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The February *Review*

This very full issue of the *Monthly Labor Review* publishes research and findings on quite disparate labor market topics. Work schedules, productivity trends, wage variation, and employment patterns among young people are among the topics covered. The articles published this month reflect the depth and breadth of labor market data and analyses currently being produced.

Such depth and breadth are suggested in this month's cover illustration, itself prompted by our initial article, authored by four Bureau economists. Commonly known data on net labor market outcomes—unemployment rates being a familiar example—are only the tip of the iceberg in terms of understanding the full extent of labor market dynamism. BLS now regularly issues a number of data series that depict the remarkably fluid nature of actions taken by employers and employees on a continual basis: businesses opening and closing, expanding and contracting; employees being hired, quitting, or being laid off; workers shifting between employment, unemployment, and being in and out of the overall labor force. Potential analyses of these data series, succinctly described in the article, allow for a much richer understanding of current economic conditions. What lies beneath merits close attention, indeed.

Sometimes aggregate measures such as overall pay trends may mask substantial variety beneath the surface. As reflected in the title of their article, Krista Sunday and Jordan Pfuntner ask probing questions about how wages vary among workers in the same job within the same business establishment. They review previous studies on this subject and suggest a number of factors that contribute to wage spreads, including pay compression, tenure-based pay scales and how narrowly job systems are defined within a business. They primarily use occupational pay data from the Bureau's National Compensation Survey, and in innovative ways.

Trends in education among young people and how such trends relate to workforce preparation, career choice, skills development, and other socioeconomic phenomena are always of interest to guidance counselors, educators, parents, and employers. The article by Teresa L. Morisi, which examines over two decades worth of data from the Current Population Survey, highlights shifts in school enrollment and work patterns among teenagers since the mid-1980s. Is it too pithy to say that school is in, work is out?

Trends in labor productivity—often thought of as being among the key determinants of societal living standards—are closely watched by researchers and policymakers. The marked growth in output per hour in the latter half of the 1990s was one of the most widely noted and reflected-upon developments of the long economic expansion in that decade. Three BLS economists update us on trends since the beginning of the new century, and find that productivity gains are continuing in many industries, but—again looking below the surface—what accounts for that growth differs in some pivotal ways from what came before.

Our fifth and final article this month, by Harriet B. Presser, Janet C. Gornick, and Sangeeta Parashar examines the extent of nonstandard work hours in several European countries. They provide substantial context and discussion for the consequences of workweek reduction measures adopted in those countries, specifically in regard to when employees' hours are worked and gender differences thereof.

Skiing employment: East and West

While for some people the winter months are best spent indoors in front of the fireplace with something warm to drink, for others it's the time of year to hit the slopes. Data from BLS' Quarterly Census of Employment and Wages show that trends in skiing employment between the eastern and western halves of the Nation have "sloped" differently in recent years. Jobs in Colorado, California, and other western States have edged their way up, while those in eastern States, such as Pennsylvania and New Hampshire, have slid down. One of the biggest determinants of employment each season in the ski industry, not surprisingly, is the weather and concurrent amount of snowfall.

An online version of a report in PDF format describing these findings can be found at **www.bls.gov/opub/ils/pdf/opbils64.pdf**. □

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Studying the labor market using BLS labor dynamics data

Three relatively new data sources released by the BLS help analysts track the rich dynamics underlying the changes in employment and unemployment; these data add depth and context, and they ultimately provide a better understanding of movements in the labor market

Zhi Boon, Charles M. Carson, R. Jason Faberman, and Randy E. Ilg

Over the past 5 years, the Bureau of Labor Statistics (BLS) has released three new data products that measure the dynamics of the U.S. labor market. These data illustrate the fluid nature of the labor market by highlighting the millions of jobs that appear or disappear and the millions of individuals who become employed, become unemployed, or leave the labor force entirely every month.

In 2002, the BLS began releasing data from the Job Openings and Labor Turnover Survey (JOLTS). This survey of establishments has collected data since December 2000 on the number of hires, quits, layoffs, and job openings businesses have each month. In 2003, the BLS began releasing the Business Employment Dynamics (BED) data. The BED counts are based on 6.9 million mandatory reports submitted by businesses subject to State Unemployment Insurance (UI) programs; these records are longitudinally linked over time so that one can observe employment changes at the establishment level. The BED measures the gross number of jobs gained each quarter at expanding or opening establishments, as well as the gross number of jobs lost each quarter at contracting or closing establishments. The BED data are available back to 1992. Finally, beginning in October 2007, the BLS has released seasonally adjusted monthly estimates of labor force status flows (also known as "gross flows") from the Current Population Survey (CPS), a survey best known as the source of the monthly unemployment rate. The estimates of labor force status flows, which begin in 1990, use month-to-month changes in the employment status of individuals to estimate the population-level changes in labor force status between being employed, unemployed, or out of the labor force.

This article explains how these new data on employment dynamics provide a more detailed picture of the labor market. It also explains how these data—when used in conjunction with existing labor market information, such as the more familiar BLS data on employment and unemployment—enhance understanding of how the labor market functions and how it changes with the business cycle. The main point of the study is that these data add context to the observed changes in the labor market and help answer questions that the more traditional employment data cannot address. By providing a deeper understanding of movements in the labor market, this information can aid analysts and policy makers alike.

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Why study labor dynamics?

Most observers of the U.S. labor market are familiar with the standard gauges used to measure its health, such as employment growth and the unemployment rate. Every month, these estimates provide a useful measure of the overall health of the labor market, and consequently they are closely watched by analysts and others. Data on the underlying labor dynamics are useful because they add depth to these standard measures. For example, knowing that employment grew by 150,000 jobs or that the unemployment rate fell by 0.2 percentage point provides a reasonable sense of overall labor market health, but for those looking to make policy, financial, or other economic decisions, this information leaves key questions related to how these changes came about unanswered.

When the economy adds 150,000 jobs, it represents a net gain summed over millions of businesses simultaneously expanding, contracting, starting up or closing down each month. Some businesses have hired new employees, others have let workers go or have had workers quit, and others still have had some mix of workers starting work and separating from employment. As a result, there are several ways the economy can generate a net gain of 150,000 jobs. For example, there could be a rise in job creation that outpaces an increase in job losses. On the other hand, there could be a fall in job loss that is steeper than a decline in job gains. One could think of many possible scenarios. The policy-related and financial decisions related to each of these scenarios can be quite different. The first scenario paints a picture of increased employment coupled with increased turbulence, while the second scenario implies employment gains coupled with a decline in labor market churning. The gross job gains and gross job losses statistics of the BED capture exactly these types of flows, thereby giving some context to the dynamic environment in which jobs are added or lost during a given period.

Labor market analysts might also be interested in knowing about the movement of workers into and out of those jobs. While this is related to the gains and losses of jobs, this is a slightly different question to ask, and requires different tools to answer. Returning to the example of a net gain of 150,000 jobs, did such a gain come about through a relative increase in hiring or a relative decline in workers separating from their jobs? Of those who separated, how many were laid off and how many chose to quit? A period of high turnover with a lot of quits is obviously much different from a period of high turnover with many layoffs. The data on labor turnover from the JOLTS program provide answers to these questions.

Just as multiple scenarios can generate a gain of 150,000 jobs, multiple scenarios can cause a 0.2-percentage point decline in unemployment. Each month, millions of people move into and out of unemployment, as well as into and out of the labor force (the sum of the employed and the unemployed) altogether. Because the unemployment rate is defined as the number of unemployed persons divided by the number of people in the labor force, it can decline in several different ways. The most obvious way that the unemployment rate can decline is for the number of unemployed persons to decline. However, this, too, can occur either because of a drop in recently unemployed individuals (that is, a drop in the flows into unemployment) or because of a rise in the number of unemployed persons who find a job or drop out of the labor force entirely (that is, a rise in the flows out of unemployment). The unemployment rate can also decline because of a rise in the number of employed individuals. The economic and policy implications of each change are quite different. The labor force status flows data from the CPS quantify the flow of people into and out of each of the major labor market states: employed, unemployed, and not in the labor force. These flows data provide analysts with critical information on the detailed changes in the labor market in a given month.

Labor dynamics data from the BLS

Job Openings and Labor Turnover Survey. The Job Openings and Labor Turnover Survey (JOLTS) is an establishment survey that publishes monthly data on job openings, as well as monthly and annual data on hires and separations, by major industry and region.[1] The survey samples about 16,000 establishments. It covers all nonfarm employment and is benchmarked to the BLS Current Employment Statistics (CES) survey, which is commonly referred to as "the payroll survey."

Job openings are a count of the number of vacancies on the last business day of the month. They provide a measure of unmet labor demand. *Hires* are all additions to the payroll for the month. Similarly, total *separations* are all subtractions from the payroll for the month. The JOLTS distinguishes between three types of separations: quits (generally voluntary separations), layoffs and discharges (generally involuntary separations), and other separations (such as transfers and retirements). Hires and separations are commonly referred to as "worker flows," because they measure the movement of workers across business establishments. These flows are presented as rates and are calculated by dividing each by employment for the month.

Business Employment Dynamics. The Business Employment Dynamics (BED) data series is a virtual census of the U.S. private sector. It includes all establishments covered by State unemployment insurance (UI) programs—about 6.9 million in 2006—with each establishment longitudinally linked so that its employment history can be tracked by BLS.[2] Each quarter, these data include gross job gains and gross job losses by major industry, employer size class, and by State. *Gross job gains* are the sum of increases in employment from expansions at existing businesses and the addition of new jobs at opening businesses. *Gross job losses* are the sum of decreases in employment from contractions at existing businesses and the loss of jobs at closing businesses. The BED data include job gains and losses for all four types of employment changes. Employment changes in the BED are measured from the third month of one quarter to the third month of the next quarter. The net change in employment is the difference between the gross number of jobs gained and the gross number of jobs lost.

Gross job gains and losses are often referred to as "job flows," because they measure changes in the number of positions rather than the actual movement of workers. Finally, gross job gains and losses are expressed as rates, calculated by dividing by the average of the previous and current quarter's third-month employment.[3]

CPS Labor force status flows. The labor force status flows data are derived from the Current Population Survey (CPS), a monthly sample survey of approximately 60,000 households.[4] Each month, the CPS is administered to about three-quarters of the households that were also in the survey during the previous month. (The other one-fourth consists of new households.) The month-to-month overlap allows the BLS to track individuals who change labor force status from one month to the next. The dynamic "flows" of these individuals underlie changes observed in the official labor force stock estimates published by BLS (employment, unemployment, and not in the labor force). Gross flow estimates are available for the total working-age population (age 16 and over) and separately for men and women.

In a given month, a person is in one of three labor force states: employed (E), unemployed (U), or not in the labor force (N). The following month, the person could either have the same status or change to one of the other two states. Thus, one can express the complete set of labor market gross flow possibilities with the following 3 x 3 matrix:

	Status in current month		
Status in prior month	*Employed*	*Unemployed*	*Not in labor force*
Employed.....	**EE**	EU	EN
Unemployed.....	UE	**UU**	UN
Not in the labor force	NE	NU	**NN**

The notation of the matrix is such that the first letter of each flow denotes the labor force status of an individual in the previous month, and the second letter of each flow denotes the state of an individual in the current month. The diagonal elements, EE, UU, NN (shown in bold), represent individuals who did not change their labor force status over the month.

The flows into employment, listed in the first column, represent all individuals who remained employed, but not necessarily with the same employer, over the month (EE); the number of unemployed persons who became employed (UE); and the number of persons previously not in the labor force who became employed (NE). The flows into unemployment, listed in the second column, represent the number of employed who become unemployed (EU), the number of unemployed who remained unemployed from the previous month (UU), and the number of individuals not in the labor force who became unemployed (NU). Finally, the flows out of the labor force, listed in the third column, represent the number of previously employed individuals who leave the labor force (EN), the number of previously unemployed individuals who leave the labor force (UN), and the number of individuals who remained out of the labor force (NN).

Note that the CPS labor force status flows data do not provide insight into how or why individuals change their labor force status. For example, among EN flows, the data do not distinguish between persons who drop out of the labor force voluntarily or involuntarily. They do not identify whether flows out of employment (EN or EU) represent quits, layoffs, or other separations; they do not identify whether those who enter the labor force (NE or NU) are new entrants or re-entrants; and they do not identify if those who quit looking for work (UN) do so because they are discouraged over job prospects.[5]

The most interesting estimates for studying labor dynamics are the gross flows not on the matrix's diagonal (UE, NE, EU, NU, EN, UN). The gross flow statistics from the CPS have actually been available in some form intermittently since 1948. Unlike previous versions, however, the current labor force status flows data are available on a seasonally adjusted basis and have flow estimates that are compatible with the monthly stock estimates published each month.[6]

Like the JOLTS estimates, the CPS labor force status flows can be referred to as "worker flows," because they measure the movements of actual workers. One can express these flows as rates in several different ways, depending on the specific question one wants to answer. The more common gross flow rates used are expressed as percentages of the population, of the labor force, of employment, or of their original stock's level.

How the data relate to each other

At first glance, it might appear that the JOLTS, BED, and CPS gross flow data essentially measure the same basic economic phenomena, but each series measures a different and distinct aspect of labor market dynamics. Exhibit 1 highlights the differences in measurement and concepts between the three data sources. Both the JOLTS and BED data are based on establishments, while the CPS data are based on household information. The JOLTS and CPS report monthly data, while the BED reports quarterly. The data also differ in their coverage, timeliness, detail, and periods covered. More importantly, each series is conceptually different, with BED focusing on the perspective of businesses, CPS focusing on the perspective of individuals, and JOLTS focusing on workers at businesses.

Both the JOLTS and CPS data measure worker flows. The JOLTS data does so from the establishment viewpoint, measuring the number of workers each month who are hired, who are laid off, who quit, or who separate in some other way. The CPS data measure worker flows from the individual's viewpoint, measuring the number of workers who change their status between being employed, unemployed, or out of the labor force. The two sources complement each other well. For example, assume that the number of quits rises in the JOLTS data. To infer the implications of such a rise, it would be useful to know where these workers went. The CPS data address this question by reporting the number of workers who move from employment to either unemployment or out of the labor force entirely. It is possible that neither gross flow measure would change, suggesting that those who quit found new jobs quickly and remained in the pool of employed persons.[7]

The BED data measure job flows. The BED calculates the net change in jobs at each establishment over the reference period. Establishments that add workers on net either opened or expanded, and those that lose workers on net either closed or contracted. One can think of these job flows as a subset of worker flows, because even an establishment-level net change will mask turnover that occurs within the period. For example, if a worker quits and is quickly replaced during the same reference period, no job gain or loss will be observed in the BED data. In the JOLTS data, on the other hand, a quit and a hire would be observed.[8] Compared with the other data sources, this fact makes the BED data somewhat more appropriate for analyzing the business side of the labor market, because it ignores much of the routine labor market churning and focuses on the reallocation of actual jobs in the labor market. Similarly, the CPS is more appropriate for analyzing the worker side of the market, because it measures the flow of individuals into and out of unemployment as well as into and out of employment. The JOLTS data on hires and separations lie somewhere in between, measuring employed workers but giving a more complete picture of their movements in and out of different businesses.

Graphical examples help to illustrate the different labor dynamics concepts each data source measures. Exhibit 2 depicts some relatively common employment changes during both recessions and expansions. The hypothetical example shows two establishments. Establishment A faces difficult business conditions and must contract its workforce as a result. Establishment B has been doing well financially and is planning to expand. Establishment A is forced to lay off half of its eight workers. In addition, another worker from establishment A quits after learning that establishment B is hiring and accepts a position there. Of the four laid-off workers, three immediately start searching for new work and thus are counted as unemployed. The fourth decides not to actively search for work and drops out of the labor force. Under this scenario, even though establishment B is doing well, it must still deal with the routine turnover of workers. Of its original six workers, suppose one longtime employee retires and another quits because of family responsibilities at home. Thus, in order to expand, establishment B will need to hire additional workers as well as replace the two who left. Establishment B would hire four new workers: the one worker who was previously at establishment A and three recent college graduates who just entered the labor force.

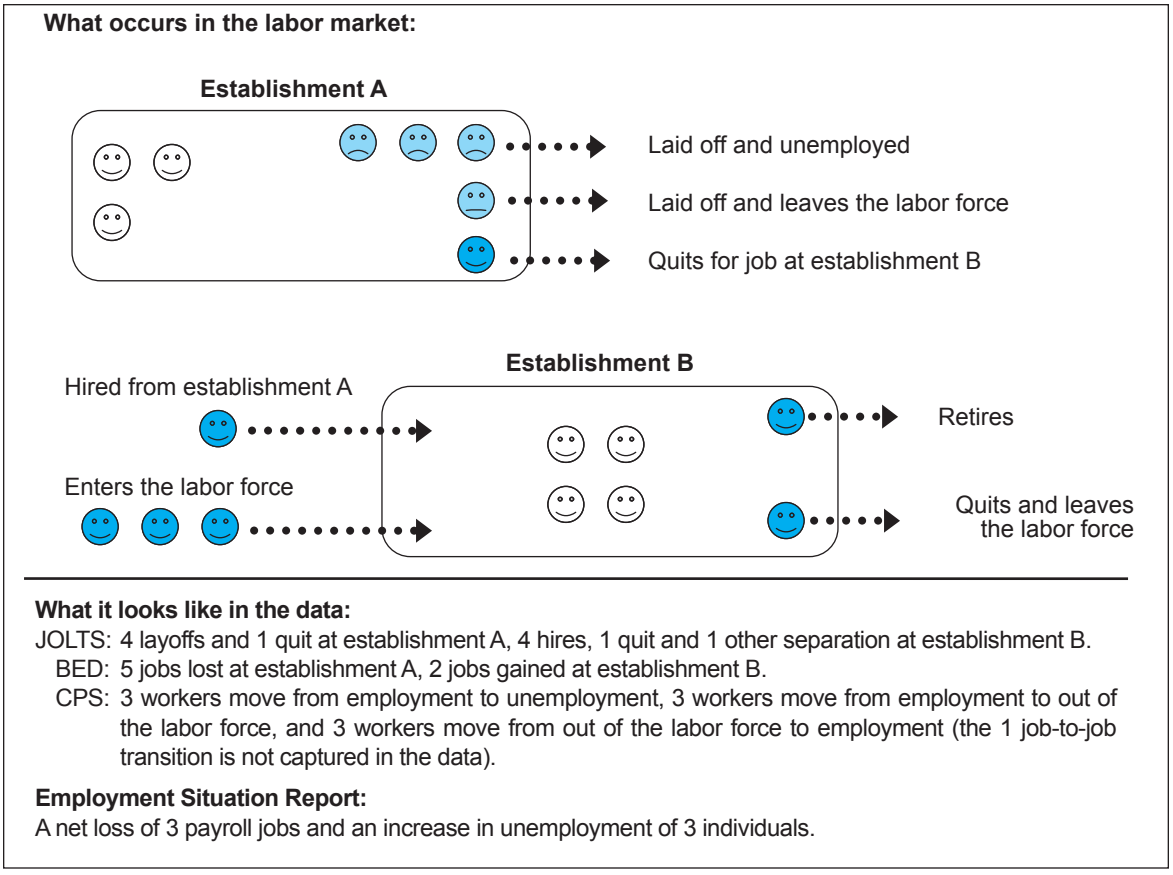
How is this all reflected in the data? In JOLTS, there would be 4 hires (all at establishment B) and 7 separations (4 layoffs and 1 quit at establishment A, and 1 quit and 1 "other separation" at establishment B). In the BED data, there would be 2 job gains (the net gain at establishment B) and 5 job losses (the net loss at establishment A). In the CPS data, there would be 3 workers going from employment to unemployment (the 3 layoffs at establishment A), 3 workers leaving employment and dropping out of the labor force entirely (the 1 layoff at establishment

Exhibit 1. **Summary of BLS labor dynamics data**

Data characteristics	Job Openings and Labor Turnover (JOLTS)	Business Employment Dynamics (BED)	Current Population Survey (CPS) labor force status flows
Data source	Survey of roughly 16,000 establishments	Virtual census of establishments from UI administrative records	Six of the eight rotation groups of the Current Population Survey; represents roughly 45,000 households
Coverage	All nonfarm employment	All private employment	Individuals aged 16 and over
Frequency	Monthly	Quarterly	Monthly
Related data sources	Survey of employment benchmarked to the Current Employment Statistics (CES)	Longitudinal data based on the Quarterly Census of Employment and Wages (QCEW)	Gross flow data based on continuous respondents in the Current Population Survey (CPS)
Timeliness	Available approximately 2 months after the end of the reporting month	Available approximately 8 months after the reporting quarter	Available approximately 1 week after the end of the reporting month
History	Data available from December 2000	Data available from 1992Q3	Data available from January 1990
Data elements	Total number of **Job Openings** on the last business day of the month Total number of **Hires** during the month Total number of Separations (disaggregated into **Quits, Layoffs and Discharges,** and **Other Separations**) during the month	Total number of **Gross Job Gains** at *Expanding* and *Opening* establishments Total number of **Gross Job Losses** at *Contracting and Closing* establishments	Total number of individuals moving between two of the three labor market states: **Employment, Unemployment**, and **Out of the Labor Force** (the total number moving from unemployment to employment, from employment to out of the labor force, and so on)
Detail available	Data available for major (2-digit NAICS) industries and for four geographic regions	Data available for major (2-digit NAICS) industries, by size class of the employer, and by State	Data available by sex

A, plus the retirement and quit at establishment B), and 3 workers entering the labor force and immediately becoming employed (the 3 college graduates hired at establishment B). The worker who switched from establishment A to establishment B never became unemployed, so that worker's status would not change in the CPS data—such a worker would be counted as part of the employment-to-employment (EE) flow. The monthly BLS Employment Situation news release would report a decline in employment of 3 payroll jobs and an increase of 3 in the number of unemployed persons, with no change in the labor force. As this example shows, though, these aggregate level numbers do not describe all of the activity occurring in the labor market. There are many dynamics in this example: of the 17 workers in the two establishments, 10 had some change in their work status. The JOLTS data would show that 4 people were hired while 7 separated from their jobs. The BED data would show that 2 new jobs were created while 5 others were lost. Finally, the CPS data would show that 3 people flowed into the employment pool, while 6 others flowed out.

Exhibit 2. **An example of employment dynamics**



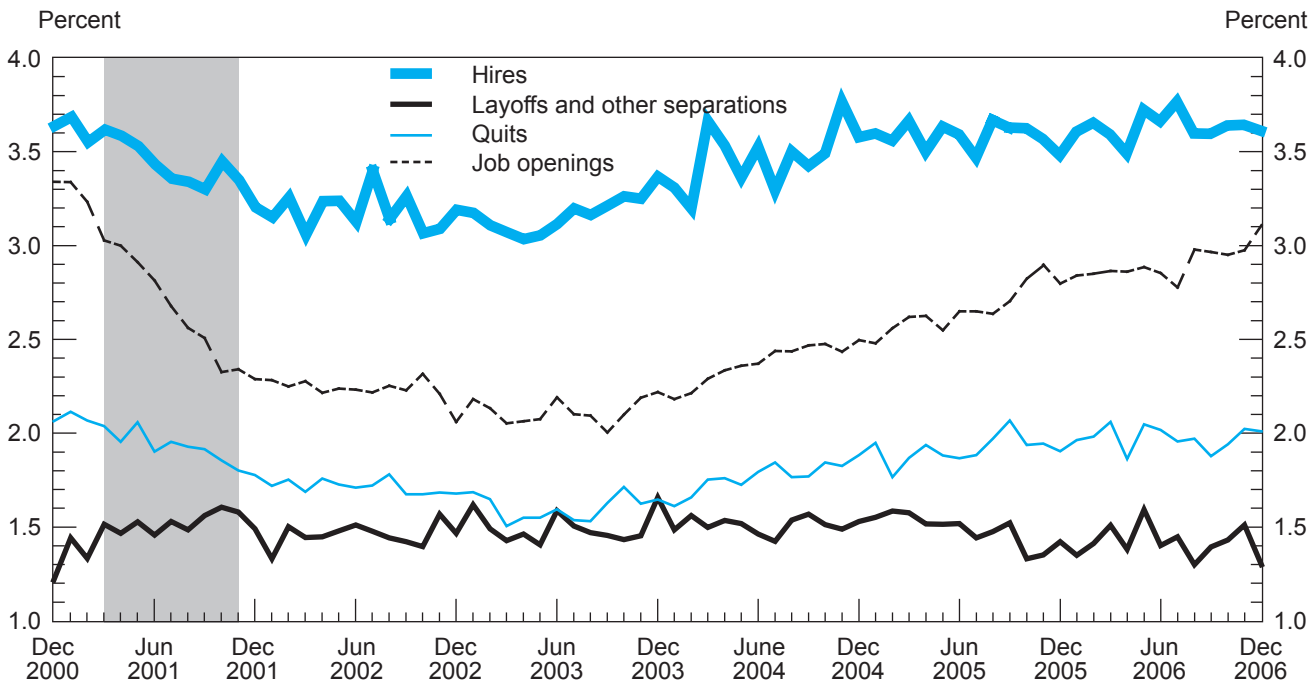
What the data show

The preceding example highlights some common changes that occur in the labor market. Together, the three data sources show dynamics that represent millions of jobs and workers in every measurement period. In an average month during periods covered by the CPS and JOLTS data, more than 14 million individuals, or 6.9 percent of the working-age population, will change their labor force status in some way. More than 4 million will be hired and about as many will separate from their jobs. In a given quarter, more than 15 percent of all jobs will reallocate across different establishments. In other words, the flows of workers and jobs in any given period are quite large.

Consider the JOLTS estimates, for example. Chart 1 presents the JOLTS monthly estimates of hires and separations as a percent of employment, and the job openings estimates as a percent of employment plus job openings (the total number of positions available). All flows move in accordance with the business cycle, but they also remain relatively high throughout its duration. For example, even at its lowest point, the hiring rate still represents more than 3 percent of employment (about 4 million workers), and even when hiring is strong, the rate of layoffs and other separations account for at least 1.3 percent of employment (about 2 million workers). Quits consistently account for between 1.5 and 2.0 percent of employment, implying that they are the more common type of separation, while the job openings rate fluctuates considerably between 2.0 and 3.5 percent of all positions.

Chart 2 depicts the gross job gains and gross job losses estimates from the BED. The estimates are broken out by type of employment change (such as expansions, contractions, openings, and closings) and are expressed as rates, calculated by dividing the job flows by the average of the current and previous quarters' employment. The combined gross job gains and losses each averaged about 7.5 percent of employment (nearly 8 million jobs) per quarter over the 1992–2006 period. Most gains occurred at expanding establishments, while most losses occurred at contract-

Chart 1. JOLTS monthly job openings and labor flows, seasonally adjusted, nonfarm employment



NOTE: Rates are percent of monthly employment. Job opening rate is percent of vacancies + employment

Chart 2. BED quarterly job flow rates, seasonally adjusted, private employment

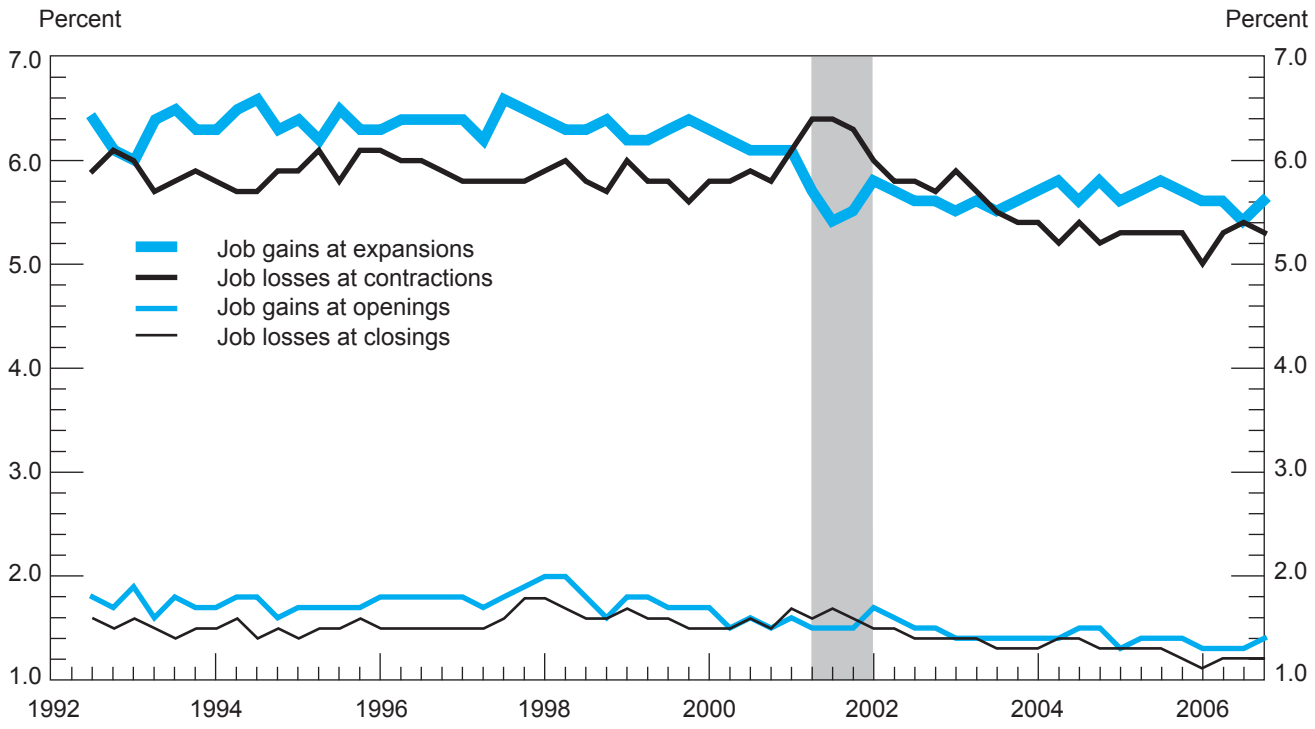


Table 1. Labor force status flows, average monthly estimates, CPS data, 1990–2006

Labor force flows	Number of individuals (in thousands)	Percent of population	Percent of labor force	Percent of original stock
Employed to unemployed (EU)	1,821	0.9	1.3	1.4
Employed to not in labor force (EN)	3,561	1.7	2.6	2.7
Unemployed to employed (UE)	2,035	1.0	1.5	27.4
Unemployed to not in labor force (UN)	1,642	.8	1.2	22.1
Not in labor force to employed (NE)	3,398	1.6	2.5	4.9
Not in labor force to unemployed (NU)	1,832	.9	1.3	2.7

ing establishments. Gains at opening establishments and losses at closing establishments each averaged less than 2 percent of employment. Additionally, gross job gains and loss rates tended to be higher prior to the 2001 recession.

