 1992 subsequently reported a switch to self-employment. Switches from wage-and-salary work to self-employment were similar by full-time career status; however, switches from self-employment to wage-and-salary work were less common among those without a full-time career job in their work history. Switches from white-collar to blue-collar positions and vice versa were not significantly different by career job status.

Most workers experienced changes in hourly wage rates when a job switch was made. The distributions were similar among men and women. About two-thirds of job switches involved a wage change of more than 10 percent, with declines (38 percent) outweighing increases (29 percent). A small percentage of job changers (13 percent) suffered wage reductions of 51 percent or more, and

another quarter had wage decreases of 11 to 50 percent. About 20 percent enjoyed wage gains in the range from 11 percent to 50 percent, with another 10 percent doing even better than that.

When wage changes are disaggregated by career job status, the two groups of women are similar. Among men, the percentages suffering wage declines were nearly identical (41 percent and 42 percent), but men with no career job history were about 10 percentage points less likely than men with a full-time career job in their work history to have a wage change of less than 10 percent and were 10 percentage points more likely to enjoy a wage increase of more than 10 percent. The difference may be because the noncareer men were starting from a lower wage base, from which a raise of 10 percent or more was easier to attain.

*Multivariate analysis.* Multivariate analysis is used to determine whether the existence of a full-time career job in an individual's work history affects the person's likelihood of working as he or she approaches traditional retirement ages. In general, one would expect those who never held a full-time career job to be less attached to the labor force and therefore less likely to be working at any given time. This subsection presents two multivariate models. The first model explores the timing of the retirement decision, defined here as leaving the labor force, with career status as a regressor. The model was estimated for men and women separately, with logistic regression used on the sample that includes just those with work experience since age 50. Table 6 presents the marginal effects from the re-

**Table 5. Number of observed job switches since 1992, by gender and full-time career job status, respondents working in 1992**

[In percent]

Work status	Total	Men			Women		
		All men	No full-time career job in work history	Full-time career job in work history	All women	No full-time career job in work history	Full-time career job in work history
Full time or part time:							
Any switch from full time to part time	36	35	41	35	36	39	36
Any switch from part time to full time <sup>1</sup>	19	22	22	6	18	18	13
Wage and salary or self-employed:							
Any switch from wage and salary to self-employed	12	13	13	14	10	10	9
Any switch from self-employed to wage and salary	28	26	21	27	31	28	33
White collar or blue collar:							
Any switch from white collar to blue collar	12	15	11	15	8	7	8
Any switch from blue collar to white collar	11	10	7	10	12	11	12
Hourly wage rates: <sup>2</sup>							
Reduction in wage of 51 percent or more	13	16	17	16	10	12	9
Reduction in wage of 11 percent to 50 percent	25	25	25	25	25	23	25
Reduction in wage of up to 10 percent or increase in wage of up to 10 percent	34	31	22	32	36	35	36
Increase in wage of 11 percent to 50 percent	19	17	19	17	20	19	21
Increase in wage of 51 percent to 100 percent	4	4	5	4	4	4	4
Increase in wage of 101 percent or more	6	7	12	6	5	6	5

<sup>1</sup> Difference by full-time career job status at  $p < .01$  among both men and women.  
<sup>2</sup> Difference by full-time career job status is significant at  $p < .05$  among men.

NOTE: Detailed entries may not sum to totals because of rounding.  
SOURCE: Authors' calculations based on Health and Retirement Study.

gressions, evaluated at the sample means.<sup>19</sup>

The results reveal that both men and women were more likely to be working the younger and healthier they were. At age 62, when most respondents first became eligible for Social Security retirement benefits, there was a large decrease in their likelihood of working. Respondents also were more likely to be working, all else being equal, if they were self-employed, had a spouse who was working (suggesting joint retirement decisions), had a spouse in poor health (women only), or were employed in a white-collar occupation or a high-skill blue-collar occupation. Respondents were less likely to be working if they were in fair or poor health or if their spouse was in excellent or very good health.

Older workers responded to economic incentives as well. Men and women with no health insurance (and

therefore no benefits to lose) or with health insurance that was portable (i.e., that would not be lost if they left their job) were significantly less likely to remain working than were those with health insurance that was not portable. Men and women with defined-benefit pension plans were significantly less likely to be working than those without pensions, a finding that is consistent with the early-retirement incentives (or, equivalently, work disincentives) typically found in such plans. Men and women with a full-time career job in their work history were significantly more likely (16 percentage points for women, 21 percentage points for men) to be working, all else being equal, compared with their counterparts without career job experience. This finding reinforces the differences by full-time career status noted earlier with respect to the percentage of

**Table 6. Marginal effects from logistic regression, dependent variable = working at time *t*, respondents with work experience since age 50**

Category	Men		Women	
	Marginal effect	<i>p</i> -value	Marginal effect	<i>p</i> -value
Full-time career status:				
No full-time career job in work history	–	–	–	–
Full-time career job in work history	0.2143	0.000	0.1626	0.000
Age:				
57 or younger	–	–	–	–
58–61	–.1352	.000	–.1318	.000
62–64	–.3488	.000	–.2946	.000
65–69	–.4474	.000	–.4015	.000
Older than 70	–.5733	.000	–.5152	.000
Self-assessed health:				
Excellent/very good	.0624	.000	.0473	.000
Good	–	–	–	–
Fair/poor	–.2317	.000	–.2172	.000
Spouse's health:				
Excellent/very good	–.0476	.000	–.0387	.001
Good	–	–	–	–
Fair/poor	.0147	.287	.0398	.003
Education:				
Less than high school	.0127	.401	.0353	.024
High school	–	–	–	–
College degree	.0248	.133	–.0096	.582
Race:				
Black	.0108	.552	.0572	.000
White	–	–	–	–
Other	.0225	.573	.0669	.099
Married	.0425	.077	–.0425	.067
Children at home	.0283	.034	.0315	.003
Spouse employed	.1703	.000	.1837	.000
Health insurance status:				
Portable	–.4924	.000	–.4867	.000
Not portable	–	–	–	–
None	–.4968	.000	–.4755	.000
Pension status:				
Defined benefit	–.2652	.000	–.1101	.000
Defined contribution	.0064	.646	.0026	.853
Defined benefit and defined contribution	.0514	.110	.0416	.213
None	–	–	–	–
Occupational status:				
White collar, high skill	.2414	.000	.2570	.000
White collar, other	.2476	.000	.2884	.000
Blue collar, high skill	.2074	.000	.2281	.000
Blue collar, other	–	–	–	–
Self-employed	.1695	.000	.1623	.000
Wage	.0032	.000	.0061	.000
Wage squared	.0000	.002	.0000	.000
Wealth	–.0014	.000	–.0017	.000
Wealth squared	.0000	.000	.0000	.000
Own home	.0195	.213	.0219	.127

See notes at end of table.

**Table 6. Continued—Marginal effects from logistic regression, dependent variable = working at time *t*, respondents with work experience since age 50**

Category	Men		Women	
	Marginal effect	<i>p</i> -value	Marginal effect	<i>p</i> -value
Year:				
1992	.2408	.000	.2375	.000
1994	.1403	.000	.1778	.000
1996	.0937	.000	.1193	.000
1998	.0834	.000	.1319	.000
2000	.0476	.021	.0996	.000
2002	.0324	.090	.0639	.001
2004	.0383	.019	.0787	.000
2006	.0124	.212	.0491	.000
2008	–	–	–	–

NOTE: Dash indicates reference, or base, category.

SOURCE: Authors' calculations based on Health and Retirement Study.

respondents working in each wave. (See chart 1.)

The next set of findings examines the determinants of job switching among the subset of respondents who were working at the time of the first interview. Over the observation period, each respondent with a job in 1992 either remained on the 1992 job, switched to another job (e.g., a bridge job for those moving from a full-time career job), or left the labor market directly from the 1992 job. As shown in table 7, men were more likely to remain working on the 1992 job if they were younger, were in excellent or very good health, had a college degree, or were self-employed, and were less likely to remain working on the first-wave job if they had a defined-benefit pension plan (again consistent with the early-retirement incentives typically incorporated into such plans). Men also were more likely to switch jobs before exiting the labor force if they were younger or had health insurance (portable or not), and were less likely to switch if they were blue-collar workers, were self-employed, or had a defined-benefit pension. Men who had a full-time career job in their work history were more likely (by a statistically significant 15 percentage points) to remain on the job they held in 1992 than those who never held a full-time career job, as one might expect, but were slightly less likely (3.5 percentage points) to switch jobs prior to exiting the labor force, although the latter effect was not statistically significant. The results were similar, but smaller, for women; still, women with defined-benefit pensions and women with defined-contribution pensions were more likely to remain working on the first-wave job and less likely to make at least one job switch. (See table 7.)

THIS ARTICLE HAS EXAMINED THE RETIREMENT decisions of workers who have had less attachment to the labor force than those workers who are typically studied in the retirement literature. The aim was to examine more closely the timing of retirement and the number and types of job switches that are made later in life by older workers who have not had a full-time career job in their work histories. These workers constitute 12 percent of the men and 32 percent of the women in the sample with work experience after age 50.

In each survey year, individuals who never held a full-time career job were less likely to be working than those who have or had held career jobs—a not unexpected finding. However, individuals without a full-time career job in their work history were found to change jobs later in life just as frequently as those with career jobs. The types of job switches were similar as well, including switches from wage-and-salary employment to self-employment and switches between white-collar and blue-collar jobs. Both groups that switched jobs later in life were more likely to experience wage reductions (of more than 10 percent) than enjoy wage increases (also of more than 10 percent).

Some notable differences by full-time career status do exist. For example, part-time employment became more pronounced over time for full-time career individuals, whereas it remained fairly constant (and high) among individuals without a full-time career job. Also, the percentage of men without a full-time career job who were working part time was near or above 60 percent in all survey years; for women, the percentage was above 70 percent. By contrast, among individuals with a full-time career job,

**Table 7. Marginal effects from logistic regression, dependent variable = still on 1992 job, switched jobs, or direct exit,<sup>1</sup> respondents working in 1992**

Category	Men				Women			
	Remained on first-wave job		Experienced at least one job switch		Remained on first-wave job		Experienced at least one job switch	
	Marginal effect	p-value	Marginal effect	p-value	Marginal effect	p-value	Marginal effect	p-value
Full-time career status:								
No full-time career job in work history	-	-	-	-	-	-	-	-
Full-time career job in work history	0.1476	0.000	-0.0347	0.260	0.0420	0.012	0.0162	0.459
Age in 1992:								
51-52	.1063	.000	.1127	.000	.1302	.003	.2235	.000
53-54	.0712	.002	.0897	.003	.0964	.015	.1251	.012
55-56	.0642	.006	.0576	.062	.1061	.009	.0950	.060
57-58	.0340	.155	.0020	.949	.0398	.286	.1351	.006
59-60	.0179	.472	.0119	.707	.0094	.807	.0938	.057
61	-	-	-	-	-	-	-	-
Self-assessed health:								
Excellent/very good	.0324	.018	.0270	.139	.0347	.012	.0436	.030
Good	-	-	-	-	-	-	-	-
Fair/poor	-.0056	.790	-.0572	.037	-.0037	.843	-.1050	.000
Spouse's health:								
Excellent/very good	-.0008	.958	.0375	.056	.0035	.789	.0131	.550
Good	-	-	-	-	-	-	-	-
Fair/poor	.0107	.601	-.0050	.855	.0140	.414	.0114	.695
College degree	.0529	.001	-.0178	.421	-.0015	.921	.0048	.848
Race:								
Black	.0422	.021	-.0431	.092	.0027	.848	-.0054	.816
White	-	-	-	-	-	-	-	-
Other	.0017	.964	-.0108	.841	.0572	.080	.0174	.770
Married	.0222	.326	.0496	.108	.0074	.674	-.0283	.320
Children at home	.0073	.623	.0160	.452	.0288	.048	.1041	.000
Spouse employed	-.0252	.052	.0028	.877	-.0112	.403	-.0205	.358
Occupational status:								
Blue collar, high skill	.0292	.082	-.0782	.001	-.0314	.181	-.0126	.700
Blue collar, other	.0366	.081	-.1231	.000	.0340	.043	-.0412	.126
White collar, high skill	-	-	-	-	-	-	-	-
White collar, other	.0182	.323	-.0249	.320	.0256	.062	-.0270	.233
Health insurance status:								
Portable	-.0055	.693	.0338	.074	-.0117	.336	.0154	.450
Not portable	-.0366	.093	.0941	.001	-.0326	.115	.0943	.002
None	-	-	-	-	-	-	-	-
Self-employed	.1333	.000	-.0819	.001	.0843	.000	-.0586	.040
Pension status:								
Defined benefit	-.0355	.016	-.0465	.029	.0296	.051	-.1405	.000
Defined contribution	-.0033	.847	.0269	.279	.0455	.010	-.0864	.000
Defined benefit and defined contribution	-.0798	.009	.1269	.001	-.0193	.586	.1273	.015
None	-	-	-	-	-	-	-	-
Own home	-.0149	.396	-.0322	.171	-.0016	.911	-.0412	.069
Wage	.0001	.693	-.0009	.161	.0003	.676	-.0004	.506
Wage squared	.0000	.424	.0000	.391	.0000	.393	.0000	.385
Wealth	.0043	.060	-.0026	.517	-.0025	.322	-.0009	.822
Wealth squared	.0000	.331	.0001	.553	.0000	.408	.0000	.793

<sup>1</sup> Direct exit from the 1992 job is the reference category with which the other two alternatives are compared.

NOTE: Dash indicates reference, or base, category. SOURCE: Authors' calculations based on Health and Retirement Study.

the percentage working part time increased steadily from 1992 to 2008, moving from approximately 10 percent in the first wave to around 50 percent when the respondents were 65 years or older.<sup>20</sup>

Respondents with career jobs generally rated their health status higher than those without career jobs and had jobs with more desirable characteristics, such as pension and health insurance benefits. A question remains, therefore, about the extent to which the shift to defined-contribution pension plans, such as 401(k)s, will affect the retirement decisions of noncareer workers, if at all. The descriptive statistics examined in this study reveal that the large majority—two-thirds of non-full-time career male respondents and three-quarters of non-full-time career female respondents—did not have an employer-provided pension on their 1992 job. For these workers, the shift away from defined-benefit pensions will be of little consequence. Further, more than one-half of non-full-time career men and 46 percent of non-full-time career women had less than \$25,000 in savings. These two findings combined—the paucity of defined-benefit pensions and the low level of savings—indicate that the traditional three-legged stool of retirement income—employer pensions, savings, and Social Security—appears to have only one strong leg for most non-full-time career workers.

A theme in the recent retirement literature is the importance of a fourth leg on the traditional retirement income stool: earnings. With two of the three legs missing for most non-full-time career workers, reliance on earnings later in life is very real for these workers. By switching jobs, these workers appear flexible with respect to the kind of work they do later in life, and many of them weather the fluctuations that come with late-life job changes, including reductions in wages. Earnings from work play a key role for many non-full-time career workers who would otherwise have to rely solely on Social Security.

One well-established conclusion from the retirement literature is that retirement is not a one-time, permanent event for many career workers. In fact, the majority of older Americans retire gradually, in stages, and often re-enter the labor market after a significant time away from it. The findings presented in this article show that, like the retirement decisions of full-time career workers, those of noncareer workers are diverse. This flexibility with respect to the labor force withdrawal patterns of both career and noncareer older workers may be the key to retirement income security in the years ahead, as earnings from work fill the gap where other retirement income sources fall short. □

## Notes

<sup>1</sup> See Joseph F. Quinn, “Retirement Patterns and Bridge Jobs in the 1990s,” EBRI Issue Brief No. 206 (Washington, DC, Employee Benefit Research Institute, February 1999), [http://www.ebri.org/publications/ib/index.cfm?fa=ibDisp&content\\_id=119](http://www.ebri.org/publications/ib/index.cfm?fa=ibDisp&content_id=119); Joseph F. Quinn, Kevin E. Cahill, and Michael D. Giandrea, “Early Retirement: The Dawn of a New Era?” TIAA-CREF Institute Policy Brief (New York, TIAA-CREF Institute, July 2011), [http://www.tiaa-cref.org/institute/research/briefs/pb\\_earlyretirement0711.html](http://www.tiaa-cref.org/institute/research/briefs/pb_earlyretirement0711.html); Michael D. Giandrea, Kevin E. Cahill, and Joseph F. Quinn, “Bridge Jobs: A Comparison Across Cohorts,” *Research on Aging*, September 2009, pp. 549–576; and Christopher J. Ruhm, “Bridge Jobs and Partial Retirement,” *Journal of Labor Economics*, October 1990, pp. 482–501.

<sup>2</sup> See Kevin E. Cahill, Michael D. Giandrea, and Joseph F. Quinn, “Retirement Patterns from Career Employment,” *The Gerontologist*, August 2006, pp. 514–523.

<sup>3</sup> See Michael D. Giandrea, Kevin E. Cahill, and Joseph F. Quinn, “Self-Employment Transitions among Older American Workers with Career Jobs,” Working Paper Series WP-418 (U.S. Bureau of Labor Statistics, April 2008), <http://www.bls.gov/osmr/abstract/ec/ec080040.htm>.

<sup>4</sup> See Nicole Maestas, “Back to Work: Expectations and Realizations of Work after Retirement,” *Journal of Human Resources*, summer 2010, pp. 719–748; and Kevin E. Cahill, Michael D. Giandrea, and Joseph F. Quinn, “Reentering the Labor Force after Retirement,” *Monthly Labor Review*, June 2011, pp. 34–42, <http://www.bls.gov/opub/mlr/2011/06/art2full.pdf>.

<sup>5</sup> Cahill, Giandrea, and Quinn, “Retirement Patterns.”

<sup>6</sup> See *The 2011 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Insurance Trust Funds* (Washington, DC, U.S. Government Printing Office, 2011), p. 53; Alicia H. Munnell, “Working Longer: A Potential Win-Win Proposition,” in Teresa Ghilarducci and John Turner, eds., *Work Options for Older Americans* (Notre Dame, IN, University of Notre Dame Press, 2007), pp. 11–43; and Nicole Maestas and Julia Zissimopoulos, “How Longer Work Lives Ease the Crunch of Population Aging,” *Journal of Economic Perspectives*, winter 2010, pp. 139–160.

<sup>7</sup> See Courtney C. Coile and Phillip B. Levine, “Bulls, Bears, and Retirement Behavior,” *Industrial and Labor Relations Review*, April 2006, pp. 408–429.

<sup>8</sup> See, for instance, Andrew A. Samwick, “New Evidence on Pensions, Social Security, and the Timing of Retirement,” *Journal of Public Economics*, vol. 70, no. 2, 1998, pp. 207–236; Patricia M. Anderson, Alan L. Gustman, and Thomas L. Steinmeier, “Trends in Male Labor Force Participation and Retirement: Some Evidence on the Role of Pensions and Social Security in the 1970s and 1980s,” *Journal of Labor Economics*, October 1999, pp. 757–783; and Christopher J. Ruhm, “Secular Changes in the Work and Retirement Patterns of Older Men,” *The Journal of Human Resources*, spring 1995, pp. 362–385.

<sup>9</sup> See Alicia H. Munnell, Kevin E. Cahill, and Natalia A. Jivan, “How Has the Shift to 401(k)s Affected the Retirement Age?” Issue Brief no. 13 (Boston, Center for Retirement Research, September 2003); Leora Friedberg and Anthony Webb, “Retirement and the Evolution of Pension Structure,” *Journal of Human Resources*, spring 2005, pp. 281–308; and Alicia H. Munnell and Pamela Perun, “An Update



on Private Pensions,” Issue Brief no. 50 (Boston, Center for Retirement Research, August 2006).

<sup>10</sup> See, for example, Jonathan Gruber and Brigitte Madrian, “Health Insurance Availability and the Retirement Decision,” *American Economic Review*, September 1995, pp. 938–948; Alan L. Gustman and Thomas L. Steinmeier, “Employer Provided Health Insurance and Retirement Behavior,” *Industrial and Labor Relations Review*, October 1994, pp. 124–140; Lynn A. Karoly and Jeannette Rogowski, “The Effect of Access to Post-Retirement Health Insurance on the Decision to Retire Early,” *Industrial and Labor Relations Review*, October 1994, pp. 103–123; David M. Blau and Donna B. Gilleskie, “The Role of Retiree Health Insurance in the Employment Behavior of Older Men,” *International Economic Review*, May 2008, pp. 475–514; and Eric French and John Bailey Johns, “The Effects of Health Insurance and Self-Insurance on Retirement Behavior,” Working Paper 2007-170 (Ann Arbor, MI, Michigan Retirement Research Center, October 2007).

<sup>11</sup> See Julie L. Hotchkiss and M. Melinda Pitts, “Female Labour Force Intermittency and Current Earnings: Switching Regression Model with Unknown Sample Selection,” *Applied Economics*, March 2005, pp. 545–560.

<sup>12</sup> See Jay Stewart, “Male Nonworkers: Who Are They and Who Supports Them?” *Demography*, August 2006, pp. 537–552.

<sup>13</sup> See Julie Whittaker, *Unemployment and Older Workers*, CRS Report to Congress (Congressional Research Service, August 29, 2007); and Sewin Chan and Ann Huff Stevens, “Job Loss and Employment Patterns of Older Workers,” *Journal of Labor Economics*, April 2001, pp. 484–521.

<sup>14</sup> For a description of the HRS, see F. Thomas Juster and Richard Suzman, “An Overview of the Health and Retirement Study,” *Journal of Human Resources*, vol. 30, special issue, 1995, pp. S7–S56; and *Growing Older in America: The Health & Retirement Study* (U.S. Department of Health and Human Services, 2007), <http://www.nia.nih.gov/health/>

**publication/growing-older-america-health-and-retirement-study.**

<sup>15</sup> The HRS sample includes the spouses of age-eligible respondents, a factor that explains the higher percentage of women who were less than 54 years old in 1992 (45 percent), compared with men (29 percent).