Table 1 presents the monthly averages of the CPS labor force status flows data, both in levels and as percentages of the population, labor force, and the original "stock" or labor force category (employment, unemployment, or out of the labor force). Between 1990 and 2006, the largest flows were between employment and out of the labor force, averaging about 7.0 million workers going either into or out of each labor market status each month. Flows between employment and unemployment are smaller, averaging around 3.9 million individuals per month. An even smaller number of individuals, on average, move between unemployment and out of the labor force. Of the three stocks, unemployment exhibits the greatest amount of churning, relatively speaking. On average, 27 percent of the unemployed in a given month get a job the following month, while 22 percent drop out of the labor force.

Charts 3 and 4 depict the flows into and out of employment and unemployment, respectively, over time. Since the monthly series of these flows can be quite "noisy," in a statistical sense, the estimates are presented as quarterly sums of the monthly data expressed as percentages of the labor force. Chart 3 shows that employment inflows (UE + NE) and employment outflows (EU + EN) exhibit small movements over time and both consistently represent about 12 percent of the labor force. Outflows exceed inflows during both recessionary periods, so employment falls. Chart 4 shows unemployment inflows (EU + NU) and unemployment outflows (UE + UN), again, as percentages of the labor force. These flows exhibit more cyclical variation over the period, ranging from 6.4 to 9.4 percent, and they tend to track each other closely, with inflows into unemployment exceeding outflows during economic downturns.

Worker and job flows vary in the cross section as well as over time. For example, the JOLTS and BED data in table 2 show that worker and job flows differ widely across major industries. Industries such as natural resources and mining, construction, and leisure and hospitality tend to have a high turnover of workers, as well as a high reallocation of jobs, while industries such as manufacturing and wholesale trade tend to have low levels of both. In addition, as the CPS data in table 3 shows, during the sample period used in this study, worker flow patterns differ by sex. Men account for more than half of the labor force, but women account for the majority of labor force dynamics, exhibiting higher flow rates into and out of both employment and unemployment.

Labor dynamics and the business cycle

These new data sources complement each other and provide a better understanding of the labor market. This is especially true when studying these changes over the business cycle. The CPS seasonally adjusted labor force status flows data go back to 1990, covering the last two recessions, while the BED data begin after the 1990–91 recession.[9] The JOLTS data begin just before the start of the 2001 recession. Thus, the 2001 recession is the only one for which movements in all three surveys together can be compared.

Chart 5 shows the movements of payroll employment growth (from the CES) and the unemployment rate (from the CPS) on a quarterly basis since 1990. In each recession, employment growth dropped sharply and remained negative for several quarters after the recession ended. Follow-

Chart 3. CPS employment flows: quarterly sums, percent of the labor force

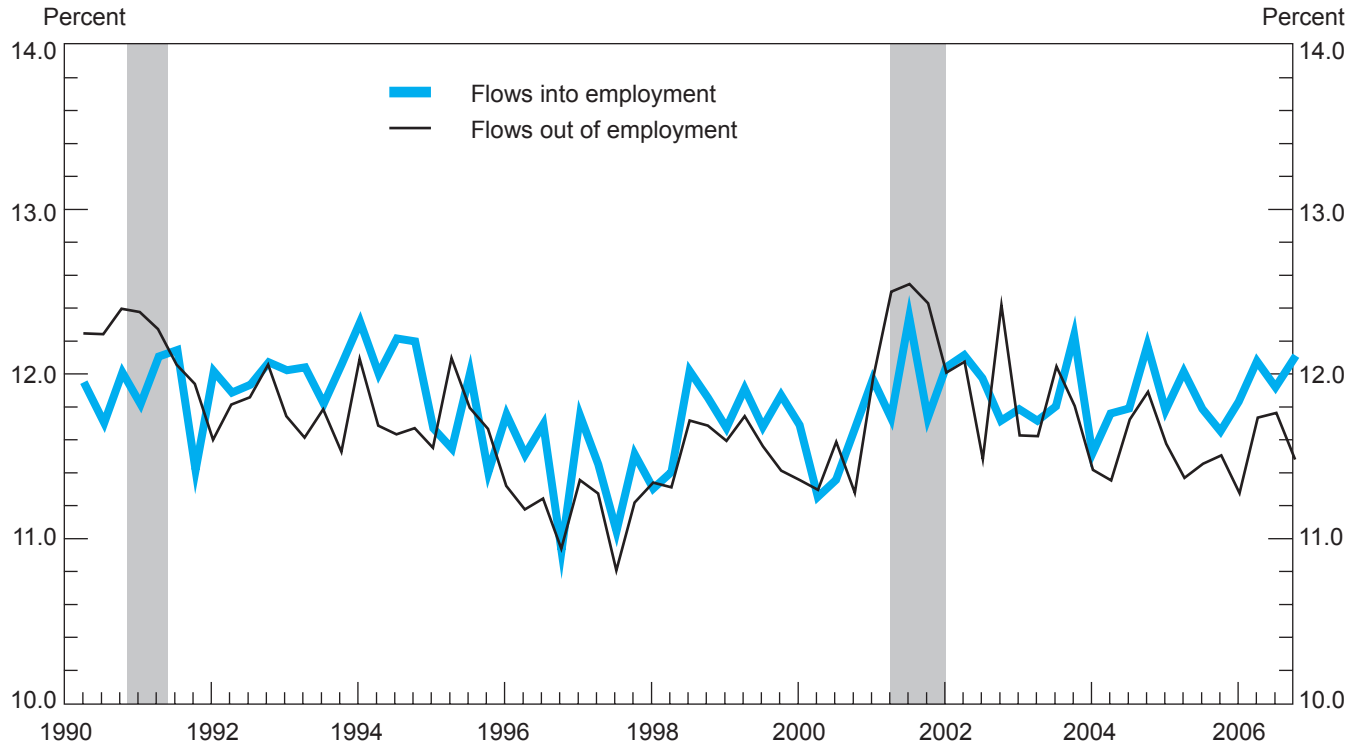


Chart 4. CPS unemployment flows: quarterly sums, percent of the labor force

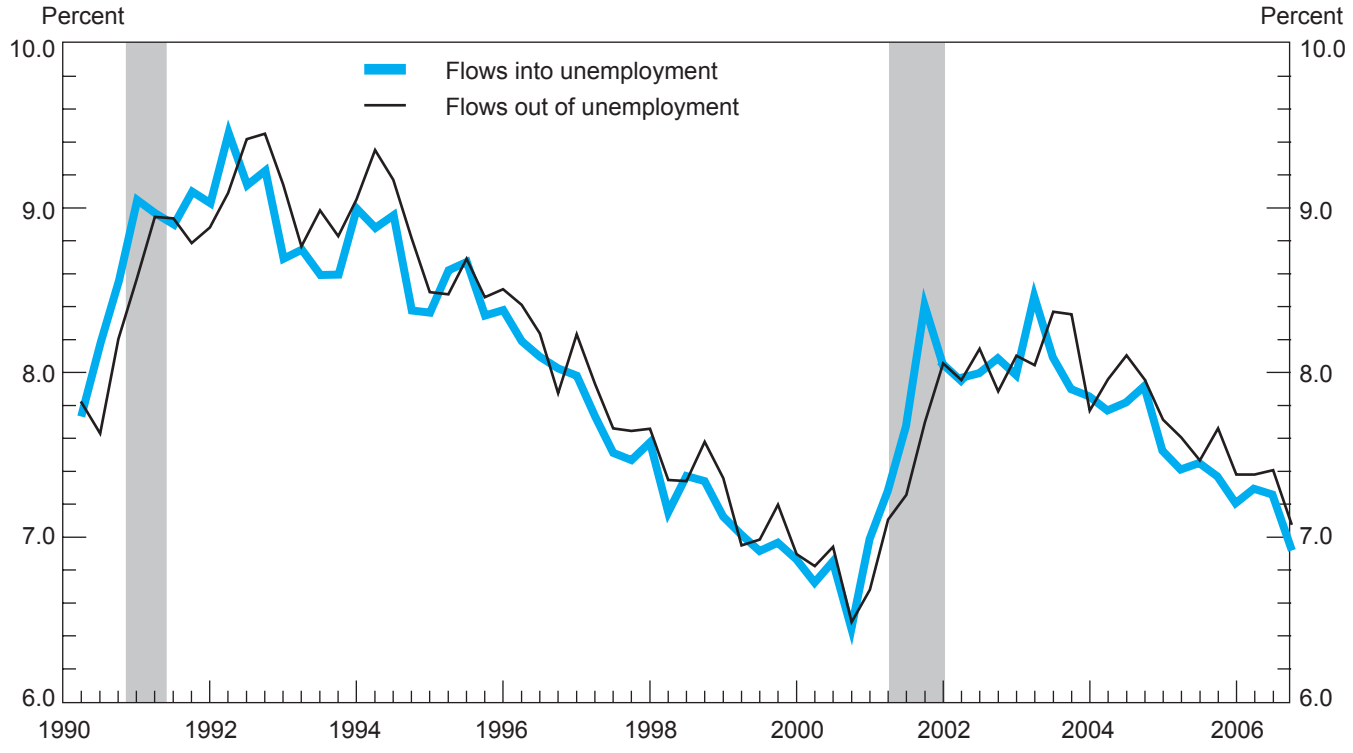


Table 2. Worker and job flow estimates by major industry, JOLTS and BED data, January 2001–June 2006

Industries	JOLTS monthly estimates, percent of employment				BED quarterly data, percent of average employment	
	Job openings	Hires	Quits	Layoffs and other separations	Gross job gains	Gross job losses
Natural resources and mining	1.4	3.2	1.4	1.7	17.1	17.0
Construction	1.7	5.6	2.2	3.4	11.7	11.4
Manufacturing	1.6	2.3	1.2	1.5	3.9	4.8
Wholesale trade	1.8	2.4	1.3	1.2	5.7	5.7
Retail trade	2.3	4.5	2.7	1.7	7.0	6.9
Transportation, warehousing, and utilities	1.9	3.0	1.4	1.6	5.3	5.4
Information	2.4	2.2	1.4	1.0	5.2	6.1
Financial activities	2.5	2.3	1.3	.9	5.8	5.6
Professional and business services	3.4	4.6	2.1	2.1	8.5	8.4
Health and education	3.5	2.7	1.5	.9	4.8	4.2
Leisure and hospitality	3.3	6.5	4.0	2.2	9.4	9.2
Other services	2.3	3.3	2.0	1.3	7.9	7.9
Government	1.8	1.5	.6	.6	...	...

Table 3. Labor force status flows by gender, average monthly estimates, CPS data, 1999–2006

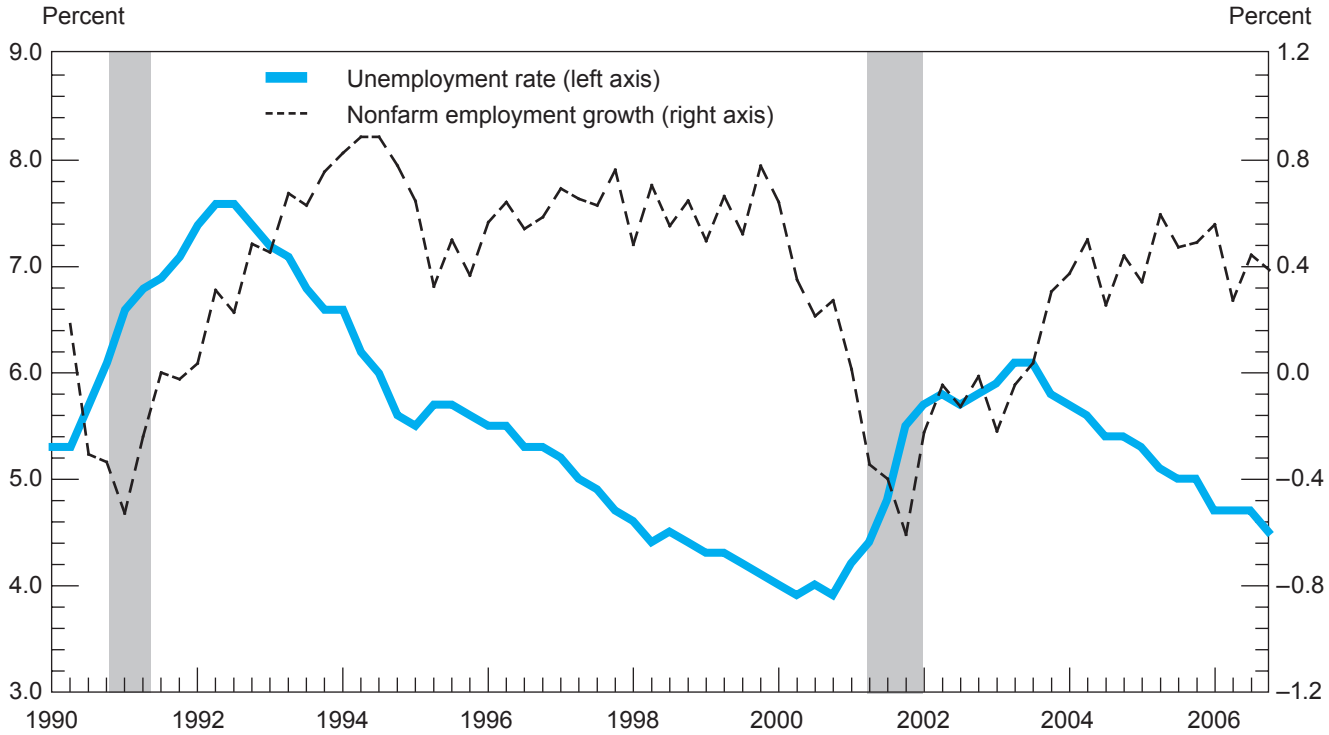
Labor force flows	Number of individuals (in thousands)	Percent of total labor force	Percent of gender's labor force
Men			
Employment inflows (UE + NE)	2,611	1.9	3.5
Employment outflows (EU + EN)	2,586	1.9	3.5
Unemployment inflows (EU + NU)	1,898	1.4	2.6
Unemployment outflows (UE + UN)	1,911	1.4	2.6
Women			
Employment inflows (UE + NE)	2,822	2.0	4.4
Employment outflows (EU + EN)	2,796	2.0	4.4
Unemployment inflows (EU + NU)	1,755	1.3	2.8
Unemployment outflows (UE + UN)	1,766	1.3	2.8

ing the 2001 recession, employment continued to contract until the middle of 2003. The unemployment rate rose during both recessions and did not peak until after they had officially ended. The unemployment rate declined over a long period from 1993 to 2001. After the 2001 recession, the unemployment rate did not rise nearly as high as it did following the 1990–91 recession.

Comparing these data to the gross flows data in chart 4, one can see that the unemployment stock and the unemployment flows exhibited very similar patterns. When unemployment was high, the flow of people moving into and out of the unemployment pool was high as well. By definition, when unemployment inflows exceed outflows, the unemployment rate rises, and one can observe that this happened during and immediately following both recessions. Note that it takes only relatively small differences between inflow and outflow rates to generate large changes in the unemployment rate.

The information presented in charts 6 and 7 provides a clearer picture of the relationship between the movements of worker and job flows from the JOLTS, BED and CPS gross flows data. Chart 6 depicts the flows into employment

Chart 5. CES nonfarm employment growth and the CPS unemployment rate, quarterly and seasonally adjusted



(hires, gross job gains, and employment inflows, respectively), while chart 7 shows the flows out of employment (separations, gross job losses, and employment outflows, respectively). The monthly JOLTS and CPS flow data are summed for each quarter to make them comparable to the quarterly BED data. For consistency, all flows are expressed as percentages of the average of the current and previous periods' employment.[10] In addition, the JOLTS job openings rate (measured at their level as of the beginning of the quarter) is included in chart 6. Chart 7 presents the JOLTS separations rate broken out into quits and layoffs plus all other separations.

Chart 6 shows that hiring and gross job gains declined during the 2001 recession. Hiring had a particularly large drop during the recession and did not rebound until mid-2003. By the end of 2004, the hiring rate had returned to its prerecession levels. Job openings followed a similar pattern, although they were still somewhat below their prerecession level at the end of 2006. The rate of gross job gains, which was fairly steady in the last 18 months of the 1990s, began to decline in the first half of 2000, well before the recession began. The rate of job gains fell during the recession and continued its decline until well after it ended. In fact, even though net job gains rebounded starting in mid-2003, gross job gains remained relatively low through the middle of 2006. Finally, flows into employment showed little change over the business cycle, other than to rise modestly during each recession. At first glance, this might appear inconsistent with the other data measures, but these are the individuals who find work after having been unemployed or out of the labor force in the prior month. The flows from these labor force states will tend to be higher when their stocks are larger.

Employment inflows do not include workers who are hired while employed at another job ("job-to-job" transitions). To make the employment inflows comparable to the JOLTS hiring rate, one would have to add these job-to-job transitions to the employment inflow estimate.[11] For this estimate to match the observed movement of the JOLTS hiring rate, the rate of job-to-job transitions would have to drop precipitously during 2001. Most people who leave one job and take another job separate from their previous employer by quitting; the JOLTS data exhibit a large fall in quits, suggesting there were fewer of these job-to-job transitions in 2001.

In chart 7, the JOLTS data show a large decline in the rate

Chart 6. **Worker and job flows into employment, quarterly, seasonally adjusted, percent of average employment**

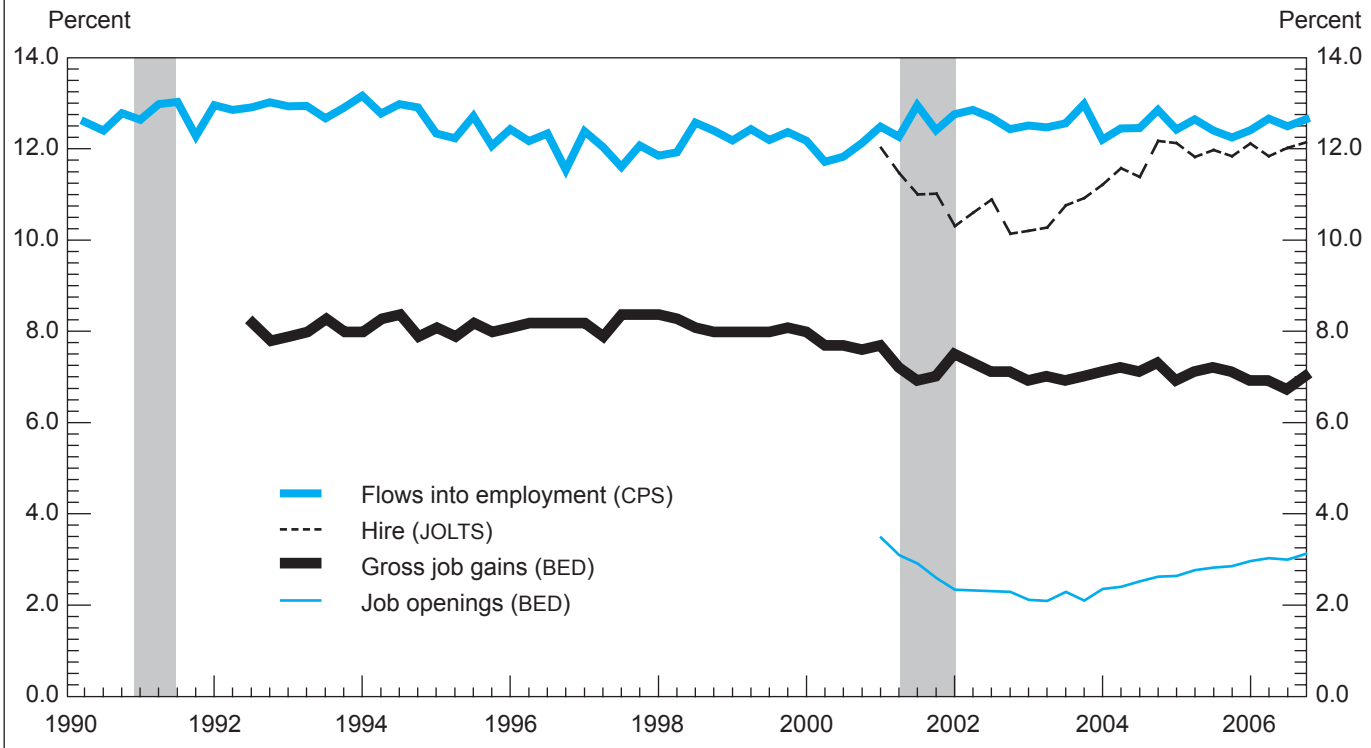
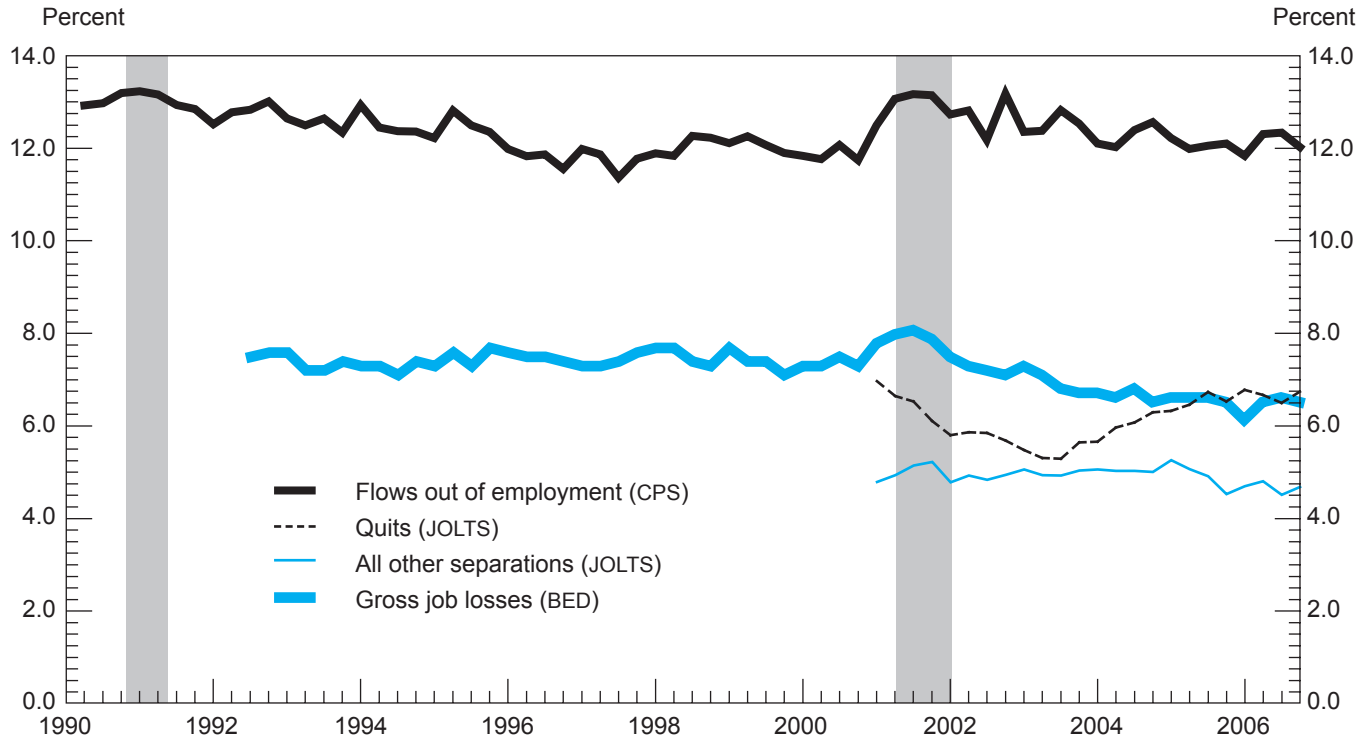


Chart 7. **Worker and job flows out of employment, quarterly, seasonally adjusted, percent of average employment**



of quits during the recession, comparable to the decline in hires shown in chart 6. Moreover, quits start to rise and reach their prerecession levels about the same times that hires do. Layoffs and other separations, on the other hand, rise modestly during the 2001 recession and then decline. They remain higher between 2002 and 2004 and decline again in 2005. Gross job losses also rise and then decline during the 2001 recession. Like the gross job gains, they continue to decline during the first half of 2006. Finally, employment outflows exhibit a pattern quite similar to layoffs and other separations, with a rise during the recession that declines somewhat after it ends, but doesn't completely fall to prerecession levels until 2005. Employment outflows exhibit a similar pattern during and after the 1990–91 recession. Unlike employment inflows, there is little disconnect between employment outflows and what is shown by the JOLTS data on layoffs and other separations and the BED gross job loss data show. This occurs for two reasons: first, unlike inflows, the outflow rate has employment as its initial stock, making it more comparable to the other estimates; and second, outflows from employment are more closely related to layoffs and job losses than they are to total separations, which include quits.

NEW DATA ON LABOR DYNAMICS recently released by the BLS complement the standard measures of the labor market, such as the employment and unemployment statistics provided in the monthly BLS employment report. The Job Openings and Labor Turnover Survey measures the number of workers who move into and out of jobs each month, distinguishes between those who quit or are laid off, and tracks the number of job openings businesses have open at a given point in time. The Business Employment Dynamics data decompose employment growth into the jobs gained at opening and expanding establishments and the jobs lost at contracting and closing establishments. Finally, labor force status flows data from the Current Population Survey measure the movement of individuals as their status changes between being employed, unemployed, or out of the labor force entirely. These new data track the rich dynamics that underlie movements in employment and unemployment and provide a better understanding of labor market changes. □

Notes

[1] For more about the JOLTS data see Kelly A. Clark and Rosemary Hyson, "New tools for labor market analysis: JOLTS," *Monthly Labor Review*, December 2001, pp. 32–37 and Kelly Clark, "The Job Openings and Labor Turnover Survey: what initial data show," *Monthly Labor Review*, November 2004, pp. 14–23. The JOLTS data are publicly available on the Internet at **http://www.bls.gov/jlt**.

[2] For more information on the Business Employment Dynamics (BED) data, see Timothy R. Pivetz, Michael A. Searson, and James R. Spletzer, "Measuring job and establishment flows with BLS longitudinal microdata," *Monthly Labor Review*, April 2001, pp. 13–20; and James R. Spletzer, R. Jason Faberman, Akbar Sadeghi, David M. Talan, and Richard L. Clayton, "Business employment dynamics: new data on gross job gains and losses," *Monthly Labor Review*, April 2004, pp. 29–42. The BED data are publicly available on the Internet at **http://www.bls.gov/bdm**.

[3] Using average employment in the denominator provides a symmetric growth rate and allows a symmetric treatment of changes at opening and closing establishments. This is the official BLS methodology, which is consistent with that of Steven J. Davis, John C. Haltiwanger, and Scott Schuh, *Job Creation and Job Destruction* (MIT Press, 1996).

[4] For an explanation of the Current Population Survey's coverage and concepts, see "Explanatory Notes and Estimates of Error," *Employment and Earnings* (Bureau of Labor Statistics, January 2007). For more on the concepts and estimation of labor force status flows data, see Harley J. Frazis, Edwin L. Robinson, Thomas D. Evans, and Martha A. Duff, "Estimating gross flows consistent with stocks in the CPS," *Monthly Labor Review*, September 2005, pp. 3–9 and Randy E. Ilg, "Analyzing CPS data using gross flows," *Monthly Labor Review*, September 2005, pp. 10–18. The CPS data are publicly available on the Internet at **http://www.bls.gov/cps**.

[5] The CPS has a specific definition of discouraged workers. They are individuals who wish to work and have looked for work sometime in the prior 12 months, but who are not currently looking for work specifically because they believe that no jobs are available for them.

[6] To make the CPS labor force status flows consistent with the reported stock estimates, the BLS developed a method that forces their reconciliation. In addition to the nine flows shown in the text table, there are adjustments that correct for all sources of discrepancies, so that implied changes in stocks derived from the flows match changes in CPS stock estimates. These adjustments account for changes in the working-age population and include net immigration, persons who just turned 16, and average death rates. For more information, see Frazis and others, "Estimating gross flows consistent with stocks in the CPS."

[7] Note that with the 1994 redesign of the CPS, it became possible to measure the job-to-job transitions that are contained within the EE estimate. Respondents are now asked whether their current employer is the same as their employer from the previous month. The publicly available data do not report these estimates separately, although research studying their behavior exists (for example, Bruce Fallick and Charles A. Fleischmann, "Employer-to-Employer Flows in the U.S. Labor Market: The Complete Picture of Gross Worker Flows," Federal Reserve FEDS Working Paper 2004–34). For more information on their measurement, see "Effects of Job Changing on Payroll Survey Employment Trends," available on the Internet at **http://www.bls.gov/ces/cesjobch.pdf**.

[8] By this notion, one could use the JOLTS microdata to estimate both job flows and worker flows.

[9] Although the official Business Employment Dynamics (BED) data begin in 1992, there exists firm-level BED data that begin in

1990. See Jessica Helfland, Akbar Sadeghi and David Talan, "Employment dynamics: small and large firms over the business cycle," *Monthly Labor Review*, March 2007, pp. 39–50; and R. Jason Faberman, "Job Flows over the Recent Business Cycle: Not all 'Recoveries' are Created Equal," BLS Working paper No. 391 (Bureau of Labor Statistics, 2005).

[10] As a result of the authors imposing this consistency on the data, the employment flow rates in charts 7 and 8 use a different denominator than the employment flow rates in chart 3.

[11] Note that this addition would also be necessary if one wanted to compare employment outflows with the JOLTS total separations rate. In addition, note that adding job-to-job transitions would make the CPS employment inflows considerably larger in magnitude than the JOLTS hiring rate. (See note 7 for more information about job-to-job transitions.) Understanding why such a difference in magnitudes exists is a topic of ongoing research.

Nominations Sought for 2008 Julius Shiskin Award

Nominations are invited for the annual Julius Shiskin Memorial Award for Economic Statistics. The award is given in recognition of unusually original and important contributions in the development of economic statistics or in the use of statistics in interpreting the economy. Contributions are recognized for statistical research, development of statistical tools, application of information technology techniques, use of economic statistical programs, management of statistical programs, or developing public understanding of measurement issues. The award was established in 1980 by the Washington Statistical Society (WSS) and is now cosponsored by the WSS, the National Association for Business Economics, and the Business and Economics Statistics Section of the American Statistical Association (ASA). The 2007 award recipient was Arthur Kennickell, Senior Economist and Head of the Microeconomic Surveys Unit at the Federal Reserve Board, for his leadership of the Federal Reserve's Survey of Consumer Finances and his achievements as an international expert on the design and implementation of household economic surveys.

Because the program was initiated many years ago, it is little wonder that statisticians and economists often ask, "Who was Julius Shiskin?" At the time of his death in 1978, "Julie" was the Commissioner of the Bureau of Labor Statistics (BLS) and earlier served as the Chief Statistician at the Office of Management and Budget (OMB), and the Chief Economic Statistician and Assistant Director of the Census Bureau. Throughout his career, he was known as an innovator. At Census he was instrumental in developing an electronic computer method for seasonal adjustment. In 1961, he published *Signals of Recession and Recovery*, which laid the groundwork for the calculation of monthly economic indicators, and he developed the monthly Census report *Business Conditions Digest* to disseminate them to the public. In 1969, he was appointed Chief Statistician at OMB where he developed the policies and procedures that govern the release of key economic indicators (Statistical Policy Directive Number 3), and originated a *Social Indicators* report. In 1973, he was selected to head BLS where he was instrumental in preserving the integrity and independence of the BLS labor force data and directed the most comprehensive revision in the history of the Consumer Price Index (CPI), which included a new CPI for all urban consumers.

Nominations for the 2008 award are now being accepted. Individuals or groups in the public or private sector from any country can be nominated. The award will be presented with an honorarium of $750 plus additional recognition from the sponsors. A nomination form and a list of all previous recipients are available on the ASA Web site at **www.amstat.org/sections/bus_econ/shiskin.html** or by writing to the Julius Shiskin Award Committee, Attn: Monica Clark, American Statistical Association, 732 North Washington Street, Alexandria, VA 22314–1943.

Completed nominations must be received by April 1, 2008. For further information contact Steven Paben, Julius Shiskin Award Committee Secretary, at paben.steven@bls.gov.

How widely do wages vary within jobs in the same establishment?

Within a given establishment, wages of workers vary considerably by job, particularly in certain occupations, such as public school teachers, and with incentive pay playing a role as well; although comparisons over time are problematic, evidence suggests that such wage dispersion has increased over the last two decades

Krista Sunday
and
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Wages in the United States vary widely. A full-time counter attendant in a fast-food restaurant may earn the Federal minimum wage of $5.85 per hour, or $12,200 a year, while the chief executive officer of a major corporation may command an annual salary of $10 million. Analysts have studied this phenomenon extensively and identified a number of factors that affect wage rates. Factors such as occupation and the industry, geographic location, unionization, size, and ownership (private industry or government) of the establishment have been examined, as have individual characteristics such as the employee's knowledge and skills, tenure, performance, and sex. Most of these studies have focused on wage differences across occupations and establishments, and have illuminated the role that the various factors play in explaining why certain jobs pay more than other jobs.[1] Wages also can vary dramatically within a single occupation. For example, in 2004, 10 percent of computer programmers earned $17.19 per hour or less, whereas the top 10 percent earned $42.07 per hour or more.[2]

A different question asks, How do wages vary among workers in the same job within the same establishment? Are wages widely dispersed, or do they tend to be similar for all workers in the job? Finally, the question is posed, Has the dispersion of wages within establishment jobs changed over the last quarter century? These questions are more difficult for researchers to tackle, because data sources are generally less conducive to studies within establishments. In order to answer these questions, researchers must examine individual wage rates within occupations, within establishments. However, individual wage records are rarely available to researchers, particularly for cross-industry, national studies.

Questions about wage dispersion within occupations, within establishments (hereafter referred to as *within-job dispersion*), are interesting ones when viewed against the backdrop of developments in employee compensation over the last decade. Some experts in employee compensation have proposed that competitive pressures impelled employers to move increasingly toward *variable-pay*[3] schemes, in which employee pay varies from year to year or from pay period to pay period, depending upon employee or company performance. This idea contrasts with the traditional notion that employees receive an hourly wage or a fixed weekly, monthly, or annual salary as compensation for time worked. The past adoption of variable-pay policies by many employers would suggest that within-job dispersion ought to be greater today than it was 20 or 25 years ago.

The introduction of "broadbanding" by many companies in the 1990s also would suggest that pay was becoming more dis-

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persed over time. Broadbanding is a job classification system that defines jobs more broadly than traditional job descriptions, often by combining formerly separate jobs into a single classification. Accompanying the broader job description is a wider range of salaries (in comparison to those of traditional plans) that can be paid to workers in the broadbanded job. Thus, the adoption of broadbanding offers the potential for a greater diversity of wages among workers in the same company or government job.[4]

An examination of 2004 BLS wage data suggests that wages vary widely within a particular job in a particular establishment. For example, in private industry overall, the highest paid registered nurse is paid about 40 percent more, on average, than his or her lowest paid colleague in the same establishment job. Similarly, among State and local government establishments, the highest paid elementary school teacher earns double what the lowest paid teacher makes in a particular job. Pay differences within establishment jobs are even more pronounced for some private-industry sales occupations.

Occupational comparisons over the past 20 years are difficult to make, because the duties and responsibilities of many jobs have evolved with advances in technology and the economy. Nevertheless, a comparison of BLS data from 1983 and 2004 suggests that within-job wage dispersion has increased over that period: about three-quarters of the selected occupations compared showed a higher degree of dispersion in 2004 than in 1983.

Previous studies

Three 1980s BLS *studies.* In the 1980s, the BLS published three related studies that examined the extent to which wages varied. Two of these studies focused on the variation in actual wages paid. In a 1985 study by John Buckley, the subject was how wages differed for workers employed in the same occupation within the same establishment. In reviewing a variety of occupations across private industry, Buckley found that, for individual office clerical occupations and professional and technical occupations, the highest actual wage paid in the establishment was, on average, 20 percent to 35 percent higher than the lowest actual wage paid. Dispersion was generally less for skilled maintenance, toolroom, and powerplant jobs, with the highest wage for the job exceeding the lowest wage by 10 percent to 15 percent.[5] For material movement and custodial jobs, dispersion varied widely, with the highest wages exceeding the lowest wages by an average of 13 percent for power truck operators (other than forklift) and by 45 percent for "Guards, I."

A 1981 study by Carl Barsky and Martin Personick analyzed the extent to which wages varied within industries in 43 manufacturing and 6 mining industries. They found that industries differed markedly in the extent of wage dispersion, and they also found that industries differed in how much of the variation was due to differences within establishments compared with differences across establishments.[6]

The third BLS study examined the impact of establishment pay policies. In a 1984 study of white-collar workers in medium and large establishments across most private industries, Martin Personick discovered that, among establishments with formal range-of-rates systems, the mean width of the rate range was generally 40 percent to 49 percent for technical and clerical workers, and 50 percent to 55 percent for professional and administrative workers.[7] He also learned that actual pay rates were generally less dispersed than the rates designated in the establishment's policy.

These three studies stemmed from earlier studies by H. M. Douty, who analyzed 1958–60 BLS industry and metropolitan area data.[8] Building upon the work of Alfred Marshall and other early theorists, Douty argued that individual differences in the ability to contribute to production are important factors in making wages disperse within establishments.[9]

Other studies. Analysts have divided wage variation into several components by looking at variation across industries, across establishments, and within establishments. In a 1991 study using BLS data from six manufacturing industries, Erica Groshen found that both establishment and occupational pay differentials were important components of variation in pay.[10] In another study, using BLS Occupational Employment Statistics data from 1996–97, Julia Lane, Laurie Salmon, and James Spletzer also found that the characteristics of the establishment and of the occupation explain nearly nine-tenths of wage variation, with the remainder due to pay differences within establishment jobs.[11]

Some researchers have investigated the question from the opposite perspective: What impact do pay differences have on workers? For example, Matt Bloom examined the effects of pay differences on performance among professional baseball players, and Jeffrey Pfeffer and Nancy Langton studied the impact among college faculty.[12] Studies from this viewpoint have covered a variety of individual employment situations and are difficult to summarize. One theme that appears to emerge, however, is that wage dispersion within establishments does have an impact on characteristics such as employee performance (and team performance)

and job satisfaction, but the impact varies with the particular circumstances: the type of establishment, the occupation, and the nature and organization of the work.

Exhibit 1 summarizes the factors thought to contribute to wage dispersion, focusing on those which affect the wages of employees working in the same job within an establishment. Note, however, that it is not always clear how, or even whether, a hypothesis explaining wage variation across the economy applies to the narrower question of wage variation within establishment jobs. Thus, the exhibit should be interpreted as the authors' attempt to adapt various aspects of theory to the question at hand, rather than as an inventory of established theory.

This article builds upon the BLS studies conducted 20 years ago by looking at how wages varied within occupations, within establishments, in 2004. For purposes of comparability, the article adopts, as much as possible, the methods used by Buckley in 1985. Current research on the topic uses a unique data source: the BLS National Compensation Survey (NCS), a comprehensive survey of wages and salaries and of employee benefits. Major outputs of the survey include the Employment Cost Index, a quarterly measure of trends in employment costs for wages, benefits, and compensation (the sum of wages and benefits); the quarterly Employer Costs for Employee Compensation, a measure that provides information on employer costs (expressed per hour worked) for wages, benefits, and compensation; and the various Employee Benefits publications, which report the incidence of employee benefits and the details of employee benefit plans. The NCS also publishes wage and salary information on several hundred occupations; among the survey's publications are about 80 locality reports each year, as well as reports on the 9 broad geographic regions (referred to as Census economic divisions) and on the Nation as a whole. Information for this article is drawn mainly from the NCS

Exhibit 1. Factors contributing to wage spreads in jobs within establishments

Incentive pay (*wider wage spreads*): Differences in performance (production, sales, etc.) lead to differences in pay.

Range-of-rates pay structures (*wider wage spreads*): Formal rate ranges tend to be wide.

Tenure-based pay scale (*wider wage spreads*): Differences in length of service lead to different pay rates.

Systems that pay for the "person," such as education-based pay scales, and pay-for-knowledge or pay-for-skill plans (*wider wage spreads*): Differences in education lead to different pay rates. The acquisition of knowledge, training, or skills boosts pay in comparison to the pay of other workers in the same job.

Broadbanded job system (*wider wage spreads)*: Salary ranges tend to be wide, and employees may stay in the job for a long time, rather than be promoted into another job.

Unionized occupation (*narrower wage spreads*) Unions often bargain to limit differences in pay among workers in the same job, by setting standard rates for a job, narrowing rate ranges, or introducing other types of "compressed" pay structures."[1]

Pay compression (*narrower wage spreads*): Pay differences narrow over time as workers within a job reach the highest rate of pay for the job. In addition, percentage differences in pay rates are reduced when cents-per-hour increases are given to all workers regardless of pay rate. By contrast, if there is turnover in a job in which tenure affects pay, large differences can exist between new hires and senior employees.

Narrowly defined job system (*narrower wage spreads*): Employees may rapidly be promoted into another job, so the spread within individual jobs is narrow.

Wage level (*spreads widen as wages increase*): Higher levels of wages imply greater levels of responsibility and more opportunity for differentiating one's performance. Calculations of spreads are affected by the highest paid workers' very high earnings. In contrast, lower levels of wages imply lower levels of responsibility and less opportunity for differentiating one's performance. Still, although minimum-wage laws provide a floor beneath which the lowest paid workers cannot be paid, larger percentage differences in wage spreads can arise when differences are divided by a small denominator.

Work level (*spreads widen as work levels increase*): Higher levels of responsibility provide more opportunity for differentiating one's performance. Conversely, lower levels of responsibility provide less opportunity for differentiating one's performance.

Turnover, difficulty in recruiting (*unclear effect*): A concentration of workers at the top or bottom of rate ranges leads to narrower differences in pay. But it can also be argued that, in cases where one long-serving employee persists in the job, turnover increases dispersion because there are always new employees (often at low pay rates) in the job.

Size of establishments (*unclear effect*): Larger establishments may have wider wage spreads because they are more likely to have formal range-of-rate systems, which tend to have wide rate ranges. But it has also been argued that *smaller* establishments have wider spreads, because they are less constrained by formal pay systems, have more flexibility in varying pay, and can gear pay more closely to performance. Also, smaller companies do not have as predictable a source of funds to share with employees as larger companies do, which leads to greater pay diversity.

[1]Pay "compression" refers to pay structures in which pay differentials are narrow between newly hired and more experienced workers (see George T. Milkovich and Jerry M. Newman, *Compensation*, 5th ed. (New York, McGraw-Hill, 1996), pp. 50–51) or between lower graded and higher graded workers. For a discussion of pay compression in State and local governments, see Michael A. Miller, "The public-private pay debate: what do the data show?" *Monthly Labor Review*, May 1996, pp. 18–29; on the Internet at **www.bls.gov/opub/mlr/1996/05/art2full.pdf**.

national wage and salary estimates for 2004.

NCS data collection methods

To understand the data on wage dispersion presented subsequently, it is important to understand how NCS data are collected. The methods for selecting jobs to survey and for collecting wage and salary information are of particular importance. The 2004 NCS included 20,400 establishments with one or more employees. An establishment was generally defined as a nonagricultural business, other than a private household, operating out of a single physical location.[13] State and local government establishments were included, but the Federal Government was not. The survey used a three-stage sample design. First, a sample of 79 metropolitan areas and 73 nonmetropolitan areas was selected to represent the United States.[14] Second, within each of these 152 areas, a sample of private-industry and State and local government establishments was selected. Third, within each establishment selected, a sample of jobs was selected.

The number of jobs (four, six, or eight) selected in an establishment depends upon the number of employees in the establishment.[15] The sampling generally uses a list of all jobs or employees within the establishment. The sampling is proportional to the number of employees in the job, so the more employees in a job, the greater is the chance that the job will be selected for the sample.

Selection of the job is, in turn, a multistage procedure. Usually, the BLS survey selects the most detailed job recognized by the establishment. For example, a small establishment may consider all computer programmers to be a single job, whereas a large corporate headquarters may define several different jobs within the computer programmer series.

Once the establishment job is defined, it is matched with a BLS occupation. For the 2004 NCS wage publications, a system of 480 occupations derived from the 1990 census was used.[16] For example, an establishment job titled "Cost Accountant III" might be matched with the BLS job "accountants and auditors."

The job selected is further refined to ensure that all workers in the job share one or the other of each of the following three characteristics: full time or part time, union or nonunion, and incentive pay or time-based pay.

For example, if the Cost Accountant III job had both full-time and part-time incumbents, either the full-time workers would be selected for the survey, to the exclusion of the part-timers, or the part-time workers would be selected for the survey, to the exclusion of the full-timers.[17]

Finally, the job selected is classified into 1 of 15 work levels or grades on the basis of a point factor system that assigns different levels based upon (1) the knowledge required for the job; (2) the job's complexity, scope, and effect; (3) the degree of autonomy the employee has; and (4) several other factors. For example, full-time, nonunion, time-based-pay Cost Accountants III with several years of experience and who are fully qualified to deal with a wide variety of difficult accounting problems might be classified into the survey job of accountants and auditors, level 11.[18]

This successive refinement process ensures that, in most cases, the job studied comprises a homogeneous set of employees. Although the broadness or narrowness of the job surveyed depends on how broadly or narrowly the job is defined by the establishment, the BLS refinement process does tend to identify relatively discrete company or government jobs by and large.

Once an establishment job has been refined in this manner, the BLS takes a census by collecting individual wage rates for each employee in the selected job. Incentive pay, including commissions, piece rates, and production bonuses, is included, as are cost-of-living allowances, hazard pay, deadhead pay,[19] and amounts deferred under a salary reduction program. Excluded are shift differentials, overtime pay, and bonuses not tied directly to production.[20] Also excluded are uniform and tool allowances, free room and board, on-call pay, and payments (such as tips) made by parties other than the employer.

Thus, the backdrop for the NCS data on wage dispersion is the collection of the rate of pay for each worker in occupations that are relatively homogeneous and narrowly defined. Knowing each worker's wage allows measures of wage dispersion to be calculated for each job selected within each establishment. The progressive refinement of the job surveyed facilitates a relatively narrow definition of *job*, compared with definitions produced by other sources of information.

Measuring wage dispersion

The subsequent analysis follows the 1980s BLS studies by calculating several measures of dispersion. To illustrate these measures, four occupations have been selected: registered nurses, janitors and cleaners, hotel clerks, and salesworkers of motor vehicles and boats. Summary data for these occupations are presented in table 1. In each case, most workers were in establishments in which more than one rate was paid for the job.

Wage spread. The primary measure of dispersion pre-

Table 1. Wage dispersion measures for four private-industry occupations and selected work levels, 2004

[In percent]

Occupation	Proportion of workers in establishment jobs with multiple pay rates	Mean wage spread	Median wage spread	Coefficient of variation	Proportion of across-establishment variation	Index of wage dispersion
Registered nurse, overall	84	43	40	29	84	34
Registered nurse, grade 9	85	42	41	24	84	30
Janitors and cleaners, overall	68	50	38	37	90	47
Janitors and cleaners, grade 1	75	47	38	33	91	36
Hotel clerk, overall	74	31	19	20	72	24
Hotel clerk, grade 3	83	39	30	17	60	23
Salesworkers, motor vehicles and boats, overall	85	481	275	75	40	100
Salesworkers, motor vehicles and boats, grade 5	76	530	262	68	45	108

sented in the analysis that follows is termed *wage spread*. This measure is calculated by determining the percentage by which the highest paid worker's wage in the establishment job exceeded that of the lowest paid worker. For example, suppose that in the establishment job of pediatric nurse the highest paid full-time worker earned $70,000 per year and the lowest paid earned $40,000. Then the wage spread would be calculated as 75 percent: [($70,000 – $40,000)/$40,000] × 100. The spread for each establishment job is calculated in this manner and is then averaged across each establishment and occupation composing a segment of the workforce. Since the NCS takes a census of all employees in the job, variability in the aggregate wage spreads is due to sampling establishments and jobs within establishments, but not from taking a subset of workers within the establishment jobs.[21]

The wage spread is calculated for jobs within establishments in which more than one rate of pay was granted. Jobs with a single incumbent and jobs whose incumbents received the same wage are not included in the calculations. For the survey as a whole, 64 percent of private-sector employees were in jobs with more than one rate of pay, 13 percent were in jobs in which all workers received the same pay, and 23 percent were in single-incumbent jobs. In State and local governments, 83 percent of employees were in jobs with multiple pay rates, 7 percent were in jobs with only one rate, and 10 percent were in single-incumbent jobs.

The wage spread is a measure of the dispersion of wages in a single job within a single establishment.[22] For example, the average spread in wages for registered nurses in private industry was 43 percent in 2004. In other words, among all private establishments paying registered nurses different rates, the wage of the highest paid nurse was about 40 percent higher, on average, than that of his or her lowest paid counterpart in the same nursing job within the establishment.

Two statistics measuring the wage spread are calculated: the mean and the median. The mean, or average, is computed by summing the wage spread in each establishment job surveyed and dividing by the number of observations. The median is a "positional" statistic that is computed by arraying each of the wage spreads in numeric order from the lowest spread to the highest. The wage spread in the exact middle is the median spread. (A few other "positional" statistics besides the median are displayed. For example, at the 25th-percentile wage spread, one-quarter of the observations had the same or a lower spread and three-quarters the same or a higher spread. Conversely, at the "75th percentile," three-quarters of observations had the same or a lower spread and one-quarter the same or a higher spread.)[23]

The reason both statistics are examined is that the wage spread is affected by extreme values within an establishment job, because only the highest and lowest rates enter into the calculation. Calculated over many observations, average spreads will be less affected by extreme values in a few establishments, but in those cases where there are fewer observations, or where a few observations have extremely high wage spreads, the mean, or average, spread can be heavily affected. For example, although the mean wage spread for workers selling motor vehicles and boats is 481 percent, the median is 275 percent. The reason for this difference is that in about 1 in 10 establishment jobs

the highest paid salesworker earned 10 or more times what the lowest earned.

As table 1 shows, the mean wage spread is usually higher than the median. In some occupations, such as registered nurse, the two figures are similar, but in other occupations they diverge. Because of this divergence, both statistics are examined in this article.

The wage spread considers only the highest and lowest wage rates in a job, so it is subject to fluctuations from pay period to pay period as employees are hired or leave the job. These fluctuations should be mitigated in cases where a large number of observations are averaged, but caution should nonetheless be exercised in interpreting data for subsets of the workforce for which the survey had smaller numbers of observations. Note that sample errors are not calculated for the wage dispersion measures to be discussed, so no statements as to their statistical reliability can be made. For this reason, the analysis that follows concentrates mainly on cases with a relatively large number of observations.

The wage spreads for larger groupings of employees, such as salesworkers or workers in unionized jobs, are calculated by combining the wage spread data from individual occupations. Thus, patterns in the wage spreads for large subsets of the workforce can be traced back to the impact of individual occupations.

Three broader statistics. To provide an additional perspective, three other measures are calculated that show how wages vary in occupations *across* establishments. The *coefficient of variation* for an occupation is computed by calculating the standard deviation for the occupation and dividing it by the average wage for the occupation. The coefficient of variation includes all sources of variability: differences in wages across industries, across establishments in the same industry, and across jobs within establishments, as well as the source that is the focus of this article: differences in wages in jobs within establishments. The coefficient of variation also provides a yardstick for comparing the wage variability of one occupation with another. For example, private-industry *registered nurses* had a coefficient of variation of 29 percent in 2004, *janitors* 37 percent, *hotel clerks* 20 percent, and *salesworkers of motor vehicles and boats* 75 percent. These figures partly reflect industry employment patterns: because hotel clerks are employed almost entirely in hotels, wage variation across the various industries under which those hotels are subsumed is nearly zero. *Janitors and cleaners*, by contrast, are employed in many industries, and *registered nurses*, though concentrated in the health care industry, also are employed in other industries, such as clinics in manufacturing plants and health units in corporate headquarters.

In examining the coefficient of variation for larger subsets of the economy, such as professional workers or workers in small establishments, it is important to bear in mind that it will be affected by different wage rates among occupations. For example, among State and local governments, the service workers major occupational group includes a large number of relatively highly paid occupations, such as police officers and firefighters, as well as many lower paid occupations, such as cooks and janitors. The coefficient of variation for service workers is the highest among the State and local government major occupational groups, because of the disparate wages among occupations rather than because of wide wage spans within particular establishment jobs. Unlike the wage spread, the coefficient of variation is not an average of its components. For example, the coefficient of variation for all workers in government was 54 percent, but the figure for the major occupational group with the highest coefficient of variation was 47 percent.

To help put the coefficient of variation in perspective, consider the proportion of variation attributable to wage differences across establishments. This proportion is calculated by dividing the variation of wages across establishments by the total variation in wages. For example, among private-industry registered nurses, 84 percent of total wage variation was due to cross-establishment variation in wages. The remaining 16 percent was due to variation among occupations within establishments and within establishment jobs. However, instances of the same occupation being reported for more than one job within an establishment are uncommon in the NCS, so for the rest of this article the two proportions will be referred to as *across-establishment* and *within-job* variation.

The final statistic examined, the *index of wage dispersion*, is computed by dividing the difference between the 75th-percentile wage and the 25th-percentile wage by the median (or 50th-percentile) wage. The index of wage dispersion thus gauges the breadth of the central portion of the distribution of wages. While the coefficient of variation includes all wage rates, the index of wage dispersion includes only the middle 50 percent of wages and is not affected by extreme values.[24] In the four sample jobs, the index of wage dispersion was close to the coefficient of variation.

Overall results

Table 2 shows that, for all occupations together, the mean wage spread was 53 percent for private industry and 62

Table 2. Wage dispersion measures for private industry and for State and local governments, 2004

[In percent]

Sector	Wage spread						Coefficient of variation	Proportion of across-establishment variation	Index of wage dispersion
	Mean	10th percentile	25th percentile	Median	75th percentile	90th percentile			
Private industry	53	7	16	32	55	92	88	90	84
State and local governments	62	11	24	47	83	122	54	71	76

percent for State and local governments. The columns listing percentiles indicate that the mean spreads were substantially affected by a minority of observations with very high wage spreads. The private-industry median wage spread was 32 percent, but the 90th-percentile spread was 92 percent. State and local governments had a similar pattern, with a median spread of 47 percent and a 90th-percentile spread of 122 percent.[25] (This skewed pattern is often seen in wage rates. For example, the 2004 NCS survey indicated that the median hourly wage for the Nation was $14.48, but the average was higher, namely, $18.09, and the 90th-percentile wage was $32.45.)

In contrast, the broader measures, which include all types of variability, showed greater wage dispersion in private industry than in State and local governments. Differences across establishments, rather than within jobs, contributed more to the overall variability of wages in private industry than in State and local governments. This finding is not too surprising, considering the greater diversity of industries and occupations found in the private sector.

The proportion of variation attributable to across-establishment differences is high—nine-tenths in private industry and seven-tenths in governments, in line with some of the studies mentioned earlier.[26] Given the sampling and data collection techniques of the NCS, which result in a relatively homogeneous group of employees within the job, we would expect that most overall variation would be of the establishment and occupational, rather than the within-job, variety.

Major occupation. In private industry, median wage spreads ranged from 28 percent for transportation and material movement workers to 38 percent for salesworkers. As expected, the mean spread had a much wider range, from around 40 percent for clerical workers, precision craft workers, machine operators, and helpers and laborers, up to 113 percent for salesworkers. (See chart 1, page 24.) Among the major occupations, the coefficient of variation and the index of wage dispersion showed roughly similar patterns.

The category of salesworkers includes a wide array of occupations, from the populous job of cashiers (41 percent mean, and 33 percent median, wage spread), in which pay is almost always determined strictly by hours worked, to various salesworkers and sales representatives, who are often paid commissions geared to sales. For example, nearly all salesworkers of motor vehicles and boats had incentive-based (commission) pay, with an average spread of 481 percent. Salesworkers paid on the basis of time worked had an average wage spread of 45 percent (and a median of 33 percent), while their incentive-paid counterparts had an average wage spread of 404 percent (and a median of 110 percent). As a group, salesworkers had the highest wage dispersion from all sources, with a coefficient of variation of 104 percent, coupled with the lowest proportion of total variation due to differences across establishments (76 percent).