<sup>16</sup> For an analyses of the retirement patterns of couples, see Courtney C. Coile, “Retirement Incentives and Couples’ Retirement Decisions,” *Topics in Economic Analysis and Policy*, July 2004, pp. 1–28; and Kanika Kapur and Jeannette Rogowski, “The Role of Health Insurance in Joint Retirement among Married Couples,” *Industrial and Labor Relations Review*, April 2007, pp. 397–407.

<sup>17</sup> Occupations are categorized as blue or white collar and then as highly skilled or not highly skilled. Individuals working in managerial or professional occupations are considered as being white-collar, highly skilled workers. Those working in technical, sales, and administrative support occupations are categorized as being in white-collar positions that are not highly skilled. Workers in precision production, craft, and repair occupations; construction trades; machine operator, assembler, and inspector occupations; transportation and material moving occupations; and protective service occupations are considered blue-collar, highly skilled workers. All other occupations are labeled blue collar and not highly skilled.

<sup>18</sup> For an analysis of bridge jobs among the self-employed, see Giandrea, Cahill, and Quinn, “Self-Employment Transitions.”

<sup>19</sup> Estimation was performed in two additional ways: with a linear probability model and a fixed-effects linear probability model. Similar results were obtained with all three methods.

<sup>20</sup> Although the level of part-time employment was associated with the way in which respondents were stratified in the first wave (i.e., full-time career status is defined, in part, by whether the respondent was working full time during that wave), the two groups also were compared many years later, including in the last survey (2008), 16 years after the first interview.

## Measuring annual change in household wealth with the Consumer Expenditure Survey

*The Consumer Expenditure Survey (CE) effectively estimates change in net wealth at the household level, compared with the Flow of Funds Accounts; however, results show that the CE does not accurately measure wealth changes at the aggregate national level*

Jeffrey D. Lundy

**T**he Consumer Expenditure Survey (CE) tracks the value of assets and liabilities for a large rotating sample of American households. Unfortunately, researchers studying household wealth have largely neglected this resource, generally relying instead on aggregate statistics. While aggregate wealth statistics suggest individual household decisions, the CE potentially offers a more direct picture of how American households manage their finances.

To validate the survey's potential for measuring changes in household wealth, this article compares the CE with the well-established Flow of Funds Accounts (FFA) of the Federal Reserve Board (FRB). Results indicate that the CE effectively measures change in wealth at the household level.

Additionally, this article examines the extent of wealth gains and losses for the 2004–2009 period. The number of households with annual wealth losses during this period was considerably higher than the number of households with negative net worth. Furthermore, wealth gains varied substantially across households possessing varying types of assets. These demonstrative findings reveal the poten-

tial of the CE for examining how financial and demographic characteristics of households affect their annual change in net wealth.

The CE is known among researchers for its detailed coverage of households' expenditures. Less well known is that the survey also tracks changes in most categories of households' assets and liabilities. In fact, in terms of categorical coverage, the wealth categories that the CE tracks are similar to those in the well-regarded Survey of Consumer Finances (SCF).

Despite this broad coverage of wealth categories, researchers have only recently begun validating the CE wealth estimates against other well-established survey estimates. Most notable is the pioneering work of Johnson and Li,<sup>1</sup> comparing CE liability data against the SCF. Comparing estimates between the two surveys, the authors found that "household debt balances and payments are measured reasonably well in the CE" and that "CE data may be used to examine household debt and its relation to household economic decisions."<sup>2</sup> The work of Johnson and Li breaks new ground by confirming the capability of the CE to track liabilities at the household level.

Moving forward, it is of considerable interest to know how well the CE tracks households' overall net wealth (i.e., both assets and liabilities). To meet this goal, this article ex-

Jeffrey D. Lundy is a doctoral candidate in sociology at the University of California, San Diego; Department of Sociology, 401 Social Science Building, 9500 Gilman Drive #0533, La Jolla, CA 92093-0533. Email: jlundy@ucsd.edu

amines the potential of the CE for measuring annual changes in household net wealth, by comparing it with the FRB's FFA. The FFA are the most widely used source of aggregate data on U.S. household balance sheets.<sup>3</sup> Findings from the research indicate that the survey effectively estimates annual changes in household wealth.

Additionally, this article presents estimates for the number of U.S. households with annual wealth gains and losses during the 2004–2009 period. These estimates show the capability of the CE to explore financial changes at the household level. Furthermore, this article lays groundwork for future research examining the connection between expenditures of households and their annual change in wealth, using the CE comprehensive expenditure data.

### Measuring changes in household wealth using the CE

The CE tracks respondents' reported expenditures over five 3-month periods. The BLS reports only the final four periods of transactions in the published data, because the first interview is dropped (the first interview is only used to contact respondents and to establish a baseline for future transactions). Respondents completing all five interviews of the survey report an entire year of their financial transactions.

Unlike many economic surveys, the CE does not track households, *per se*. Rather, it tracks the expenditures of consumer units (CUs). CUs are defined by

- all members of a particular household who are related by blood, marriage, adoption, or other legal arrangements;
- a person who is 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 is financially independent; or
- two or more persons living together who use their income to make joint expenditures.<sup>4</sup>

On the basis of these criteria, CUs align in many ways with the common conception of a household; however, a single household can include more than one CU, such as in the case of roommates sharing an apartment. Because *household* refers to a dwelling, the household in this case is the apartment, which comprises more than one CU. For simplicity, I will refer to CUs as "households" for the remainder of this article,

despite the limited number of cases in which this designation is technically incorrect.

In terms of categorical coverage, the survey has strikingly detailed information on expenditures. It covers everyday expenditures, such as gasoline purchases, as well as infrequent expenditures, such as clocks, decorative pillows, plastic dinnerware, fresh flowers, sewing patterns, and aircraft rental. As noted by Johnson and Li, the CE also has comprehensive coverage of liabilities, covering both the balance and change in balance for most types of debt.

Unfortunately, the CE coverage of assets is slightly less comprehensive. It only tracks the balances of certain assets such as checking and savings accounts and the value of owned securities, U.S. bonds, and money owed to the household for personal loans. The survey does not track the balance of whole life insurance policies, annuities and trusts, quasi-liquid retirement accounts (e.g., pensions, individual retirement accounts/Keoghs), or business investments. The survey does track the current market value of real estate (e.g., primary residence, vacation properties, and investment properties); however, the current market value is self-reported, and respondents cannot be expected to consistently report the correct appraisal values of their properties. In addition, the survey does not cover the value of other nonliquid assets such as vehicles and collectibles (e.g., artwork, coins).

Despite having limited coverage of asset value, the CE has comprehensive coverage for changes in asset value over the period of a year. For instance, the survey does not record the total worth of business assets that a household owns; however, it does track annual contributions and withdrawals to business assets. Using these data, one can examine how much value a household contributes or withdraws over a year, even though one does not know the total worth of business assets at the start of the year. Thus, the CE gives researchers a broad perspective on households' annual change in asset and liability values, even when they have a more limited view of a household's total net worth.

Presently, scant literature exists concerning household-level wealth transactions, using population representative data. In the areas of economics and policy, past researchers have mainly examined aggregate national statistics when investigating Americans' saving and investing practices.<sup>5</sup> While aggregate statistics suggest individual decisions, they overrepresent the actions of a limited number of households with large wealth ownership. Examining disaggregated transactions will more directly show how households manage their finances, across all levels of wealth ownership. Using the CE to examine annual change in wealth is a good first step toward exploring financial decisions at the individual household level. In fact, because the CE also tracks comprehensive demographic and

expenditure details, the survey can potentially illuminate how the spending and investing of a household are correlated with its annual change in net wealth.

To measure change in households' net wealth, this article assembles CE data from 2004 to 2009. I calculate change in net wealth by aggregating the changes in a household's individual wealth components, i.e., its various assets and liabilities (see appendix A). The CE reports many changes in asset value in a household's fourth quarter of transactions, to reflect changes occurring over a full year. However, because the CE is conducted on a rotating basis, a number of households do not finish the full survey. The present sample is restricted to only those households reporting four quarters of transactions in the survey. Despite this restriction, the sample of households completing the full survey is found to have demographic characteristics congruent with the full CE sample, which is itself weighted to represent the U.S. population (see "Technical notes" section and appendix B).

## Comparing estimates

How well does the CE track changes in wealth? For validating the CE estimates, the most natural point of comparison is the FRB's FFA. The FFA are a project of the FRB to track the U.S. financial flows across various economic sectors. In the United States, the FFA are the only instruments that measure annual change in personal net wealth, other than the CE.<sup>6</sup>

Like the CE, researchers collect data for the FFA on a perpetual, rotating basis (as opposed to the SCF, which is only administered every 3 years). Unlike the CE, the FFA are measured at the aggregate national level. Data are collected from a variety of sources, including banks and businesses, and change in personal wealth is estimated with data reconciled on aggregate spending and investments.

To compare personal wealth estimates between the CE and FFA, one must examine year-to-year change in aggregate national wealth for nine 6-month periods, encompassing the period from 2004 to 2009. Using 6-month periods ensures an adequate sample size in the CE (2,385 households per period, on average). The time frame for each 6-month period spans either October to March or April to September.<sup>7</sup> Households starting the survey in 2005 are excluded, because a change in the CE sample frame makes this time unusable.

In the CE, one calculates change in wealth by summing the annual change in wealth reported by households. Thus, to calculate the aggregate change in wealth between one period and the same period 1 year later, one sums a

1-year change in wealth for all households reporting in the latter period. To find the change in wealth occurring between the period starting in October 2007 and the period starting in October 2008, one sums the annual change in wealth reported by households in the October 2008 period. For example, suppose one unique household provides data in each of the 6 months (e.g., October to March) so that the sample size is six observations. If each household reports a net increase in wealth of \$5, the total increase in net wealth over the period would be \$30—\$5 for the October-to-October increase, \$5 for the November-to-November increase, and so forth.

In the FFA, one calculates change in wealth by averaging aggregate personal net wealth within each of the 6-month periods. Then each period average is subtracted from its counterpart in the following year. For instance, from October 2003 to March 2004, the FFA estimate that Americans possessed an average of \$45.8 trillion. One year later, the FFA estimate that Americans possessed an average net worth of \$51.4 trillion. Thus, personal net wealth gained approximately \$5.6 trillion between the two periods.

Comparing estimates for change in aggregate net wealth (chart 1), one will find that movements in the FFA and the CE correlate at 0.94 ( $p < .001$ ). This result suggests that movements in CE wealth estimates are strongly consistent with movements in the FFA. Note, however, that the scale of changes in the CE is not comparable with the FFA.<sup>8</sup> This result is to be expected, given that CE population weights are not calibrated to represent the correct volume of personal net wealth at the aggregate national level.

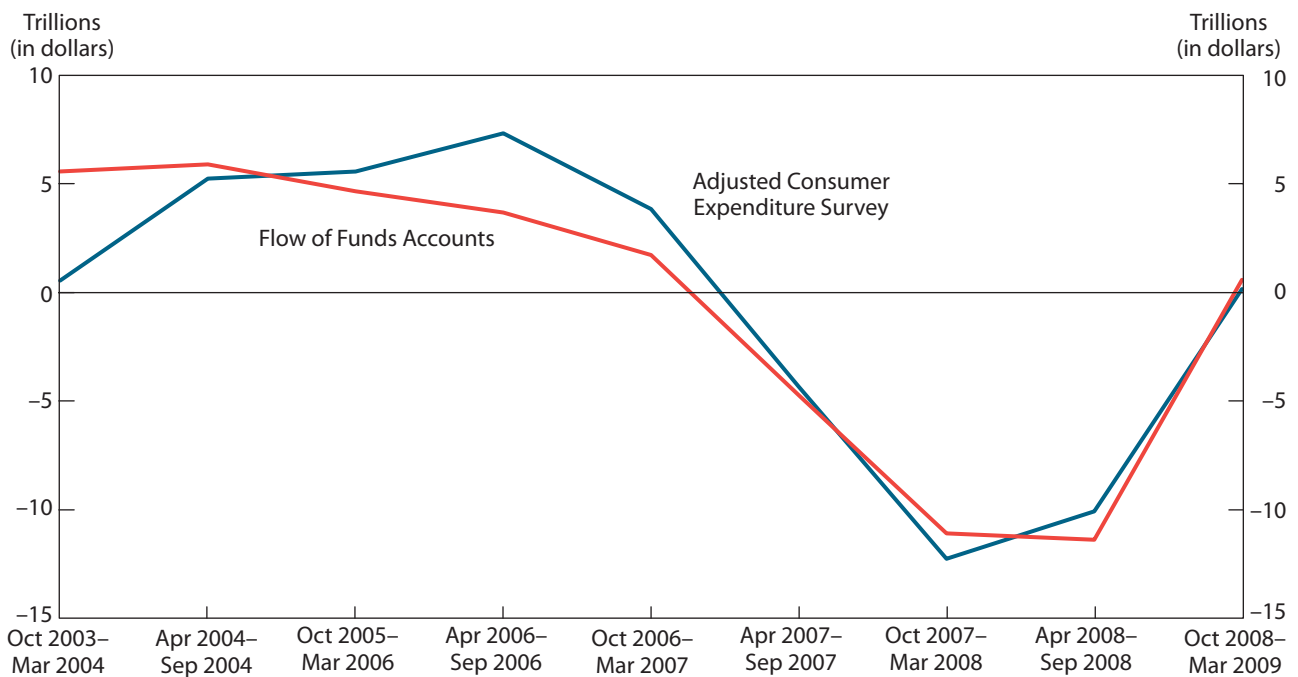
Nonetheless, the strong correlation between the CE and FFA suggests that CE data accurately represent changes in net wealth at the individual household level. Thus, the CE can apparently be used for investigating household changes in net wealth. The CE should not be used, however, for estimating the total volume of personal net wealth at the national level.

## A test case using CE wealth data: household wealth gains

This section examines descriptive findings drawn from the CE. These basic findings demonstrate the kind of questions CE wealth data can answer—starting with one of the most basic: On average, how many households gain wealth during a given year?

Analyzing annual estimates from the 2004–2009 CE data, one will find an average of 55 percent of American households to have lost or maintained their wealth dur-

**Chart 1. Estimated change in aggregate net wealth between Flow of Funds Accounts and adjusted Consumer Expenditure Survey**



NOTE: These data are both unadjusted and also unweighted (i.e., the BLS-supplied population weights are not applied). Weights are not used because BLS calculates them with the full sample in mind, whereas this project uses only the subsample of households reporting for five interviews.  
 SOURCES: Flow of Funds Accounts (2004–2009), Federal Reserve Board, and Consumer Expenditure Survey (2004–2009), U.S. Bureau of Labor Statistics.

ing a given year, while 45 percent of households gained wealth. This estimate of wealth gain may seem low when compared with previously published estimates from the SCF. For instance, the FRB estimates that in 2004, approximately 91 percent of U.S. households fell into the category of having positive net wealth (table 1).<sup>9</sup>

Although SCF and CE estimates appear quite divergent (i.e., wealth gain rates of 45 percent vs. 91 percent), one should note that the SCF and CE are measuring net wealth in two different forms. While considered the gold standard for personal wealth measurement, the SCF is limited to measuring a household’s current net worth at the time of the survey interview. Unlike the estimates found in the CE, wealth estimates from the SCF give no perspective on recent wealth changes.

Clearly then, the CE and SCF diverge in their estimates of wealth gains, because they are measuring 1-year change in wealth vs. life-to-date net worth, respectively. However, this raises the question: How can 55 percent of households lose or maintain their wealth per year, while only 9 percent of households have zero to negative net worth? The difference between 1-year wealth loss and negative net worth is explained by several factors.

One reason why annual rates of wealth loss are apparently high is the result of including zero-change households along with wealth-losing households. If households with zero annual change in wealth have gained wealth in the past or will gain surplus wealth in the future (as most households will strive to do), then they ultimately will have positive net worth across multiple years. When examining CE data, one will find that 14 percent of U.S. households reported zero change in net wealth during an average sample year. Thus, the percentage of households actually losing wealth per year is just 41 percent.

Another reason why annual rates of wealth loss are apparently high is connected to the economic life cycle of households. Specifically, a substantial portion of wealth-losing households are in the extremes of youth and older age and thus are spending against wealth they have accumulated (or plan to accumulate) during middle age.

To show this effect, table 1 displays the subsample of households whose household heads are mid-aged (i.e., 25 < age of household head < 50). Notably, in the mid-aged sample, the percentage of households with zero or negative annual change in wealth is 20 percent lower than the percentage for the population as a whole. This finding re-

**Table 1. Percentage of U.S. households gaining, maintaining, or losing wealth**

Wealth change status	Net worth (2004 Survey of Consumer Finances)	Annual change in wealth (2004–2009 Consumer Expenditure Survey)	
		Total	Mid-aged
Positive	91.1	44.7	54.8
Zero or negative	8.9	55.3	45.2

SOURCES: Survey of Consumer Finances (2004) and Consumer Expenditure Survey (2004–2009), U.S. Bureau of Labor Statistics.

flects the substantial effect that older and younger generations exert on annual estimates of wealth loss. To examine this influence further, one should consider the percentage of wealth-losing households within older age brackets.

Households with heads 55 years of age and older account for 50.4 percent of wealth-losing households, and households with heads 65 years of age and older account for 31.5 percent of wealth-losing households. These statistics suggest that older individuals represent a significant portion of wealth-losing households during any given year. While some of these individuals may have persistent annual wealth losses (e.g., retirees), they will also have positive net worth, because of the wealth they have accumulated over their lifetime.

Finally, another reason for the apparently high wealth loss rate is its connection to the nature of personal finance. In particular, the present research does not smooth debt across loan payment terms; therefore, many recorded annual losses misrepresent a household's long-term finances.

For example, consider a family taking a loan to remodel its home during a survey year. Such a loan will register as a large negative change in the household's net wealth. However, for many years after the survey, this household is likely to record positive changes in wealth as the family repays its loan. Furthermore, when the family eventually sells its remodeled home, it will likely realize an increased selling price resulting from the modifications.

In many cases then, the large up-front loss from a loan misrepresents the long-term wealth accumulation of a household, because the short-term loss will be balanced by persistent gains over the long term. In addition, if the loan is for a capital improvement, an increase in asset value will likely go unrecorded during a survey year.<sup>10</sup>

Given the factors just addressed, one would expect a significant proportion of annual wealth losers to ultimately end up with positive net worth. Thus, many annual losses likely misrepresent a household's current (and future) net worth.

## The extent of wealth losses

Looking at how many Americans lose wealth is instructive, but it offers no sense of the extremes to which households are gaining or losing wealth. Table 2 details the quartile values for households' annual change in net wealth among the mid-aged subsample. Only the mid-aged subsample is examined, for controlling life-cycle-related wealth changes (e.g., the effect of retirees, students).

Two primary results are evident from table 2. First, many mid-aged households have moderate annual wealth gains. In fact, among wealth-gaining households, one-quarter gained less than \$2,900 per year.

Second, stark differences exist in wealth gains between households with varying levels of asset ownership. Among households lacking any significant assets, over half did not gain any wealth. On the other side of the spectrum, however, households with more than \$10,000 in securities had a median gain over 11 times larger than the population median. In the middle were households with homeownership and who possessed between \$0 and \$10,000 in securities. These households experienced moderate gains, with a median gain around twice the population median.

COMPARING THE CE and the FFA reveals that the CE does effectively estimate change in net wealth at the household level. However, results show that the CE does not accurately measure wealth changes at the aggregate national level. The latter result is to be expected, given that CE population weights are not calibrated to reflect the aggregate personal wealth of the United States.

To demonstrate the potential of the CE, this article examines the extent of household wealth gains and losses for the 2004–2009 period. The number of households with annual wealth losses was found to be considerably higher than the number of households with lifetime wealth losses. Additionally, households in various asset ownership groups were found to have wealth gains that also varied considerably.

Such descriptive results merely scratch the surface of the CE demographic and financial variables. Nonetheless, they demonstrate the survey's capability to cross-reference households' demographic characteristics with their annual change in net wealth. This capability holds great promise for examining how economic transactions of households affect their annual wealth gains and losses.

Future work using the CE may take many forms. Certainly, the survey lends itself to studying questions about households' financial management. For instance, using the CE detailed expenditure data, one can examine how

**Table 2. Annual change in net wealth of various households in mid-aged subsample**

Quartile points	Total sample	Within wealth $\Delta$ status		Within owner status		
		Lost or maintained	Gained	Nonowners	Homeowners	Securities owners
25	-\$2,678	-\$16,030	\$2,834	-\$500	-\$4,158	-\$5,991
50	956	-3,983	7,222	0	2,287	11,329
75	8,500	0	19,881	2,048	10,726	36,035

SOURCE: Consumer Expenditure Survey (2004–2009), U.S. Bureau of Labor Statistics.

spending on various items is correlated with gains or losses in wealth. Taking another approach, one might examine how income shocks affect annual changes in wealth or how effectively insurance protects wealth in the face of such shocks. In addition, one might examine the comparative annual returns from different types of household investments. Obviously, the CE has many potential applications for researchers interested in policy, consumption behavior, and economic theory.

**Technical notes**

To have a sufficient number of points for comparison, this article used information from households participating in the CE from 2004 through 2009. During this period, two events occurred that affected the CE collection: (1) the survey frame was adjusted in 2005 and (2) the sample size was reduced in 2006.

The survey frame adjustment is a routine change to the CE, which occurs every 10 years. During these adjustment years, the survey frame is reconstructed with new demographic information from the preceding decennial census. Fewer households exist during these years, because no households enter the survey in January of the redesign year and some households cease to be interviewed if their primary sampling unit was cut from the frame. As such, the CE microdata documentation recommends that users do not link household records longitudinally across 2005. Consequently, this project dropped households whose

time in the survey crossed into 2005. This action can be noted in chart 1 by the gap on the *x*-axis between September 2004 and October 2005.

The second notable change to the CE collection occurred after the first quarter of 2006. At that time, a sample reduction was implemented to lessen the costs of survey collection. As such, a number of households during this period were not able to complete their survey, and thus their attrition was nonvoluntary.

In this article, I noted the similarity between the four-interview and full survey samples. Appendix B shows the differences in distribution for important demographic variables in the four-interview and full samples, using data from the second quarter of 2006 to the fourth quarter of 2009. These differences result from attrition, because households that complete four interviews have demographics that diverge from the full sample. The first quarter of 2006 is excluded from these analyses because of the sample reduction previously mentioned.

The following gives a sense of the attrition rate: an average of 79 percent of households completed four interviews during the second quarter 2006 to the fourth quarter 2009. In general, the differences between the samples appear to be reasonably small. The only difference of some note is the larger percentage of homeowners in the restricted sample. Households owning homes appear slightly more likely to complete the full survey than households who are renting. The reader should bear this in mind, because it may affect results to a limited extent. □

**NOTES**

ACKNOWLEDGMENTS: I would like to thank Maria Charles, Dan Hirschman, Pam Spanier, and Ann Decker, as well as the Horowitz Foundation for Social Policy; the Department of Sociology at the University of California, San Diego; the University of Michigan Economic Sociology Workshop; and BLS for their assistance with this article.

<sup>1</sup> Kathleen W. Johnson and Geng Li, “Household liability data in the Consumer Expenditure Survey,” *Monthly Labor Review*, December

2009, pp. 18–27, <http://www.bls.gov/opub/mlr/2009/12/home.htm>.

<sup>2</sup> *Ibid.*, p. 18.

<sup>3</sup> Rochelle L. Antoniewicz, *A Comparison of the Household Sector from the Flow of Funds Accounts and the Survey of Consumer Finances* (Federal Reserve Board of Governors, October 2000).

<sup>4</sup> 2005 *Consumer Expenditure Interview Survey Public Use Micro-*

data Documentation (U.S. Bureau of Labor Statistics, 2007).

<sup>5</sup> Milt Marquis, “What’s Behind the Low U.S. Personal Saving Rate?” *FRBSF Economic Letter* (San Francisco, CA: Federal Reserve Bank of San Francisco, 2002); Marshall B. Reinsdorf 2007, “Alternative Measures of Personal Saving,” *Survey of Current Business* (Bureau of Economic Analysis, 2007), pp. 7–13.

<sup>6</sup> The FFA are the only public instrument measuring personal wealth changes; private sources of data may be available separately. In addition, the *National Income and Product Accounts* (NIPAs) measure personal household savings (i.e., gross personal income minus gross personal consumption); however, the NIPAs do not measure change in wealth due to investments, capital gains and losses, etc.

<sup>7</sup> These particular periods are chosen to correspond with the CE survey design. In the CE, respondents report transactions from the 3 months predating the time of their interview. For instance, CUs entering during the first half of 2004 (i.e., January 2004 to June 2004) are reporting expenditures from October 2003 to March 2004. CE data

are released by the calendar year in which respondents entered the survey, not according to the time frame of respondents’ expenditures. Therefore, to use the latest available data, one must use time periods offset 3 months back from the usual calendar year.

<sup>8</sup> In chart 1, CE wealth changes are adjusted upward to more easily compare movements between the surveys. This adjustment is a simple linear transformation: each unadjusted CE value is multiplied by 560,000. This adjustment may seem quite large; however, the CE estimates are unweighted, and thus to match the FFA, they need to be adjusted by a large degree.

<sup>9</sup> Edward N. Wolff, “Recent Trends in Household Wealth in the United States: Rising Debt and the Middle-Class Squeeze” (working paper, Levy Economics Institute Annandale-on-Hudson, NY, 2007).

<sup>10</sup> The increase in unrealized value will only be accounted for if the home is sold during the same year in which the capital improvement loan is taken.

## APPENDIX A: Consumer Expenditure Survey assets and liabilities

**Table A-1. Consumer Expenditure Survey coverage for change in assets and liabilities**

Consumer Expenditure Survey coverage of assets	Consumer Expenditure Survey variables
Total Δ in checking, money market, and call accounts	COMPCKGX
Total Δ in certificates of deposit and savings accounts	COMPSAVX
Total Δ in directly held pooled investment funds (all types, except money market funds), directly held stocks, and directly held bonds (all types, except bond funds or savings bonds)	COMPSECX
Total Δ in U.S. savings bonds	COMPBNDX
Negative Δ in household’s cash value of whole life insurance and/or annuities	SETLINSX
Positive Δ in household’s cash value of whole life insurance	POLICYBY
Negative Δ in household’s government retirement fund, account-type pensions on current job, and individual retirement accounts/Keoghs	FINDRETX
Positive Δ in household’s government retirement fund	FGOVRETM
Positive Δ in account-type pensions on current job	FPRIPENM
Positive Δ in individual retirement accounts/Keoghs	FINDRETX
Total Δ in other miscellaneous financial assets	COMPOWDX
Positive Δ in business assets	BSINVSTX
Negative Δ in business assets	WDBSASTX
Disposed of vehicles	EXPN – OVC: DISPX
Disposed of homes	EXPN – OPD: SALEX
Acquired vehicles	EXPN – OVB: NETPURX
Acquired homes	EXPN – OPB: OWN_PURX
Consumer Expenditure Survey coverage of liabilities	Consumer Expenditure Survey variables
Primary residence mortgages	EXPN – MOR: QBLNCM1X, QBLNCM2X, QBLNCM3X
Home equity loans secured by primary residence	EXPN – HEL: QBLNCM1G, QBLNCM2G, QBLNCM3G
Lines of credit secured by primary residence	EXPN – OPH: JLCPRINX, JINTPDX
Vehicle loans	EXPN – OVB: QVPRIM1X, QVPRIM2X, QVPRIM3X
Credit (credit cards, student loans, etc.)	EXPN – FNA: CREDITR5=100, ...



**APPENDIX B: Consumer Expenditure Survey: four-interview and full survey comparison**
**Table B-1. A comparison of the four-interview sample to the full survey sample, second quarter 2006 to fourth quarter 2009, of the Consumer Expenditure Survey**

Demographic variables	Survey sample		Difference
	Four-interview	Full	
Mean age	52.40	49.42	2.98
Mean number of autos	.93	.90	.03
Mean family size	2.56	2.53	.03
Mean income (dollars) <sup>1</sup>	67,185	63,969	3,216
Poverty rate (percent)	10.7	12.6	-1.9
Household tenure composition (percent)			
Owned with mortgage	46.9	43.2	3.7
Owned without mortgage	27.4	24.1	3.3
Rented	24.6	31.5	-6.9
Occupied without rent	1.1	1.2	-.1
Occupied student housing	.01	.7	-.7
Racial composition (percent)			
White	83.5	82.1	1.4
Black	10.8	11.7	-.9
Asian	4.0	4.3	-.3
Marital status (percent)			
Married	57.0	53.3	3.7
Widowed	10.6	9.4	1.2
Divorced	13.9	14.1	-.2
Separated	2.6	2.8	-.2
Never married	15.9	20.4	-4.5
Family type (percent)			
Husband and wife only	24.0	21.7	2.3
Husband and wife with one or more children	26.6	25.5	1.1
Other husband and wife	4.4	4.3	.1
Single parent	5.2	5.9	-.7
Single person	26.4	28.6	-2.2
All others	13.4	14.0	-.6

<sup>1</sup> Unadjusted for inflation.

SOURCE: Consumer Expenditure Survey (2006–2009), U.S. Bureau of Labor Statistics.

## Multiple jobholding in states in 2011

Jim Campbell

From 2010 to 2011, multiple-jobholding rates<sup>1</sup> decreased in 28 states and the District of Columbia, increased in 20 states, and were unchanged in 2 states. The annual average multiple-jobholding rate for the United States was 4.9 percent in 2011, unchanged from a year earlier.

Montana experienced the largest de-

crease among the states (-1.9 percentage points). Five other states had decreases of 1.0 percentage point or more: South Dakota and Wyoming (-1.3 points each), Kentucky (-1.2 points), Rhode Island (-1.1 points), and Alaska (-1.0 point). The largest over-the-year multiple-jobholding rate increase among the states was posted in Maine (+1.1 percentage points), followed by Kansas and Nevada (+0.8 point each), North Carolina (+0.6 point), and Louisiana, New Jersey, and Tennessee (+0.5 point each).

The U.S. multiple-jobholding rate has declined gradually or remained flat in each of the last 15 years, since it peaked at 6.2 percent in 1996.<sup>2</sup>

Compared with 1996, 2011 saw 47 states and the District of Columbia with lower multiple-jobholding rates. The remaining 3 states had rates that were unchanged or only marginally higher over that 15-year span. The largest declines occurred in Montana (-3.9 percentage points), Arkansas and Missouri (-3.4 points each), and Hawaii (-3.3 points).

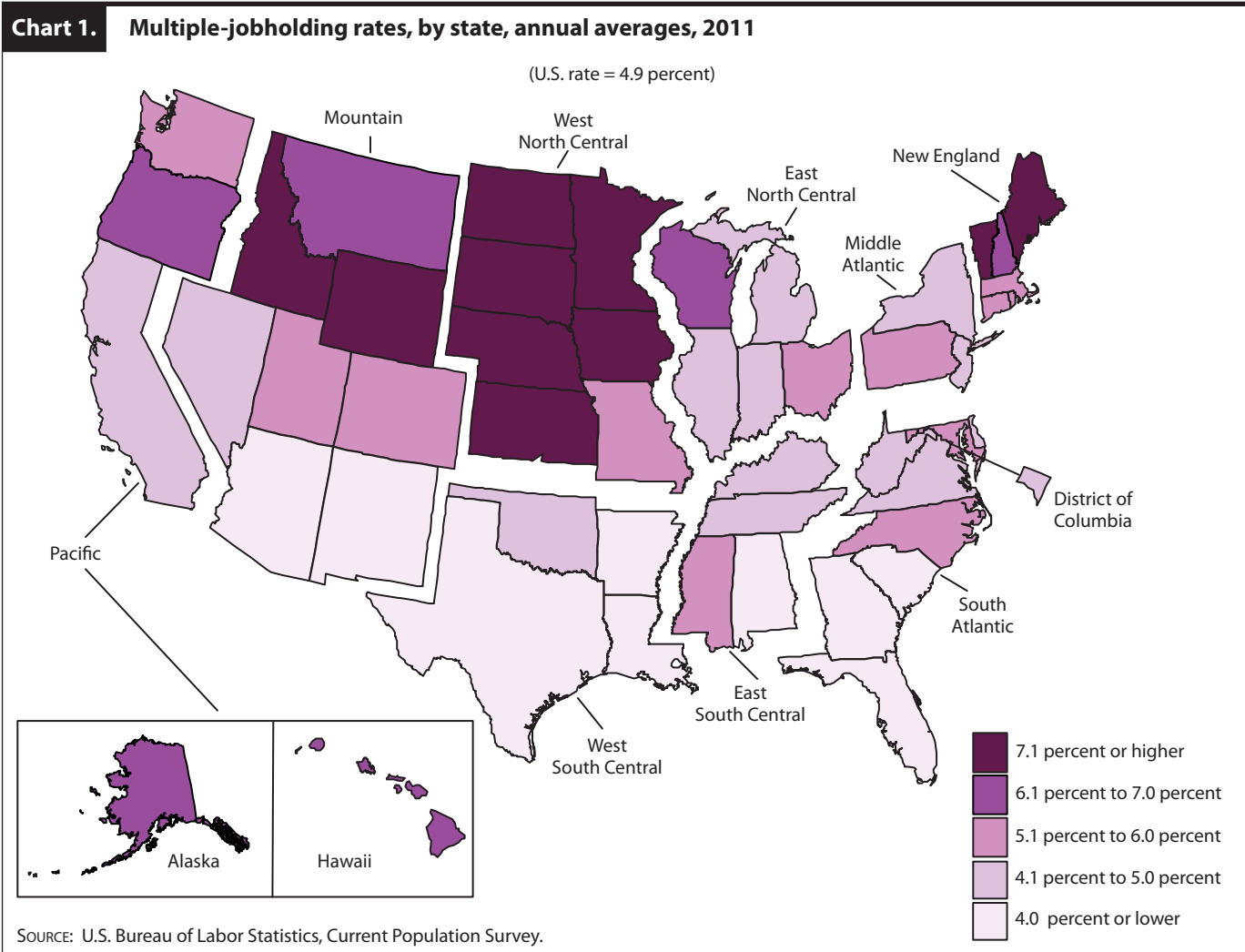
Multiple-jobholding rates for individual states continued to vary considerably around the U.S. average. (See table 1 and chart 1.) In 2011, 31 states had higher multiple-jobholding rates than the national average, 1 had the same, and 18 states and the District of Columbia had lower rates. As in past

Jim Campbell is an economist formerly in the Division of Local Area Unemployment Statistics, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics. Email: lausoa@bls.gov.

**Table 1. Multiple jobholders as a percentage of total employment, by state, annual averages, 2010 and 2011**

U.S. Census region and division	2010	2011	U.S. Census region and division	2010	2011
United States	4.9	4.9			
Northeast region	5.0	5.0	Midwest region	6.2	6.1
New England division	6.2	5.9	East North Central division	5.5	5.5
Connecticut	6.3	5.5	Illinois	5.5	5.0
Maine	7.0	8.1	Indiana	4.7	4.9
Massachusetts	5.5	5.4	Michigan	4.7	5.0
New Hampshire	6.5	6.1	Ohio	5.7	6.0
Rhode Island	7.0	5.9	Wisconsin	6.9	6.9
Vermont	8.7	8.3	West North Central division	7.7	7.4
Middle Atlantic division	4.5	4.7	Iowa	8.4	7.6
New Jersey	3.9	4.4	Kansas	7.0	7.8
New York	4.3	4.4	Minnesota	8.6	8.1
Pennsylvania	5.3	5.4	Missouri	5.8	5.6
South region	4.1	4.1	Nebraska	9.0	8.6
South Atlantic division	4.2	4.1	North Dakota	8.9	9.0
Delaware	4.5	4.2	South Dakota	10.3	9.0
District of Columbia	4.6	4.3	West region	5.0	4.9
Florida	3.6	3.4	Mountain division	5.4	5.2
Georgia	3.9	3.8	Arizona	4.1	3.9
Maryland	5.4	5.3	Colorado	5.7	5.8
North Carolina	4.5	5.1	Idaho	7.1	7.4
South Carolina	4.1	3.6	Montana	8.2	6.3
Virginia	4.4	4.5	Nevada	4.2	5.0
West Virginia	4.4	4.1	New Mexico	4.6	3.7
East South Central division	4.4	4.3	Utah	6.5	5.8
Alabama	3.3	3.3	Wyoming	8.8	7.5
Kentucky	5.5	4.3	Pacific division	4.8	4.8
Mississippi	5.1	5.3	Alaska	7.2	6.2
Tennessee	4.1	4.6	California	4.4	4.3
West South Central division	3.9	4.0	Hawaii	7.0	6.1
Arkansas	4.3	3.7	Oregon	6.5	6.6
Louisiana	3.5	4.0	Washington	5.6	5.7
Oklahoma	4.5	4.1			
Texas	3.8	3.9			

SOURCE: U.S. Bureau of Labor Statistics, Current Population Survey.



years, northern states generally had higher rates than southern states. All 7 states in the West North Central Census division continued to register multiple-jobholding rates above that of the nation. All 6 states in the New England division, and all except 2 states (Arizona and New Mexico) in the Mountain division, also posted rates higher than the national average. North Dakota and South Dakota recorded the highest rates of any state, 9.0 percent, followed by Nebraska, 8.6 percent, and Vermont, 8.3 percent. Most of the states with high multiple-jobholding rates in 2011

have had consistently high rates over the timespan during which estimates have been available.

In the South region,<sup>3</sup> 13 of the 16 states, as well as the District of Columbia, had multiple-jobholding rates below the U.S. figure. Alabama recorded the lowest multiple-jobholding rate of any state in 2011, 3.3 percent. Two other states in the South—Florida and South Carolina—reported the next-lowest rates, 3.4 percent and 3.6 percent, respectively. □

**Notes**

<sup>1</sup> Data for this report come from the Current

Population Survey (CPS), a survey of about 60,000 households selected to represent the U.S. population 16 years and older. The survey is conducted monthly by the Census Bureau for the Bureau of Labor Statistics. Multiple jobholders are those persons who report, in the reference week of the survey, that they are wage or salary workers who hold two or more jobs, self-employed workers who also hold a wage or salary job, or unpaid family workers who also hold a wage or salary job.

<sup>2</sup> Annual multiple-jobholding data for states became available following the redesign of the CPS in 1994.

<sup>3</sup> The South region is composed of the East South Central, South Atlantic, and West South Central divisions.

## Do recessions cause early retirement?

In the wake of the December 2007–June 2009 recession, a number of studies have explored the effects of the economic downturn on people’s retirement decisions. Many people watched the value of their 401(k)-type retirement plans plummet when the stock market crashed in 2008, and some might have deferred retirement because of those losses. In addition, tight labor market conditions might have induced some people to retire earlier than they had planned, either because they lost their jobs or they could not find work. Although the stock market had recovered to prerecession levels by 2010, the weakness in the job market persists. In “Recessions, Retirement, and Social Security” (*American Economic Review: Papers and Proceedings* 2011, May 2011, pp. 23–28, <http://www.aeaweb.org/articles.php?doi=10.1257/aer.101.3.23>), economists Courtney C. Coile and Phillip B. Levine use data from the Annual Social and Demographic Supplement to the Current Population Survey (CPS) as well as other data to analyze the implications of the current weak labor market on retirement decisions and on the receipt of Social Security benefits.

As Coile and Levine point out, high unemployment can have a substantial impact on older workers’ income—in the present and for the rest of their lives. When older workers lose their jobs, it is generally more difficult for them to find new ones than it is for younger workers. In that kind of environment, Social Security benefits may be the only source of income for many of these

workers. But if they begin drawing benefits early—at age 62, for example—their monthly benefit and, in many cases, their lifetime benefits will be reduced. Coile and Levine examine how changes in the unemployment rate affect retirement decisions, the claiming of Social Security benefits, and the subsequent total amount of Social Security benefits received by older workers. They find evidence that workers are more likely to leave the labor force, collect Social Security earlier, and receive lower lifetime Social Security benefits if a recession happens when a worker is near retirement age. People age 62 and older are more likely to withdraw from the labor force than to seek work when the unemployment rate is high, and they also are likely to start claiming Social Security benefits. These effects are most pronounced for people with less education as they tend to be more vulnerable to job loss and to rely more heavily on Social Security for their retirement income.

Coile and Levine use CPS supplemental data from the 1980 to 2009 March surveys for their analysis of the effects of weak labor market conditions on labor force status and Social Security receipt, focusing on men ages 55 to 69 for that part of their study. For their analysis of older peoples’ income, they look at men ages 70 to 79 and use data from the 2000 Census and from the 2001, 2002, and 2006–2009 American Community Surveys. The authors limit their sample to *men* who have already left the labor force, because women in that age group are likely to receive Social Security payments based on their husbands’ earnings. In addition, the authors include only people who report some income from

Social Security—more than 90 percent in this age category—because the other 10 percent are most likely ineligible to receive benefits and thus their income from that source would not be affected by labor market conditions. The resulting sample consists of nearly 600,000 men ages 70 to 79, which they combine with state-level unemployment data from the Bureau of Labor Statistics.

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## When’s the right time to “claim”?

Social Security benefits are universally available to Americans starting at age 62, but the monthly benefit amount depends on a number of factors, especially an individual’s age when beginning to collect benefits. This is because the Social Security Administration recognizes that those who delay claiming collect for fewer years and hence are entitled to a greater monthly income. In “The Decision To Delay Social Security Benefits: Theory and Evidence” (National Bureau of Economic Research, Working Paper 17866, February 2012, <http://www.nber.org/papers/w17866>), authors John B. Shoven and Sita Nataraj Slavov report on their empirical research into the advantages and disadvantages of starting to claim benefits at various ages—taking into account other demographics—and then suggest the optimal age to begin.

The authors focus on the financial advantage to the recipient of delaying the commencement of benefits. They note that the annual increase in benefit amount from delaying has become more generous over the years; for example, the 1924 birth cohort earns 3 percent of their base benefit per year of delay beyond full

retirement age, while the 1943 cohort (and later) can earn 8 percent of their base benefit per year of delay beyond full retirement age. The authors explain the financial advantages that occur when interest rates are low—and especially when rates are 3.5 percent or lower, as is the case today, because the delay raises the net present value of the benefit. The authors even suggest that households would be better off first spending down other assets (such as 401(k) plans) in order to delay claiming.

Shoven and Slavov point out that delaying the initial claim has advantages similar to those of purchasing a real annuity. Full-retirement (or base-year) age for most people currently able to claim Social Security benefits is 66. Those who claim benefits at age 62 receive just 75 percent of the base-year amount, while waiting until age 70 results in a monthly benefit that is 132 percent of the age-66 amount. Demographic groups that gain the most from delaying include married couples (because of the spousal and survivor benefit) and two-earner couples (especially when the primary earner's benefit is the one that is delayed); also, single women gain more from waiting than do single men.

Life expectancy needs to be taken into account in the decision; the longer one lives, the better off one would be delaying the first claim. For men and women who were born in 1950 and reach age 62, life expectancy is now 83.20 and 85.51 years, respectively, indicating that women are financially helped slightly more by delaying benefits because of their longer life expectancies. Age at death would be a very useful bit of information, but of course is an unknown when people are deciding at what age to start claiming benefits.

The University of Michigan Health

and Retirement Study (HRS) cited by the authors found that individuals who work longer tend to postpone claiming, perhaps because they enjoy their work and it pays well. Delaying the start of claiming benefits was also true of individuals with higher levels of education, which are associated with both longer life expectancy and greater financial literacy. Nonetheless, the HRS found that the majority of Americans start claiming Social Security benefits immediately after turning 62 even though that age isn't typically to their actuarial advantage.