The patterns seen in the mean wage spreads are similar to those found in the earlier BLS studies. Professional and managerial workers generally are employed at higher work levels than clerical, blue-collar, and service workers and have a greater opportunity than the latter workers do to differentiate their performance. (Note, however, that most salesworkers were not included in the earlier BLS studies.)

Mean and median spreads tracked much more closely among the major occupational groups in State and local governments than they did among those in private industry. (See chart 2, page 25.) Mean spreads were lowest among the sparsely populated machine operators and precision craft workers major occupational groups. Professional workers (a

Chart 1. Wage spread by major occupation, private industry, 2004

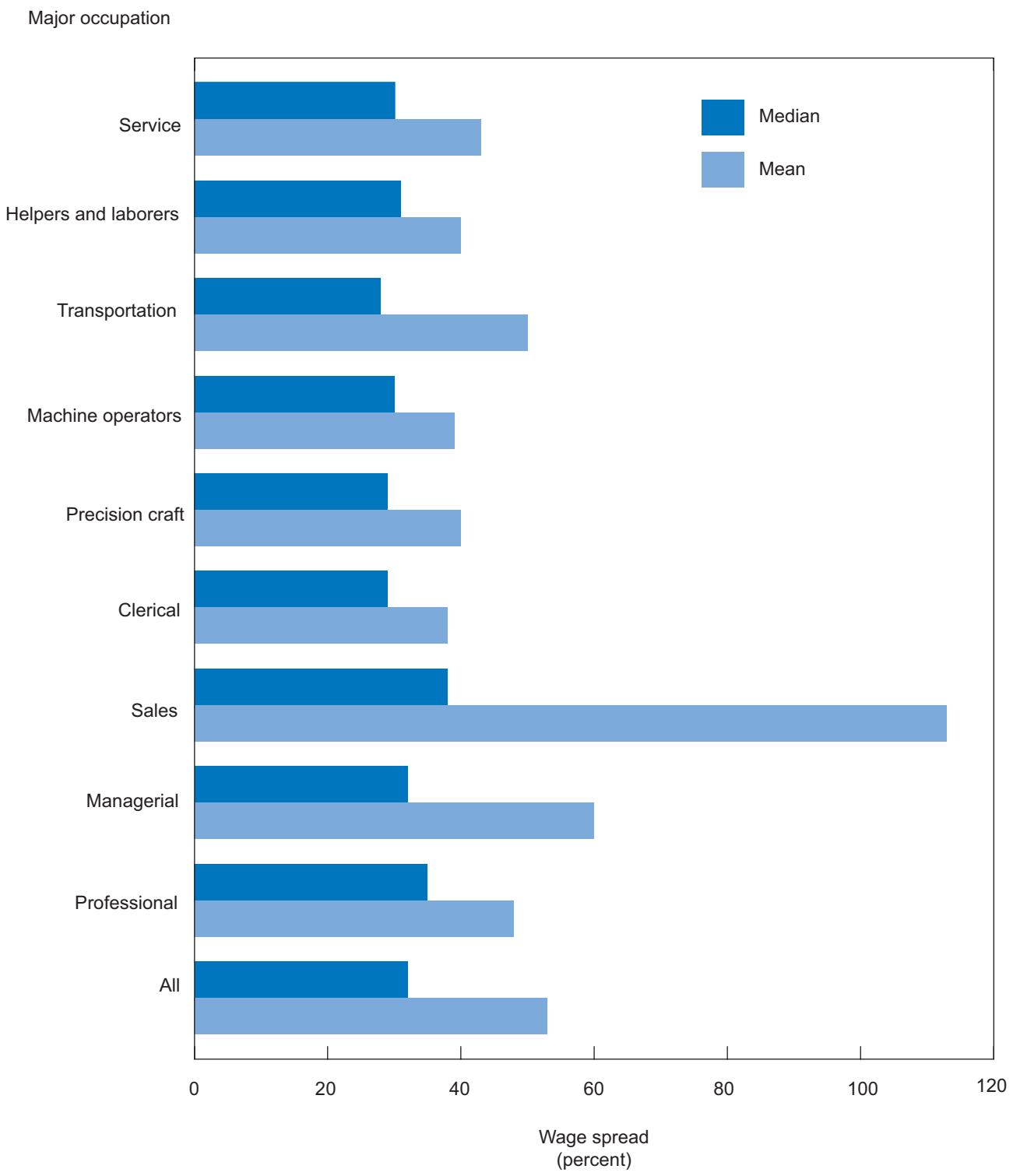
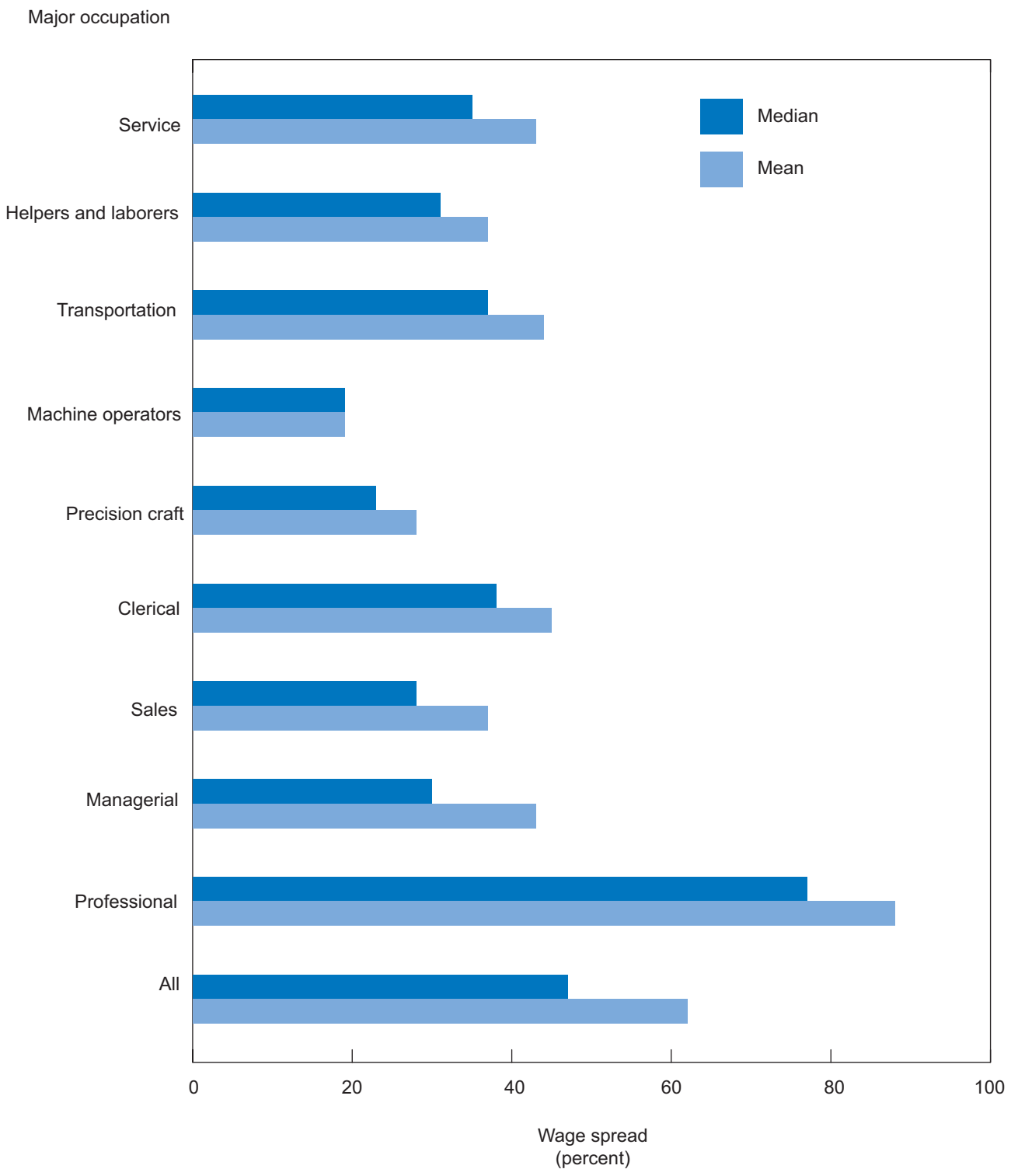


Chart 2. Wage spread by major occupation, State and local governments, 2004



group that includes teachers) had the highest spreads (with a median of 77 percent and a mean of 88 percent).[27] The two most populous teaching occupations had mean spreads of more than 100 percent: elementary school teachers had a mean spread of 106 percent (the median was 98 percent), and secondary school teachers averaged 104 percent (with a median of 100 percent). Public school teachers are commonly paid according to a combination of length of service and educational attainment. For example, a teacher with a master's degree and 20 years of experience might earn $70,000 per year, while a beginning teacher with a bachelor's degree might earn $35,000. The other major occupational groups had mean spreads ranging from 37 percent to 45 percent and medians of 28 percent to 38 percent. (There are few salesworkers in governments, and they are rarely paid commissions.)

Unlike the situation in private industry, the coefficients of variation and indexes of wage dispersion for the major occupations did not follow the same pattern as the mean wage spread. Differences among major occupational groups were small when the most inclusive measure, the coefficient of variation, was used, and ranged from 31 percent for transportation workers to 47 percent for service workers. As noted earlier, government service workers are a mix of high- and low-paying occupations.

Grade levels. The theory of compensation suggests that wages should be more disperse for higher graded jobs, because they offer workers greater autonomy and more opportunity for differentiating their performance.[28] Charts 3 and 4 show that wage spreads did indeed tend to be greater in higher graded jobs, but the pattern was not seamless. For both private industry and State and local governments, wage spreads tended to be lowest among the lower level jobs (grades 1–4), in which many clerical, service, and blue-collar workers are concentrated. In these grades, the work generally follows set procedures and guidelines, is closely supervised, and does not require complicated decisionmaking.

Private-industry median wage spreads were widest among workers in grades 11 and higher. At these grades, professional, administrative, and managerial employees typically have mastered the knowledge required by the job, can select among work methods, and follow only general guidelines. The narrowing of the mean spreads at the highest levels may be attributable to the fact that establishment jobs with workers at grades 14 and 15 generally were found only in a small number of establishments and often had few incumbents per establishment. Workers at these levels are often senior managers, scientific experts, or senior professors. The last two of these types of employees may have been clustered at the top of the salary range for their jobs, but the survey data do not permit any verification of this supposition.

Median and mean wage spreads were more closely aligned in State and local governments than in private industry. Public-sector employees in grades 8 and 9, into which many elementary and secondary school teachers are classified, had relatively high wage spreads. Wage spreads also were high for government workers in grades 11–15 (typically journey-level and senior expert grades for professional and managerial employees).

Level of pay. Because higher levels of work are generally associated with higher levels of pay, the division by wage level looks very much like the division by work level. That is, jobs with higher average salaries tended to have wider spreads than lower paid jobs. In private industry, there was a relatively steady progression (as measured by mean wage spreads), with wage dispersion increasing in tandem with increases in hourly wages. (See chart 5, page 28.) Jobs averaging less than $7 per hour had a mean wage spread of 33 percent, compared with 116 percent for jobs averaging more than $32 per hour.[29] Although the median figures showed a similar trend, the differences were less pronounced, ranging from 25 percent in the lowest category to 41 percent in the highest, with little difference among the middle categories ($7 per hour to under $32 per hour).

A similar pattern applied to State and local government workers, for whom mean spreads ranged from 35 percent for the lowest paid category to 100 percent for the highest paid category. In contrast to the figures for private industry, State and local government median wage spreads varied as widely as the mean figures. (See chart 6, page 28.)

Do wage spreads differ when the level of *total compensation*, rather than the level of wages, is examined? Experimental tabulations using 2006 data that array wage spreads by the level of *total compensation* (wages plus the cost of benefits) showed less pronounced patterns. Overall, the private-industry figures were similar to the wage spreads presented earlier in this article. The mean wage spread was 54 percent, the median 33 percent.

Median wage spreads were lowest (22 percent) for private establishment jobs in which the costs for wages and benefits were less than $10 per hour. There was little difference in median wage spreads among jobs with total-compensation costs of $10 or more. The lowest spread (33 percent) was for jobs with total-compensation costs of $19 per hour to under $30 per hour, and the highest (38 percent) was found in jobs with costs of $14 per hour to

Chart 3. Wage spread by work level, private industry, 2004

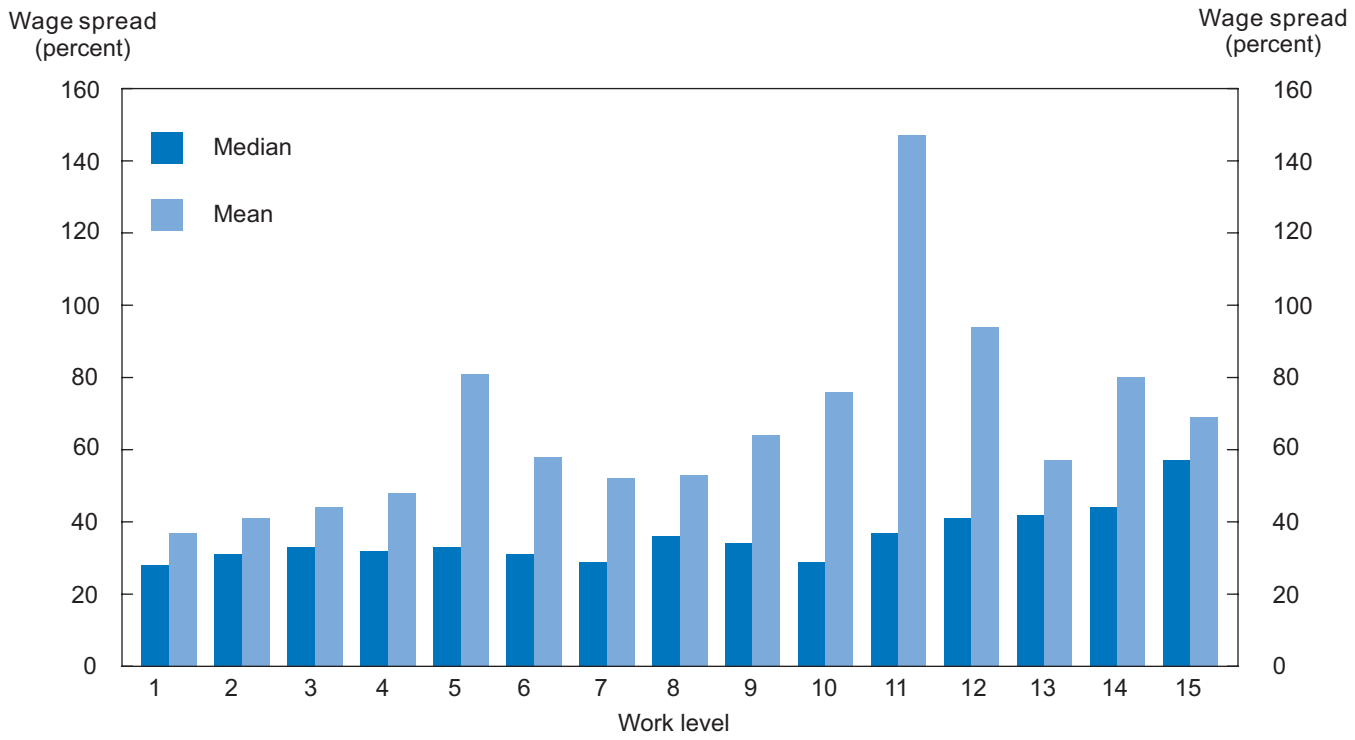


Chart 4. Wage spread by work level, State and local governments, 2004

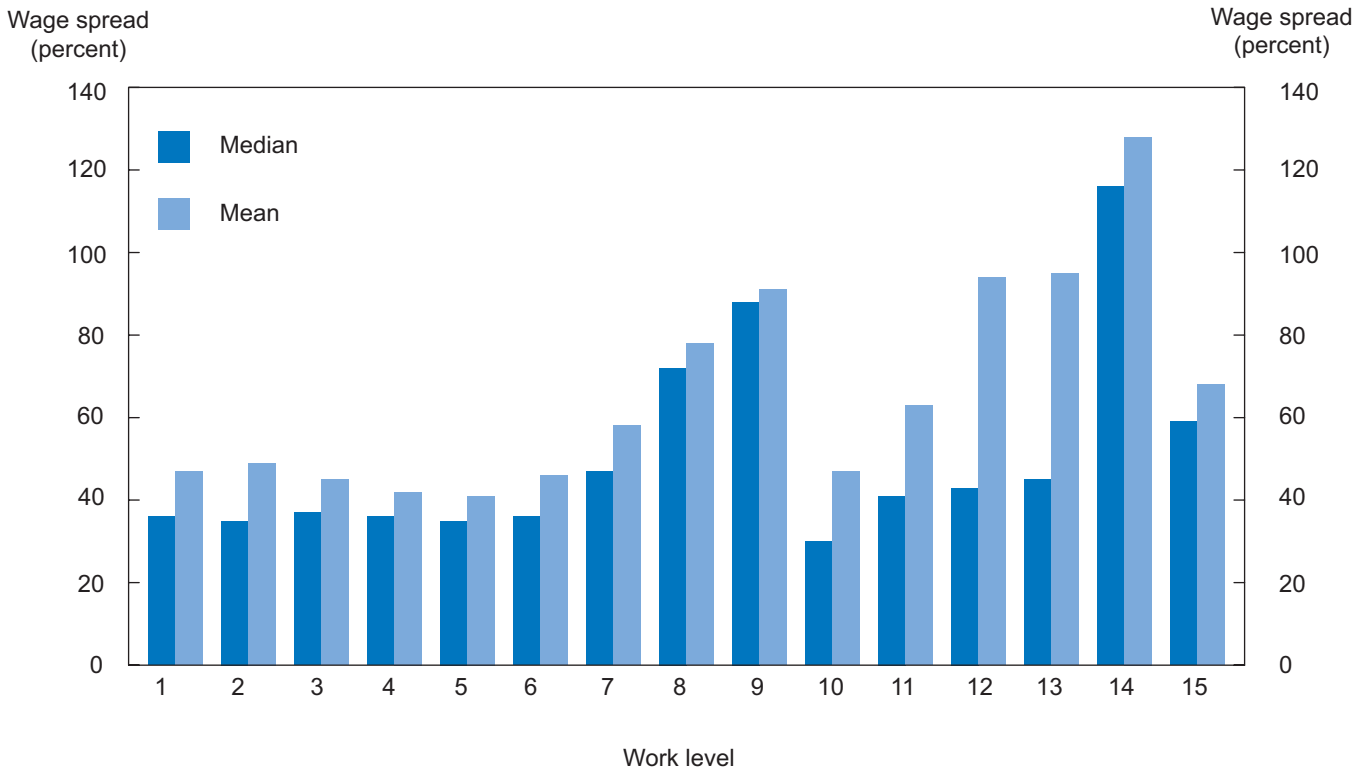


Chart 5. Wage spread by wage level, private industry, 2004

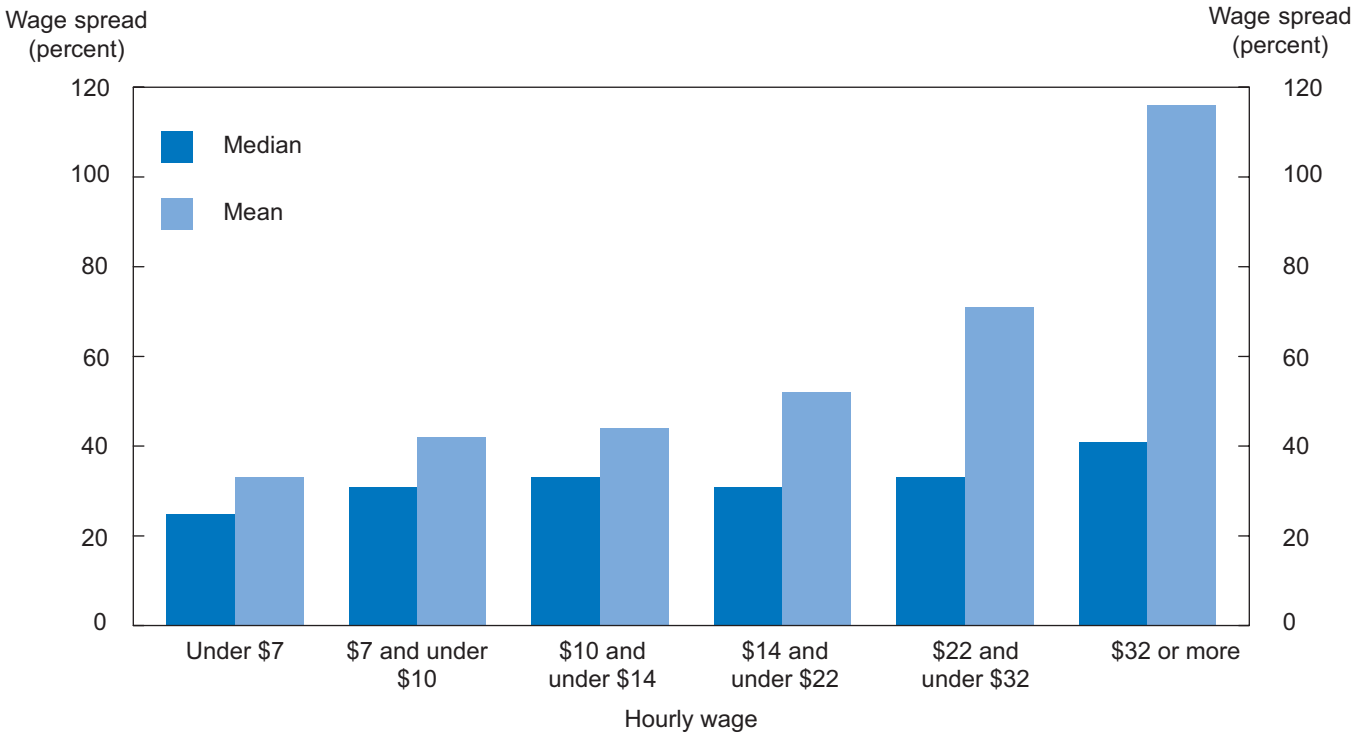
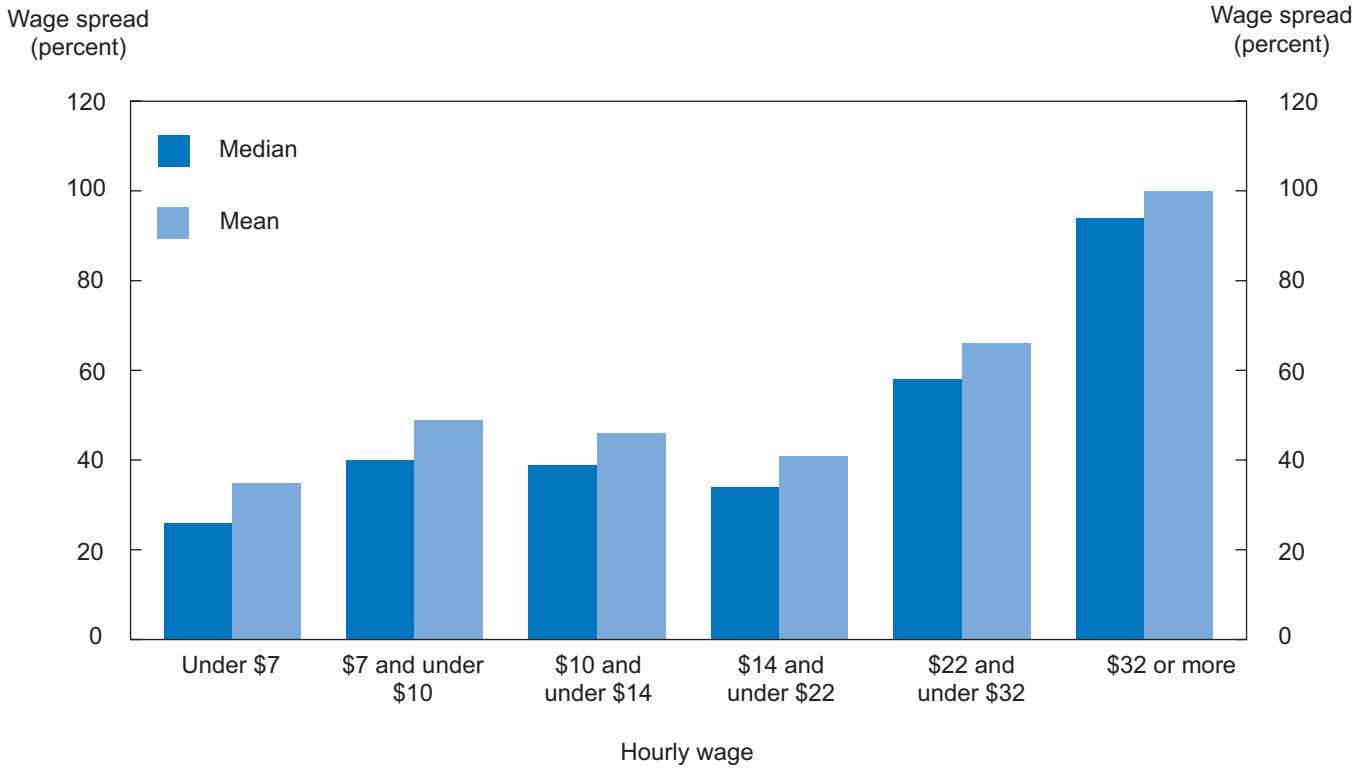


Chart 6. Wage spread by wage level, State and local governments, 2004



under $19 per hour. These results may stem from the way data are reported in the NCS. Unlike wage data, which are collected separately for each employee, NCS benefit cost data are collected for the establishment job as a whole. Thus, the total-compensation categories used in these experimental tabulations combine individual (and varying) wage rates with average hourly benefit costs.[30]

The experimental figures for State and local governments were not as close to the 2004 statistics reported earlier in this article: the mean wage spread was 52 percent, the median 41 percent. The lowest median spread (30 percent) was in jobs with total-compensation costs of $10 to under $14 per hour, and the highest (66 percent) was found in jobs with costs of $44 per hour or more. There was no apparent pattern to the median spreads for the other hourly cost ranges tabulated.

Industry. Cross-economy studies have found that industry is an important factor in accounting for overall wage dispersion. The narrower look at wage spreads within establishment jobs that this article presents, though conducted only at the major industry level, showed mixed results. In private industry, there was little difference in median wage spreads among the five industry divisions studied. As with other characteristics examined, however, mean spreads ranged more widely, from 41 percent in manufacturing to 105 percent in finance, insurance, and real estate, an industry that includes several of the sales occupations with the highest mean spreads.[31] (See chart 7, page 30.) In his 1985 study, Buckley found that mean wage spreads were generally smaller in manufacturing than in nonmanufacturing industries.

Among the three State and local government major industries tabulated, mean wage spreads were similar for public administration (39 percent) and health services (43 percent). By contrast, the average spread was 80 percent for education services, in which teachers compose a large share of employment.[32] Median figures again showed more variation than in the private sector, ranging from 33 percent in public administration to 70 percent in education. (See chart 8, page 30.)

Size of establishment. Some theorists have suggested that wage dispersion is more pronounced in smaller establishments than in larger establishments, because smaller firms are apt to have less structured pay policies and a less predictable flow of funds to share with employees.[33] In contrast, the focus presented here on individual jobs within establishments may call for a different explanation. Larger establishments, for example, are more apt to have formal pay systems with broad rate ranges.[34] Charts 9 and 10 (page 31) show that wage spreads did not vary greatly by the size of the establishment (measured by the number of workers employed there), although the picture is somewhat mixed: on the one hand, it is difficult to discern clear patterns among private-industry establishments, while, on the other, for governments, the smallest establishments (those with fewer than 100 employees) had the lowest wage spreads (with a 36 percent mean and a 28 percent median). In contrast to private industry, government showed a gradual increase in wage spreads as the size of the establishment increased, except that there was no difference in median spreads for the two largest categories of establishments. (The data for State and local governments excluded establishments with fewer than 50 workers; the private-industry data included all establishments, even those with just 1 worker.)

In 1985, Buckley found that, while average spreads were higher for white-collar jobs in private establishments employing 500 or more workers than in smaller establishments, a mixed pattern emerged for blue-collar jobs. The 2004 results for managerial jobs also were mixed, but in the clerical and professional categories, which contain the jobs most similar to those studied by Buckley, the larger establishments (those with 500 or more workers) tended to have higher mean and median spreads than establishments with fewer employees. Among service jobs in establishments with 500 or more employees, the 2004 trend was also generally toward higher spreads. However, the opposite was true for craftworkers. Table 3 (page 32) summarizes the results by establishment size for each major occupational group.