### Working while sick

Most everyone has heard of *absenteeism* in the workplace—being absent from work because of sickness or a health-related condition. However, not many of us have heard of *presenteeism*—being present at work while sick or not feeling well. The term is so new that many well-known English dictionaries, such as Merriam-Webster, do not list it. Researchers have just become aware of the phenomenon in the past 20 years and have found that it can affect workers' productivity more than absenteeism. Workers who stay on the job while ill aren't able to complete their tasks on time, make more errors, and often miss deadlines. In addition, by continuing to stay at work, workers forgo the rest and treatment that their health condition may require.

Obviously, with employees' decreased productivity due to presenteeism, employers are incurring significant revenue losses and added costs, such as higher healthcare expenses. So what can businesses do to improve workers' physical and mental health and in turn decrease presenteeism? Many employers

have implemented workplace health promotion (WHP) programs. These programs may include but are not limited to the following: offering exercise in the workplace; increasing the number of rest periods; promoting health awareness through seminars, workshops, email, literature, etc.; and improving equipment and the environment, such as air and water quality. But just how effective are WHP programs?

Authors Carol Cancelliere, J. David Cassidy, Carlo Ammendolia, and Pierre Côté ask this same question in their article, "Are workplace health promotion programs effective at improving presenteeism in workers? A systematic review and best evidence synthesis of the literature" (*BMC Health*, May 2011, <http://www.biomedcentral.com/1471-2458/11/395>). In this article, Cancelliere and her colleagues present their research on WHP programs and their effects on presenteeism.

Finding studies that met their criteria was not easy. The criteria were that each study had to be original, include at least 20 participants 18 years or older, and include a WHP program that focused on health and wellness. The researchers searched several databases, such as Medline (<http://www.nlm.nih.gov/bsd/pmresources.html>) and the Cochrane Library (<http://www.thecochranelibrary.com/view/0/index.html>). They examined several studies published worldwide from 1990 to 2010 and found only 47 out of 2,032 that met their criteria. These 47 were then measured and divided into three groups that describe the strength of the study—strong, moderate, and weak. Researchers defined each study's strength by the percentage of participants that represented the current work population, level of study control, blinding of

participants and researchers, methods used to measure findings, and follow-up of participants. Of the 47 studies, Cancelliere et al. accepted only 14 to review for this article, rating 4 strong and 10 moderate.

The researchers then reviewed each of the accepted studies on the basis of the following:

- Are they beneficial?

- If so, what makes the programs work?
- What health conditions and other factors could lead to presenteeism?

Reviewing the 14 studies, Cancelliere and her colleagues found that exercise decreases presenteeism through improved health of workers and that some WHP programs are

beneficial. However, the researchers suggest that making programs available isn't enough on its own to improve workers' health; they emphasize the need to focus on the mechanics that go into creating, designing, and following up on the program effects and then, even more importantly, adjusting programs to workers' fitness and health needs. □

## Race and economics

*Race & Economics: How Much Can Be Blamed on Discrimination?* By Walter E. Williams, Stanford, CA, Hoover Institution Press, 2011, 174 pp, \$21.33/hardback; \$8.40/paperback.

Many people in government and academia argue that government-imposed allocation of resources, rather than free-market resource allocation, is needed to keep minorities from being subject to discrimination by the majority and Big Business. In *Race & Economics*, Walter E. Williams takes a different approach. He applies economic analysis to attempt to prove that free-market resource allocation is in the best interest of minorities. Williams is the author of 10 books, including *Up From the Projects: An Autobiography*, in which he describes his journey as a Black man from a Philadelphia housing project to the faculty of George Mason University in Fairfax, Virginia, where he has served as the John M. Olin distinguished Professor of Economics since 1980. In the acknowledgment page of this, his most recent book, Dr. Williams confides that he spent a number of years gathering research materials and writing the book. His diligence is readily apparent.

Throughout *Race & Economics*, Dr. Williams promotes the idea that economics and profits usually trump personal feelings and prejudices. He uses the sport of baseball as an example of this idea. There have been many, many significant events during the long and storied history of the sport, but sportswriters are almost unanimous in choosing Jackie

Robinson's breaking of the color barrier in 1947 as the most important. Robinson's appearance didn't immediately end prejudice among fans or owners. So why was it that all of the then 16 major league baseball teams integrated between 1947 and 1959? Per Williams, it came down to economics. Team owners realized that a "Whites only" policy would lead to losses to teams with more talented Black players, which would lead, in turn, to lost fans and lost revenue. Owners couldn't justify paying more to less talented White players than their abilities would dictate; in other words, the owners couldn't afford to discriminate.

Williams' position is that success among Blacks was achieved, not with the help of government policy, but in spite of it. He speaks out strongly against policy intended to help those in poverty who are members of minority groups. In doing so, he finds support from Frederick Douglass, a hero of the African-American community. Williams quotes an 1865 speech of Douglass' titled "What the Black Man Wants": "Everyone has asked the question ... 'What shall we do with the Negro?' I have had but one answer from the beginning. Do nothing with us! ... And if the Negro cannot stand on his own legs, let him fall also. All I ask is, give him a chance to stand on his own legs!" Williams cites numerous examples of successful entrepreneurs among free Northern Blacks and even Southern slaves, examples that Douglass doubtless witnessed.

The current (April 2012) unemployment rate is 8.1 percent, and it would be higher if it included those who wanted full-time work but accepted part-time work and those who gave up searching for

employment. The unemployment rate among African-Americans is much higher still, currently more than 15 percent, and more than 40 percent among Black youths ages 16 to 24 years. Is the higher rate among Blacks the result of discrimination?

Williams would answer that it is not. He comes to this conclusion by comparing current unemployment rates with unemployment rates of 100 years ago, a time of much greater discrimination. In 1900, for example, the employment-to-population ratio was 57.4 percent for non-Whites and only 45.5 percent for Whites. By 1990 these ratios had reversed, with the rate for non-Whites falling slightly, to 56.2 percent, while the ratio for Whites rose to 63.6 percent. Earlier periods displayed a similar pattern, as did the 1900–1930 period. On March 31, 1931, Congress passed the Davis–Bacon Act. This bill (which Williams believes was pushed by labor unions seeking higher wages and which would exclude Black workers who were willing to work for less) mandated the payment of locally prevailing wages and benefits on all federally financed or federally assisted construction projects that exceeded \$5,000 (reduced to \$2,000 in 1935). Once the bill became law, Black unemployment began rising relative to that of Whites; per Williams, this effect was further compounded by the passage of several other pieces of New Deal legislation, such as the Fair Labor Standards Act (FLSA), the Walsh–Healey Act, the National Labor Relations Act, and even the Social Security Act. The FLSA established a federal minimum-wage law that applied to employees engaged in and producing goods for interstate commerce.

Williams argues that this law helped those workers at the low end of the wage scale, but only those who could keep their job, because employers were not likely to keep an employee whose productivity was worth \$6/hour if the employee had to be paid \$7/hour. Williams concedes that some of those who advocate for a minimum-wage law do so with good intentions, believing that an increase in the number of people paid a “living wage” will reduce the poverty rate. However, it is his view that these actions have also been used with the goal of protecting the jobs of White workers. He cites union workers in apartheid South Africa, who demanded equal-pay-for-equal-work laws so that Blacks could not be hired for less and thereby usurp their jobs. What matters is the ultimate effect, says Williams, and that has been to increase the unemployment rate of the unskilled and young, many of whom are minorities.

Williams also decries occupational licensing laws. For some occupations, such as medicine and law, licensing laws are clearly needed. But there are now approximately 800 occupations that require licenses in at least one state: barbers, cosmetologists, taxi drivers, beekeepers—even fortune tellers—and more. Williams believes that these licensing laws are a means of restricting entry into an occupation, benefiting only those who are already practicing the trade. Some such laws, he maintains, are truly outrageous—for example, taxicab licensing requirements in New York City that include an entry fee of \$500,000. He believes that these

regulations result in the exclusion of less skilled, less experienced, and less wealthy persons, many of whom are Black. Williams acknowledges the union claim that licensing laws are needed to screen out unscrupulous practitioners, but he argues that in some trades (specifically, electricians, railroad workers, truckers, and plumbers) the laws have been purposely written to restrict the entry of Blacks.

Williams also has concerns about racial-profiling charges made against police officers accused of stopping Black or Hispanic drivers more often than non-Hispanic Whites. Similar accusations have been made against certain taxi drivers, alleging that they refused to provide rides to Blacks. Williams cites a 1999 story by James Owens in which (mainly black and Hispanic) cab drivers in Washington, DC, voice support for racial profiling and Commissioner Sandra Seegars (also Black) warned cabbies to stay away from low-income Black neighborhoods. Pizza companies that deliver also have been accused of racial profiling for refusing to deliver to certain neighborhoods, often crime-ridden and primarily Black ones. Since most of the delivery drivers who refused were themselves Black, Williams believes that the accusation is specious. In 1991, Jesse Jackson stated that it is criminal that banks “systematically discriminate against African-Americans and Latinos in making mortgage loans.” Williams argues that discrimination was not involved; rather, the huge difference in net worth and credit scores of Blacks and Whites, even those who

have the same monthly income, was to blame. Williams contends that if banks were discriminating against Blacks by making their loan approvals more difficult, then Black default rates would be lower, and he cites a 1992 Federal Reserve study which found that Black and White default rates were roughly equivalent. He also claims that the insistence of many in Congress in recent years that homeownership be made more available in the form of subprime loans to low-income people was a primary cause of the collapse of the housing market and the ensuing recession. Had lending institutions been allowed to set their own requirements, Williams opines, many of our recent economic problems could have been avoided.

The thesis of this book is that attempts in the last 50 years to lessen the economic gap between Blacks and Whites through government interventions have been unsuccessful and may even have worsened the situation. Williams argues that free-market resource allocation would have been a better solution for both minorities and the public in general. *Race & Economics* is an easy read, well written and well researched: Williams provides 24 pages of footnotes to support his arguments. For those readers open to looking at the issue of race and economics from a distinctly conservative point of view, I strongly recommend this book. □

—Ronald Johnson  
Office of Prices and Living  
Conditions  
Bureau of Labor Statistics



## Notes on current labor statistics ..... 49

### Comparative indicators

- 1. Labor market indicators..... 61
- 2. Annual and quarterly percent changes in compensation, prices, and productivity..... 62
- 3. Alternative measures of wages and compensation changes..... 62

### Labor force data

- 4. Employment status of the population, seasonally adjusted ..... 63
- 5. Selected employment indicators, seasonally adjusted ..... 64
- 6. Selected unemployment indicators, seasonally adjusted.... 65
- 7. Duration of unemployment, seasonally adjusted..... 65
- 8. Unemployed persons by reason for unemployment, seasonally adjusted ..... 66
- 9. Unemployment rates by sex and age, seasonally adjusted ..... 66
- 10. Unemployment rates by State, seasonally adjusted..... 67
- 11. Employment of workers by State, seasonally adjusted ..... 67
- 12. Employment of workers by industry, seasonally adjusted ..... 68
- 13. Average weekly hours by industry, seasonally adjusted..... 71
- 14. Average hourly earnings by industry, seasonally adjusted ..... 72
- 15. Average hourly earnings by industry..... 73
- 16. Average weekly earnings by industry ..... 74
- 17. Diffusion indexes of employment change, seasonally adjusted ..... 75
- 18. Job openings levels and rates, by industry and regions, seasonally adjusted..... 76
- 19. Hires levels and rates by industry and region, seasonally adjusted..... 76
- 20. Separations levels and rates by industry and region, seasonally adjusted..... 77
- 21. Quits levels and rates by industry and region, seasonally adjusted..... 78
- 22. Quarterly Census of Employment and Wages, 10 largest counties ..... 78
- 23. Quarterly Census of Employment and Wages, by State .. 79
- 24. Annual data: Quarterly Census of Employment and Wages, by ownership ..... 81
- 25. Annual data: Quarterly Census of Employment and Wages, establishment size and employment, by supersector..... 82
- 26. Annual data: Quarterly Census of Employment and Wages, by metropolitan area ..... 83
- 27. Annual data: Employment status of the population..... 88
- 28. Annual data: Employment levels by industry ..... 88
- 29. Annual data: Average hours and earnings level, by industry ..... 89

### Labor compensation and collective bargaining data

- 30. Employment Cost Index, compensation ..... 90
- 31. Employment Cost Index, wages and salaries ..... 92
- 32. Employment Cost Index, benefits, private industry ..... 94
- 33. Employment Cost Index, private industry workers, by bargaining status, and region ..... 95
- 34. National Compensation Survey, retirement benefits, private industry ..... 96
- 35. National Compensation Survey, health insurance, private industry..... 99
- 36. National Compensation Survey, selected benefits, private industry ..... 101
- 37. Work stoppages involving 1,000 workers or more ..... 101

### Price data

- 38. Consumer Price Index: U.S. city average, by expenditure category and commodity and service groups..... 102
- 39. Consumer Price Index: U.S. city average and local data, all items ..... 105
- 40. Annual data: Consumer Price Index, all items and major groups..... 106
- 41. Producer Price Indexes by stage of processing ..... 107
- 42. Producer Price Indexes for the net output of major industry groups ..... 108
- 43. Annual data: Producer Price Indexes by stage of processing..... 109
- 44. U.S. export price indexes by end-use category..... 109
- 45. U.S. import price indexes by end-use category..... 110
- 46. U.S. international price indexes for selected categories of services ..... 110

### Productivity data

- 47. Indexes of productivity, hourly compensation, and unit costs, data seasonally adjusted ..... 111
- 48. Annual indexes of multifactor productivity..... 112
- 49. Annual indexes of productivity, hourly compensation, unit costs, and prices ..... 113
- 50. Annual indexes of output per hour for select industries.... 114

### International comparisons data

- 51. Unemployment rates in 10 countries, seasonally adjusted ..... 117
- 52. Annual data: Employment status of the civilian working-age population, 10 countries..... 118
- 53. Annual indexes of manufacturing productivity and related measures, 19 economies..... 119

### Injury and illness data

- 54. Annual data: Occupational injury and illness..... 121
- 55. Fatal occupational injuries by event or exposure ..... 123

# 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 usually are revised in the March issue of the *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 ( $\$3/150 \times 100 = \$2$ ). 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/](http://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/](http://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/](http://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](http://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](http://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 season-

ally 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 2007 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 posi-

tions. 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

With the release of data for January 2010, the CES program introduced its annual revision of national estimates of employment, hours, and earnings from the monthly survey of nonfarm establishments. Each year, the CES survey realigns its sample-based estimates to incorporate universe counts of employment—a process known as benchmarking. Comprehensive counts of employment, or benchmarks, are derived primarily from unemployment insurance (UI) tax reports that nearly all employers are required to file with State Workforce Agencies. With the release in June 2003, CES 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 pub-

lished 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 2007, publications presenting data from the Covered Employment and Wages program have

switched to the 2007 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 mil-

lion 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** information 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 supplemental 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 2007 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 aggregations, 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 conversion 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 pub-

lished 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/](http://www.bls.gov/ect/)

ADDITIONAL INFORMATION on the Employment Cost Index is available at [www.bls.gov/ncs/ect/home.htm](http://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](http://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 estimated 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 stoppages data is available at [www.bls.gov/cba/home.htm](http://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 measured 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 North American Indus-

try 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, allowances, 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](http://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 adjusted to 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](http://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 and 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 Introduction and Appendix B. Country Notes in *International Comparisons of Annual Labor Force Statistics, Adjusted to U.S. Concepts, 10 Countries, 1997-2009*, on the Internet at [www.bls.gov/ilc/flscomparelf.htm](http://www.bls.gov/ilc/flscomparelf.htm), and the Notes for Table 1 in the monthly report *International Unemployment Rates and Employment Indexes, Seasonally Adjusted, 2008-2010*,

on the Internet at [www.bls.gov/ilc/intl\\_unemployment\\_rates\\_monthly.htm](http://www.bls.gov/ilc/intl_unemployment_rates_monthly.htm).

## 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 19 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 the United States, the output measure is a chain-weighted index of real value added produced by the Bureau of Economic Analysis. BLS uses this series here to preserve international comparability. However, for its domestic industry measures, shown in tables 47–50 in this section, BLS uses a different output measures called “sectoral output,” which is gross output less intra-sector 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 Czech Republic, Finland, and the United Kingdom, compensation is reduced in certain years 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.

### 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 more in-depth information on sources and methods, see <http://www.bls.gov/news.release/prod4.toc.htm>.

FOR ADDITIONAL INFORMATION on international comparisons, contact the Division of International Labor Comparisons: (202) 691-5654 or [ilchelp@bls.gov](mailto:ilchelp@bls.gov).

## 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/](http://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 ac-

counts, 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/](http://www.bls.gov/iif/)

## 1. Labor market indicators

Selected indicators	2010	2011	2010				2011				2012
			I	II	III	IV	I	II	III	IV	I
<b>Employment data</b>											
Employment status of the civilian noninstitutional population (household survey): <sup>1</sup>											
Labor force participation rate.....	64.7	64.1	64.9	64.9	64.6	64.4	64.2	64.1	64.1	64.0	63.8
Employment-population ratio.....	58.5	58.4	58.5	58.6	58.5	58.3	58.4	58.3	58.3	58.5	58.5
Unemployment rate.....	9.6	8.9	9.8	9.6	9.5	9.6	9.0	9.1	9.1	8.7	8.2
Men.....	10.5	9.4	10.9	10.6	10.4	10.2	9.4	9.6	9.5	9.0	8.3
16 to 24 years.....	20.8	18.7	21.7	21.0	20.5	20.1	18.9	18.8	19.0	18.2	17.7
25 years and older.....	8.9	7.9	9.2	9.0	8.9	8.8	7.9	8.1	8.1	7.6	6.8
Women.....	8.6	8.5	8.6	8.6	8.5	8.8	8.4	8.5	8.5	8.4	8.2
16 to 24 years.....	15.8	15.7	15.4	16.1	15.5	16.4	16.4	15.8	15.7	15.1	14.8
25 years and older.....	7.4	7.3	7.4	7.4	7.4	7.6	7.2	7.3	7.4	7.3	7.1
Employment, nonfarm (payroll data), in thousands: <sup>1</sup>											
Total nonfarm.....	129,874	131,358	129,438	130,021	129,885	130,346	130,922	131,311	131,694	132,186	132,874
Total private.....	107,384	109,253	106,914	107,283	107,618	108,088	108,725	109,199	109,642	110,193	110,890
Goods-producing.....	17,751	18,021	17,704	17,754	17,764	17,785	17,942	18,019	18,100	18,176	18,328
Manufacturing.....	11,528	11,733	11,470	11,546	11,551	11,575	11,690	11,738	11,768	11,808	11,931
Service-providing.....	112,123	113,337	111,729	112,267	112,121	112,561	112,980	113,292	113,594	114,010	114,546
Average hours:											
Total private.....	33.4	33.6	33.3	33.4	33.5	33.5	33.6	33.7	33.6	33.7	33.8
Manufacturing.....	41.1	41.4	41.0	41.0	41.3	41.3	41.5	41.4	41.3	41.6	41.7
Overtime.....	3.8	4.1	3.6	3.9	3.9	4.0	4.2	4.0	4.0	4.1	4.2
<b>Employment Cost Index<sup>1,2,3</sup></b>											
Total compensation:											
Civilian nonfarm <sup>4</sup> .....	2.0	2.0	.7	.4	.5	.3	.7	.7	.3	.3	.6
Private nonfarm.....	2.1	2.2	.8	.5	.4	.3	.7	.9	.3	.3	.6
Goods-producing <sup>5</sup> .....	2.3	2.4	1.0	.5	.6	.1	.8	1.1	.2	.4	.3
Service-providing <sup>5</sup> .....	2.0	2.0	.7	.4	.4	.4	.7	.7	.3	.3	.9
State and local government.....	1.8	1.3	.3	.2	1.0	.3	.3	.1	.8	.1	.5
Workers by bargaining status (private nonfarm):											
Union.....	3.3	2.7	1.5	.8	.8	.2	.7	1.3	.3	.4	.3
Nonunion.....	1.8	2.1	.7	.5	.4	.3	.8	.7	.4	.3	.7

<sup>1</sup> Quarterly data seasonally adjusted.

<sup>2</sup> Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

<sup>3</sup> 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.

<sup>4</sup> Excludes Federal and private household workers.

<sup>5</sup> 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	2010	2011	2010				2011				2012
			I	II	III	IV	I	II	III	IV	I
<b>Compensation data<sup>1, 2, 3</sup></b>											
Employment Cost Index—compensation:											
Civilian nonfarm.....	2.0	2.0	0.7	0.4	0.5	0.3	0.7	0.7	0.3	0.3	0.6
Private nonfarm.....	2.1	2.2	.8	.5	.4	.3	.7	.9	.3	.3	.6
Employment Cost Index—wages and salaries:											
Civilian nonfarm.....	1.6	1.4	.4	.4	.4	.4	.4	.4	.4	.2	.6
Private nonfarm.....	1.8	1.6	.5	.4	.4	.4	.4	.5	.4	.3	.6
<b>Price data<sup>1</sup></b>											
Consumer Price Index (All Urban Consumers): All Items.....	1.5	3.0	.8	.2	.2	.3	2.0	1.0	.5	-5	1.6
Producer Price Index:											
Finished goods.....	3.8	4.8	1.8	-1	.6	1.4	3.6	1.2	.6	-8	1.7
Finished consumer goods.....	5.0	5.7	2.4	-1	.7	1.8	4.6	1.4	.7	-1.4	2.2
Capital equipment.....	.4	2.3	.0	-1	.0	.5	.6	.4	.2	1.0	.6
Intermediate materials, supplies, and components.....	6.3	6.1	2.6	1.2	.4	2.0	5.2	2.9	.0	-2.3	2.4
Crude materials.....	16.1	6.4	8.8	-4.2	2.7	8.5	9.3	3.5	-2.2	-3.6	2.7
<b>Productivity data<sup>4</sup></b>											
Output per hour of all persons:											
Business sector.....	4.0	.2	4.2	1.2	2.3	1.3	-1.8	-1	1.5	1.2	-6
Nonfarm business sector.....	4.0	.4	4.5	1.2	1.8	1.8	-1.0	-3	1.8	1.2	-5
Nonfinancial corporations <sup>5</sup> .....	4.7	.4	8.7	-1.4	-5	-3.7	1.8	2.9	.1	3.7	-

<sup>1</sup> 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.

<sup>2</sup> Excludes Federal and private household workers.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> Output per hour of all employees.

**3. Alternative measures of wage and compensation changes**

Components	Quarterly change					Four quarters ending—					
	2011				2012	2011				2012	
	I	II	III	IV	I	I	II	III	IV	I	
Average hourly compensation: <sup>1</sup>											
All persons, business sector.....	4.9	-0.1	5.3	4.0	1.4	2.3	1.6	2.5	3.5	2.6	
All persons, nonfarm business sector.....	5.1	-5	5.7	3.9	1.5	2.3	1.6	2.6	3.5	2.6	
Employment Cost Index—compensation: <sup>2</sup>											
Civilian nonfarm <sup>3</sup> .....	.7	.7	.3	.3	.6	2.0	2.2	2.0	2.0	1.9	
Private nonfarm.....	.7	.9	.3	.3	.6	2.0	2.3	2.1	2.2	2.1	
Union.....	.7	1.3	.3	.4	.3	2.5	3.0	2.4	2.7	2.3	
Nonunion.....	.8	.7	.4	.3	.7	1.9	2.2	2.1	2.1	2.0	
State and local government.....	.3	.1	.8	.1	.5	1.8	1.7	1.5	1.3	1.5	
Employment Cost Index—wages and salaries: <sup>2</sup>											
Civilian nonfarm <sup>3</sup> .....	.4	.4	.4	.2	.6	1.6	1.6	1.6	1.4	1.7	
Private nonfarm.....	.4	.5	.4	.3	.6	1.6	1.7	1.7	1.6	1.9	
Union.....	.6	.4	.5	.3	.6	1.9	1.7	1.7	1.8	1.8	
Nonunion.....	.4	.5	.4	.3	.5	1.6	1.7	1.7	1.7	1.8	
State and local government.....	.3	.1	.4	.2	.3	1.2	1.2	1.0	1.0	1.0	

<sup>1</sup> Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

<sup>2</sup> 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.

<sup>3</sup> Excludes Federal and private household workers.





**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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>Hispanic or Latino ethnicity</b>															
Civilian noninstitutional population <sup>1</sup> .....	33,713	34,438	34,155	34,233	34,311	34,391	34,470	34,555	34,640	34,724	34,808	34,885	36,301	36,384	36,463
Civilian labor force.....	22,748	22,898	22,643	22,783	22,754	22,832	22,778	22,938	23,014	23,253	23,222	23,270	24,045	24,206	24,128
Participation rate.....	67.5	66.5	66.3	66.6	66.3	66.4	66.1	66.4	66.4	67.0	66.7	66.7	66.2	66.5	66.2
Employed.....	19,906	20,269	20,083	20,102	20,060	20,189	20,207	20,353	20,411	20,601	20,574	20,699	21,513	21,628	21,638
Employment-population ratio <sup>2</sup> .....	59.0	58.9	58.8	58.7	58.5	58.7	58.6	58.9	58.9	59.3	59.1	59.3	59.3	59.4	59.3
Unemployed.....	2,843	2,629	2,560	2,680	2,695	2,643	2,570	2,585	2,603	2,652	2,648	2,571	2,532	2,579	2,491
Unemployment rate.....	12.5	11.5	11.3	11.8	11.8	11.6	11.3	11.3	11.3	11.4	11.4	11.0	10.5	10.7	10.3
Not in the labor force.....	10,964	11,540	11,512	11,450	11,557	11,558	11,692	11,617	11,626	11,471	11,586	11,615	12,256	12,178	12,335

<sup>1</sup> The population figures are not seasonally adjusted.

<sup>2</sup> Civilian employment as a percent of the civilian noninstitutional population.

<sup>3</sup> 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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>Characteristic</b>															
Employed, 16 years and older..	139,064	139,869	139,764	139,628	139,808	139,385	139,450	139,754	140,107	140,297	140,614	140,790	141,637	142,065	142,034
Men.....	73,359	74,290	74,051	73,969	74,217	74,068	74,011	74,209	74,435	74,492	74,975	75,235	75,288	75,318	75,369
Women.....	65,705	65,579	65,714	65,659	65,591	65,316	65,439	65,545	65,672	65,805	65,639	65,555	66,349	66,747	66,665
Married men, spouse present.....	43,292	43,283	42,914	43,015	43,043	43,075	43,210	43,259	43,640	43,661	43,933	43,709	43,658	43,556	43,635
Married women, spouse present.....	34,582	34,110	34,173	34,029	33,847	33,723	33,809	33,947	34,091	34,225	34,442	34,177	34,445	34,341	34,325
<b>Persons at work part time<sup>1</sup></b>															
All industries:															
Part time for economic reasons.....	8,874	8,560	8,459	8,571	8,541	8,545	8,437	8,787	9,270	8,790	8,469	8,098	8,230	8,119	7,672
Slack work or business conditions.....	6,174	5,711	5,634	5,714	5,836	5,807	5,695	5,815	5,900	5,839	5,578	5,305	5,372	5,446	5,081
Could only find part-time work.....	2,375	2,514	2,355	2,444	2,475	2,474	2,538	2,707	2,844	2,538	2,496	2,419	2,551	2,404	2,341
Part time for noneconomic reasons.....	18,251	18,334	18,425	18,326	18,481	18,461	18,280	18,276	18,329	18,401	18,363	18,372	18,636	18,827	18,523
Nonagricultural industries:															
Part time for economic reasons.....	8,744	8,423	8,297	8,453	8,396	8,400	8,264	8,640	9,115	8,664	8,358	7,952	8,083	7,988	7,584
Slack work or business conditions.....	6,087	5,617	5,542	5,602	5,729	5,704	5,586	5,714	5,803	5,762	5,502	5,199	5,278	5,356	5,000
Could only find part-time work.....	2,358	2,494	2,326	2,448	2,452	2,308	2,510	2,702	2,869	2,566	2,518	2,423	2,563	2,365	2,295
Part time for noneconomic reasons.....	17,911	17,957	18,035	18,004	18,113	18,093	17,883	17,867	17,915	18,003	17,941	17,969	18,298	18,399	18,100

<sup>1</sup> 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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>Characteristic</b>															
Total, 16 years and older.....	9.6	8.9	8.9	9.0	9.0	9.1	9.1	9.1	9.0	8.9	8.7	8.5	8.3	8.3	8.2
Both sexes, 16 to 19 years.....	25.9	24.4	24.5	24.9	24.1	24.6	24.9	25.3	24.5	24.0	23.7	23.1	23.2	23.8	25.0
Men, 20 years and older.....	9.8	8.7	8.7	8.8	8.9	9.0	8.9	8.8	8.7	8.7	8.3	8.0	7.7	7.7	7.6
Women, 20 years and older.....	8.0	7.9	7.8	7.9	8.0	8.0	7.9	7.9	8.1	7.9	7.8	7.9	7.7	7.7	7.4
White, total <sup>1</sup> .....	8.7	7.9	7.9	8.1	8.0	8.1	8.1	7.9	7.9	8.0	7.6	7.5	7.4	7.3	7.3
Both sexes, 16 to 19 years.....	23.2	21.7	21.5	22.1	20.3	21.8	23.1	22.8	21.2	21.7	21.3	20.3	21.1	21.3	22.5
Men, 16 to 19 years.....	26.3	24.5	23.4	24.9	22.5	25.0	25.3	26.8	24.9	25.5	24.6	23.2	24.5	23.8	25.5
Women, 16 to 19 years.....	20.0	18.9	19.5	19.4	18.3	18.6	20.8	18.5	17.4	17.7	18.0	17.3	17.7	18.7	19.5
Men, 20 years and older.....	8.9	7.7	7.8	8.0	7.9	8.0	7.9	7.7	7.7	7.8	7.3	7.1	6.9	6.8	6.8
Women, 20 years and older.....	7.2	7.0	6.9	7.0	7.1	7.0	7.0	7.0	7.1	7.0	6.9	6.8	6.8	6.8	6.6
Black or African American, total <sup>1</sup> .....	16.0	15.8	15.6	16.2	16.2	16.2	15.9	16.7	15.9	15.0	15.5	15.8	13.6	14.1	14.0
Both sexes, 16 to 19 years.....	43.0	41.3	41.9	41.3	40.8	39.8	39.1	46.3	43.6	37.5	39.6	42.1	38.5	34.7	40.5
Men, 16 to 19 years.....	45.4	43.1	40.3	45.5	44.8	41.3	37.9	44.9	43.5	38.7	42.7	48.3	35.9	43.6	40.2
Women, 16 to 19 years.....	40.5	39.4	43.5	37.3	36.3	38.3	40.3	48.0	43.6	36.4	36.8	34.6	41.0	26.8	40.8
Men, 20 years and older.....	17.3	16.7	16.8	17.0	17.4	16.9	17.0	18.0	16.6	16.0	16.4	15.7	12.7	14.3	13.8
Women, 20 years and older.....	12.8	13.2	12.5	13.5	13.4	13.7	13.4	13.4	13.2	12.6	13.0	13.9	12.6	12.4	12.3
Hispanic or Latino ethnicity.....	12.5	11.5	11.3	11.8	11.8	11.6	11.3	11.3	11.3	11.4	11.4	11.0	10.5	10.7	10.3
Married men, spouse present.....	6.8	5.8	6.0	6.1	6.0	6.1	6.1	5.8	5.8	5.8	5.3	5.1	5.1	5.0	5.1
Married women, spouse present.....	5.9	5.6	5.7	5.7	5.8	5.6	5.6	5.7	5.8	5.7	5.3	5.4	5.6	5.5	5.3
Full-time workers.....	10.4	9.6	9.5	9.6	9.7	9.7	9.8	9.7	9.8	9.5	9.2	9.0	8.8	8.8	8.6
Part-time workers.....	6.3	6.3	6.3	6.3	6.2	6.7	6.1	6.5	6.0	6.4	6.0	6.3	5.9	6.0	6.2
<b>Educational attainment<sup>2</sup></b>															
Less than a high school diploma.....	14.9	14.1	13.8	14.6	14.6	14.2	14.9	14.1	13.9	13.8	13.3	13.8	13.1	12.9	12.6
High school graduates, no college <sup>3</sup> .....	10.3	9.4	9.5	9.7	9.5	10.0	9.3	9.5	9.6	9.5	8.8	8.7	8.4	8.3	8.0
Some college or associate degree.....	8.4	8.0	7.4	7.5	8.0	8.4	8.2	8.2	8.4	8.2	7.6	7.7	7.2	7.3	7.5
Bachelor's degree and higher <sup>4</sup> .....	4.7	4.3	4.4	4.5	4.5	4.4	4.3	4.3	4.2	4.4	4.4	4.1	4.2	4.2	4.2

<sup>1</sup> 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.

<sup>2</sup> Data refer to persons 25 years and older.

## 7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Less than 5 weeks.....	2,771	2,677	2,437	2,725	2,687	3,068	2,675	2,734	2,743	2,676	2,510	2,669	2,486	2,541	2,572
5 to 14 weeks.....	3,267	2,993	2,927	2,931	2,912	2,976	3,063	3,019	2,902	3,285	2,896	2,858	2,884	2,807	2,754
15 weeks and over.....	8,786	8,077	8,122	7,919	8,197	8,137	8,134	8,218	8,227	7,869	7,766	7,628	7,498	7,397	7,175
15 to 26 weeks.....	2,371	2,061	1,991	2,058	1,994	1,874	1,972	2,203	2,029	2,029	2,087	2,039	1,980	1,971	1,867
27 weeks and over.....	6,415	6,016	6,130	5,860	6,204	6,263	6,162	6,015	6,197	5,839	5,680	5,588	5,518	5,426	5,308
Mean duration, in weeks.....	33.0	39.3	38.9	38.3	39.6	39.8	40.2	40.3	40.4	39.2	40.9	40.8	40.1	40.0	39.4
Median duration, in weeks.....	21.4	21.4	21.6	20.8	21.9	22.1	21.2	21.7	21.8	20.8	21.5	21.0	21.1	20.3	19.9

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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Job losers <sup>1</sup> .....	9,250	8,106	8,244	8,181	8,250	8,233	8,146	8,120	8,028	7,924	7,599	7,602	7,321	7,209	7,020
On temporary layoff.....	1,431	1,230	1,209	1,241	1,218	1,253	1,246	1,237	1,195	1,226	1,181	1,216	1,284	1,135	1,120
Not on temporary layoff.....	7,819	6,876	7,035	6,941	7,031	6,980	6,900	6,883	6,833	6,699	6,418	6,386	6,037	6,075	5,900
Job leavers.....	889	956	900	944	919	971	936	973	972	1,068	1,005	953	939	1,031	1,117
Reentrants.....	3,466	3,401	3,278	3,387	3,436	3,431	3,424	3,519	3,484	3,387	3,355	3,399	3,325	3,361	3,269
New entrants.....	1,220	1,284	1,335	1,322	1,229	1,227	1,274	1,249	1,323	1,291	1,276	1,280	1,253	1,392	1,433
<b>Percent of unemployed</b>															
Job losers <sup>1</sup> .....	62.4	59.0	59.9	59.1	59.6	59.4	59.1	58.6	58.1	58.0	57.4	57.4	57.0	55.5	54.7
On temporary layoff.....	9.6	8.9	8.8	9.0	8.8	9.0	9.0	8.9	8.7	9.0	8.9	9.2	10.0	8.7	8.7
Not on temporary layoff.....	52.7	50.0	51.1	50.2	50.8	50.4	50.1	49.7	49.5	49.0	48.5	48.3	47.0	46.7	46.0
Job leavers.....	6.0	7.0	6.5	6.8	6.6	7.0	6.8	7.0	7.0	7.8	7.6	7.2	7.3	7.9	8.7
Reentrants.....	23.4	24.7	23.8	24.5	24.8	24.8	24.8	25.4	25.2	24.8	25.3	25.7	25.9	25.9	25.5
New entrants.....	8.2	9.3	9.7	9.6	8.9	8.9	9.2	9.0	9.6	9.4	9.6	9.7	9.8	10.7	11.2
<b>Percent of civilian labor force</b>															
Job losers <sup>1</sup> .....	6.0	5.3	5.4	5.3	5.4	5.4	5.3	5.3	5.2	5.1	4.9	4.9	4.7	4.7	4.5
Job leavers.....	.6	.6	.6	.6	.6	.6	.6	.6	.6	.7	.7	.6	.6	.7	.7
Reentrants.....	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1
New entrants.....	.8	.8	.9	.9	.8	.8	.8	.8	.9	.8	.8	.8	.8	.9	.9

<sup>1</sup> 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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Total, 16 years and older.....	9.6	8.9	8.9	9.0	9.0	9.1	9.1	9.1	9.0	8.9	8.7	8.5	8.3	8.3	8.2
16 to 24 years.....	18.4	17.3	17.5	17.6	17.2	17.3	17.4	17.6	17.3	16.7	16.8	16.7	16.0	16.5	16.4
16 to 19 years.....	25.9	24.4	24.5	24.9	24.1	24.6	24.9	25.3	24.5	24.0	23.7	23.1	23.2	23.8	25.0
16 to 17 years.....	29.1	27.7	28.7	30.7	28.9	27.9	28.2	28.7	26.3	25.2	23.3	27.8	28.8	29.9	28.8
18 to 19 years.....	24.2	22.9	22.5	22.3	22.0	22.8	23.2	24.4	23.2	23.2	23.4	21.3	20.5	20.8	22.9
20 to 24 years.....	15.5	14.6	14.9	14.9	14.6	14.5	14.6	14.7	14.6	13.9	14.2	14.4	13.3	13.8	13.2
25 years and older.....	8.2	7.6	7.5	7.6	7.8	7.9	7.8	7.7	7.7	7.7	7.3	7.2	7.0	7.0	6.8
25 to 54 years.....	8.6	7.9	7.8	8.0	8.1	8.2	8.0	8.1	8.1	8.0	7.6	7.6	7.4	7.3	7.1
55 years and older.....	7.0	6.6	6.5	6.5	6.7	6.9	6.8	6.6	6.7	7.0	6.4	6.2	5.9	5.9	6.2
Men, 16 years and older.....	10.5	9.4	9.4	9.5	9.5	9.7	9.6	9.5	9.4	9.4	8.9	8.7	8.3	8.3	8.3
16 to 24 years.....	20.8	18.7	18.9	19.1	18.6	18.7	18.8	19.5	18.9	17.9	18.5	18.3	17.1	18.6	17.4
16 to 19 years.....	28.8	27.2	26.4	28.1	27.0	27.4	27.2	28.1	27.8	27.3	26.6	26.6	25.3	27.0	26.7
16 to 17 years.....	31.8	29.1	28.4	32.3	31.0	30.2	29.4	28.2	27.6	27.4	26.7	30.5	32.0	33.5	30.1
18 to 19 years.....	27.4	26.3	25.4	26.4	25.3	25.8	25.7	28.9	27.1	27.4	26.7	25.1	22.3	23.9	25.1
20 to 24 years.....	17.8	15.7	16.3	16.0	15.7	15.6	15.8	16.3	15.7	14.6	15.6	15.3	14.2	15.6	14.1
25 years and older.....	8.9	7.9	7.8	8.0	8.1	8.4	8.2	8.1	8.0	8.1	7.4	7.2	6.9	6.7	6.8
25 to 54 years.....	9.3	8.2	8.1	8.3	8.4	8.6	8.4	8.4	8.3	8.4	7.7	7.5	7.2	7.1	7.0
55 years and older.....	7.7	7.0	6.8	6.9	7.0	7.8	7.3	6.9	6.9	7.2	6.7	6.1	5.9	5.7	6.3
Women, 16 years and older.....	8.6	8.5	8.3	8.4	8.5	8.5	8.5	8.5	8.6	8.4	8.3	8.3	8.3	8.2	8.1
16 to 24 years.....	15.8	15.7	16.0	15.9	15.7	15.7	15.9	15.6	15.6	15.2	15.0	15.0	14.8	14.2	15.4
16 to 19 years.....	22.8	21.7	22.6	21.6	21.3	21.7	22.5	22.4	21.1	20.6	20.7	19.3	21.1	20.7	23.4
16 to 17 years.....	26.5	26.3	29.0	29.4	27.0	25.8	27.0	29.2	25.1	23.2	20.0	25.0	25.8	26.1	27.6
18 to 19 years.....	20.9	19.3	19.6	18.0	18.7	19.7	20.6	19.3	19.0	18.6	20.1	17.1	18.6	17.8	20.7
20 to 24 years.....	13.0	13.4	13.4	13.6	13.5	13.3	13.2	12.8	13.4	13.1	12.6	13.4	12.3	11.7	12.2
25 years and older.....	7.4	7.3	7.1	7.3	7.4	7.4	7.3	7.3	7.5	7.3	7.2	7.3	7.2	7.2	6.8
25 to 54 years.....	7.8	7.6	7.5	7.6	7.7	7.8	7.6	7.7	7.8	7.5	7.5	7.6	7.6	7.6	7.2
55 years and older <sup>1</sup> .....	6.2	6.2	5.8	5.4	6.0	6.3	7.3	7.1	6.6	6.5	5.8	5.7	5.9	6.1	5.9

<sup>1</sup> 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	Feb. 2011	Jan. 2012 <sup>P</sup>	Feb. 2012 <sup>P</sup>	State	Feb. 2011	Jan. 2012 <sup>P</sup>	Feb. 2012 <sup>P</sup>
Alabama.....	9.3	7.8	7.5	Missouri.....	8.9	7.5	7.4
Alaska.....	7.7	7.2	7.0	Montana.....	6.9	6.5	6.2
Arizona.....	9.7	8.7	8.7	Nebraska.....	4.5	4.1	4.1
Arkansas.....	8.0	7.6	7.6	Nevada.....	13.6	12.7	12.3
California.....	12.0	10.9	10.9	New Hampshire.....	5.5	5.1	5.2
Colorado.....	8.6	7.8	7.8	New Jersey.....	9.3	9.0	9.0
Connecticut.....	9.2	8.0	7.8	New Mexico.....	7.6	7.0	7.2
Delaware.....	7.4	7.0	6.9	New York.....	8.1	8.3	8.5
District of Columbia.....	10.0	9.9	9.8	North Carolina.....	10.4	10.2	9.9
Florida.....	10.8	9.6	9.4	North Dakota.....	3.5	3.2	3.1
Georgia.....	9.9	9.2	9.1	Ohio.....	8.9	7.7	7.6
Hawaii.....	6.6	6.5	6.4	Oklahoma.....	6.1	6.1	6.0
Idaho.....	8.8	8.1	8.0	Oregon.....	9.7	8.8	8.7
Illinois.....	9.3	9.4	9.1	Pennsylvania.....	8.0	7.6	7.6
Indiana.....	8.9	8.7	8.4	Rhode Island.....	11.3	10.9	11.0
Iowa.....	6.0	5.4	5.3	South Carolina.....	10.5	9.3	9.1
Kansas.....	6.9	6.1	6.1	South Dakota.....	5.0	4.2	4.3
Kentucky.....	9.8	8.8	8.7	Tennessee.....	9.5	8.2	8.0
Louisiana.....	7.6	6.9	7.0	Texas.....	8.0	7.3	7.1
Maine.....	7.9	7.0	7.1	Utah.....	7.3	5.7	5.7
Maryland.....	7.2	6.5	6.5	Vermont.....	5.9	5.1	4.9
Massachusetts.....	7.7	6.9	6.9	Virginia.....	6.3	5.8	5.7
Michigan.....	10.7	9.0	8.8	Washington.....	9.5	8.4	8.3
Minnesota.....	6.7	5.6	5.7	West Virginia.....	8.1	7.4	7.2
Mississippi.....	10.5	10.0	9.6	Wisconsin.....	7.6	6.9	6.9
				Wyoming.....	6.2	5.5	5.4