Incentive workers have a great impact on the wage spreads for different-size establishments in private industry. When these workers are removed from the tabulations, a much smoother progression from small to large establishments emerges:

Size of establishment (private industry)	*Wage spread, percent (time-based workers)*	
	Mean	*Median*
1–99 employees	33	25
100–499 employees	45	34
500–999 employees	48	35
1,000–2,499 employees	47	35
2,500 or more employees	56	42

Union status. Union membership has declined in the years since the earlier BLS studies were published. In 2004, 12.5 percent of wage and salary workers belonged to unions, down from 20.1 percent in 1983. By 2004, State

Chart 7. Wage spread by industry, private industry, 2004

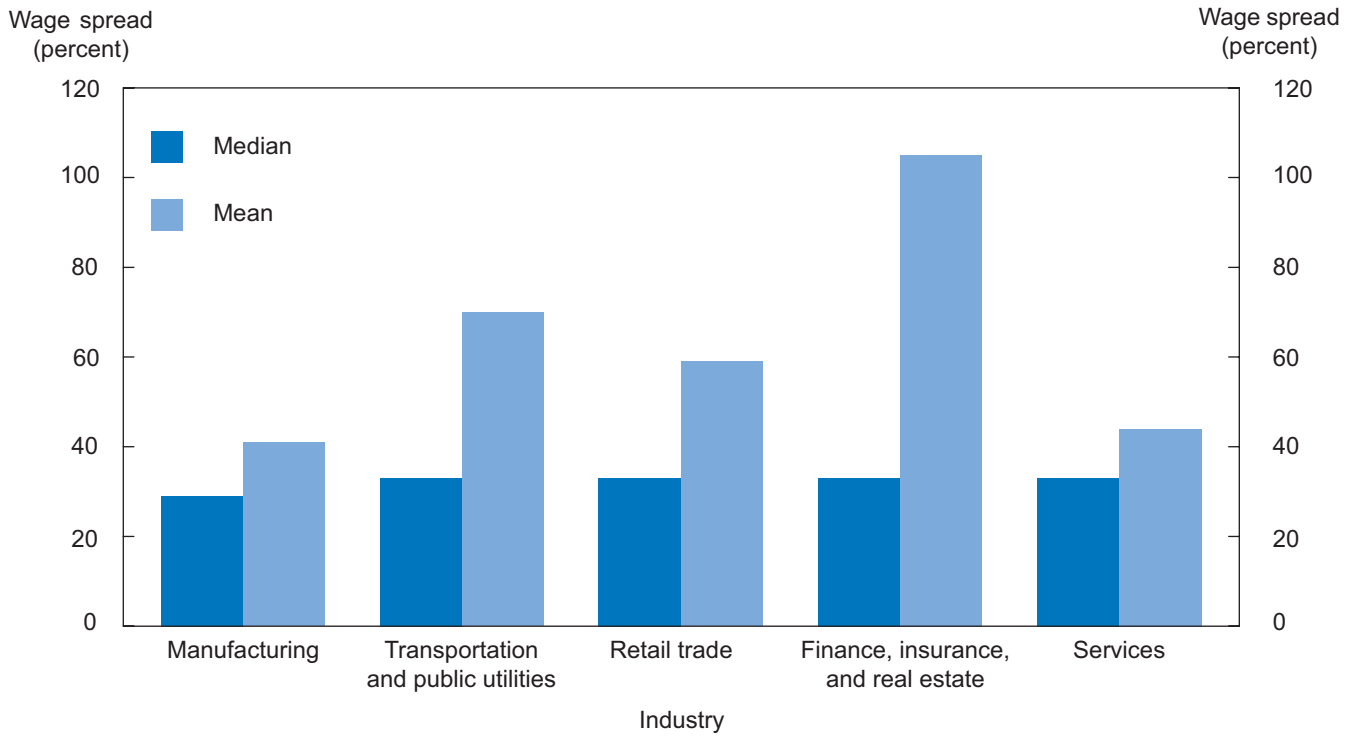


Chart 8. Wage spread by industry, State and local governments, 2004

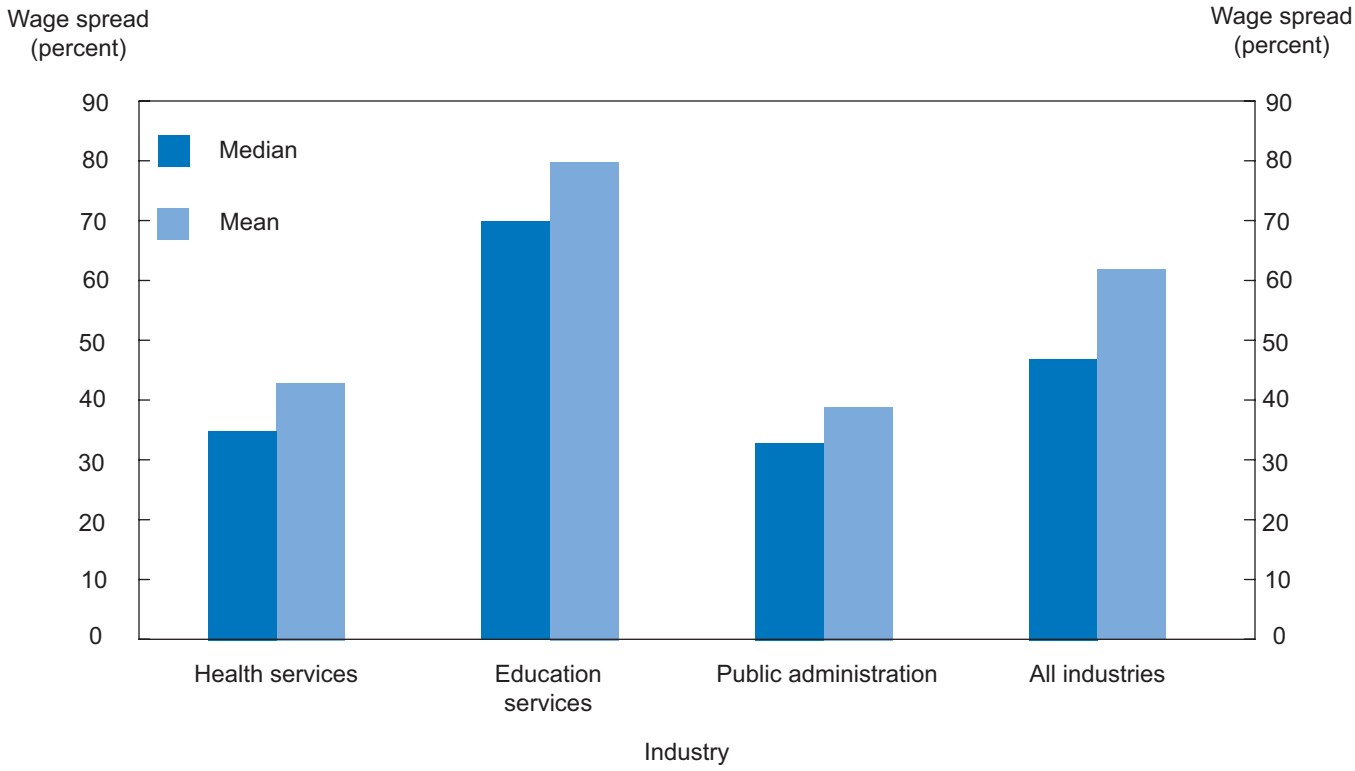


Chart 9. Wage spread by size of establishment, private industry, 2004

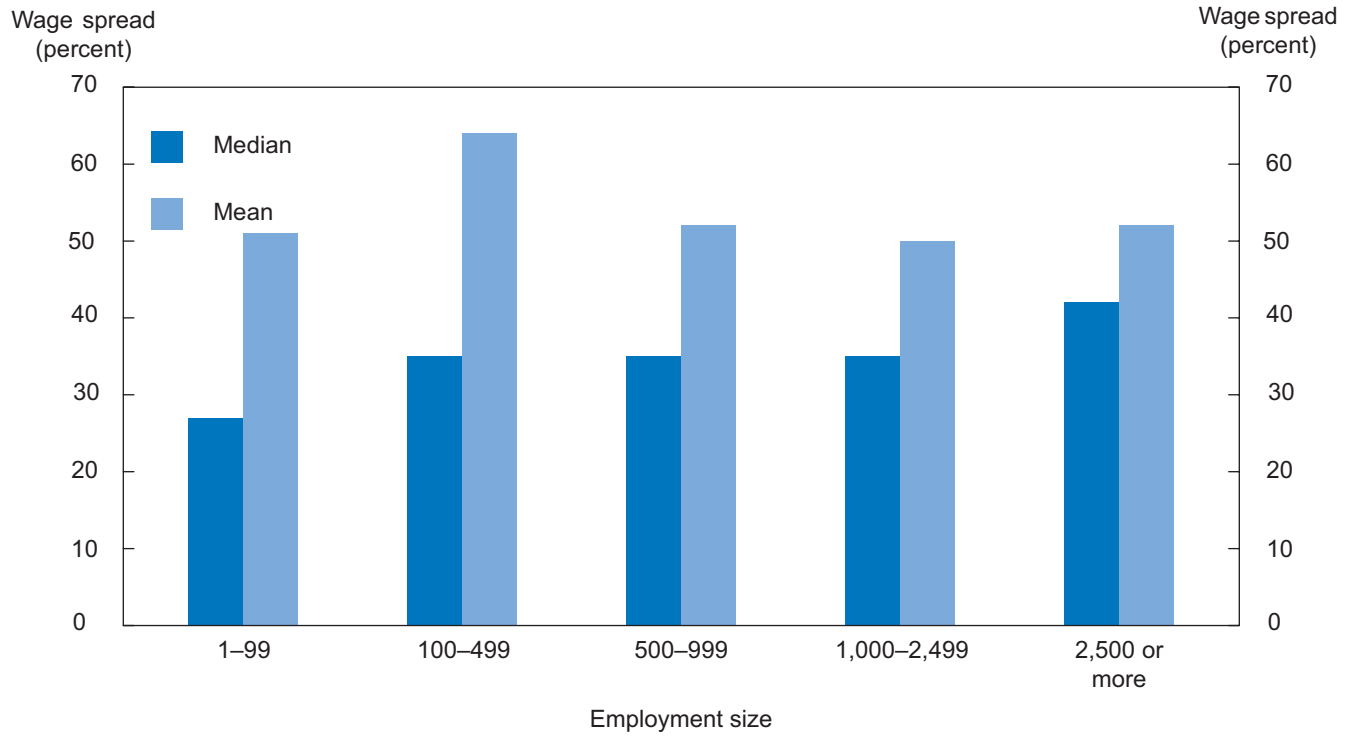


Chart 10. Wage spread by size of establishment, State and local governments, 2004

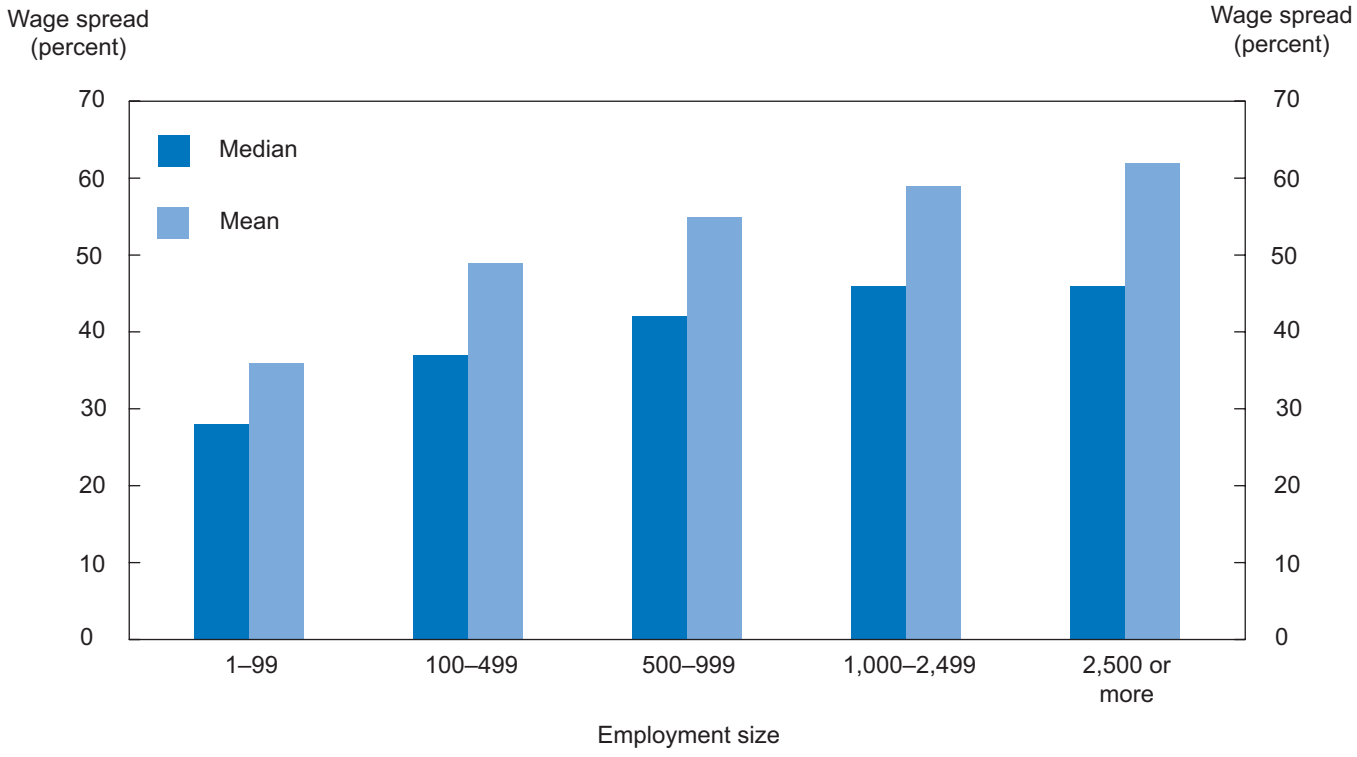


Table 3. Mean and median wage spreads for major occupational groups, by establishment size, private industry, 2004

[In percent]

Major occupational group	Under 100		100–499		500–999		1,000–2,499		2,500 or more	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Professional	40	29	46	31	42	35	43	37	57	45
Managerial	121	30	44	31	40	27	39	27	48	39
Sales	122	29	178	64	126	75	141	48	62	40
Clerical	30	24	41	30	44	33	41	35	49	43
Craft	42	31	46	30	30	21	36	25	31	26
Machine operators	38	31	41	29	34	28	50	35	37	33
Transportation	37	25	90	31	59	40	76	42	52	51
Helpers and laborers	36	29	41	32	47	36	57	41	54	42
Service	32	24	46	36	68	46	54	33	64	48

and local government workers composed four-tenths of union members outside the Federal Government. The difference between private industry and State and local government was marked: about 7.9 percent of private-industry workers were union members, compared with 36.4 percent of State and local government workers.[35]

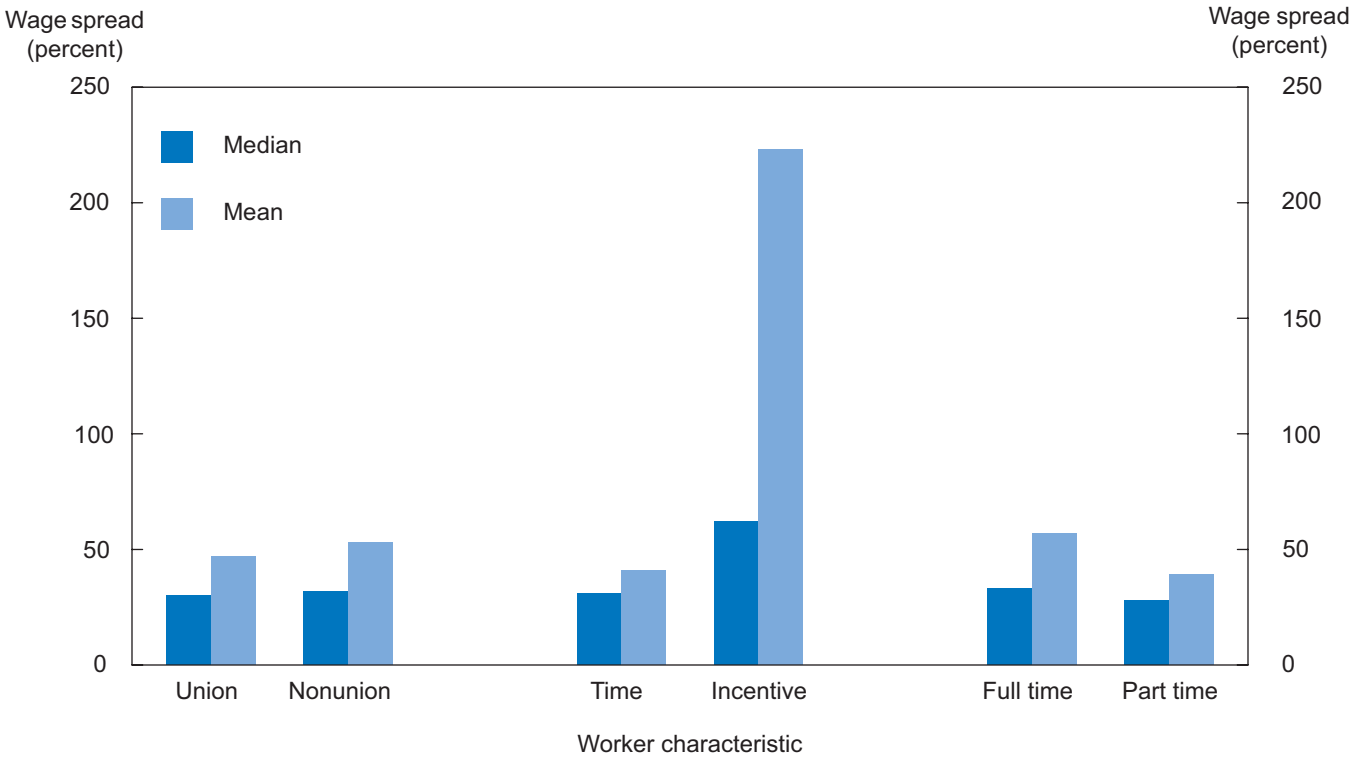
In Buckley's 1985 study, results were mixed: spreads were narrower for union workers in blue-collar jobs, but often broader in white-collar jobs. The study presented herein shows, as other studies of overall dispersion have demonstrated, that private-industry workers in unionized occupations had a slightly lower average wage dispersion than their nonunion counterparts.[36] The mean wage spread for union workers was 47 percent, compared with 53 percent for workers in nonunion jobs. The median spreads were 30 percent and 32 percent, respectively. (See chart 11.) Table 4 (page 34) shows comparative spreads for blue-collar workers, among whom the concentration of union workers was highest.

A different pattern emerged for the more highly unionized State and local government sector. The mean wage spread for unionized government workers (64 percent) was slightly higher than that for nonunion jobs (60 percent). (The median spreads were 48 percent and 45 percent, respectively.) This apparently counterintuitive result stems largely from the influence of the relatively populous professional workers major occupational group, among whom unionized employees had a mean spread of 93 percent, compared with 81 percent for nonunion employees. Public school teachers account for a sizable portion of professional workers and have high rates of unionization together with widely varying pay rates. Table 5 (page 35) shows dispersion measures for six public teaching occupations. Except for substitute teachers, each occupation has a high wage spread and a much lower than average across-establishment variability. Wage spreads were higher for union workers in 5 of the 6 teaching jobs. The exception was prekindergarten and kindergarten teachers, an occupation for which the spreads were similar.

Full-time status. Full-time workers had higher wage dispersion rates than their part-time counterparts in both sectors. (See charts 11 and 12 (the latter, page 36).) In private industry, there are substantial numbers of both full- and part-time salesworkers, but full-time salesworkers had a mean spread of 170 percent, compared with 43 percent for part-timers. (The respective median figures were 48 percent and 33 percent.) In the other major occupational groups with a significant portion of part-time workers, the patterns were mixed. For example, spreads were moderately higher for full-time service workers, but not for part-time laborers.

Differences were somewhat larger for governments. Overall, the mean wage spread was 64 percent for full-time workers (the median was 49 percent), compared with a mean of 45 percent (with a median of 29 percent) for part-time workers. Spreads were higher for full-time workers in each major occupational group with substantial numbers of part-time employees, except that part-time transportation workers had a higher wage spread (mean, 55 percent; median, 44 percent) than full-time workers (mean, 39 percent; median, 33 percent). Busdrivers com-

Chart 11. Wage spread by worker characteristics, private industry, 2004



pose a large portion of transportation workers in governments, and the occupation is evenly split between full and part-time employees, both of whom have a relatively high mean wage spread (51 percent and 55 percent, respectively) within the major occupational group.

Incentive pay. As expected, the most dramatic differences in wage dispersion occurred between time-based and incentive-based workers. In private industry, workers in incentive-paid jobs had a mean wage spread of 223 percent, compared with 41 percent for workers in jobs paid strictly on the basis of the amount of time worked. (See chart 11.) The median spread for incentive workers, 62 percent, was double the 31 percent for time-based workers. (There were too few incentive-paid workers in governments to make meaningful comparisons.)

The salesworkers group had the greatest proportion of incentive workers, mainly sales workers working for commission. Among salesworkers, those paid on an incentive basis had mean wage spreads of 404 percent (the median was 110 percent), compared with 45 percent (the median was 33 percent) for time-based workers.

Transportation workers had the second-highest incidence of incentive workers. In this group, incentive-paid workers had a mean spread of 136 percent, compared with 37 percent for time-rated workers; the respective median wage spreads were 49 percent and 25 percent. Two occupations that accounted for a large proportion of transportation workers had significant portions of incentive workers along with wide differences in wage spreads. Truckdrivers paid incentive rates had a mean wage spread of 148 percent, while the mean for time-rated drivers was 35 percent. (The respective medians were 46 percent and 25 percent.) The other occupation was driver-salesworkers, who deliver, sell, and display merchandise over established routes. Many of these employees work for commissions, and those paid commissions or other incentives had a mean wage spread of 104 percent, compared with 28 percent for time-rated drivers. The respective median spreads were 83 percent and 23 percent.[37]

Profit and nonprofit establishments in private industry. Although the median wage spreads were identical (32 percent), mean spreads were higher in for-profit establishments (55 percent) than in nonprofit establishments (39 percent). (See table 6, page 37.) Of the nine major occupational groups,

Table 4. Mean and median wage spreads for blue-collar workers in private industry, 2004

[In percent]

Major occupational group	Mean wage spread, all workers	Median wage spread, all workers	Mean wage spread, union workers	Median wage spread, union workers	Mean wage spread, nonunion workers	Median wage spread, nonunion workers
Craft	40	29	31	16	42	31
Machine operators	39	30	36	25	40	31
Transportation	50	28	60	34	48	26
Laborers	40	31	43	27	40	32

professional workers composed the largest proportion of employees in nonprofit establishments. Among professional workers, wage spreads were similar in both types of establishment. In the other major occupational groups with substantial numbers of nonprofit employees, mean wage spreads tended to be higher in for-profit establishments, while median spreads were similar for the two types of establishment.

Within the professional group, many workers are employed in nonprofit education and health services establishments. For example, a large portion of registered nurses are employed in nonprofit workplaces. Nurses in nonprofit establishments have a mean wage spread of 45 percent, compared with 37 percent for nurses in for-profit facilities. (The respective medians are 43 percent and 31 percent.) Also, private secondary school teachers and many college teaching occupations are found mainly in nonprofit institutions and have higher-than-average wage spreads.[38]

Geographic location. Private industry wages were more disperse in metropolitan areas, with a mean wage spread of 55 percent, than in nonmetropolitan areas, with a 35-percent spread. (The medians were 33 percent and 27 percent, respectively.) Differences among most of the nine Census divisions were not marked, with the mean spread ranging only from 46 percent to 55 percent in seven of the divisions. The low was 41 percent, in the East North Central States, and the high was 64 percent, in the Pacific States. As expected, the median spreads were even narrower, ranging only from 29 percent in the New England States to 36 percent in the Middle Atlantic States.[39]

As mentioned earlier, these broad patterns conceal many differences among occupations.

A look at individual occupations

Jobs with the highest wage spreads. Table 7 (page 38) lists the 10 occupations with the highest median wage spreads. As noted earlier, sample errors are not calculated for these wage spread data. The table is limited to occupations with 50,000 or more workers, because the data for lightly encumbered occupations are more likely to be affected by relatively large sampling errors. The median was chosen to be the main statistic because it is less affected by extreme values than the average or mean.

The top two jobs on the list are sales occupations. Nearly all *salesworkers of motor vehicles and boats* work for commission, and so do slightly more than half of the workers in *advertising and related sales occupations*. Advertising workers paid on an incentive basis had a median spread of 775 percent and a mean spread of 615 percent. (Were occupations listed in order of mean wage spread regardless of employment, half of the top 10 occupations, including the top 4, would have been sales occupations.)

Two of the jobs on the list, *airplane pilots and navigators* and *public transportation attendants*, were transportation occupations. Both of these jobs are dominated by airline industry employees, whose pay can vary widely according to the type of aircraft they fly and whether they are commercial or private pilots. Two other private-sector occupations appeared on the list: *hairdressers and cosmetologists* and *material recording, scheduling, and distributing clerks, not elsewhere classified*. About two-thirds of hairdressers were paid incentive rates (commissions), and for these workers, the wage spreads were 105 percent (median) and 143 percent (mean).[40]

There is no simple explanation for the high wage spreads prevailing among material recording, scheduling,

Table 5. Wage dispersion measures for selected public school teaching occupations, 2004

[In percent]

Occupation	Mean wage spread, all workers	Median wage spread, all workers	Mean wage spread, union workers	Median wage spread, union workers	Mean wage spread, nonunion workers	Median wage spread, nonunion workers	Coefficient of variation, all workers	Proportion of across-establishment variation, all workers	Index of wage dispersion, all workers
Elementary school teachers	106	98	113	102	94	88	32	56	45
Secondary school teachers	104	100	111	106	95	89	31	53	43
Prekindergarten and kindergarten teachers	76	73	75	77	77	73	33	64	42
Special education teachers	93	88	99	96	75	65	33	59	48
Teachers, except college and university, not elsewhere classified	127	112	132	113	112	77	37	63	51
Substitute teachers	66	33	108	109	52	17	41	83	61

and distributing clerks, not elsewhere classified. The answer may lie in the nature of the job. This occupation is one of several in the pre-2006 occupational classification system that was used to categorize workers in various jobs that did not fit into other, more specific occupations. A search of establishment job titles revealed that the types of jobs included in the occupation were disparate. In addition, about half of the employees were in jobs for which it was not possible to assign a specific work level; among these jobs, the median wage spread was 109 percent. Survey data do not provide a clear answer, but it is possible that the high wage spreads result from workers performing a wide range of duties within those jobs and being paid different rates corresponding to their duties. (A look at the other establishment and employee characteristics did not reveal any clear patterns.)

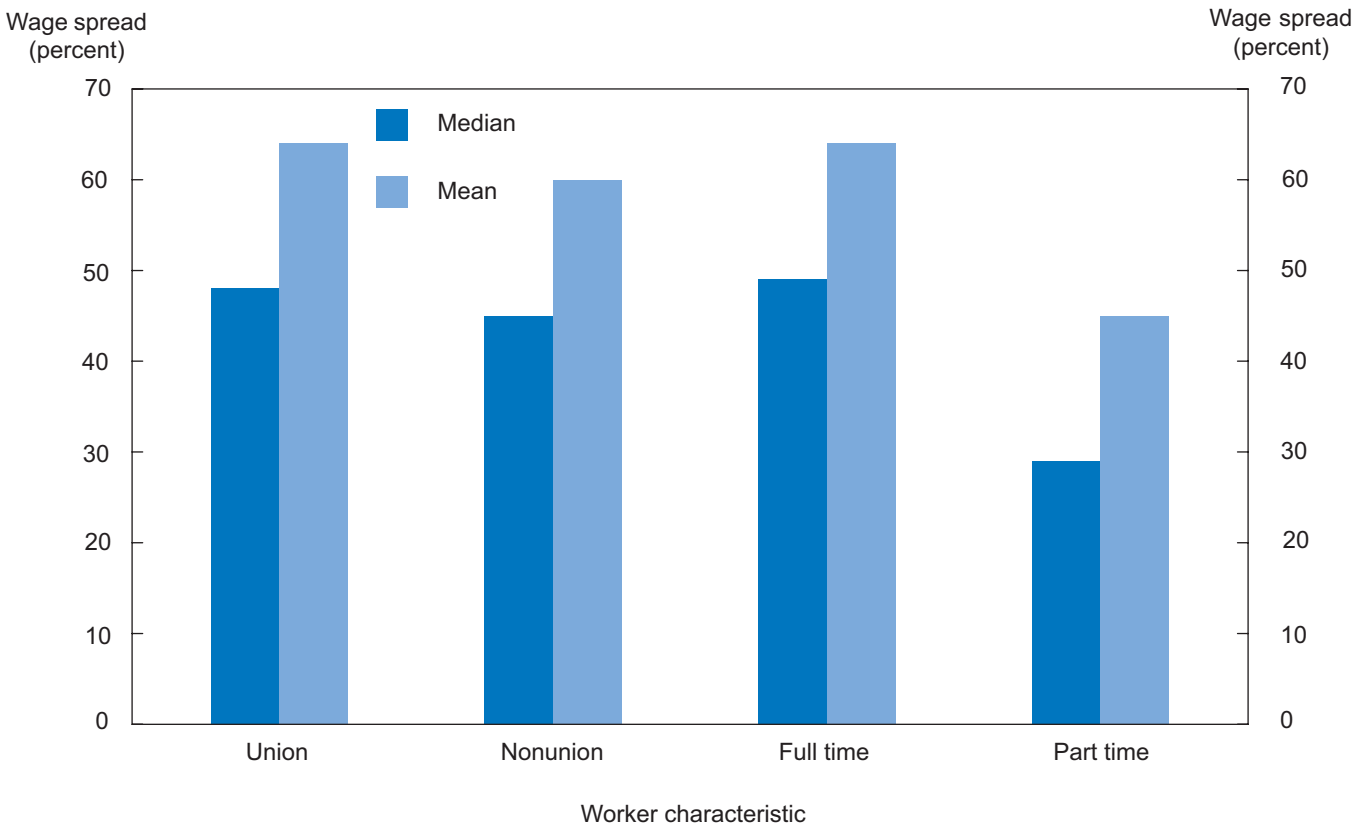
Four State and local government teaching occupations complete the list. This is no surprise, given the typically high wage spreads found among public teaching occupations.