<sup>P</sup> = preliminary

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

State	Feb. 2011	Jan. 2012 <sup>P</sup>	Feb. 2012 <sup>P</sup>	State	Feb. 2011	Jan. 2012 <sup>P</sup>	Feb. 2012 <sup>P</sup>
Alabama.....	2,203,470	2,160,092	2,149,848	Missouri.....	3,051,359	3,041,934	3,032,131
Alaska.....	366,545	367,907	367,224	Montana.....	502,559	506,541	506,545
Arizona.....	3,058,358	3,005,922	3,005,923	Nebraska.....	999,611	1,015,709	1,014,039
Arkansas.....	1,369,848	1,383,037	1,385,981	Nevada.....	1,387,890	1,377,473	1,370,820
California.....	18,360,835	18,462,438	18,467,766	New Hampshire.....	737,685	742,129	742,604
Colorado.....	2,723,667	2,730,248	2,731,141	New Jersey.....	4,548,430	4,572,935	4,575,888
Connecticut.....	1,921,825	1,916,038	1,914,498	New Mexico.....	930,450	928,517	932,004
Delaware.....	438,481	440,458	439,769	New York.....	9,523,223	9,513,528	9,520,717
District of Columbia.....	345,980	346,567	347,810	North Carolina.....	4,640,525	4,683,094	4,687,689
Florida.....	9,219,382	9,298,687	9,297,244	North Dakota.....	379,784	389,701	390,049
Georgia.....	4,718,382	4,743,544	4,750,761	Ohio.....	5,822,204	5,788,948	5,794,997
Hawaii.....	660,849	660,843	659,513	Oklahoma.....	1,766,586	1,785,029	1,787,505
Idaho.....	768,293	775,534	777,207	Oregon.....	1,993,082	1,992,848	1,992,108
Illinois.....	6,552,846	6,579,964	6,589,029	Pennsylvania.....	6,403,912	6,382,830	6,390,129
Indiana.....	3,172,329	3,210,675	3,213,116	Rhode Island.....	564,923	560,147	559,032
Iowa.....	1,668,071	1,666,454	1,664,019	South Carolina.....	2,153,963	2,152,122	2,158,446
Kansas.....	1,505,599	1,510,203	1,507,875	South Dakota.....	446,114	449,371	449,317
Kentucky.....	2,070,227	2,066,634	2,066,126	Tennessee.....	3,130,787	3,134,679	3,123,406
Louisiana.....	2,071,329	2,057,899	2,060,510	Texas.....	12,410,711	12,518,550	12,517,731
Maine.....	703,170	708,735	709,381	Utah.....	1,347,743	1,330,781	1,334,405
Maryland.....	3,070,953	3,079,072	3,083,746	Vermont.....	360,196	360,580	360,658
Massachusetts.....	3,464,119	3,456,267	3,458,195	Virginia.....	4,283,378	4,341,962	4,343,120
Michigan.....	4,675,408	4,633,005	4,646,907	Washington.....	3,491,107	3,492,453	3,498,061
Minnesota.....	2,974,178	2,976,126	2,974,074	West Virginia.....	800,770	802,677	803,726
Mississippi.....	1,337,922	1,349,014	1,343,796	Wisconsin.....	3,070,780	3,054,610	3,059,442
				Wyoming.....	303,584	306,677	307,245

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

<sup>P</sup> = preliminary







**13. Average weekly hours of production or nonsupervisory workers<sup>1</sup> on private nonfarm payrolls, by industry, monthly data seasonally adjusted**

Industry	Annual average		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. <sup>P</sup>	Mar. <sup>P</sup>
<b>TOTAL PRIVATE</b> .....	33.4	33.6	33.6	33.7	33.6	33.7	33.7	33.6	33.6	33.7	33.7	33.7	33.8	33.8	33.8
<b>GOODS-PRODUCING</b> .....	40.4	40.9	40.7	40.8	40.9	40.8	40.9	40.8	40.8	40.9	40.9	41.1	41.2	41.3	41.2
<b>Natural resources and mining</b> .....	44.6	46.7	45.8	46.6	46.5	47.2	46.4	46.3	46.7	47.5	47.0	47.6	47.7	47.6	47.4
<b>Construction</b> .....	38.4	39.0	38.6	38.8	39.1	38.9	39.1	39.0	39.0	38.8	38.9	39.2	39.1	39.3	39.3
<b>Manufacturing</b> .....	41.1	41.4	41.5	41.4	41.5	41.4	41.4	41.3	41.3	41.5	41.5	41.6	41.8	41.9	41.7
Overtime hours.....	3.8	4.1	4.2	4.1	4.1	4.0	4.1	4.1	4.0	4.1	4.1	4.1	4.2	4.2	4.2
Durable goods.....	41.4	41.9	41.9	41.8	41.8	41.8	41.8	41.7	41.8	41.9	41.9	42.1	42.2	42.3	42.1
Overtime hours.....	3.8	4.2	4.4	4.2	4.2	4.2	4.2	4.2	4.1	4.2	4.2	4.3	4.4	4.4	4.4
Wood products.....	39.1	39.7	40.0	39.9	39.5	39.3	39.2	39.3	39.7	39.5	39.8	40.4	41.3	41.1	40.9
Nonmetallic mineral products.....	41.7	42.3	42.4	42.2	42.8	42.5	42.6	42.5	42.6	42.3	41.7	42.0	42.3	43.1	42.4
Primary metals.....	43.7	44.6	45.0	45.0	45.2	45.1	44.8	44.5	44.1	43.9	44.0	44.2	44.2	44.1	44.0
Fabricated metal products.....	41.4	42.0	41.9	42.0	42.0	42.1	42.1	41.9	41.9	42.0	42.1	42.3	42.3	42.6	42.3
Machinery.....	42.1	43.1	43.1	42.9	43.3	43.3	43.1	43.2	43.0	42.9	43.0	43.1	43.0	43.1	43.1
Computer and electronic products.....	40.9	40.5	40.4	40.5	40.5	40.4	40.6	40.5	40.4	40.6	40.4	40.8	41.0	41.0	40.4
Electrical equipment and appliances.....	41.1	40.8	41.2	40.7	40.8	41.1	40.3	40.3	40.6	41.4	41.0	41.0	41.2	41.5	41.6
Transportation equipment.....	42.9	43.2	43.6	42.9	42.8	42.8	43.1	43.0	43.2	43.3	43.5	43.7	43.8	43.9	43.7
Furniture and related products.....	38.5	39.9	40.0	39.9	40.1	39.3	39.7	40.0	39.8	40.0	40.1	40.3	40.9	40.4	40.0
Miscellaneous manufacturing.....	38.7	38.9	38.8	38.7	38.8	38.7	38.8	38.6	38.9	39.1	39.0	38.9	39.2	39.1	38.8
Nondurable goods.....	40.8	40.8	40.7	40.9	40.9	40.7	40.9	40.6	40.7	40.9	40.8	40.9	41.1	41.1	41.0
Overtime hours.....	3.8	4.0	4.0	4.0	4.0	3.8	4.0	4.0	3.9	4.0	4.0	3.9	4.0	4.0	4.0
Food manufacturing.....	40.7	40.2	39.9	40.3	40.0	40.0	40.2	40.0	40.2	40.2	40.5	40.4	40.5	40.6	40.5
Beverage and tobacco products.....	37.5	39.2	39.0	38.8	39.1	39.1	39.9	38.7	39.0	39.6	39.5	39.0	39.0	38.7	38.5
Textile mills.....	41.2	41.7	40.7	42.1	42.2	42.0	42.0	41.8	42.0	42.6	42.4	42.7	42.9	43.0	43.1
Textile product mills.....	39.0	39.1	39.1	39.1	38.7	38.6	38.0	39.0	39.6	39.7	39.9	40.8	40.5	40.5	40.2
Apparel.....	36.6	38.2	38.3	38.3	38.9	38.7	38.5	38.3	37.6	37.9	37.7	37.2	38.0	37.7	37.2
Leather and allied products.....	39.1	39.8	39.0	39.0	39.5	40.3	39.9	39.3	39.2	39.7	40.0	40.2	40.1	40.0	39.9
Paper and paper products.....	42.9	42.9	43.7	42.8	43.2	43.0	43.1	42.8	42.6	42.8	42.7	42.1	42.9	43.0	43.0
Printing and related support activities.....	38.2	38.0	37.9	38.0	38.0	37.9	38.3	37.8	37.8	37.8	37.9	38.4	38.4	38.4	38.3
Petroleum and coal products.....	43.0	43.8	42.8	43.4	44.3	43.6	44.3	43.4	42.8	43.9	44.7	46.2	47.2	47.7	47.2
Chemicals.....	42.2	42.5	42.6	43.3	43.1	42.5	42.2	42.2	42.3	42.6	41.9	41.9	42.2	42.0	42.1
Plastics and rubber products.....	41.9	42.0	42.0	41.9	42.1	41.9	42.0	41.9	41.7	42.3	41.8	42.0	42.0	42.2	41.9
<b>PRIVATE SERVICE-PROVIDING</b> .....	32.2	32.4	32.4	32.5	32.4	32.4	32.5	32.4	32.4	32.5	32.5	32.5	32.5	32.5	32.5
<b>Trade, transportation, and utilities</b> .....	33.3	33.7	33.7	33.8	33.7	33.7	33.7	33.7	33.7	33.8	33.8	33.8	33.9	33.9	33.8
Wholesale trade.....	37.9	38.5	38.5	38.5	38.6	38.6	38.5	38.4	38.6	38.7	38.6	38.7	38.6	38.9	38.7
Retail trade.....	30.2	30.5	30.4	30.6	30.4	30.5	30.6	30.5	30.5	30.7	30.7	30.7	30.8	30.7	30.7
Transportation and warehousing.....	37.1	37.8	38.2	38.0	37.9	37.9	37.8	37.8	37.7	37.8	37.8	37.7	37.7	37.8	37.7
Utilities.....	42.0	42.1	42.5	42.7	42.4	42.0	41.9	41.9	42.3	41.9	41.7	40.5	40.8	40.7	40.5
<b>Information</b> .....	36.3	36.2	36.3	36.5	36.4	36.3	36.4	36.0	36.1	36.3	36.2	36.0	36.2	36.0	36.0
<b>Financial activities</b> .....	36.2	36.4	36.3	36.3	36.4	36.4	36.5	36.4	36.6	36.6	36.5	36.6	36.6	36.6	36.7
<b>Professional and business services</b> .....	35.1	35.2	35.1	35.3	35.2	35.3	35.2	35.1	35.2	35.3	35.2	35.2	35.3	35.3	35.2
<b>Education and health services</b> .....	32.1	32.3	32.2	32.3	32.3	32.3	32.4	32.3	32.4	32.4	32.4	32.3	32.4	32.4	32.4
<b>Leisure and hospitality</b> .....	24.8	24.8	24.9	24.8	24.8	24.8	24.8	24.7	24.7	24.8	24.8	24.9	24.9	24.9	25.0
<b>Other services</b> .....	30.7	30.7	30.8	30.8	30.8	30.9	30.7	30.7	30.8	30.9	30.7	30.8	30.8	30.6	30.7

<sup>1</sup> 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<sup>1</sup> on private nonfarm payrolls, by industry, monthly data seasonally adjusted**

Industry	Annual average		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. <sup>P</sup>	Mar. <sup>P</sup>
<b>TOTAL PRIVATE</b>															
Current dollars.....	\$19.07	\$19.47	\$19.34	\$19.39	\$19.43	\$19.45	\$19.52	\$19.50	\$19.53	\$19.57	\$19.58	\$19.59	\$19.61	\$19.65	\$19.69
Constant (1982) dollars.....	8.91	8.79	8.80	8.79	8.78	8.78	8.78	8.74	8.73	8.75	8.75	8.76	8.75	8.72	8.71
<b>GOODS-PRODUCING.....</b>	20.28	20.66	20.58	20.59	20.63	20.63	20.68	20.71	20.71	20.75	20.73	20.78	20.78	20.84	20.90
<b>Natural resources and mining.....</b>	23.82	24.51	24.39	24.04	24.46	24.43	24.62	24.61	24.66	24.85	24.87	24.89	24.89	25.46	25.61
<b>Construction.....</b>	23.22	23.64	23.51	23.57	23.57	23.58	23.65	23.78	23.76	23.72	23.68	23.75	23.74	23.82	23.93
<b>Manufacturing.....</b>	18.61	18.94	18.90	18.90	18.92	18.92	18.95	18.93	18.94	19.00	18.98	19.02	19.03	19.04	19.06
Excluding overtime.....	17.78	18.04	17.99	18.01	18.03	18.05	18.06	18.03	18.07	18.11	18.09	18.13	18.12	18.13	18.15
Durable goods.....	19.81	20.12	20.10	20.11	20.11	20.10	20.12	20.09	20.12	20.20	20.15	20.15	20.16	20.16	20.16
Nondurable goods.....	16.80	17.07	17.01	17.02	17.05	17.06	17.10	17.09	17.06	17.10	17.11	17.19	17.20	17.23	17.28
<b>PRIVATE SERVICE-PRIVATE SERVICE-PROVIDING.....</b>	18.81	19.21	19.08	19.14	19.18	19.20	19.28	19.25	19.28	19.32	19.34	19.34	19.37	19.39	19.43
<b>Trade, transportation, and utilities.....</b>	16.82	17.15	17.06	17.10	17.12	17.14	17.22	17.18	17.21	17.25	17.26	17.25	17.28	17.32	17.37
Wholesale trade.....	21.54	21.97	21.86	21.93	21.98	22.00	22.14	22.02	22.02	22.07	22.00	21.97	22.06	22.01	22.11
Retail trade.....	13.24	13.51	13.42	13.46	13.43	13.46	13.54	13.49	13.51	13.59	13.69	13.67	13.68	13.74	13.78
Transportation and warehousing.....	19.16	19.50	19.34	19.39	19.45	19.47	19.55	19.60	19.66	19.67	19.55	19.60	19.63	19.63	19.69
Utilities.....	30.04	30.82	30.68	31.12	30.84	30.87	30.94	30.96	31.20	30.96	31.15	30.99	31.01	31.01	31.09
<b>Information.....</b>	25.87	26.61	26.50	26.72	26.61	26.42	26.55	26.58	26.71	26.83	26.76	26.80	26.74	26.71	26.80
<b>Financial activities.....</b>	21.52	21.91	21.77	21.86	21.80	21.76	21.87	21.83	21.95	21.99	22.20	22.26	22.36	22.43	22.47
<b>Professional and business services.....</b>	22.78	23.12	23.01	23.08	23.10	23.17	23.24	23.14	23.11	23.15	23.21	23.12	23.14	23.13	23.24
<b>Education and health services.....</b>	20.12	20.78	20.56	20.59	20.71	20.76	20.86	20.92	20.94	20.99	20.98	21.01	21.04	21.03	21.03
<b>Leisure and hospitality.....</b>	11.31	11.45	11.40	11.42	11.49	11.47	11.49	11.48	11.48	11.50	11.48	11.53	11.54	11.58	11.61
<b>Other services.....</b>	17.06	17.32	17.22	17.27	17.28	17.34	17.36	17.36	17.38	17.41	17.39	17.42	17.40	17.44	17.36

<sup>1</sup> 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.

















**23. Quarterly Census of Employment and Wages: by State, third quarter 2010.**

State	Establishments, third quarter 2010 (thousands)	Employment		Average weekly wage <sup>1</sup>	
		September 2010 (thousands)	Percent change, September 2009-10	Third quarter 2010	Percent change, third quarter 2009-10
United States <sup>2</sup>	9,044.4	128,440.4	0.2	\$870	3.4
Alabama	116.8	1,813.9	-1	774	4.0
Alaska	21.4	333.5	1.3	926	4.4
Arizona	147.2	2,342.3	-9	821	2.6
Arkansas	85.6	1,147.0	.8	684	3.8
California	1,347.5	14,469.7	-3	982	3.3
Colorado	173.2	2,183.8	-2	898	2.5
Connecticut	111.4	1,611.9	.0	1,069	4.3
Delaware	28.4	404.7	.8	902	2.4
District of Columbia	35.0	693.8	2.0	1,471	1.2
Florida	595.2	7,045.3	.0	780	2.8
Georgia	268.2	3,749.9	-1	823	2.7
Hawaii	38.9	585.6	-1	804	2.2
Idaho	55.0	616.8	-1.1	667	3.1
Illinois	378.6	5,539.5	.0	916	4.0
Indiana	157.2	2,736.7	.8	742	3.9
Iowa	94.3	1,439.8	-5	719	3.6
Kansas	87.5	1,296.1	-1.0	731	3.5
Kentucky	110.1	1,728.3	.8	729	3.3
Louisiana	131.0	1,834.8	.0	790	3.9
Maine	49.2	589.4	-6	714	3.6
Maryland	163.8	2,469.7	.5	966	2.7
Massachusetts	221.1	3,169.8	.8	1,069	4.5
Michigan	247.6	3,825.9	.9	840	3.8
Minnesota	164.7	2,574.3	.4	875	4.7
Mississippi	69.5	1,077.4	.0	653	2.8
Missouri	174.5	2,596.8	-5	764	2.7
Montana	42.4	428.7	.0	647	1.6
Nebraska	60.0	899.8	-2	708	2.8
Nevada	71.2	1,106.8	-1.7	815	1.2
New Hampshire	48.4	608.9	.1	854	2.9
New Jersey	265.6	3,759.0	-4	1,024	2.8
New Mexico	54.8	785.9	-1.0	745	2.9
New York	591.6	8,364.2	.5	1,057	4.3
North Carolina	251.7	3,806.2	-3	768	3.1
North Dakota	26.4	366.1	3.0	726	6.8
Ohio	286.4	4,942.1	.3	791	3.4
Oklahoma	102.2	1,487.5	-2	726	4.0
Oregon	131.0	1,620.5	.3	791	3.1
Pennsylvania	341.0	5,500.9	.9	860	4.1
Rhode Island	35.2	456.0	.8	826	4.2
South Carolina	111.4	1,763.7	.5	714	3.9
South Dakota	30.9	393.7	.4	660	4.3
Tennessee	139.6	2,578.3	.8	777	4.3
Texas	572.4	10,204.5	1.5	876	3.7
Utah	83.7	1,160.6	.5	740	2.2
Vermont	24.4	294.3	.5	752	2.6
Virginia	232.9	3,544.1	.4	930	3.8
Washington	237.0	2,855.7	-3	953	4.0
West Virginia	48.4	699.4	1.1	702	4.3
Wisconsin	157.6	2,657.7	.5	752	3.6
Wyoming	25.2	278.9	.0	793	4.9
Puerto Rico	49.6	910.0	-2.7	502	1.6
Virgin Islands	3.6	43.5	2.3	754	4.3

<sup>1</sup> Average weekly wages were calculated using unrounded data.

<sup>2</sup> 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.



**25. Annual data: Quarterly Census of Employment and Wages, establishment size and employment, private ownership, by supersector, first quarter 2009**

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers <sup>1</sup>	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
<b>Total all industries<sup>2</sup></b>										
Establishments, first quarter .....	8,673,470	5,396,379	1,372,066	917,124	619,710	208,342	116,230	28,460	10,018	5,141
Employment, March .....	106,811,928	7,655,167	9,090,916	12,402,665	18,661,722	14,311,905	17,267,316	9,739,523	6,812,850	10,869,864
<b>Natural resources and mining</b>										
Establishments, first quarter .....	125,678	71,920	23,395	14,867	9,674	3,218	1,798	557	189	60
Employment, March .....	1,671,238	114,506	154,613	200,225	290,721	219,346	272,879	190,717	127,225	101,006
<b>Construction</b>										
Establishments, first quarter .....	841,895	593,637	117,797	69,486	42,421	12,009	5,208	1,004	254	79
Employment, March .....	5,927,257	750,065	771,369	934,164	1,265,441	817,103	768,721	335,349	170,276	114,769
<b>Manufacturing</b>										
Establishments, first quarter .....	353,643	145,720	59,845	52,049	48,545	22,752	16,627	5,187	1,972	946
Employment, March .....	12,092,961	244,232	401,010	715,491	1,510,229	1,588,920	2,528,984	1,779,448	1,333,297	1,991,350
<b>Trade, transportation, and utilities</b>										
Establishments, first quarter .....	1,894,905	1,033,036	375,292	246,643	148,518	49,772	32,487	7,193	1,500	464
Employment, March .....	24,586,392	1,677,443	2,499,579	3,315,288	4,451,666	3,466,697	4,754,309	2,475,362	986,198	959,850
<b>Information</b>										
Establishments, first quarter .....	146,483	86,433	20,709	15,824	13,049	5,437	3,310	1,046	458	217
Employment, March .....	2,855,390	116,231	137,955	215,809	401,856	374,575	498,814	363,892	311,123	435,135
<b>Financial activities</b>										
Establishments, first quarter .....	841,782	557,483	151,027	76,069	37,169	11,153	5,768	1,759	907	447
Employment, March .....	7,643,521	858,488	993,689	1,001,354	1,107,323	763,190	864,862	608,781	630,533	815,301
<b>Professional and business services</b>										
Establishments, first quarter .....	1,517,365	1,055,297	196,348	124,698	83,581	30,884	18,369	5,326	2,047	815
Employment, March .....	16,516,273	1,410,994	1,290,519	1,682,005	2,542,519	2,131,798	2,769,134	1,819,751	1,394,329	1,475,224
<b>Education and health services</b>										
Establishments, first quarter .....	858,136	417,186	184,310	120,602	78,973	28,774	20,050	4,427	1,976	1,838
Employment, March .....	18,268,572	733,986	1,225,826	1,623,193	2,380,692	2,002,526	3,016,357	1,503,953	1,376,575	4,405,464
<b>Leisure and hospitality</b>										
Establishments, first quarter .....	733,354	283,960	124,005	140,576	133,542	38,935	9,942	1,532	603	259
Employment, March .....	12,723,443	448,520	837,732	1,973,561	4,006,199	2,578,345	1,402,865	518,812	411,444	545,965
<b>Other services</b>										
Establishments, first quarter .....	1,193,934	988,947	116,718	55,617	24,052	5,381	2,663	428	112	16
Employment, March .....	4,361,271	1,168,997	762,081	732,752	699,997	367,591	389,163	143,040	71,850	25,800

<sup>1</sup> Includes establishments that reported no workers in March 2009.

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

<sup>2</sup> Includes data for unclassified establishments, not shown separately.



**26. Continued — Average annual wages for 2008 and 2009 for all covered workers<sup>1</sup> by metropolitan area**

Metropolitan area <sup>2</sup>	Average annual wages <sup>3</sup>		
	2008	2009	Percent change, 2008-09
Cumberland, MD-WV .....	\$32,583	\$33,409	2.5
Dallas-Fort Worth-Arlington, TX .....	50,331	49,965	-0.7
Dalton, GA .....	34,403	35,024	1.8
Danville, IL .....	35,602	35,552	-0.1
Danville, VA .....	30,580	30,778	0.6
Davenport-Moline-Rock Island, IA-IL .....	40,425	40,790	0.9
Dayton, OH .....	40,824	40,972	0.4
Decatur, AL .....	36,855	37,145	0.8
Decatur, IL .....	42,012	41,741	-0.6
Deltona-Daytona Beach-Ormond Beach, FL .....	32,938	33,021	0.3
Denver-Aurora, CO .....	51,270	51,733	0.9
Des Moines, IA .....	43,918	44,073	0.4
Detroit-Warren-Livonia, MI .....	50,081	48,821	-2.5
Dothan, AL .....	32,965	33,888	2.8
Dover, DE .....	36,375	37,039	1.8
Dubuque, IA .....	35,656	35,665	0.0
Duluth, MN-WI .....	36,307	36,045	-0.7
Durham, NC .....	53,700	54,857	2.2
Eau Claire, WI .....	33,549	34,186	1.9
El Centro, CA .....	33,239	34,220	3.0
Elizabethtown, KY .....	33,728	34,970	3.7
Elkhart-Goshen, IN .....	35,858	35,823	-0.1
Elmira, NY .....	36,984	36,995	0.0
El Paso, TX .....	31,837	32,665	2.6
Erie, PA .....	35,992	35,995	0.0
Eugene-Springfield, OR .....	35,380	35,497	0.3
Evansville, IN-KY .....	38,304	38,219	-0.2
Fairbanks, AK .....	44,225	45,328	2.5
Fajardo, PR .....	22,984	23,467	2.1
Fargo, ND-MN .....	36,745	37,309	1.5
Farmington, NM .....	41,155	40,437	-1.7
Fayetteville, NC .....	34,619	35,755	3.3
Fayetteville-Springdale-Rogers, AR-MO .....	39,025	40,265	3.2
Flagstaff, AZ .....	35,353	36,050	2.0
Flint, MI .....	39,206	38,682	-1.3
Florence, SC .....	34,841	35,509	1.9
Florence-Muscle Shoals, AL .....	32,088	32,471	1.2
Fond du Lac, WI .....	36,166	35,667	-1.4
Fort Collins-Loveland, CO .....	40,154	40,251	0.2
Fort Smith, AR-OK .....	32,130	32,004	-0.4
Fort Walton Beach-Crestview-Destin, FL .....	36,454	37,823	3.8
Fort Wayne, IN .....	36,806	37,038	0.6
Fresno, CA .....	36,038	36,427	1.1
Gadsden, AL .....	31,718	32,652	2.9
Gainesville, FL .....	37,282	38,863	4.2
Gainesville, GA .....	37,929	37,924	0.0
Glens Falls, NY .....	34,531	35,215	2.0
Goldsboro, NC .....	30,607	30,941	1.1
Grand Forks, ND-MN .....	32,207	33,455	3.9
Grand Junction, CO .....	39,246	38,450	-2.0
Grand Rapids-Wyoming, MI .....	39,868	40,341	1.2
Great Falls, MT .....	31,962	32,737	2.4
Greeley, CO .....	38,700	37,656	-2.7
Green Bay, WI .....	39,247	39,387	0.4
Greensboro-High Point, NC .....	37,919	38,020	0.3
Greenville, NC .....	34,672	35,542	2.5
Greenville, SC .....	37,592	37,921	0.9
Guayama, PR .....	27,189	28,415	4.5
Gulfport-Biloxi, MS .....	35,700	36,251	1.5
Hagerstown-Martinsburg, MD-WV .....	36,472	36,459	0.0
Hanford-Corcoran, CA .....	35,374	35,402	0.1
Harrisburg-Carlisle, PA .....	42,330	43,152	1.9
Harrisonburg, VA .....	34,197	34,814	1.8
Hartford-West Hartford-East Hartford, CT .....	54,446	54,534	0.2
Hattiesburg, MS .....	31,629	32,320	2.2
Hickory-Lenoir-Morganton, NC .....	32,810	32,429	-1.2
Hinesville-Fort Stewart, GA .....	33,854	35,032	3.5
Holland-Grand Haven, MI .....	37,953	37,080	-2.3
Honolulu, HI .....	42,090	42,814	1.7
Hot Springs, AR .....	29,042	29,414	1.3
Houma-Bayou Cane-Thibodaux, LA .....	44,345	44,264	-0.2
Houston-Baytown-Sugar Land, TX .....	55,407	54,779	-1.1
Huntington-Ashland, WV-KY-OH .....	35,717	36,835	3.1
Huntsville, AL .....	47,427	49,240	3.8
Idaho Falls, ID .....	30,485	30,875	1.3
Indianapolis, IN .....	43,128	43,078	-0.1
Iowa City, IA .....	39,070	39,703	1.6
Ithaca, NY .....	41,689	42,779	2.6
Jackson, MI .....	38,672	38,635	-0.1
Jackson, MS .....	36,730	37,118	1.1

See footnotes at end of table.

**26. Continued — Average annual wages for 2008 and 2009 for all covered workers<sup>1</sup> by metropolitan area**

Metropolitan area <sup>2</sup>	Average annual wages <sup>3</sup>		
	2008	2009	Percent change, 2008-09
Jackson, TN .....	\$35,975	\$35,959	0.0
Jacksonville, FL .....	41,524	41,804	0.7
Jacksonville, NC .....	27,893	29,006	4.0
Janesville, WI .....	36,906	36,652	-0.7
Jefferson City, MO .....	33,766	34,474	2.1
Johnson City, TN .....	32,759	33,949	3.6
Johnstown, PA .....	32,464	33,238	2.4
Jonesboro, AR .....	31,532	31,793	0.8
Joplin, MO .....	32,156	32,741	1.8
Kalamazoo-Portage, MI .....	40,333	40,044	-0.7
Kankakee-Bradley, IL .....	34,451	34,539	0.3
Kansas City, MO-KS .....	44,155	44,331	0.4
Kennewick-Richland-Pasco, WA .....	41,878	43,705	4.4
Killeen-Temple-Fort Hood, TX .....	34,299	35,674	4.0
Kingsport-Bristol-Bristol, TN-VA .....	37,260	37,234	-0.1
Kingston, NY .....	35,883	36,325	1.2
Knoxville, TN .....	38,912	39,353	1.1
Kokomo, IN .....	44,117	42,248	-4.2
La Crosse, WI-MN .....	34,078	34,836	2.2
Lafayette, IN .....	37,832	38,313	1.3
Lafayette, LA .....	42,748	42,050	-1.6
Lake Charles, LA .....	39,982	39,263	-1.8
Lakeland, FL .....	35,195	35,485	0.8
Lancaster, PA .....	38,127	38,328	0.5
Lansing-East Lansing, MI .....	42,339	42,764	1.0
Laredo, TX .....	29,572	29,952	1.3
Las Cruces, NM .....	32,894	34,264	4.2
Las Vegas-Paradise, NV .....	43,120	42,674	-1.0
Lawrence, KS .....	32,313	32,863	1.7
Lawton, OK .....	32,258	33,206	2.9
Lebanon, PA .....	33,900	34,416	1.5
Lewiston, ID-WA .....	32,783	32,850	0.2
Lewiston-Auburn, ME .....	34,396	34,678	0.8
Lexington-Fayette, KY .....	40,034	40,446	1.0
Lima, OH .....	35,381	36,224	2.4
Lincoln, NE .....	35,834	36,281	1.2
Little Rock-North Little Rock, AR .....	38,902	40,331	3.7
Logan, UT-ID .....	29,392	29,608	0.7
Longview, TX .....	38,902	38,215	-1.8
Longview, WA .....	37,806	38,300	1.3
Los Angeles-Long Beach-Santa Ana, CA .....	51,520	51,344	-0.3
Louisville, KY-IN .....	40,596	41,101	1.2
Lubbock, TX .....	33,867	34,318	1.3
Lynchburg, VA .....	35,207	35,503	0.8
Macon, GA .....	34,823	35,718	2.6
Madera, CA .....	34,405	34,726	0.9
Madison, WI .....	42,623	42,861	0.6
Manchester-Nashua, NH .....	50,629	49,899	-1.4
Mansfield, OH .....	33,946	33,256	-2.0
Mayaguez, PR .....	22,394	23,634	5.5
McAllen-Edinburg-Pharr, TX .....	28,498	29,197	2.5
Medford, OR .....	33,402	34,047	1.9
Memphis, TN-MS-AR .....	43,124	43,318	0.4
Merced, CA .....	33,903	34,284	1.1
Miami-Fort Lauderdale-Miami Beach, FL .....	44,199	44,514	0.7
Michigan City-La Porte, IN .....	33,507	33,288	-0.7
Midland, TX .....	50,116	47,557	-5.1
Milwaukee-Waukesha-West Allis, WI .....	44,462	44,446	0.0
Minneapolis-St. Paul-Bloomington, MN-WI .....	51,044	50,107	-1.8
Missoula, MT .....	33,414	33,869	1.4
Mobile, AL .....	38,180	39,295	2.9
Modesto, CA .....	37,867	38,657	2.1
Monroe, LA .....	32,796	33,765	3.0
Monroe, MI .....	41,849	41,055	-1.9
Montgomery, AL .....	37,552	38,441	2.4
Morgantown, WV .....	37,082	38,637	4.2
Morristown, TN .....	32,858	32,903	0.1
Mount Vernon-Anacortes, WA .....	36,230	37,098	2.4
Muncie, IN .....	32,420	32,822	1.2
Muskegon-Norton Shores, MI .....	36,033	35,654	-1.1
Myrtle Beach-Conway-North Myrtle Beach, SC .....	28,450	28,132	-1.1
Napa, CA .....	45,061	45,174	0.3
Naples-Marco Island, FL .....	40,178	39,808	-0.9
Nashville-Davidson--Murfreesboro, TN .....	43,964	43,811	-0.3
New Haven-Milford, CT .....	48,239	48,681	0.9
New Orleans-Metairie-Kenner, LA .....	45,108	45,121	0.0
New York-Northern New Jersey-Long Island, NY-NJ-PA .....	66,548	63,773	-4.2
Niles-Benton Harbor, MI .....	38,814	39,097	0.7
Norwich-New London, CT .....	46,727	47,245	1.1
Ocala, FL .....	32,579	32,724	0.4

See footnotes at end of table.

26. Continued — Average annual wages for 2008 and 2009 for all covered workers<sup>1</sup> by metropolitan area

Metropolitan area <sup>2</sup>	Average annual wages <sup>3</sup>		
	2008	2009	Percent change, 2008-09
Ocean City, NJ .....	\$33,529	\$33,477	-0.2
Odessa, TX .....	44,316	42,295	-4.6
Ogden-Clearfield, UT .....	34,778	35,562	2.3
Oklahoma City, OK .....	39,363	39,525	0.4
Olympia, WA .....	40,714	41,921	3.0
Omaha-Council Bluffs, NE-IA .....	40,097	40,555	1.1
Orlando, FL .....	39,322	39,225	-0.2
Oshkosh-Neenah, WI .....	41,781	41,300	-1.2
Owensboro, KY .....	34,956	35,264	0.9
Oxnard-Thousand Oaks-Ventura, CA .....	46,490	47,066	1.2
Palm Bay-Melbourne-Titusville, FL .....	42,089	43,111	2.4
Panama City-Lynn Haven, FL .....	34,361	34,857	1.4
Parkersburg-Marietta, WV-OH .....	35,102	35,650	1.6
Pascagoula, MS .....	42,734	43,509	1.8
Pensacola-Ferry Pass-Brent, FL .....	34,829	35,683	2.5
Peoria, IL .....	44,562	44,747	0.4
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD .....	51,814	52,237	0.8
Phoenix-Mesa-Scottsdale, AZ .....	44,482	44,838	0.8
Pine Bluff, AR .....	34,106	34,588	1.4
Pittsburgh, PA .....	44,124	44,234	0.2
Pittsfield, MA .....	38,957	38,690	-0.7
Pocatello, ID .....	30,608	30,690	0.3
Ponce, PR .....	21,818	22,556	3.4
Portland-South Portland-Biddeford, ME .....	39,711	40,012	0.8
Portland-Vancouver-Beaverton, OR-WA .....	45,326	45,544	0.5
Port St. Lucie-Fort Pierce, FL .....	36,174	36,130	-0.1
Poughkeepsie-Newburgh-Middletown, NY .....	42,148	43,054	2.1
Prescott, AZ .....	33,004	32,927	-0.2
Providence-New Bedford-Fall River, RI-MA .....	42,141	42,428	0.7
Provo-Orem, UT .....	35,516	35,695	0.5
Pueblo, CO .....	34,055	34,889	2.4
Punta Gorda, FL .....	32,927	32,563	-1.1
Racine, WI .....	41,232	40,623	-1.5
Raleigh-Cary, NC .....	43,912	44,016	0.2
Rapid City, SD .....	32,227	32,821	1.8
Reading, PA .....	40,691	41,083	1.0
Redding, CA .....	35,655	35,912	0.7
Reno-Sparks, NV .....	42,167	42,232	0.2
Richmond, VA .....	45,244	44,960	-0.6
Riverside-San Bernardino-Ontario, CA .....	38,617	38,729	0.3
Roanoke, VA .....	36,475	37,153	1.9
Rochester, MN .....	46,196	46,999	1.7
Rochester, NY .....	41,728	41,761	0.1
Rockford, IL .....	39,210	38,843	-0.9
Rocky Mount, NC .....	33,110	33,613	1.5
Rome, GA .....	35,229	35,913	1.9
Sacramento--Arden-Arcade--Roseville, CA .....	47,924	48,204	0.6
Saginaw-Saginaw Township North, MI .....	37,549	38,009	1.2
St. Cloud, MN .....	35,069	35,883	2.3
St. George, UT .....	29,291	29,608	1.1
St. Joseph, MO-KS .....	32,651	33,555	2.8
St. Louis, MO-IL .....	45,419	44,080	-2.9
Salem, OR .....	34,891	35,691	2.3
Salinas, CA .....	40,235	40,258	0.1
Salisbury, MD .....	35,901	36,396	1.4
Salt Lake City, UT .....	41,628	42,613	2.4
San Angelo, TX .....	32,852	33,043	0.6
San Antonio, TX .....	38,876	39,596	1.9
San Diego-Carlsbad-San Marcos, CA .....	49,079	49,240	0.3
Sandusky, OH .....	33,760	33,117	-1.9
San Francisco-Oakland-Fremont, CA .....	65,100	65,367	0.4
San German-Cabo Rojo, PR .....	19,875	20,452	2.9
San Jose-Sunnyvale-Santa Clara, CA .....	80,063	79,609	-0.6
San Juan-Caguas-Guaynabo, PR .....	26,839	27,620	2.9
San Luis Obispo-Paso Robles, CA .....	38,134	38,913	2.0
Santa Barbara-Santa Maria-Goleta, CA .....	42,617	43,257	1.5
Santa Cruz-Watsonville, CA .....	41,471	40,880	-1.4
Santa Fe, NM .....	38,646	39,536	2.3
Santa Rosa-Petaluma, CA .....	43,757	43,274	-1.1
Sarasota-Bradenton-Venice, FL .....	36,781	36,856	0.2
Savannah, GA .....	37,846	38,343	1.3
Scranton--Wilkes-Barre, PA .....	34,902	35,404	1.4
Seattle-Tacoma-Bellevue, WA .....	53,667	54,650	1.8
Sheboygan, WI .....	37,834	38,114	0.7
Sherman-Denison, TX .....	36,081	36,151	0.2
Shreveport-Bossier City, LA .....	36,308	36,706	1.1
Sioux City, IA-NE-SD .....	34,326	34,087	-0.7
Sioux Falls, SD .....	36,982	37,562	1.6
South Bend-Mishawaka, IN-MI .....	37,654	37,811	0.4
Spartanburg, SC .....	39,313	39,104	-0.5

See footnotes at end of table.

**26. Continued — Average annual wages for 2008 and 2009 for all covered workers<sup>1</sup> by metropolitan area**

Metropolitan area <sup>2</sup>	Average annual wages <sup>3</sup>		
	2008	2009	Percent change, 2008-09
Spokane, WA .....	\$36,792	\$38,112	3.6
Springfield, IL .....	44,416	45,602	2.7
Springfield, MA .....	40,969	41,248	0.7
Springfield, MO .....	32,971	33,615	2.0
Springfield, OH .....	33,158	33,725	1.7
State College, PA .....	38,050	38,658	1.6
Stockton, CA .....	39,075	39,274	0.5
Sumter, SC .....	30,842	31,074	0.8
Syracuse, NY .....	40,554	41,141	1.4
Tallahassee, FL .....	37,433	38,083	1.7
Tampa-St. Petersburg-Clearwater, FL .....	40,521	41,480	2.4
Terre Haute, IN .....	33,562	33,470	-0.3
Texarkana, TX-Texarkana, AR .....	35,002	35,288	0.8
Toledo, OH .....	39,686	39,098	-1.5
Topeka, KS .....	36,714	37,651	2.6
Trenton-Ewing, NJ .....	60,135	59,313	-1.4
Tucson, AZ .....	39,973	40,071	0.2
Tulsa, OK .....	40,205	40,108	-0.2
Tuscaloosa, AL .....	37,949	38,309	0.9
Tyler, TX .....	38,817	38,845	0.1
Utica-Rome, NY .....	34,936	35,492	1.6
Valdosta, GA .....	29,288	29,661	1.3
Vallejo-Fairfield, CA .....	45,264	47,287	4.5
Vero Beach, FL .....	36,557	35,937	-1.7
Victoria, TX .....	39,888	38,608	-3.2
Vineland-Millville-Bridgeton, NJ .....	40,709	41,145	1.1
Virginia Beach-Norfolk-Newport News, VA-NC .....	38,696	39,614	2.4
Visalia-Porterville, CA .....	32,018	32,125	0.3
Waco, TX .....	35,698	36,731	2.9
Warner Robins, GA .....	40,457	41,820	3.4
Washington-Arlington-Alexandria, DC-VA-MD-WV .....	62,653	64,032	2.2
Waterloo-Cedar Falls, IA .....	37,363	37,919	1.5
Wausau, WI .....	36,477	36,344	-0.4
Weirton-Steubenville, WV-OH .....	35,356	34,113	-3.5
Wenatchee, WA .....	30,750	31,200	1.5
Wheeling, WV-OH .....	32,915	33,583	2.0
Wichita, KS .....	40,423	40,138	-0.7
Wichita Falls, TX .....	34,185	33,698	-1.4
Williamsport, PA .....	33,340	34,188	2.5
Wilmington, NC .....	35,278	36,204	2.6
Winchester, VA-WV .....	37,035	38,127	2.9
Winston-Salem, NC .....	39,770	39,874	0.3
Worcester, MA .....	45,955	45,743	-0.5
Yakima, WA .....	30,821	31,366	1.8
Yauco, PR .....	19,821	20,619	4.0
York-Hanover, PA .....	39,379	39,798	1.1
Youngstown-Warren-Boardman, OH-PA .....	34,403	33,704	-2.0
Yuba City, CA .....	36,538	37,289	2.1
Yuma, AZ .....	31,351	32,474	3.6

<sup>1</sup> Includes workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs.

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

<sup>3</sup> Each year's total is based on the MSA definition for the specific year. Annual changes include differences resulting from changes in MSA definitions.

<sup>4</sup> Totals do not include the six MSAs within Puerto Rico.