Mean wage spreads for these 10 occupations ranged from 83 percent for material recording, scheduling, and distributing clerks, not elsewhere classified, to 481 percent for salesworkers of motor vehicles and boats. Overall wage variation was relatively high for most of these jobs, as measured by the coefficient of variation. However, as might be expected in cases where wages varied so greatly among workers within jobs in the same establishment, the share of total wage variation attributable to differences across establishments was generally much smaller than that for private industry or State and local governments overall.

Jobs with the lowest wage spreads. A very different set of jobs appears on the list of jobs with the lowest median wage spreads. Table 8 (page 39), which, like table 7, is limited to occupations with 50,000 or more workers, shows these jobs. Eleven of the 12 occupations listed are in private industry.[41] These jobs are so varied that it is difficult to summarize them. They appear to share only one of the characteristics explored in this article: very few workers in them receive incentive pay.

The 11 private-industry occupations include three supervisory jobs, two skilled-craft jobs (tool and die makers; miscellaneous plant and system operators), two jobs from the laundry and drycleaning industry (pressing machine operators and laundering and drycleaning machine operators),

Chart 12. Wage spread by worker characteristics, State and local governments, 2004



two health services jobs (dental hygienists and pharmacists), one transportation job (motor transportation occupations, not elsewhere classified), and a personal service job (welfare service aides). The sole government job on the list (supervisors of police and detectives) is a supervisory job.

The two skilled-craft jobs had the largest proportion of union workers of any private-sector nonsupervisory jobs listed in the table. Unionized *tool and die makers* had a median wage spread of 8 percent, compared with 17 percent for their nonunion counterparts; the comparable figures for *miscellaneous plant and systems operators* were 4 percent and 32 percent, respectively.[42]

Although wage spreads were lower for unionized workers in the two laundry industry jobs, the main factor behind the low wage spreads appeared to be that most workers were employed at lower work levels with relatively small wage spreads. A large portion of *laundering and drycleaning machine workers* was employed in level 1 jobs, for which the median wage spread was 12 percent. Similarly, most *pressing machine operators* were in level 1 and level 2 jobs, for which the median spreads were 14 percent and 7 percent, respectively.

A similar dynamic appeared to affect *motor transportation occupations, not elsewhere classified:* three-quarters of the employees were classified in level 1 and level 2 jobs, for which the median wage spreads were 13 percent and 15 percent, respectively. In addition, this occupation had the highest proportion of part-time workers of any occupation listed in table 8. Median wage spreads were 14 percent for part-timers and 33 percent for full-time workers.

Welfare service aides had the second-highest proportion of part-time workers listed in the table. The median wage spread for part-timers in this occupation was 13 percent, compared with 18 percent for full-time workers. The occupation is a relatively low-paid one. In 2004, the average hourly wage was $9.24 per hour and the median was $8.88. The median wage spread for workers paid less than $7.00 per hour was 13 percent; for those paid $7 to under $10 per hour, it was 14 percent.

It is more difficult to discern patterns underlying low

Table 6. Mean and median wage spreads for selected major occupational groups, profit and nonprofit private establishments, 2004

[In percent]

Major occupational group	Mean wage spread, all establishments	Median wage spread, all establishments	Mean wage spread, for-profit establishments	Median wage spread, for-profit establishments	Mean wage spread, nonprofit establishments	Median wage spread, nonprofit establishments
All groups	53	32	55	32	39	32
Professional	48	35	50	34	45	37
Managerial	60	32	63	32	38	28
Clerical	38	29	39	30	33	29
Service	43	30	45	30	34	29

wage spreads for the two health care jobs. *Dental hygienists* were evenly split between full- and part-time workers, but median wage spreads were small for both types of work schedule, as well as for work levels and pay rates. However, most workers were employed in establishments with fewer than 100 workers, for which the median wage spread was 11 percent. *Pharmacists* were employed in large numbers in retail establishments (where the median spread was 7 percent) and services establishments (with a 12-percent median spread). Median spreads were similar among all sizes of establishments, in both profit (an 8-percent median spread) and nonprofit (13 percent) establishments, and by the work level of the occupation. Most pharmacists earned $32 an hour or more; the median wage spread for workers at this earning level was 10 percent.

Patterns are even more difficult to find in the three private-sector supervisory occupations shown in the table. *Supervisors of electricians and power transmission installers* had a significant portion of union workers, but the median wage spread was higher for union workers (60 percent) than for nonunion workers (14 percent). By industry, the median spread was lower in transportation and public utilities (7 percent) than in the services (14 percent) or goods-producing industries (20 percent).[43] Median spreads were noticeably lower in the smallest establishments (14 percent) than in larger establishments. The occupation *supervisors of cleaners and building services* is mainly a services industries job, for which the median wage spread was 5 percent. Median spreads also showed no obvious pattern when sizes of establishments, profit or nonprofit status, work levels, or pay rates were examined. Nearly all *supervisors of personal service occupation workers* were employed in services industries. Here, too, median spreads showed no obvious pattern when sizes of establishments, work levels, or pay levels were examined. The large majority of supervisors was employed in for-profit establishments, where the median wage spread was 13 percent. The minority employed in nonprofit establishments had a median wage spread of 24 percent.

The sole public-sector job on the list in table 8 is *supervisors of police and detectives*. The majority of employees in this occupation were in union jobs, where the median wage spread was 13 percent, compared with 24 percent for nonunion workers.

Fifty-six selected occupations. It would be impractical in this article to present details for all 400 occupations, and multiple work levels within each occupation, included in the pre-2006 NCS classification system. To help focus on a smaller number, table 9 (pages 40–43) presents summary statistics for 56 selected occupations, chosen in two ways: (1) the three most populous private-sector occupations in each major occupational group were chosen, and (2) three other occupations in each major occupational group were chosen randomly.[44] For this sample, a list of occupations, with corresponding employment counts, from the 1990 Census of Population was used. (The 1990 census system was the foundation for the occupational classifications used in the 2004 NCS.) When data were also published by NCS for State and local governments, those data were included in the table. The goal was to show the most common occupations in the United States, plus a few of the many diverse, but less common, occupations in the U.S. economy.

It is difficult to draw a common theme by looking at individual occupations, because the patterns shown in one occupation differ from those appearing in another. Some occupations follow the broad trends shown in overall private-industry or government data, while oth-

Table 7. The 10 occupations[1] with the highest wage spreads, 2004

[In percent]

Occupation	Sector	Wage spread						Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
		Mean	Percentile							
			10th	25th	Median	75th	90th			
Salesworkers, motor vehicles and boats	Private	481	99	183	275	488	977	75	40	100
Advertising and related sales occupations	Private	443	13	41	197	955	955	87	33	87
Public transportation attendants	Private	209	72	91	124	208	536	44	32	42
Teachers, except college and university, not elsewhere classified	Public	127	31	70	112	167	238	37	63	51
Postsecondary teachers, subject not specified	Public	160	25	53	108	218	398	41	56	51
Secondary school teachers	Public	104	58	76	100	126	160	31	53	43
Elementary school teachers	Public	106	55	78	98	121	156	32	56	45
Airplane pilots and navigators	Private	190	7	45	97	449	530	56	82	83
Hairdressers and cosmetologists	Private	124	8	26	90	211	295	56	50	60
Material recording, scheduling, and distribution clerks, not elsewhere classified	Private	83	17	45	90	113	139	39	76	48

[1] Occupations with 50,000 or more incumbents.

ers run counter to these broader patterns. For example, as noted earlier, the wage spread for all workers was slightly higher for governments than for private industry. The NCS published data on both private industry and governments for 45 of the 56 occupations selected. Of these 45 occupations, 36 had substantial differences (20 percent or more) in the median wage spreads between sectors. Judged by this standard, 18 occupations had higher private-industry wage spreads, while 18 had higher spreads in governments.[45] It is clear, however, that the within-job wage dispersion varies considerably by occupation, even within families of similar occupations. This finding is not surprising, because experience shows that wage rates vary considerably among occupations when they are viewed in terms of the characteristics examined in this article.[46]

Among the 56 occupations selected, private-industry median wage spreads ranged from 12 percent for dental hygienists and hand cutting and trimming occupations to 90 percent for hairdressers and cosmetologists. These occupations generally show the same patterns of wage dispersion that overall trends would lead one to expect. Private-industry sales occupations tend to have the highest wage spreads, followed by managerial and professional jobs. Within the major occupational group machine op-

Table 8. The 12 occupations[1] with the lowest median wage spreads, 2004

[In percent]

Occupation	Sector	Wage spread						Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
		Mean	Percentile							
			10th	25th	Median	75th	90th			
Miscellaneous plant and systems operators, not elsewhere classified	Private	15	4	4	5	23	45	26	97	36
Supervisors, cleaning and building service workers	Private	19	5	5	5	21	48	34	91	41
Pharmacists	Private	16	2	5	11	21	35	18	89	11
Dental hygienists	Private	12	3	7	12	19	19	22	99	30
Supervisors, personal service occupation workers	Private	24	6	13	13	39	44	31	88	42
Tool and die makers	Private	17	3	8	13	24	32	22	97	36
Supervisors, police and detectives	Public	17	4	7	13	24	37	29	97	42
Motor transportation occupations, not elsewhere classified	Private	22	4	8	14	29	57	46	91	43
Welfare service aides	Private	25	3	8	14	33	71	29	86	43
Laundering and drycleaning machine operators	Private	23	5	5	14	31	46	24	87	24
Supervisors, electricians and power transmission installers	Private	21	3	11	14	22	60	25	97	44
Pressing machine operators	Private	24	7	7	14	25	62	22	84	22

[1] Occupations with 50,000 or more incumbents.

erators, for example, textile sewing machine operators had the highest incidence of incentive-paid employees and the highest wage spreads. Similarly, among skilled craftworkers, automobile mechanics had the greatest proportion of workers under incentive rates and the highest median wage spread.

Changes in wage dispersion over time

The data discussed so far have shown that wages vary considerably among workers in the same job within both private industry and State and local government establishments. But is this within-job variation increasing over time? The conventional wisdom suggests that it is. Factors

Table 9. Wage dispersion measures for 56 selected occupations, 2004

[In percent]

Occupation	Sector	Reason chosen	Mean wage spread	Median wage spread	Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
Professional							
Registered nurses	Private	Populous	43	40	29	84	34
Registered nurses	Public	Populous	43	42	26	80	36
Law teachers	Private	Random	56	41	40	77	60
Law teachers	Public	Random	39	16	49	([1])	149
Elementary school teachers	Private	Populous	60	56	34	82	49
Elementary school teachers	Public	Populous	106	98	32	56	45
Lawyers	Private	Populous	76	55	47	81	69
Lawyers	Public	Populous	62	32	38	78	53
Computer programmers	Private	Populous	46	37	43	88	50
Computer programmers	Public	Populous	38	31	30	85	43
Technical							
Clinical laboratory technologists and technicians	Private	Random	33	33	34	83	49
Clinical laboratory technologists and technicians	Public	Random	38	39	32	81	35
Dental hygienists	Private	Random	12	12	22	99	30
Dental hygienists	Public	Random	2	1	9	98	19
Licensed practical nurses	Private	Populous	31	28	20	82	27
Licensed practical nurses	Public	Populous	34	32	24	81	29
Tool programmers, numerical control	Private	Random	26	14	26	85	24
Technical and related occupations, not elsewhere classified	Private	Populous	38	30	49	84	67
Technical and related occupations, not elsewhere classified	Public	Populous	41	37	35	86	58
Executive, Administrative, and Management							
Financial managers	Private	Random	50	32	55	94	66
Financial managers	Public	Random	32	40	36	94	86
Personnel and labor relations managers	Private	Random	35	28	51	96	61
Personnel and labor relations managers	Public	Random	33	41	30	97	49
Managers, food service and lodging establishments	Private	Populous	45	41	53	97	48
Managers, food service and lodging establishments	Public	Populous	26	25	34	60	52
Managers and administrators, not elsewhere classified	Private	Populous	49	36	134	100	64
Managers and administrators, not elsewhere classified	Public	Populous	54	25	40	92	59
Accountants and auditors	Private	Populous	37	25	32	89	40
Accountants and auditors	Public	Populous	33	35	27	87	44
Sales							
Supervisors, sales occupations	Private	Populous	41	32	58	94	64

See footnote at end of table.

Table 9. **Continued—Wage dispersion measures for 56 selected occupations, 2004**

[In percent]

Occupation	Sector	Reason chosen	Mean wage spread	Median wage spread	Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
Supervisors, sales occupations	Public	Populous	9	8	27	98	23
Sales occupations, other business services	Private	Random	132	61	92	65	81
Sales occupations, other business services	Public	Random	39	39	20	([1])	([1])
Salesworkers, other commodities	Private	Populous	77	45	69	62	61
Salesworkers, other commodities	Public	Populous	56	71	40	40	73
Cashiers	Private	Populous	41	33	32	82	38
Cashiers	Public	Populous	37	28	38	87	58
Street and door-to-door salesworkers	Private	Random	36	20	62	84	176
Demonstrators, promoters, and models, sales	Private	Random	37	25	29	37	43
Clerical							
Secretaries	Private	Populous	40	34	31	87	43
Secretaries	Public	Populous	50	43	28	83	40
Bookkeepers, accounting and auditing clerks	Private	Populous	29	24	33	94	38
Bookkeepers, accounting and auditing clerks	Public	Random	36	32	27	84	34
Payroll and timekeeping clerks	Private	Random	28	18	30	95	41
Payroll and timekeeping clerks	Public	Random	21	22	21	93	24
Messengers	Private	Random	25	26	24	90	38
Messengers	Public	Random	35	39	34	77	76
Meter readers	Private	Random	34	28	32	91	61
Meter readers	Public	Random	21	12	36	95	43
General office clerks	Private	Populous	39	30	32	86	44
General office clerks	Public	Populous	45	39	28	81	37
Craft and precision production							
Automobile mechanics	Private	Populous	74	44	34	61	39
Automobile mechanics	Public	Populous	21	21	28	95	59
Aircraft engine mechanics	Private	Random	25	19	25	90	37
Machinery maintenance occupations	Private	Random	34	29	33	94	50
Machinery maintenance occupations	Public	Random	125	40	30	59	38
Telephone line installers and repairers	Private	Random	26	24	20	93	10
Carpenters	Private	Populous	37	34	33	89	48
Carpenters	Public	Populous	18	12	32	97	52
Supervisors, production occupations	Private	Populous	29	23	31	91	45
Supervisors, production occupations	Public	Populous	22	28	39	97	50
Machine operators							
Printing press operators	Private	Random	34	28	28	81	43
Printing press operators	Public	Random	10	11	13	98	4
Textile sewing machine operators	Private	Populous	62	63	32	76	32

See footnote at end of table.

Table 9. Continued—Wage dispersion measures for 56 selected occupations, 2004

[In percent]

Occupation	Sector	Reason chosen	Mean wage spread	Median wage spread	Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
Miscellaneous machine operators, not elsewhere classified	Private	Populous	32	24	34	94	52
Miscellaneous machine operators, not elsewhere classified	Public	Populous	32	33	42	96	77
Assemblers	Private	Populous	47	39	46	94	70
Hand cutting and trimming occupations	Private	Random	35	12	32	84	35
Transportation and material moving							
Truckdrivers	Private	Populous	59	29	36	84	57
Truckdrivers	Public	Populous	27	21	34	95	53
Busdrivers	Private	Populous	29	26	30	92	33
Busdrivers	Public	Populous	53	47	27	76	42
Motor transport occupations, not elsewhere classified	Private	Random	22	14	46	91	43
Motor transport occupations, not elsewhere classified	Public	Random	29	33	29	91	51
Operating engineers	Private	Random	36	18	30	94	33
Operating engineers	Public	Random	22	14	37	95	49
Industrial truck and tractor equipment operators	Private	Populous	33	28	31	93	43
Industrial truck and tractor equipment operators	Public	Populous	46	49	18	45	25
Miscellaneous material moving equipment operators, not elsewhere classified	Private	Random	45	38	36	94	60
Miscellaneous material moving equipment operators, not elsewhere classified	Public	Random	37	43	28	77	53
Laborers and helpers							
Supervisors, handlers, equipment cleaners, and laborers, not elsewhere classified	Private	Random	48	58	37	86	35
Supervisors, handlers, equipment cleaners, and laborers, not elsewhere classified	Public	Random	34	39	30	91	37
Construction laborers	Private	Populous	40	30	42	93	64
Construction laborers	Public	Populous	30	20	32	90	52
Stock handlers and baggers	Private	Populous	37	30	38	89	52
Stock handlers and baggers	Public	Populous	20	14	31	96	34
Garage and service station occupations	Private	Random	27	22	33	80	32
Garage and service station occupations	Public	Random	53	28	16	1	10
Hand packers and packagers	Private	Random	37	29	36	90	45
Laborers, except construction, not elsewhere classified	Private	Populous	47	39	39	87	50

See footnote at end of table.

Table 9. Continued—Wage dispersion measures for 56 selected occupations, 2004

[In percent]

Occupation	Sector	Reason chosen	Mean wage spread	Median wage spread	Coefficient of variation	Percent of across-establishment variation	Index of wage dispersion
Laborers, except construction, not elsewhere classified	Public	Populous	37	29	38	92	62
Service							
Crossing guards	Public	Random	52	28	28	89	37
Guards and police, except public service	Private	Random	91	55	34	68	32
Guards and police, except public service	Public	Random	26	22	34	86	41
Cooks	Private	Populous	32	26	31	82	42
Cooks	Public	Populous	31	24	24	86	35
Nursing aides, orderlies, and attendants	Private	Populous	35	30	26	84	29
Nursing aides, orderlies, and attendants	Public	Populous	38	34	29	80	38
Janitors and cleaners	Private	Populous	50	38	37	90	47
Janitors and cleaners	Public	Populous	46	39	31	85	47
Hairdressers and cosmetologists	Private	Random	124	90	56	50	60

[1] Less than 0.5 percent.

such as the movement toward variable-pay systems, the adoption of broad-banded methods for defining jobs and setting pay scales, and the decline in the proportion of the workforce that is unionized all would tend to increase within-job wage dispersion.

The BLS studies of the 1980s provide a benchmark to assess the 2004 data. However, the comparison is not a simple one, because of differences in the underlying surveys, differences in the way jobs are defined, and the lack of sample error data for the wage spread statistics. Thus, any comparisons can only be approximate.

Buckley's 1985 article affords the best basis for comparison, because the occupations he studied are the easiest to compare with the occupations defined for the 2004 NCS. Buckley analyzed data from the 1983 BLS Area Wage Surveys (AWS's), which were composed of a sample of cities drawn to represent the metropolitan areas of the United States, except for Alaska and Hawaii. In all but the 13 largest metropolitan areas, the AWS program covered private-industry establishments with 50 or more workers in manufacturing; transportation, communications, and public utilities; retail trade; wholesale trade; and selected services industries. In the 13 largest areas, only establishments with 100 or more employees were surveyed in manufacturing; transportation, communications, and public utilities; and retail trade.

In contrast, the NCS data used in this article include State and local government establishments with 50 or more employees. The NCS also includes private establishments in all industries with 1 or more employees, except for agriculture and private households. In addition, the NCS includes Alaska and Hawaii. To facilitate comparisons, the NCS data used in the comparisons that follow have been limited to private industry; however, note that the NCS data do encompass a broader array of industries than do the AWS's, as well as smaller establishments and outlets in nonmetropolitan areas. It was not feasible to restrict the NCS data to the same subset of the economy that Buckley examined, but cases in which survey coverage differences may have substantially affected the comparisons were excluded from the analysis as much as possible.

Table 10 (page 44) looks broadly at families of occupations in aligning the 1983 and 2004 results. Because the AWS program surveyed only selected cross-industry jobs, the AWS entries show the highest and lowest spreads re-

Table 10. Wage spread measures, families of occupations, 1983 and 2004

[In percent]

Family of occupations	1983 wage spread, BLS Area Wage Survey (AWS's)				2004 wage spread, National Compensation Survey			
	Mean	25th percentile	Median	75th percentile	Mean	25th percentile	Median	75th percentile
Clerical (20 occupations/levels in AWS's)	19–35	9–18	16–34	27–51	38	15	29	51
Professional and technical (20 occupations/levels in AWS's)	17–42	7–20	16–35	23–60	48	18	35	56
Skilled craft (12 occupations in AWS's)	7–21	2–5	3–14	7–34	40	13	29	51
Transportation equipment operators (6 occupations in AWS's)	13–26	1–10	5–22	16–41	50	13	28	49
Laborers (7 occupations in AWS's)	19–30	5–7	14–22	26–50	40	17	31	56
Service (3 occupations/levels in AWS's)	38–45	14–19	33–40	58–65	43	15	30	52

ported by Buckley for individual occupations. For example, 20 occupations or occupational levels compose the AWS results for clerical workers; in contrast, the NCS results represent workers at all work levels in all clerical jobs. Because of the different survey bases, comparisons of the 1983 and 2004 data must be viewed only as rough indicators of changes in wage dispersion. For instance, the AWS job list included only three transportation occupations: truck-drivers (classified by four different types of truck), forklift operators, and operators of other types of industrial trucks. In contrast, the NCS includes all types of transportation jobs—from jobs involving all kinds of motor vehicles, to railroad transportation, water transportation, and jobs involving all types of material-moving equipment. Thus, the NCS data are formed from a broad array of jobs, while the AWS data are drawn from a few select jobs.

The comparisons made in table 10, though imprecise and fraught with limitations, reveal that wage spreads appear to have increased somewhat for white- and blue-collar workers, but remained about the same for service workers. Differences are greatest for skilled-craft and transportation jobs, and smallest for clerical jobs. Service occupation wage spreads were about the same in 1983 as in 2004, but the AWS data included only two jobs—guards (two levels) and janitors—that had the most diverse pay patterns of any of the jobs in the Buckley study, except for electronics technicians.

To refine the comparisons further, individual occupations and work levels within occupations were examined next. The occupational differences between the two studies are as daunting as the differences in survey coverage. As is noted shortly, nearly all employees are covered by the list of occupations used in the NCS, and the NCS job descriptions were taken from the 1990 census' occupational system, whereas the AWS's included only a selection of cross-industry jobs and used job definitions developed by the BLS for the 1983 surveys.

The comparisons of individual occupations were restricted to those occupations which appear to be reasonably similar between the two surveys.[47] In some cases, an overall occupation was deemed comparable; in other cases, only a work level or work levels within an occupation were compared. In general, the AWS job descriptions tend to focus on narrower jobs than the NCS job descriptions do; thus, an NCS job is likely to include a wider set of employees than its AWS counterpart. Consequently, NCS wages may tend to vary more because of the broader spectrum of workers included, and this greater variation may bias NCS jobs toward showing a greater degree of dispersion than AWS jobs exhibit.[48]

The 68 jobs that Buckley examined were primarily cross-industry, "benchmark" jobs defined by customized job descriptions prepared by the BLS.[49] The AWS jobs included only full-time workers, so comparisons,

when possible, are limited to full-time workers. In a few cases, another subset of NCS data was used when a different kind of adjustment seemed appropriate. For example, the NCS data on order clerks (a clerical job) were limited to full-time, time-based workers, because the AWS job definition excluded commission-paid workers.

Over the last 20 years, even occupations that appear comparable from the survey job descriptions may not in fact be comparable because of changes in the content of the job. For example, in 1983, a computer programmer may have been writing programs for a mainframe computer or a minicomputer, using a language such as Fortran or COBOL and the "top-down" methodology prevalent at the time. By 2004, the same programmer may have been writing programs to run on personal computers and servers linked together in a network (on the Internet or on an intranet), using a radically different language, such as Java or HTML, and "object-oriented" methodology. No attempt was made to screen out or adjust for these kinds of changes in job content. Instead, the analysis presented here compares 45 of the 68 occupations and levels that Buckley analyzed in 1983 with NCS occupations and levels in 2004: 18 clerical occupations; 15 professional and technical occupations; 6 skilled craft and maintenance occupations; 4 transportation and material movement, and laborers and material handlers, occupations; and 2 service occupations.[50] Summary results are displayed in table 11.[51]

With the differences in survey coverage, occupational definition, and occupational content, the information contained in table 11 should be interpreted with caution and viewed only as a rough barometer of changes in wage spreads. Overall, about 3 out of 4 occupations or work levels that were compared showed a higher median wage spread in 2004 than in 1983. In 24 of the 45 comparisons, the 2004 median spread was at least 20 percent higher than the 1983 median. The results were nearly identical when the mean wage spreads were compared.

Results were mixed for clerical jobs. Nine jobs had a higher median wage spread in 2004, but eight had a higher spread in 1983. For the other types of jobs, the comparisons showed generally higher median and mean wage spreads in 2004.

The many limitations inherent in comparing two such disparate data sets, as well as the small fraction of the workforce included in the 45 occupations and work levels examined, preclude drawing any definite conclusions about private-industry workers overall. For the cross-industry occupations compared, however, there does appear to be some evidence in support of those who have argued that developments in the economy, in compensation policies, and in the administration of compensation have tended to increase pay differences among workers in the same job within the same establishment over the last 20 years. □

Table 11. Mean and median wage spread differences, 1983 and 2004

Occupational group	Higher in 1983		Higher in 2004		At least 20 percent higher in 1983		At least 20 percent higher in 2004	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
Clerical[1]	8	7	9	10	5	2	4	5
Professional and technical[2]	3	2	11	13	3	2	9	10
Skilled maintenance	0	0	6	6	0	0	6	5
Transportation and material movement, and laborers and material handlers	0	0	4	4	0	0	4	4
Service	0	0	2	2	0	0	1	1
All occupations[3]	11	9	32	35	8	4	24	25

[1] One clerical occupation had the same mean wage spread in both years, and one had the same median spread.
[2] One technical occupation had the same median wage spread in both years.
[3] See notes 1 and 2.

Notes

ACKNOWLEDGMENT: The authors gratefully acknowledge the assistance given by Carl Barsky in providing the tabulations and developing the concepts used in this article and by James Smith in explaining data patterns.

[1] For a summary of these factors, see Richard I. Henderson, *Compensation Management in a Knowledge-Based World*, 7th ed. (Upper Saddle River, NJ, Prentice Hall, 1997), pp. 28-35.

[2] *National Compensation Survey: Occupational Wages in the United States, July 2004, Supplementary Tables* (Bureau of Labor Statistics, August 2005), p. 3; on the Internet at **www.bls.gov/ncs/ocs/sp/ncbl0728.pdf** (visited Sept. 26, 2006). For a review of pay diversity among occupations, see John E. Buckley, "Rankings of Full-Time Occupations, by Annual Earnings, July 2004," *Compensation and Working Conditions Online* (Bureau of Labor Statistics, Nov. 30, 2005), on the Internet at **www.bls.gov/opub/cwc/cm20051121ar01p1.htm** (visited Oct. 5, 2006).

[3] For information on variable pay, see H. N. Altmansberger, "Variable Pay: An Overview," in Lance A. Berger and Dorothy R. Berger, eds., *The Compensation Handbook*, 4th ed. (New York, McGraw-Hill, 2000), pp. 199–207; and Jeffrey L. Schildkraut, "NCS Reviews the Effectiveness of Variable Pay Collection," *Compensation and Working Conditions Online* (Bureau of Labor Statistics, Apr. 16, 2003), on the Internet at **www.bls.gov/opub/cwc/cm20030324ar01p1.htm** (visited Sept. 26, 2006).

[4] For more information on broadbanding, see Howard Risher and Robert J. Butler, "Salary Banding: An Alternative Salary-Management Concept," *ACA Journal*, winter 1993/4, pp. 48–57. For a discussion of the impact of new methods of defining jobs on compensation policies, see Charles Fay, Howard Risher, and Douglas Mahony, "Survey Results of the Impact of New Job Design on Compensation," *ACA Journal*, winter 1997, pp. 29–44.

[5] John E. Buckley, "Wage differences among workers in the same job and establishment," *Monthly Labor Review*, March 1985, pp. 11–16; on the Internet at **www.bls.gov/opub/mlr/1985/03/art2full.pdf** (visited Sept. 26, 2006).

[6] Carl B. Barsky and Martin E. Personick, "Measuring wage dispersion: pay ranges reflect industry traits," *Monthly Labor Review*, April 1981, pp. 35–41; on the Internet at **www.bls.gov/opub/mlr/1981/04/art5full.pdf** (visited Sept. 26, 2006).

[7] Range-of-rate systems are formal plans that specify the minimum and maximum pay rates for a particular job. Personick's study included most private industries, but had limited coverage in services, and also generally included establishments with at least 100 or 250 employees, depending upon the industry. About 80 percent of establishments in his study had such formal systems. (See Martin E. Personick, "White-collar pay determination under range-of-rate systems," *Monthly Labor Review*, December 1984, pp. 25–30; on the Internet at **www.bls.gov/opub/mlr/1984/12/art4full.pdf** (visited Sept. 26, 2006).

[8] H. M. Douty, "Sources of Occupational Wage and Salary Rate Dispersion within Labor Markets," *Industrial and Labor Relations Review,* October 1961, pp. 67–74.

[9] H. M. Douty, "Some Aspects of Wage Statistics and Wage Theory," in *Proceedings of the Eleventh Annual Meeting: Industrial Relations Research Association* (Madison, WI, Industrial Relations Research Association, 1958).

[10] Erica L. Groshen, "Sources of Intra-Industry Wage Dispersion: How Much Do Employers Matter?" *Quarterly Journal of Economics,* August 1991, pp. 869–84.

[11] Julia I. Lane, Laurie A. Salmon, and James R. Spletzer, "Establishment wage differentials," *Monthly Labor Review,* April 2007, pp. 3–17; on the Internet at **www.bls.gov/opub/mlr/2007/04/art1full.pdf** (visited Aug. 17, 2007).

[12] Matt Bloom, "The Performance Effects of Pay Dispersion on Individuals and Organizations," *Academy of Management Journal*, February 1999, pp. 25–40; and Jeffrey Pfeffer and Nancy Langton, "The Effect of Wage Dispersion on Satisfaction, Productivity, and Working Collaboratively: Evidence from College and University Faculty," *Administrative Science Quarterly*, September 1993, pp. 382–407.

[13] Thus, the term "establishment" is not synonymous with "firm" or "government."

[14] For information about the sample used in the 2004 survey, see Kenneth J. Hoffmann, "New Areas Selected for BLS National Compensation Survey Program," *Compensation and Working Conditions,* spring 1997, pp. 27–31; on the Internet at **www.bls.gov/opub/cwc/archive/spring1997art4.pdf** (visited Oct. 5, 2006).

[15] For establishments with fewer than 50 workers, 4 jobs are selected (unless the establishment has only 1, 2, or 3 employees, in which case all employees are selected). Six jobs are selected in establishments with 50 to 249 employees, and 8 jobs in establishments with 250 or more employees.

[16] In 2006, the NCS wage-level publications switched to the 2000 Standard Occupational Classification (SOC) system.

[17] It is also possible that full- and part-time workers could be selected separately as distinct jobs to survey.

[18] As explained later, to determine job levels, the NCS uses a point factor system based upon the Federal Government's 15 levels for white-collar workers. For a description of the approach used in the 2004 survey, see Kenneth J. Hoffmann, "New Approach to Measuring Occupational Wages," *Compensation and Working Conditions* (Bureau of Labor Statistics, December 1996), pp. 4–8; on the Internet at **www.bls.gov/opub/cwc/archive/winter1996art1.pdf** (visited Apr. 13, 2007). For details about the current method, see *NCS: Guide for Evaluating Your Firm's Jobs and Pay* (Bureau of Labor Statistics, October 2003); on the Internet at **www.bls.gov/ncs/ocs/sp/ncbr0004.pdf** (visited Apr. 13, 2007).

[19] Deadhead pay is pay for an employee who is assigned to ride on a vehicle as a passenger. (For a fuller definition, see the glossary.)

[20] The costs of these items are included among the costs of benefits as reported in the Employment Cost Index and the Employer Costs for Employee Compensation. (For definitions of terms, see the glossary.)

[21] It should be noted, however, that this study does not treat a number of factors that affect pay and that do vary within the job, such as age, schooling, tenure, effort, and managerial talent. Variations among these factors might help explain some of the findings presented in this article. For example, differences in managerial skills might contribute to higher-than-average wage spreads for managerial occupations.

[22] Because occupations are the main focus of this article, these statistical measures are described as occupational statistics. The same calculations, however, have been used both for broader aggregations, such as all professional workers or all incentive-paid workers, and for narrower aggregations, such as registered nurses, work level 9.

[23] The statistics on spread presented in this article use a calculation method different from that used for the published NCS wage statistics. Weights are applied to the survey data in order to represent all establishments and employees. The published NCS wage statistics combine several weighting factors, including geographic area and establishment weights, with a measure of employee hours. By contrast, the wage spread statistics presented in what follows use the area and establishment weights, but do not include employee hours in the calculation. The exclusion of employee hours makes the 2004 wage spread calculations more comparable to those made in the earlier BLS studies. A comparison with hours-weighted tabulations shows that, in most instances, the differences in wage spreads between the two weighting methods are small. Larger differences, however, do occur in some occupations or worker groups, such as those with a large proportion of part-time workers.

[24] For a more extensive discussion of these two measures, see Barsky and Personick, "Measuring wage dispersion," pp. 36–37.

[25] At the 90th percentile, 90 percent of the workers had a wage spread the same as or lower than the figure cited and 10 percent had a wage spread the same as or higher than the figure cited.

[26] Lane, Salmon, and Spletzer, "Establishment wage differentials"; and Groshen, "Sources of Intra-Industry Wage Dispersion."

[27] Removing teachers from the tabulation reduces the mean for professional workers to 45 percent and the median to 34 percent.

[28] See Douty, "Some Aspects of Wage Statistics and Wage Theory."

[29] Earnings intervals are rounded numbers corresponding to 2004 NCS wage distribution statistics. The 10th-percentile hourly pay rate for all workers was $7.40, the 25th-percentile rate was $10.00, the 50th-percentile (median) rate was $14.48, the 75th-percentile rate was $22.44, and the 90th-percentile rate was $32.45. (See *National Compensation Survey: Occupational Wages in the United States, July 2004 Supplementary Tables* (Bureau of Labor Statistics, August 2005)), p. 1; on the Internet at **www.bls.gov/ncs/ocs/sp/ncbl0728.pdf** (visited Apr. 13, 2007).

[30] The experimental data are developed from the sample used to produce the December 2006 Employer Costs for Employee Compensation (ECEC) estimates. Only a subset of the ECEC sample was used in this article, so the figures presented are not comparable to the ECEC published estimates.

[31] Removing incentive-paid workers from the tabulation reduces the mean spread for finance, insurance, and real estate to 40 percent and the median to 30 percent.

[32] Removing teachers from the tabulation reduces the mean spread in education services to 51 percent and the median spread to 40 percent.

[33] For a recent study using 2003 data from the BLS Occupational Employment Statistics program, see John Ichiro Jones, "An Investigation of Industry and Size Effects on Wage Dispersion," in *Occupational Employment and Wages*: *May, 2003*, Bulletin 2567 (Bureau of Labor Statistics, September, 2004), pp. 22–25; on the Internet at **www.bls.gov/oes/2003/may/dispersion.pdf** (visited Sept. 26, 2006).

[34] See Buckley, "Wage differences," p. 15.

[35] Union membership data for 2004 from the Current Population Survey were obtained from "Access to Historical Data for the Tables of the Union Membership News Release," on the Internet at **www.bls.gov/cps/cpslutabs.htm** (visited Feb. 18, 2008).

[36] See, for example, Dale Belman and John S. Heywood, "Union Membership, Union Organization, and the Dispersion of Wages," *Review of Economics and Statistics*, February 1990, pp. 148–53.

[37] For more information on workers paid incentive rates, see Anthony J. Barkume and Thomas G. Moehrle, "The Role of Incentive Pay in the Volatility of the Employment Cost Index," *Compensation and Working Conditions* (Bureau of Labor Statistics, summer 2001), pp. 13–18; on the Internet at **www.bls.gov/opub/cwc/archive/summer2001art2.pdf** (visited Sept. 26, 2006).

[38] For an analysis of wages in profit and nonprofit education and health services establishments, see Karen P. Shahpoori and James Smith, "Wages in Profit and Nonprofit Hospitals and Universities," *Compensation and Working Conditions Online* (Bureau of Labor Statistics, June 29, 2005), on the Internet at **www.bls.gov/opub/cwc/cm20050624ar01p1.htm** (visited Sept. 26, 2006).

[39] The East North Central States comprise Illinois, Indiana, Michigan, Ohio, and Wisconsin. The Pacific States are Alaska, California, Hawaii, Oregon, and Washington. The New England States encompass Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Middle Atlantic States are New Jersey, New York, and Pennsylvania.

[40] These wage spreads are not the result of tips. Because tips are payments from customers, rather than from the employer, they are not included in the wages reported in the NCS.

[41] The reason 12 occupations appear in table 8 is that several occupations tied for the 10th-lowest median wage spread. (Although all wage spreads are rounded to the nearest whole number in this table, occupations are listed in order of their unrounded wage spread.)

[42] Miscellaneous plant and systems operators include plant and systems operators other than water and sewage treatment plant operators, power plant operators, stationary engineers, and helpers. Examples of jobs included in the occupation called miscellaneous plant and systems operators are asphalt-plant operator, batch-plant operator, chemical-plant operator, control operator, gas-plant operator, oil refiner, and petroleum-plant operator.

[43] The goods-producing industries are manufacturing, construction, and mining. Separate data on the construction industry were not tabulated because the sample size was judged to be too small.

[44] According to the 1990 census, the most populous occupations employed 51 million workers altogether in 1990, and the randomly selected occupations employed 6 million workers. Data for four occupations did not meet publication criteria and are not included in the table.

[45] Comparing mean wage spreads, we see that 32 jobs had substantial differences. In 23 jobs, wage spreads were higher in private industry; in 9, spreads were higher in governments.

[46] For an illustration of the many dimensions of what might seem a simple occupation, see Laura Pfuntner, "Janitors in 2000: An Overview of NCS Data," *Compensation and Working Conditions Online* (Bureau of Labor Statistics, Nov. 24, 2003), on the Internet at **www.bls.gov/opub/cwc/cm20031121ar01p1.htm** (visited Sept. 29, 2006).

[47] Comparability was assessed by a two-step process. First, AWS and NCS job definitions were matched. Matching involved reading the job descriptions and making a judgment as to whether the employees covered by the two sets of descriptions performed the same job duties. Second, the AWS and NCS work levels were matched. For most of the white-collar jobs, work levels were matched in accordance with the system used by the U.S. Office of Personnel Management and the BLS in a survey used for setting Federal pay scales. The work levels are those established for the Federal General Schedule pay system and are also used by the NCS. For the 1983 white-collar work-level matches, see *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1983*, Bulletin 2181 (Bureau of Labor Statistics, September 1983), pp. 76–79. For a description of the work levels in the NCS, see *National Compensation Survey: Occupational Wages in the United States, July 2004*, Bulletin 2576

(Bureau of Labor Statistics, September 2005), pp. 165–72.

[48] This statement is a matter of the authors' judgment, rather than one that is empirically based. It could be argued, however, that the NCS occupational refinement process described earlier might yield a *narrower* set of employees than the AWS method does. For example, AWS's recorded wages for both union and nonunion workers if they existed in the same occupation, whereas the NCS selects either union or nonunion workers, but not both.

[49] Benchmark jobs are key jobs that are clearly recognizable across industries. (See Henderson, *Compensation Management*, pp. 205ff., for the role of benchmark jobs in administering compensation.)

[50] Note that comparisons, rather than occupations or work levels, are counted, because in some cases an overall NCS occupation was compared with two or more AWS occupations or work levels. This situation counts as a single comparison.

[51] Table 11 was constructed according to the following rules:

1. In cases where AWS's published data for multilevel occupations,
   - Where individual work levels within occupations were judged to be similar, the individual work levels were compared. The reason for this stipulation is that the AWS multilevel jobs included workers only in the work levels specified in the survey; the jobs were not intended to include workers in levels not studied. In contrast, the 15 work levels identified in the NCS are intended to cover all, or nearly all, employees in the occupation. (This stipulation was followed for 28 job levels.)
   - Where the work levels used in the two surveys were not comparable, but the overall occupation was deemed comparable, overall results for the NCS were compared with the individual work levels in the AWS's. In these cases, the overall spread for the occupation reported in the NCS was compared against the range of individual work-level spreads derived from AWS's. These comparisons are not only more complicated than those which simply compare a single level of work, but they may be less accurate as well. As noted in the previous paragraph, the AWS work levels were not intended to sum to an overall figure for an occupation. Thus, the NCS average may include figures for workers who did not fit into the AWS work levels. (This comparison was made for 3 NCS jobs that were matched to 8 AWS jobs or job levels.)
2. In cases where AWS's published data for a single-level occupation, the AWS job was compared with the overall NCS job. (This stipulation was followed for 12 NCS and 12 AWS jobs.) A similar comparison was carried out for 1 NCS occupation that matched 3 AWS occupations.

APPENDIX: Glossary

Statistical terms

Coefficient of variation. Result of dividing the *standard deviation* by the mean and then multiplying by 100.

Index of wage dispersion. The result of dividing the difference of the *75th-percentile wage* and the *25th-percentile wage* by the median (*50th-percentile)* wage and then multiplying by 100.

Mean. The average. The *mean wage spread* is computed by summing the *wage spread* for each establishment job and then dividing by the number of observations. The *mean* is also computed for *wages*.

Median. The point at which half of a designated category of workers have the same or a lower *wage spread* and half have a higher *wage spread*. Also called the *50th percentile*, the *median* is computed for *wages* as well.

Percentile. The point at which a designated percentage of workers has the same or a lower *wage spread*. For example, at the *25th percentile*, one-quarter of the workers have the same or a lower *wage spread*, and the remaining three-quarters have a higher *wage spread*. The *10th, 50th, 75th,* and *90th percentiles* are defined correspondingly. *Percentiles* are also computed for *wages.*

Proportion of interestablishment variation. The proportion of the *coefficient of variation* that is due to variation in wage spreads across, rather than within, establishments. Also called interplant and across-establishment variation.

Standard deviation and variance. The *standard deviation*, a measure of the variability of *wages,* is computed as follows: The *wage* for each establishment job is subtracted from the *average wage* for all establishment jobs. Each difference is then squared, and all of the squared differences are summed. The resulting sum is then divided by the number of establishment jobs, less 1, to yield the *variance*. The square root of the *variance* is the *standard deviation*.

Wage spread. The percentage by which the *wage* for the highest paid worker in an establishment job exceeds the *wage* of the lowest paid worker.

*Weighted number of worker*s. The number of employees in each establishment job, multiplied by a factor, or "weight," designed to reflect establishment jobs and other establishments not included in the National Compensation Survey (NCS) sample. For example, the employees studied in the 20,400 establishments selected for the 2004 NCS were weighted to represent all establishments and all 84 million employees covered by the survey.

Compensation terms

Bonus (production and nonproduction). A *production bonus* is extra payment based on production in excess of a quota or on completion of a job in less than standard time. In the NCS, *production bonuses* are included in measures of *wages and salaries*. A *nonproduction bonus* is a cash payment that is not directly related to the output of either the employee or a group of employees. Examples include attendance, Christmas, profit-sharing, safety, and yearend bonuses. In the NCS, nonproduction bonuses are excluded from measures of *wages and salaries*; instead, they are included in the benefits component of total compensation.

Commissions. Payments to salespeople based on a predetermined formula; for example, a percentage of the value of sales or the gross margin of goods or services sold. May be paid in addition to a guaranteed salary rate or may constitute total pay.

Cost-of-living adjustment or allowance. An across-the-board wage or salary change, or a supplemental payment, reflecting changes in the cost of living.

Deadhead pay or time. Pay for time spent traveling to and from a designated point and the worksite. Such time may be paid for as portal-to-portal pay in mining, deadheading on railroads, and out-of-town work in construction.

Hazard pay. Extra pay to an individual worker or a group of workers working under dangerous or undesirable conditions.

Incentive pay. Pay that is related to the actual production of workers, individually or as a group.

On-call pay. Pay received by employees for being ready to report to work if necessary.

Overtime and overtime pay. *Overtime* is work performed in excess of the basic workday or workweek, as defined by law, a collective bargaining agreement, or company policy. Sometimes applied to work performed on Saturdays, Sundays, or holidays at premium rates. *Overtime pay* is payment at premium rates (for example, time and one-half, double time) for work defined as *overtime*.

Piece rate. A predetermined amount paid per unit of output to a worker under a piecework *incentive* plan.

Salary. For workers hired on a weekly, monthly, or annual basis (for example, clerical, technical, and managerial employees), the rate of pay normally expressed in terms of dollars per week, month, or year, as opposed to payment for an hour of work. (In this article, however, the terms *salary* and *wage* are interchangeable.)

Salary reduction plans. Plans authorized under Section 401(k) or some other section of the Internal Revenue Code that allow employees to divert a portion of their salary or wages to fund benefit plans. The money contributed to the plan is not subject to Federal income tax.

Shift differential. Additional compensation (cents per hour or a percentage of the day rate) paid to workers employed at other than regular daytime hours.

Time-based pay. Pay that is related to an hourly *wage* rate or *salary* earned by workers, not to a specific level of production.

Uniform or tool allowance. Allowance to an employee, paid by the employer, as reimbursement for the cost of clothing or tools and their upkeep.

Wage or wages. Monetary compensation paid by an employer to a worker for a given unit of worktime, normally an hour, exclusive of premium payments for overtime, shift differentials, and so forth. (In this article, however, the terms *salary* and *wages* are interchangeable.)

Occupational terms

The 2004 NCS grouped the individual 480 survey occupations into nine *major occupational groups*, which, in turn, were combined into three broad occupations. Four major occupational groups were combined to form the category *white-collar workers*, four were combined to yield *blue-collar workers,* and the broad occupation of *service workers* included the service worker major occupational group.

*Blue-collar worker*s. Manual workers, usually those employed in production, maintenance, and related occupations and paid either by the hour or on an incentive basis. Blue-collar occupations cover the following four major occupational groups: precision production, craft, and repair; machine operators, assemblers, and inspectors; transportation and material movers; and handlers, equipment cleaners, helpers, and laborers.

Service workers. Workers in a protective service, food service, health service (such as health and dental aides), cleaning and building service, or personal service occupation.

White-collar workers. Office, clerical, administrative, sales, professional, and technical employees, as distinguished from production and maintenance employees, who usually are referred to as *blue-collar workers*. *White-collar workers* cover the following four occupational groupings: professional specialty and technical; executive, administrative, and managerial; sales; and administrative support, including clerical.

Notes to the appendix

[1] Terms in italics in the definitions are defined elsewhere in this glossary.

[2] Note that the *weighted* number of workers is used in all computations.

Youth enrollment and employment during the school year

Current Population Survey data show that teenagers are attending school at higher rates than ever before; at the same time, teens are less frequently employed during the school year

Teresa L. Morisi

Having a job as a teenager can be a valuable experience, teaching responsibility, and organizational and time management skills, along with providing a paycheck.[1] Teens, though, must balance their school requirements with their work preferences during the school year. The Current Population Survey (CPS) of the Bureau of Labor Statistics (BLS) produces data on school enrollment and employment for teens. These data show that teens are enrolled in school at increasingly higher rates since the mid 1980s (when the CPS began collecting monthly enrollment data for persons aged 16–24), while fewer teens are employed during the school year than in the past. Both teens who are in school and those who are not in school saw their employment rates decline; however, the decline for students has been greater than for nonstudents.

This article analyzes changes in school enrollment and employment patterns for teens who are between the ages of 16 and 19. The data are analyzed separately for youths aged 16–17 and 18–19, and by sex, race, and ethnicity. Both students in high school and students enrolled in college are included; of those 16- to 19-year-olds enrolled in 2007, about three-quarters were in high school, with the remainder in college. As noted, data on youth enrollment and employment come from the CPS, a monthly survey of about 60,000 households, and are averages for the 9 months that youths normally attend school (January–May and September–December, referred to hereafter as "school months").[2] Youths considered to be not working or not employed in this analysis either are unemployed or do not participate in the labor force. CPS data on the enrollment and working status of youths are published annually as part of *America's Children: Key National Indicators of Well Being*, a report from the Federal Interagency Forum on Child and Family Statistics, of which BLS is a member.[3]

Interviewers from the U.S. Census Bureau collect the CPS data for BLS. The interviewers query households with regard to the labor force status of household members aged 15 years and older during the reference week, which is the calendar week that includes the 12th day of the month. Only the civilian noninstitutional population is eligible to participate. Questions regarding school enrollment status are asked each month solely of persons between the ages of 16 and 24, regardless of their labor force status. Schools are defined as public or private institutions that confer academic degrees; included are high schools, community or junior colleges, 4-year colleges, universities, and graduate or professional schools of learning. School attendance, as counted by the CPS, can be either full time or part time.

In the CPS, persons are counted as employed if they did any work for pay or profit during the reference week. Persons who are absent from their jobs due to reasons such as illness or vacations are still counted as employed. Unpaid family workers, who are

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those working 15 or more hours during the reference week without pay in a family-operated enterprise, also are counted as employed. Persons who are *unemployed* must not have been employed, must have been actively searching for work during the previous 4 weeks, and must have been available for work. Persons who are neither employed nor unemployed are considered to be not in the labor force (NILF).

Changes in enrollment and employment

The proportion of 16- to 19-year-olds enrolled in school during regular school months grew from 72.8 percent in 1985 to 82.5 percent in 2007. At the same time, the rate of employment, officially known as the employment-to-population ratio, fell to 33.2 percent during school months in 2007, down from 41.5 percent in 1985. In the intervening years, employment rates for both students and nonstudents showed similar trends. The rate of employment rose for both groups from 1985 to 1989, trended downward until 1992, and then began to move upward once again until 2000. The employment rates for both groups dropped sharply after 2000. (See chart 1, page 53.)

The sections that follow analyze changes in enrollment and employment for all youths aged 16–19 and for major demographic groups. There are four possible combinations of enrollment and employment status:

1. Enrolled and employed
2. Enrolled and not employed
3. Not enrolled and employed
4. Not enrolled and not employed

Youths aged 16–19

Between 2000 and 2007, the proportion of 16- to 19-year-olds who were enrolled and not employed during regular school months grew by 11 percentage points, from 48 percent to 59 percent. This proportion had changed little throughout the 1990s before moving upward in the early 2000s; then it remained fixed at either 57 percent or 58 percent from 2003 to 2006. A little less than one-quarter of teenagers (24 percent) were both enrolled and employed during the 2007 school months. The ratio was down from 30 percent in 2000, after having edged up during the 1990s.

Youths who were not enrolled and were employed made up 10 percent of the population aged 16–19 during the 2007 school months. This proportion is lower than it was in 1985 (16 percent). Teens who were neither enrolled in school nor working at a job (sometimes referred to in the literature as "disconnected" youths[4]) were 8 percent of the 16- to 19-year-old population during school months in 2007, a rate that was down from about 10 percent in the early 1990s. (See table 1 and chart 2, pages 54 and 55.)

The younger teens. The enrollment rate for teens aged 16–17 moved upward slightly, from 92 percent of the population in 1985 to 95 percent in 2007. The status of the majority of teens in this age group is "enrolled and not working." During school months in 2007, 73 percent of 16- to 17-year-olds were nonworking students; a proportion that was up from 63 percent in 2000 (the same as it was in 1985). The proportion of 16- to 17-year-olds who were both enrolled and employed was 21 percent in 2007, down by 10 percentage points since 2000.

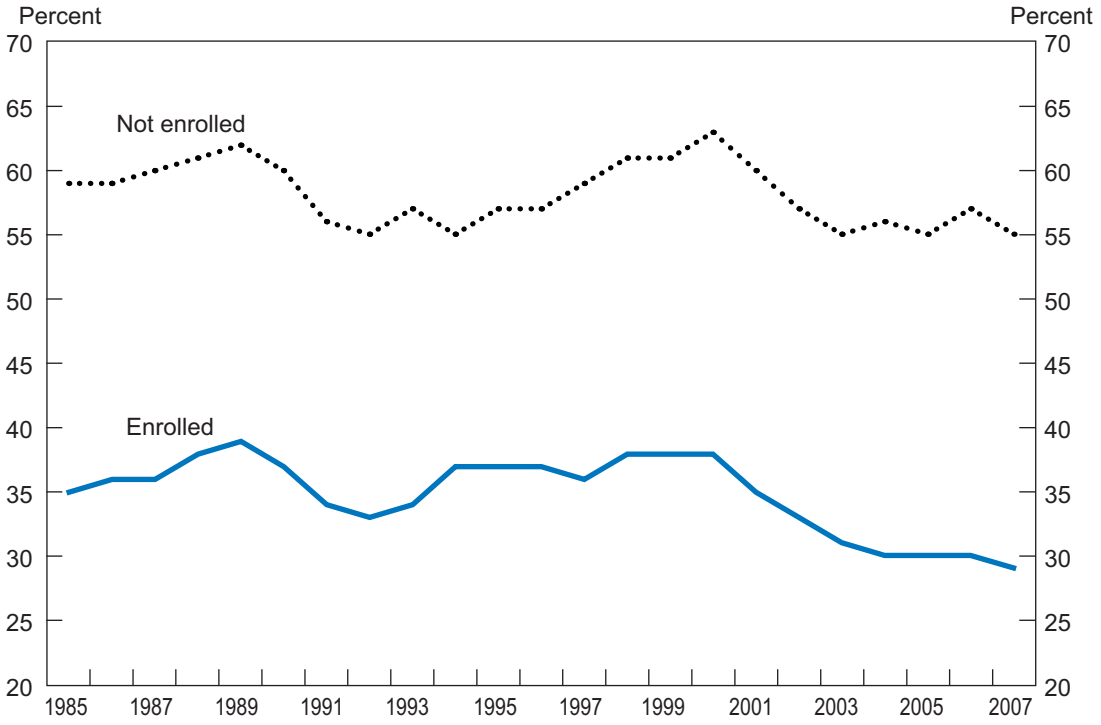
The older teens. The 18- to 19-year-old age group includes youths who are in high school and those who are in college. After graduating from high school, a higher proportion of youths is moving onto college or other advanced education than had been in the past. (See later in this article.) During the 2007 school months, 68 percent of young adults aged 18–19 were enrolled in school, while in 1985, a little more than half were enrolled. Nonworking students made up the largest proportion of 18- to 19-year-olds. In 2007, 42 percent of 18- to 19-year-olds were nonworking students, up from 34 percent in 2000; the proportion had been little changed through the 1990s. Employed students were 26 percent of the 18- to 19-year-old population in 2007, down from 30 percent in 2000 and equal to proportions seen in the early 1990s.

Young adults who worked and did not attend school were 19 percent of the 18- to 19-year-old population during the 2007 school months, down from 24 percent in 2000; the proportion had remained relatively stable through the 1990s. The share of young adults aged 18–19 who were neither enrolled in school nor working at a job was 13 percent in 2007, about the same as in 2000 and down from 17 percent in 1985. (See table 2, page 56.)

Young women and young men

A larger proportion of 16- to 19-year-old women was enrolled during the 2007 school months than men (84 percent and 81 percent, respectively.) Female 16- to 19-year-old students worked at a higher rate than did male students in 2007 (26 percent, as opposed to 21 percent). A slightly higher percentage of young men than young women (11 percent and 9 percent respectively) held a job, but were not students during school months in 2007.

Chart 1. Employment-population ratios by enrollment status of youths aged 16–19, school months in 1985–2007



NOTE: Yearly data are 9-month averages for the months youths are normally in school: January through May and September through December.