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

[December 2005 = 100]

Series	2010				2011				2012	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended	12 months ended
	Mar. 2012										
<b>Civilian workers.....</b>	112.1	112.7	113.6	113.9	115.5	116.8	117.2	117.5	118.6	0.9	2.7
<b>Private industry workers.....</b>	110.4	111.0	111.7	111.9	113.7	115.4	115.4	115.9	116.9	.9	2.8
Workers by occupational group											
Management, professional, and related.....	110.2	110.5	111.0	111.2	113.4	114.8	114.7	115.2	116.8	1.4	3.0
Sales and office.....	110.2	111.1	111.6	111.8	113.4	115.0	115.2	115.5	116.7	1.0	2.9
Natural resources, construction, and maintenance.....	111.5	112.4	113.0	113.2	114.1	115.9	116.2	116.8	117.9	.9	3.3
Production, transportation, and material moving.....	110.0	110.8	111.8	112.0	113.5	116.5	116.3	117.0	116.1	-8	2.3
Service occupations.....	111.7	112.5	113.2	113.5	115.5	116.1	115.9	116.4	118.1	1.5	2.3
Workers by industry											
Goods-producing.....	108.4	109.0	110.0	110.1	111.7	114.1	113.9	114.4	114.2	-2	2.2
Manufacturing.....	106.6	107.4	108.7	108.8	111.1	114.0	113.4	113.9	113.2	-6	1.9
Service-providing.....	111.3	111.9	112.3	112.6	114.5	115.9	116.0	116.4	118.0	1.4	3.1
<b>State and local government workers.....</b>	118.1	118.6	120.7	121.1	122.0	122.1	123.7	123.6	124.8	1.0	2.3

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 <sup>1</sup>
<b>All retirement</b>					
<b>Percentage of workers with access</b>					
All workers.....	57	59	60	60	61
White-collar occupations <sup>2</sup> .....	67	69	70	69	-
Management, professional, and related .....	-	-	-	-	76
Sales and office .....	-	-	-	-	64
Blue-collar occupations <sup>2</sup> .....	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
<b>Percentage of workers participating</b>					
All workers.....	49	50	50	51	51
White-collar occupations <sup>2</sup> .....	59	61	61	60	-
Management, professional, and related .....	-	-	-	-	69
Sales and office .....	-	-	-	-	54
Blue-collar occupations <sup>2</sup> .....	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
<b>Take-up rate (all workers)<sup>3</sup>.....</b>	-	-	85	85	84
<b>Defined Benefit</b>					
<b>Percentage of workers with access</b>					
All workers.....	20	21	22	21	21
White-collar occupations <sup>2</sup> .....	23	24	25	23	-
Management, professional, and related .....	-	-	-	-	29
Sales and office .....	-	-	-	-	19
Blue-collar occupations <sup>2</sup> .....	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 <sup>1</sup>
<b>Percentage of workers participating</b>					
All workers.....	20	21	21	20	20
White-collar occupations <sup>2</sup> .....	22	24	24	22	-
Management, professional, and related .....	-	-	-	-	28
Sales and office .....	-	-	-	-	17
Blue-collar occupations <sup>2</sup> .....	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
<b>Take-up rate (all workers)<sup>3</sup>.....</b>	-	-	97	96	95
<b>Defined Contribution</b>					
<b>Percentage of workers with access</b>					
All workers.....	51	53	53	54	55
White-collar occupations <sup>2</sup> .....	62	64	64	65	-
Management, professional, and related .....	-	-	-	-	71
Sales and office .....	-	-	-	-	60
Blue-collar occupations <sup>2</sup> .....	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
<b>Percentage of workers participating</b>					
All workers.....	40	42	42	43	43
White-collar occupations <sup>2</sup> .....	51	53	53	53	-
Management, professional, and related .....	-	-	-	-	60
Sales and office .....	-	-	-	-	47
Blue-collar occupations <sup>2</sup> .....	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
<b>Take-up rate (all workers)<sup>3</sup>.....</b>	-	-	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 <sup>1</sup>
<b>Employee Contribution Requirement</b>					
Employee contribution required.....	-	-	61	61	65
Employee contribution not required.....	-	-	31	33	35
Not determinable.....	-	-	8	6	0
<b>Percent of establishments</b>					
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

<sup>1</sup> 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.

<sup>2</sup> The white-collar and blue-collar occupation series were discontinued effective 2007.

<sup>3</sup> 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, participation, and selected series, 2003-2007**

Series	Year				
	2003	2004	2005	2006	2007 <sup>1</sup>
<b>Medical insurance</b>					
<b>Percentage of workers with access</b>					
All workers.....	60	69	70	71	71
White-collar occupations <sup>2</sup> .....	65	76	77	77	-
Management, professional, and related.....	-	-	-	-	85
Sales and office.....	-	-	-	-	71
Blue-collar occupations <sup>2</sup> .....	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
<b>Percentage of workers participating</b>					
All workers.....	45	53	53	52	52
White-collar occupations <sup>2</sup> .....	50	59	58	57	-
Management, professional, and related.....	-	-	-	-	67
Sales and office.....	-	-	-	-	48
Blue-collar occupations <sup>2</sup> .....	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
<b>Take-up rate</b> (all workers) <sup>3</sup> .....	-	-	75	74	73
<b>Dental</b>					
<b>Percentage of workers with access</b>					
All workers.....	40	46	46	46	46
White-collar occupations <sup>2</sup> .....	47	53	54	53	-
Management, professional, and related.....	-	-	-	-	62
Sales and office.....	-	-	-	-	47
Blue-collar occupations <sup>2</sup> .....	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, participation, and selected series, 2003-2007**

Series	Year				
	2003	2004	2005	2006	2007 <sup>1</sup>
<b>Percentage of workers participating</b>					
All workers.....	32	37	36	36	36
White-collar occupations <sup>2</sup> .....	37	43	42	41	-
Management, professional, and related .....	-	-	-	-	51
Sales and office.....	-	-	-	-	33
Blue-collar occupations <sup>2</sup> .....	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
<b>Take-up rate (all workers)<sup>3</sup>.....</b>	-	-	78	78	77
<b>Vision care</b>					
Percentage of workers with access.....	25	29	29	29	29
Percentage of workers participating.....	19	22	22	22	22
<b>Outpatient Prescription drug coverage</b>					
Percentage of workers with access.....	-	-	64	67	68
Percentage of workers participating.....	-	-	48	49	49
<b>Percent of establishments offering healthcare benefits .....</b>	58	61	63	62	60
<b>Percentage of medical premium paid by Employer and Employee</b>					
<b>Single coverage</b>					
Employer share.....	82	82	82	82	81
Employee share.....	18	18	18	18	19
<b>Family coverage</b>					
Employer share.....	70	69	71	70	71
Employee share.....	30	31	29	30	29

<sup>1</sup> 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.

<sup>2</sup> The white-collar and blue-collar occupation series were discontinued effective 2007.

<sup>3</sup> 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 disability 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		2011										2012		
	2010	2011	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb. <sup>P</sup>	Mar. <sup>P</sup>
Number of stoppages:															
Beginning in period.....	11	19	4	1	3	3	0	2	4	0	1	1	2	0	1
In effect during period.....	11	19	4	2	4	4	3	2	5	1	2	3	4	2	2
Workers involved:															
Beginning in period (in thousands).....	44.5	112.5	5.3	1.5	7.5	5.0	0.0	46.3	39.9	0.0	1.0	6.0	26.6	0.0	1.9
In effect during period (in thousands).....	47.7	129.8	5.3	3.4	9.4	6.9	5.4	46.3	41.2	1.3	2.3	8.3	28.9	2.3	3.2
Days idle:															
Number (in thousands).....	302.3	1,020.2	33.5	56.4	80.4	75.3	80.9	479.9	98.5	26.0	29.0	60.3	72.6	44.0	32.4
Percent of estimated working time <sup>1</sup> .....	0	0	0	0	0	0	0	0.02	0	0	0	0	0	0	0

<sup>1</sup> 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.











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

[1982-84 = 100]

Series	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Consumer Price Index for All Urban Consumers:											
All items:											
Index.....	177.1	179.9	184.0	188.9	195.3	201.6	207.342	215.303	214.537	218.056	224.939
Percent change.....	2.8	1.6	2.3	2.7	3.4	3.2	2.8	3.8	-0.4	1.6	3.2
Food and beverages:											
Index.....	173.6	176.8	180.5	186.6	191.2	195.7	203.300	214.225	218.249	219.984	227.866
Percent change.....	3.1	1.8	2.1	3.3	2.5	2.4	3.9	5.4	1.9	0.8	3.6
Housing:											
Index.....	176.4	180.3	184.8	189.5	195.7	203.2	209.586	216.264	217.057	216.256	219.102
Percent change.....	4.0	2.2	2.5	2.5	3.3	3.8	3.1	3.2	0.4	-0.4	1.3
Apparel:											
Index.....	127.3	124.0	120.9	120.4	119.5	119.5	118.998	118.907	120.078	119.503	122.111
Percent change.....	-1.8	-2.6	-2.5	-4	-7	.0	-0.4	-0.1	1.0	-0.5	2.2
Transportation:											
Index.....	154.3	152.9	157.6	163.1	173.9	180.9	184.682	195.549	179.252	193.396	212.366
Percent change.....	0.7	-9	3.1	3.5	6.6	4.0	2.1	5.9	-8.3	7.9	9.8
Medical care:											
Index.....	272.8	285.6	297.1	310.1	323.2	336.2	351.054	364.065	375.613	388.436	400.258
Percent change.....	4.6	4.7	4.0	4.4	4.2	4.0	4.4	3.7	3.2	3.4	3.0
Other goods and services:											
Index.....	282.6	293.2	298.7	304.7	313.4	321.7	333.328	345.381	368.586	381.291	387.224
Percent change.....	4.2	3.8	1.9	2.0	2.9	2.6	3.6	3.6	6.7	3.4	1.6
Consumer Price Index for Urban Wage Earners and Clerical Workers:											
All items:											
Index.....	173.5	175.9	179.8	184.5	191.0	197.1	202.767	211.053	209.630	213.967	221.575
Percent change.....	2.7	1.4	2.2	5.1	1.1	3.2	2.9	4.1	-0.7	2.1	3.6







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

[2000 = 100]

Category	2011										2012		
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
<b>ALL COMMODITIES</b> .....	139.3	142.9	143.1	142.2	142.4	141.9	141.7	141.2	142.2	142.2	142.2	142.2	144.3
Foods, feeds, and beverages.....	174.9	179.2	177.9	174.8	175.8	174.4	174.7	173.6	173.3	172.4	176.3	171.3	174.3
Agricultural foods, feeds, and beverages.....	198.9	204.1	201.8	197.0	197.7	196.1	196.5	194.8	194.9	194.0	198.8	192.1	196.2
Nonagricultural (fish, beverages) food products.....	120.7	122.9	123.9	124.5	126.2	125.3	125.3	125.6	124.1	123.7	125.4	124.3	124.6
Industrial supplies and materials.....	256.3	270.6	270.7	266.1	266.8	263.8	262.5	260.1	264.4	263.6	262.4	263.1	272.1
Fuels and lubricants.....	343.7	369.7	367.4	359.0	359.4	351.8	348.2	346.1	357.7	356.3	355.6	355.4	371.1
Petroleum and petroleum products.....	380.2	410.7	407.6	397.8	399.2	390.0	386.5	385.5	398.8	397.8	397.9	398.9	418.5
Paper and paper base stocks.....	116.3	118.8	119.5	119.4	120.4	118.4	117.1	117.3	116.2	114.8	112.5	112.5	114.0
Materials associated with nondurable supplies and materials.....	165.8	169.4	171.3	173.0	174.5	175.0	175.9	176.4	175.8	175.1	174.7	175.8	177.9
Selected building materials.....	131.5	132.0	131.3	129.3	130.5	130.8	131.2	130.3	130.2	130.7	131.3	132.0	134.4
Unfinished metals associated with durable goods.....	290.2	295.4	304.5	297.0	296.4	302.9	304.9	292.1	277.3	277.8	270.8	275.6	284.1
Nonmetals associated with durable goods.....	112.1	112.9	113.3	114.3	115.0	115.5	116.3	116.3	115.8	115.2	114.7	114.7	115.3
Capital goods.....	92.6	92.6	92.7	92.7	92.8	92.9	92.9	92.7	92.8	93.1	93.5	93.4	93.6
Electric and electrical generating equipment.....	115.6	116.6	117.0	117.1	118.2	118.6	118.4	118.6	118.5	118.4	118.9	119.1	119.5
Nonelectrical machinery.....	86.5	86.3	86.4	86.4	86.3	86.4	86.4	86.1	86.1	86.4	86.7	86.6	86.6
Automotive vehicles, parts, and engines.....	110.4	111.8	112.8	113.3	113.0	113.2	113.2	113.2	113.3	113.0	113.3	113.4	113.7
Consumer goods, excluding automotive.....	104.7	105.3	105.5	105.8	106.1	106.4	106.6	107.2	107.3	107.7	107.5	107.6	107.7
Nondurables, manufactured.....	110.3	110.8	110.9	111.6	112.1	112.6	112.8	114.2	114.3	114.4	114.5	114.4	114.5
Durables, manufactured.....	99.2	99.5	99.9	99.7	99.6	99.8	100.1	99.9	100.0	100.3	100.0	100.1	100.3
Nonmanufactured consumer goods.....	107.8	109.5	109.4	111.8	114.3	114.0	114.9	115.1	114.5	119.3	118.6	119.8	118.0

**46. U.S. international price indexes for selected categories of services**

[2000 = 100, unless indicated otherwise]

Category	2010				2011				2012
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
Import air freight.....	158.3	162.5	163.2	170.1	172.8	184.3	185.5	177.1	173.4
Export air freight.....	124.0	126.3	125.7	128.1	139.2	147.4	146.4	144.2	149.0
Import air passenger fares (Dec. 2006 = 100).....	149.8	175.3	160.9	169.9	161.2	184.0	174.6	179.5	178.7
Export air passenger fares (Dec. 2006 = 100).....	157.7	176.3	172.2	169.0	172.8	186.6	192.7	191.1	185.1

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

[2005 = 100]

Item	2009				2010				2011				2012
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
<b>Business</b>													
Output per hour of all persons.....	102.9	105.0	106.8	108.1	109.3	109.6	110.2	110.5	110.1	110.0	110.4	110.7	110.6
Compensation per hour.....	111.7	113.6	114.3	114.6	114.9	115.6	116.1	116.1	117.5	117.5	119.0	120.2	120.6
Real compensation per hour.....	102.6	103.9	103.6	103.1	103.1	103.9	104.0	103.2	103.3	102.2	102.7	103.4	103.1
Unit labor costs.....	108.5	108.1	107.0	105.9	105.1	105.5	105.4	105.0	106.8	106.8	107.8	108.5	109.1
Unit nonlabor payments.....	108.2	108.0	109.9	112.3	114.7	115.5	116.5	118.5	117.9	119.9	120.1	119.4	119.5
Implicit price deflator.....	108.4	108.1	108.1	108.4	108.9	109.4	109.7	110.4	111.2	111.9	112.7	112.8	113.2
<b>Nonfarm business</b>													
Output per hour of all persons.....	102.8	104.9	106.5	107.9	109.1	109.5	110.0	110.5	110.2	110.1	110.6	110.9	110.8
Compensation per hour.....	111.7	113.6	114.2	114.5	114.9	115.6	116.1	116.1	117.6	117.4	119.1	120.2	120.7
Real compensation per hour.....	102.6	103.9	103.5	103.0	103.1	103.9	103.9	103.2	103.3	102.1	102.7	103.4	103.2
Unit labor costs.....	108.6	108.3	107.2	106.1	105.3	105.6	105.6	105.1	106.7	106.7	107.7	108.4	109.0
Unit nonlabor payments.....	108.5	108.1	110.3	112.3	114.7	115.6	116.2	118.0	117.1	119.0	119.1	118.6	118.7
Implicit price deflator.....	108.6	108.2	108.4	108.5	109.0	109.5	109.7	110.2	110.8	111.5	112.2	112.4	112.8
<b>Nonfinancial corporations</b>													
Output per hour of all employees.....	100.7	102.3	104.2	106.6	108.9	108.5	108.3	107.3	107.8	108.6	108.6	109.6	-
Compensation per hour.....	111.4	113.5	114.3	114.7	114.9	115.4	116.1	115.8	117.0	117.1	118.6	119.5	-
Real compensation per hour.....	102.4	103.8	103.6	103.2	103.2	103.7	103.9	103.0	102.8	101.9	102.3	102.8	-
Total unit costs.....	114.4	114.5	112.4	110.1	107.4	107.3	107.6	108.3	108.7	108.1	109.1	108.8	-
Unit labor costs.....	110.6	111.0	109.7	107.6	105.6	106.4	107.1	107.9	108.5	107.9	109.2	109.1	-
Unit nonlabor costs.....	124.3	123.7	119.6	116.6	112.0	109.9	108.6	109.1	109.3	108.8	109.0	108.1	-
Unit profits.....	81.2	75.0	83.6	96.2	114.8	117.7	121.5	121.2	122.4	130.4	131.9	133.4	-
Unit nonlabor payments.....	109.5	107.0	107.2	109.6	113.0	112.5	113.0	113.3	113.8	116.2	116.8	116.7	-
Implicit price deflator.....	110.2	109.5	108.8	108.3	108.3	108.6	109.3	109.9	110.5	111.0	112.0	111.9	-
<b>Manufacturing</b>													
Output per hour of all persons.....	101.6	103.4	106.5	108.4	109.7	111.9	112.3	113.4	114.2	113.7	115.2	115.4	117.1
Compensation per hour.....	112.7	115.1	115.4	116.2	115.4	116.6	116.9	117.5	118.6	118.0	118.9	119.5	119.9
Real compensation per hour.....	103.6	105.3	104.6	104.5	103.6	104.8	104.7	104.5	104.3	102.6	102.6	102.8	102.5
Unit labor costs.....	111.0	111.3	108.3	107.2	105.2	104.2	104.1	103.6	103.8	103.8	103.2	103.5	102.4

NOTE: Dash indicates data not available.





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

[2005 = 100]

Item	1966	1976	1986	1996	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Business</b>													
Output per hour of all persons.....	44.9	56.6	65.7	76.3	95.7	98.4	100.0	100.9	102.4	103.2	105.7	109.9	110.1
Compensation per hour.....	11.0	23.2	46.4	66.9	93.0	96.2	100.0	103.8	108.1	111.7	113.5	115.7	118.5
Real compensation per hour.....	60.4	72.7	78.8	82.9	98.7	99.5	100.0	100.5	101.8	101.2	103.3	103.6	102.9
Unit labor costs.....	24.5	41.1	70.5	87.8	97.2	97.8	100.0	102.8	105.5	108.2	107.4	105.2	107.6
Unit nonlabor payments.....	22.0	36.8	63.1	84.7	90.3	95.4	100.0	103.0	105.6	106.3	109.6	116.3	119.5
Implicit price deflator.....	23.5	39.4	67.6	86.6	94.5	96.9	100.0	102.9	105.6	107.5	108.3	109.6	112.3
<b>Nonfarm business</b>													
Output per hour of all persons.....	47.0	58.2	66.6	76.9	95.8	98.4	100.0	100.9	102.5	103.1	105.5	109.8	110.2
Compensation per hour.....	11.2	23.5	46.8	67.4	93.1	96.2	100.0	103.8	107.9	111.6	113.5	115.7	118.6
Real compensation per hour.....	61.5	73.4	79.5	83.4	98.8	99.4	100.0	100.5	101.6	101.2	103.3	103.6	102.9
Unit labor costs.....	23.8	40.3	70.3	87.5	97.1	97.8	100.0	102.8	105.3	108.2	107.5	105.4	107.5
Unit nonlabor payments.....	21.5	35.7	62.1	83.7	90.1	94.8	100.0	103.2	105.4	105.8	109.8	116.1	118.6
Implicit price deflator.....	22.9	38.5	67.1	86.0	94.4	96.6	100.0	103.0	105.4	107.3	108.4	109.6	111.9
<b>Nonfinancial corporations</b>													
Output per hour of all employees.....	46.2	55.5	64.6	75.7	94.4	97.8	100.0	101.9	102.6	102.9	103.4	108.2	108.7
Compensation per hour.....	12.6	25.6	49.8	68.9	93.9	96.5	100.0	103.3	107.3	111.2	113.5	115.6	118.1
Real compensation per hour.....	69.1	80.1	84.7	85.3	99.7	99.7	100.0	100.0	101.0	100.8	103.3	103.5	102.5
Total unit costs.....	25.3	44.5	76.6	89.4	98.7	97.8	100.0	101.8	105.9	109.6	112.8	107.6	108.7
Unit labor costs.....	27.2	46.2	77.2	90.9	99.5	98.6	100.0	101.3	104.6	108.0	109.7	106.8	108.7
Unit nonlabor costs.....	20.4	40.1	75.0	85.4	96.8	95.7	100.0	103.0	109.2	113.6	121.0	109.9	108.8
Unit profits.....	38.6	42.7	53.6	92.5	66.0	88.0	100.0	111.6	100.0	91.6	84.1	118.8	129.5
Unit nonlabor payments.....	26.6	41.0	67.6	87.9	86.3	93.1	100.0	105.9	106.0	106.0	108.3	113.0	115.9
Implicit price deflator.....	27.0	44.2	73.7	89.8	94.6	96.6	100.0	103.0	105.1	107.3	109.2	109.0	111.3
<b>Manufacturing</b>													
Output per hour of all persons.....	—	—	—	65.9	93.3	95.4	100.0	100.9	104.8	104.3	104.9	111.8	114.6
Compensation per hour.....	—	—	—	66.4	96.0	96.8	100.0	102.0	105.3	109.8	114.8	116.6	118.8
Real compensation per hour.....	—	—	—	82.2	101.9	100.0	100.0	98.8	99.1	99.6	104.5	104.4	103.1
Unit labor costs.....	—	—	—	100.7	102.9	101.4	100.0	101.1	100.4	105.2	109.4	104.3	103.6
Unit nonlabor payments.....	—	—	—	88.7	84.9	91.4	100.0	104.3	110.4	118.7	110.0	—	—
Implicit price deflator.....	—	—	—	92.0	89.8	94.1	100.0	103.5	107.7	115.0	109.9	—	—

Dash indicates data not available.





















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

Event or exposure <sup>1</sup>	1996-2000 (average)	2001-2005 (average) <sup>2</sup>	2005 <sup>3</sup>	
			Number	Percent
All events .....	6,094	5,704	5,734	100
<b>Transportation incidents</b> .....	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
<b>Assaults and violent acts</b> .....	1,015	850	792	14
Homicides .....	766	602	567	10
Shooting .....	617	465	441	8
Suicide, self-inflicted injury .....	216	207	180	3
<b>Contact with objects and equipment</b> .....	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
<b>Falls</b> .....	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
<b>Exposure to harmful substances or environments</b> .....	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 Oxygen deficiency .....	112	114	136	2
	92	74	59	1
<b>Fires and explosions</b> .....	196	174	159	3
Fires--unintended or uncontrolled .....	103	95	93	2
Explosion .....	92	78	65	1

<sup>1</sup> Based on the 1992 BLS Occupational Injury and Illness Classification Manual.

<sup>2</sup> Excludes fatalities from the Sept. 11, 2001, terrorist attacks.

<sup>3</sup> 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.