Both proportions have moved downward in the last 20 years. The proportion of female teens who were neither enrolled nor employed was 8 percent in 2007, about the same proportion as males. The share of "disconnected" female teens has moved downward in the last 20 years. (See table 3, page 57.) The adolescent birthrate for young women ages 15–19 was 59.9 births per 1,000 females in 1990, and it declined to 40.5 births per 1,000 in 2005.[5]

Race and Hispanic ethnicity

A number of differences in employment and enrollment patterns may be observed among black, white, and Hispanic teens.[6] Although the employment rates for all three groups have moved downward in recent years, white youths continue to be employed at greater rates than black or Hispanic youths. Various researchers have studied this issue, and a number of reasons for the difference have been suggested, including the effects of family characteristics, such as the employment behavior of other household members; neighborhood and geographic factors, such as the industrial composition of the area and the availability of transportation; and individual characteristics, such as criminal activity.[7] The enrollment rates for all three groups have been rising, with the rates for black and white youths remaining higher than for Hispanic youths. Hispanics do have a higher high school dropout rate than either blacks or whites have: in 2005, among persons 16 to 24 years old, the percentage of high school dropouts (the "status" dropout rate) was 6.0 percent for whites, 10.4 percent for blacks, and 22.4 percent for Hispanics.[8]

The proportion of black youths between the ages of 16 and 19 who were enrolled in school and who did not hold jobs remained higher in 2007 than that for Hispanic youths and white youths. During 2007, 69 percent of black youths were enrolled and not employed during school months, as opposed to 59 percent of Hispanic youths and 56 percent of white youths. This gap between black teens, on the one hand, and Hispanic and white teens, on the other, has remained fairly consistent over time.

A greater share of white teens between the ages of 16 and 19 than either blacks or Hispanics was both enrolled and employed in 2007. During the 2007 school months, 29 percent of white youths were students and held jobs, compared with 13 percent of blacks and 17 percent of Hispanics. The proportions for blacks and whites trended downward after 2000.

Table 1. Percentage of youths aged 16–19 by enrollment/employment status during school months, selected years, 1985–2007

Status	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Enrolled in school																			
Enrolled and employed	26	28	26	26	27	29	29	29	29	31	30	30	28	26	25	25	25	25	24
Enrolled and not employed	47	47	50	52	52	50	49	50	50	49	49	48	50	54	57	58	58	57	59
Not enrolled in school																			
Not enrolled and employed	16	15	13	12	12	12	13	12	13	13	13	14	13	12	10	10	10	10	10
Not enrolled and not employed	11	10	11	10	10	10	9	9	9	8	8	8	9	9	8	8	8	8	8

NOTE: Yearly data are 9-month averages for the months that youths are normally in school: January through May and September through December.

A larger proportion of Hispanic 16- to 19-year-olds than either blacks or whites was not enrolled and employed. At 14 percent during the 2007 school months, this proportion for Hispanics was down from 20 percent in 2000. The proportion of white teens who worked and were not enrolled was higher in 2007 (10 percent) than the proportion of black teens (7 percent). The share of white teens who were not enrolled yet held jobs was little changed through the 1990s and then began to move downward in the early 2000s. The share of black youths who were not enrolled and employed has ranged between 7 percent and 10 percent for the last 20 years.

During the 2007 school months, 11 percent of black teens and 11 percent of Hispanic teens between 16 and 19 years old were not enrolled and not working, compared with 6 percent of white teens. The proportions for all three groups have moved downward since 1985, particularly for blacks and Hispanics, but the latter two groups' proportions of disconnected youths have remained nearly twice that for whites. (See table 4, page 58.)

Why are teens working less?

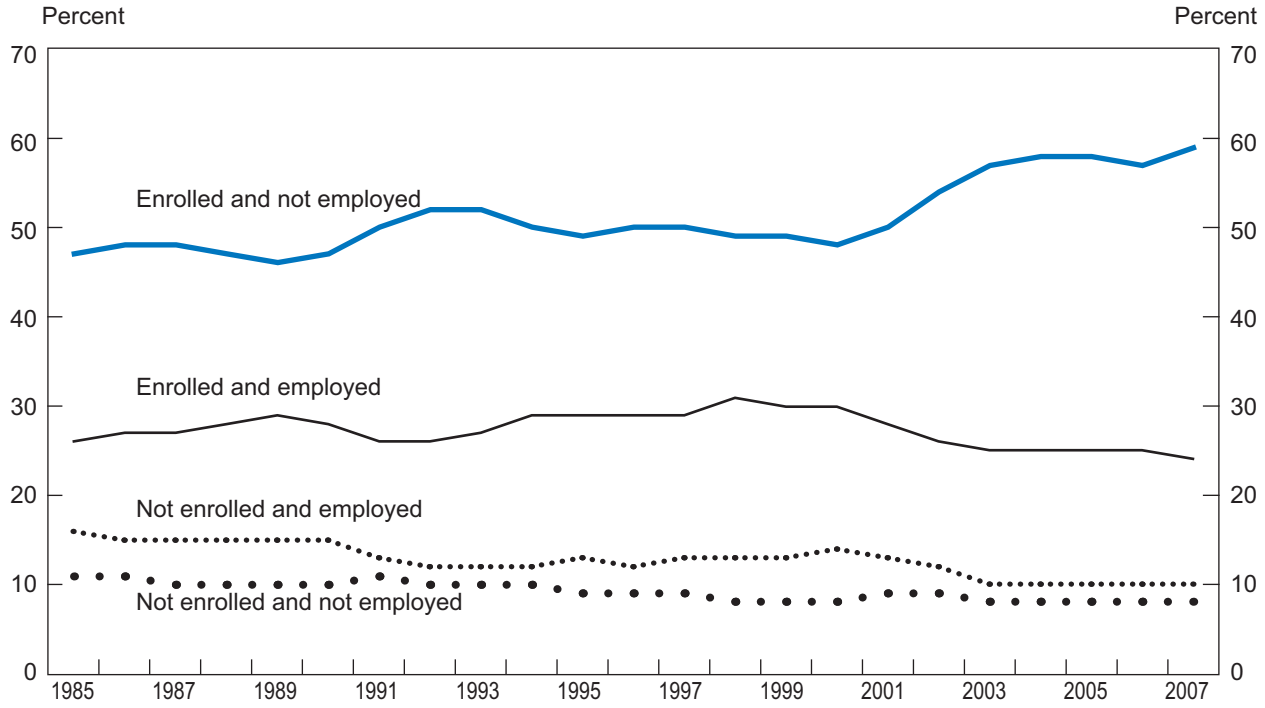
The data clearly show that teens are working less during the school year. In particular, since 2000, teens are increasingly moving into the status "enrolled and not employed," and this is true for all of the major teenage demographic groups. At the same time, declines have occurred in the proportions of teens employed among both those enrolled and those not enrolled (though to a lesser degree than enrolled teens). There are several possible reasons that teens are choosing to work less, and these are examined in the next two sections. The first section concentrates on school-related reasons, and the second, on reasons unrelated to education.

Greater school pressures

A number of factors indicate that pressure to achieve in school has increased for youths. Academic requirements for graduation have become more stringent, and many students are subject to high school exit examinations. Students are taking advanced academic courses at greater rates than ever before, and are taking more Advanced Placement® (AP) exams. Requirements and incentives for community service among students also appear to be rising. In addition, because college enrollment has been trending upward, high school students may be applying themselves more toward their academic studies in order to increase their chances of being accepted to college. All of these factors can lessen the amount of time students have available for work and may serve to place a greater emphasis on the importance of school rather than on working.

More courses and higher level courses. In the early 1980s, States began to increase the number of courses required to graduate from high school. Indeed, data from the National Center for Education Statistics (NCES) show that the average number of Carnegie units (a standard measurement for the amount of time spent on a subject) earned by public high school graduates was 21.7 for 1982 graduates and 25.8 for graduates in 2004 (the most current

Chart 2. Percentage of youths aged 16–19 by enrollment and employment status, school months in 1985–2007



NOTE: Yearly data are 9-month averages for the months youths are normally in school: January through May and September through December.

data available).[9] High school graduates also are taking more advanced courses; NCES data show that the proportion of high school graduates taking advanced-level courses was higher in 2004 than in 1990. One-half of high school graduates completed advanced mathematics courses in 2004, while a little less than one-third did so in 1990. Advanced science courses were taken by 68.4 percent of graduates in 2004, compared with about one-half of graduates in 1990. About one-third of high school graduates took advanced English courses and advanced foreign language courses in 2004 (32.7 percent and 34.5 percent, respectively). In 1990, about one-fifth of graduates took courses in each.[10] (See table 5, page 59.)

Thus, in recent years, ever more high school seniors are graduating having earned credits in increasingly difficult curricula. In 1983, the National Commission on Excellence in Education, as part of the report, "A Nation at Risk," recommended that at a minimum, college-bound students take four units of English, three of social studies, three of science, three of mathematics, one-half unit of computer science, and two units of a foreign language.[11] In 2005 (the most current year available), 36 percent of high school graduates earned this level of achievement, compared with 2 percent in 1982.[12]

High school exit examinations. Since the 1990s, States have been revising or implementing standards for achievement. By 2006, public high school students in 22 States (accounting for two-thirds of the Nation's public school students) were required to pass exit examinations in order to receive a high school diploma, and by 2012, three additional States expect that students will be required to pass exit exams in order to graduate.[13]

More students are taking AP exams. AP programs offer both advanced courses that allow high school students to gain experience in college-level work, and exams that enable students to earn college credits and attain college placement, sometimes at a higher-than-freshman level. The number of students taking AP exams has been increasing in recent years. (See chart 3, page 59.) From 1996 to 2007, the number of students taking AP exams nearly tripled, from 537,000 to 1.5 million. [14]

High school graduates are attending college at greater rates. CPS data show that the college enrollment rate of high school graduates in the October following graduation has been trending upward since 2001.[15] In October

Table 2. Percentage of youths aged 16–17 and aged 18–19 by enrollment/employment status during school months, selected years, 1985–2007

Status	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Aged 16–17																			
Enrolled in school																			
Enrolled and employed	29	29	27	26	27	30	30	30	29	31	31	31	28	25	24	23	23	23	21
Enrolled and not employed	63	63	66	68	67	64	64	64	64	63	63	63	65	69	71	72	72	72	73
Not enrolled in school																			
Not enrolled and employed	3	3	2	2	2	2	2	3	2	2	2	3	3	2	2	2	2	2	2
Not enrolled and not employed ..	5	5	5	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	4
Aged 18–19																			
Enrolled in school																			
Enrolled and employed	23	26	25	26	26	28	28	28	28	30	30	30	28	28	27	27	28	28	26
Enrolled and not employed	31	33	35	36	36	35	34	35	35	34	34	34	35	37	40	41	41	40	42
Not enrolled in school																			
Not enrolled and employed	29	26	24	23	23	22	23	22	23	23	24	24	23	21	20	19	19	20	19
Not enrolled and not employed .	17	15	16	16	15	15	15	15	14	13	13	12	13	14	14	13	13	13	13

NOTE: Yearly data are 9-month averages for the months that youths are normally in school: January through May and September through December.

2006, the college enrollment rate for recent high school graduates was 65.8 percent; in October 2001, it was 61.6 percent. Because the number of recent high school graduates who go on to attend college is greater than in the past, it is likely that they are spending more time on schoolwork (and thereby leaving less time for working) in order to enhance their chances for acceptance. Also, because financial aid for college has become more available, it may be that working to pay for college during one's teen years has become less common as a method of financing one's education. During 1992–93, about 59 percent of full-time, full-year undergraduates received some form of financial aid, whether it was from a Federal, State, or institutional source or through an employer. By 2003–04, the figure had increased to 76 percent.[16] The receipt of financial aid was up from the 1992–93 rate among part-time, part-year undergraduates as well. There are several reasons that dependence on financial aid has grown. First, revisions to the Higher Education Act in 1992 made it easier for students to become eligible for aid, allowed students to borrow more, and made Federally guaranteed, unsubsidized loans available, regardless of students' need.[17] Second, average tuition rates and fees for college (adjusted for inflation) have risen substantially, resulting in more families being eligible for aid. Third, more grant and loan programs are available. One such program is the HOPE scholarship, which provides financial assistance to students attending State universities; in some cases, recipients receive free tuition. Begun in Georgia in 1993, HOPE scholarships have spread in some form or other to 15 more States. In their 2006 study on teen labor force participation, Daniel Aaronson, Kyung-Hong Park, and Daniel Sullivan found that, between 2000 and 2004, labor force participation among 16- to 17-year-olds in HOPE States fell more than participation did for teens in non-HOPE States.[18]

Requirements and incentives for community service. There is some evidence that requirements and incentives for community service are becoming more prevalent at both the high school and college levels. If students either are choosing or are required to spend more time on volunteer work, then they will have less time available for paid work. In recent years, legislative reforms such as modifying State and local graduation requirements to include

Table 3. Percentage of youths aged 16–19 by sex and enrollment/employment status during school months, selected years, 1985–2007

Status	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Men																			
Enrolled in school																			
Enrolled and employed	26	27	25	26	26	28	28	28	28	29	29	29	26	24	23	22	23	23	21
Enrolled and not employed	48	48	52	53	53	51	51	51	51	50	49	50	52	55	58	59	59	59	60
Not enrolled in school																			
Not enrolled and employed	17	17	15	13	14	13	14	13	14	14	15	15	14	13	11	11	10	11	11
Not enrolled and not employed	9	8	9	8	8	8	8	8	8	8	7	7	8	8	8	7	7	7	8
Women																			
Enrolled in school																			
Enrolled and employed	26	28	28	27	27	30	30	30	30	33	32	32	30	28	27	27	27	27	26
Enrolled and not employed	46	46	48	50	50	48	48	48	49	47	48	47	49	52	55	56	56	56	58
Not enrolled in school																			
Not enrolled and employed	15	14	12	11	11	11	11	11	12	11	11	12	12	10	9	9	9	9	9
Not enrolled and not employed	13	12	13	12	11	11	11	11	10	9	9	9	9	9	9	8	8	8	8

NOTE: Yearly data are 9-month averages for the months that youths are normally in school: January through May and September through December.

volunteer work or community service, and Federal programs such as AmeriCorps and USA Freedom Corps, have helped to emphasize community service activities among youths. Community service performed by students is often referred to as "service-learning" when it incorporates classroom instruction. The most recent U.S. Department of Education survey on service-learning and community service was published in 1999. Covering the 1998–99 academic year, it found that 83 percent of public high schools had students participating in community-service projects recognized or arranged by the school, and nearly 50 percent had students involved in service-learning.[19] The authors noted that tentative evidence existed that service-learning had become more widespread since the early 1980s. They mentioned a 1985 survey by F. M. Newmann and R. A. Rutter, which found that 27 percent of all high schools (both public and private) offered some type of community service and 9 percent offered service-learning.[20] A more recent survey on teen volunteering was conducted in 2005 by the Corporation for National and Community Service in collaboration with the U.S. Census Bureau. A sample of youths aged 12 through 18 were asked if they had ever performed community service as part of a school requirement or activity; 38 percent replied that they had. Of those who answered yes, 65 percent took part in service-learning activities, which were defined by the survey as either helping to plan the activity or writing about the experience.[21]

Other factors

Slow recovery of the teen employment rate following the 2001 recession. Part of the decline in employment rates among teens in recent years is likely related to weakness in the economy stemming from the March–November 2001 recession.[22] The reason is that a downturn in the economy can cause workers to leave the labor force and return to or stay in school to enhance their skills. In previous recession and recovery periods (except for the short 1980 recession), the employment-to-population ratio for ages 16–19 be-

Table 4. Percentage of youths aged 16–19 by race and Hispanic ethnicity and by enrollment/employment status during school months, selected years, 1985–2007

Status	1985	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
White non-Hispanic																			
Enrolled in school																			
Enrolled and employed	30	33	32	31	32	35	35	35	35	36	36	36	34	31	30	30	31	31	29
Enrolled and not employed	44	44	46	48	48	45	45	45	46	45	45	45	47	51	53	54	54	54	56
Not enrolled in school																			
Not enrolled and employed	17	16	14	13	13	13	13	13	13	13	13	13	13	11	10	10	9	10	10
Not enrolled and not employed	9	8	8	8	7	7	7	7	7	6	6	6	6	7	6	6	6	6	6
Black non-Hispanic																			
Enrolled in school																			
Enrolled and employed	12	15	12	13	13	16	16	15	16	19	17	19	16	15	14	14	13	15	13
Enrolled and not employed	60	60	62	63	65	63	61	61	61	59	60	59	60	62	67	70	68	67	69
Not enrolled in school																			
Not enrolled and employed	10	10	9	8	7	7	8	10	9	9	10	10	10	9	7	7	8	8	7
Not enrolled and not employed	18	15	17	17	15	14	14	15	14	13	13	13	14	14	12	10	12	11	11
Hispanic origin[1]																			
Enrolled in school																			
Enrolled and employed	15	17	16	17	16	17	16	17	17	18	18	19	20	17	15	16	17	17	17
Enrolled and not employed	51	46	50	52	52	52	52	52	53	50	49	49	48	52	58	58	58	58	59
Not enrolled in school																			
Not enrolled and employed	17	20	18	15	16	15	16	15	16	18	18	20	19	18	14	14	13	15	14
Not enrolled and not employed	17	17	16	17	16	16	16	16	14	14	14	13	13	13	12	12	12	11	11

[1] Persons of Hispanic origin can be of any race.

NOTE: Yearly data are 9-month averages for the months that youths are normally in school: January through May and September through December.

gan to turn upward within a year or so after the recessions ended. By contrast, following the 2001 recession, the teenage employment-to-population ratio did not begin to turn upward until 2006, and then it moved *downward* in 2007. (See chart 4, page 60.)

Recent decrease in real wages for teens. Teen workers generally earn low wages. Real median hourly earnings for workers aged 16–19 who were paid hourly rates declined from 1979 until 1987, changed little until the later 1990s, and then drifted upward until 2002. Real median hourly earnings for teens moved downward by about 50 cents between 2002 and 2006, from $7.74 to $7.23. (See chart 5, page 60.) Falling real wages during this period may have had some effect on teens' inclina-

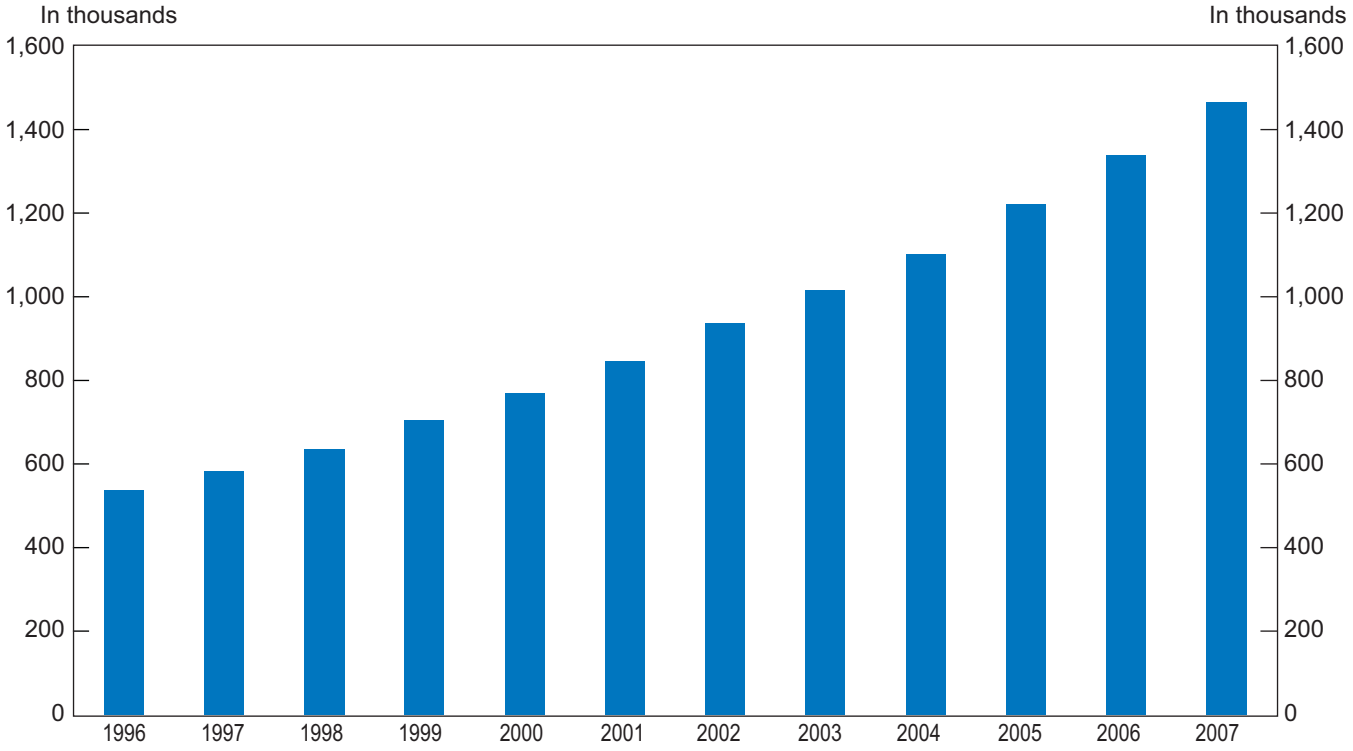
Table 5. Percentage of high school graduates who completed advanced coursework, 1990 and 2004

Year	Advanced mathematics	Advanced science	Advanced English	Advanced foreign language
1990	30.6	49.5	19.6	21.7
2004	50.0	68.4	32.7	34.5

NOTES: Advanced academic courses in mathematics include Algebra III, algebra/trigonometry, algebra/analytical geometry, trigonometry, trigonometry/solid geometry, analytical geometry, linear algebra, probability, probability/statistics, statistics (other), independent study, statistics, precalculus, AP calculus, calculus, calculus/analytical geometry, and introduction to analysis. Advanced science courses include chemistry, physics, and advanced biology. Advanced courses in English include honors level classes. Advanced foreign language courses include years 3 and 4 and advanced placement.

SOURCE: Federal Interagency Forum on Child and Family Statistics, *America's Children in Brief: Key National Indicators of Well Being 2007*, Indicator Tables ED3.A, ED3.B, ED3.C, ED3.D.

Chart 3. Number of students taking Advanced Placement tests, 1996–2007

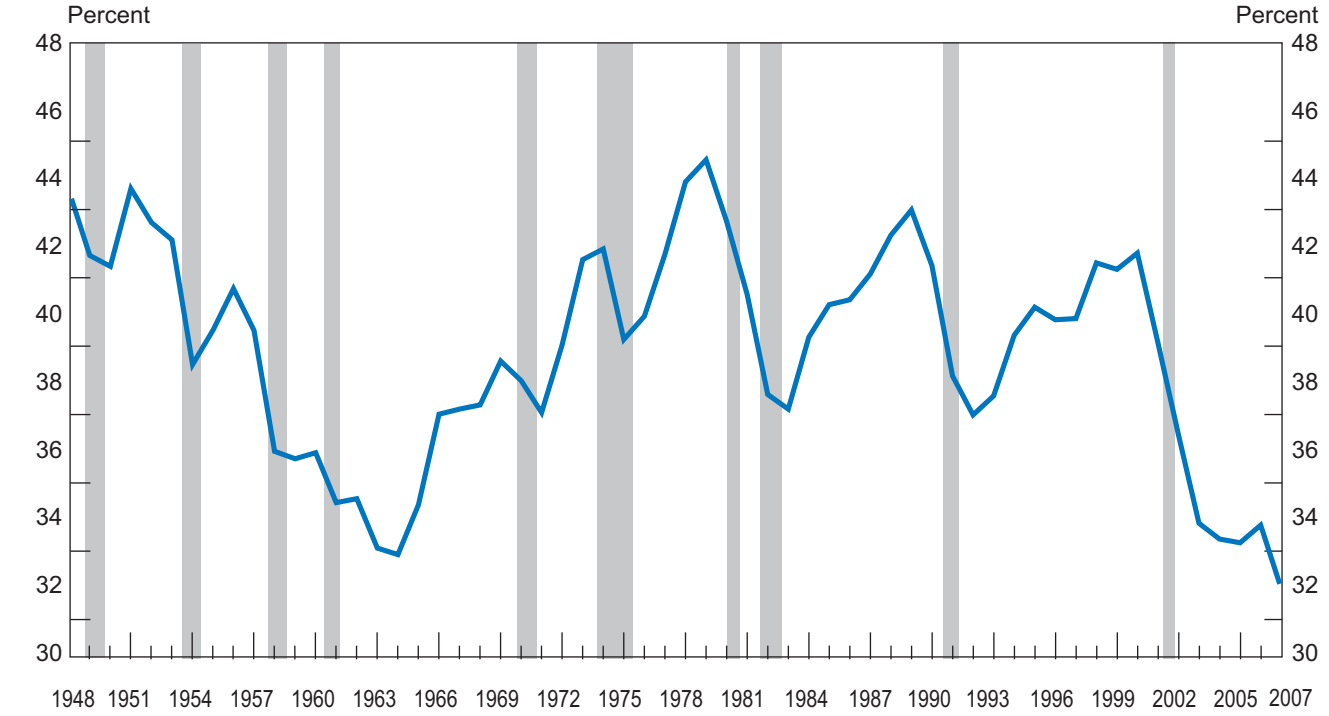


SOURCE: The College Board, New York, NY, Advanced Placement Program, National Summary Reports.

tion to work, but the rate of teens' working began to trend downward in 2000, when real wages were still rising.

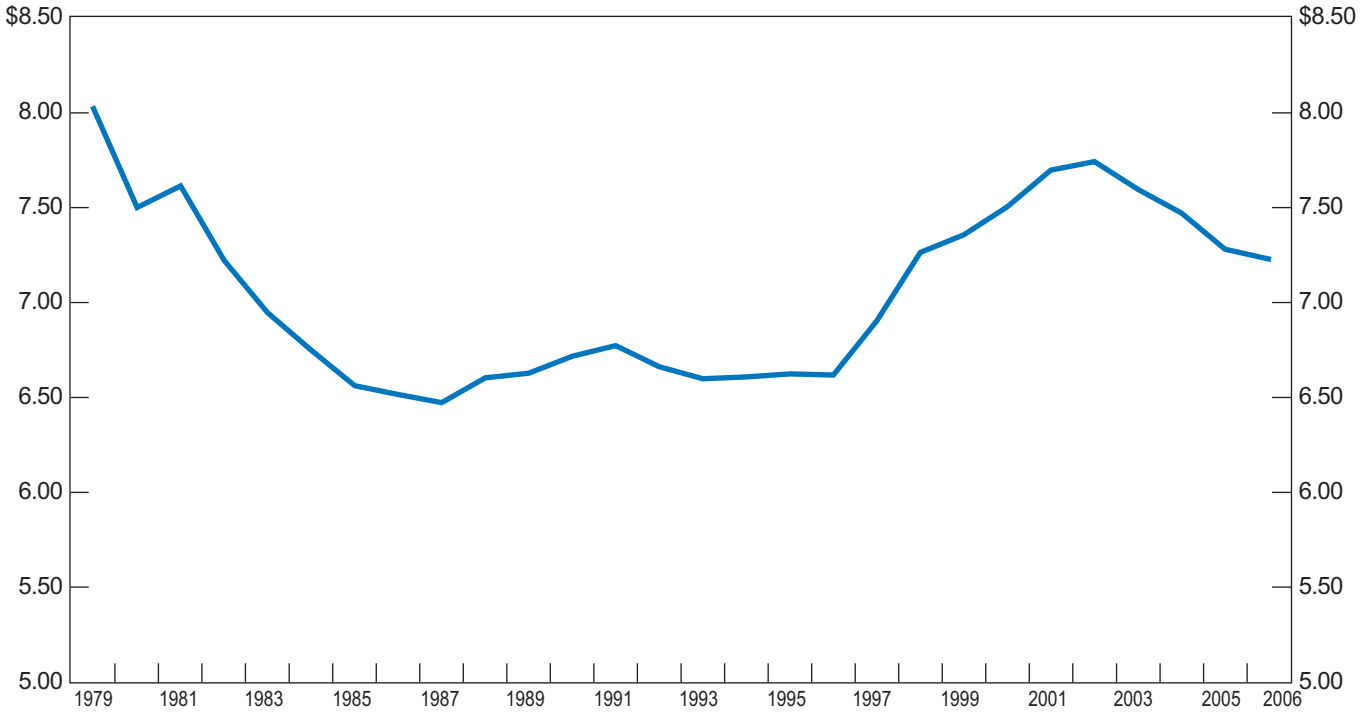
Decline in jobs held by teens in retail trade and restaurants. As CPS data show, both retail trade and restaurants employ more teens than other industries do. Yet, from 2000 to 2007, these two industries' shares of teen workers declined. Together, retail trade and restaurants accounted for about 55 percent of all employed 16- to 19-year-olds in 2007. Both industries added workers between 2000 and 2007. Employment in retail among all persons aged 16 and older increased by 807,000 over the period, while the number of 16- to 19-year-olds employed in retail fell by 419,000 and their share of retail employment declined from 12 percent to 9 percent. Restaurant employment grew by about 1 million from 2000 to 2007, while the number

Chart 4. Employment-population ratio for youths aged 16–19, school months in 1948–2007



NOTE: Yearly data are 9-month averages for the months youths are normally in school: January through May and September through December. Shaded areas denote years with recessions as designated by the National Bureau of Economic Research (NBER).

Chart 5. Average hourly earnings for youths aged 16–19 paid hourly rates in constant 2006 dollars, 1979–2006



NOTE: The Consumer Price Index research series using current methods (CPI-U-RS) is used to convert current dollars to constant 2006 dollars.

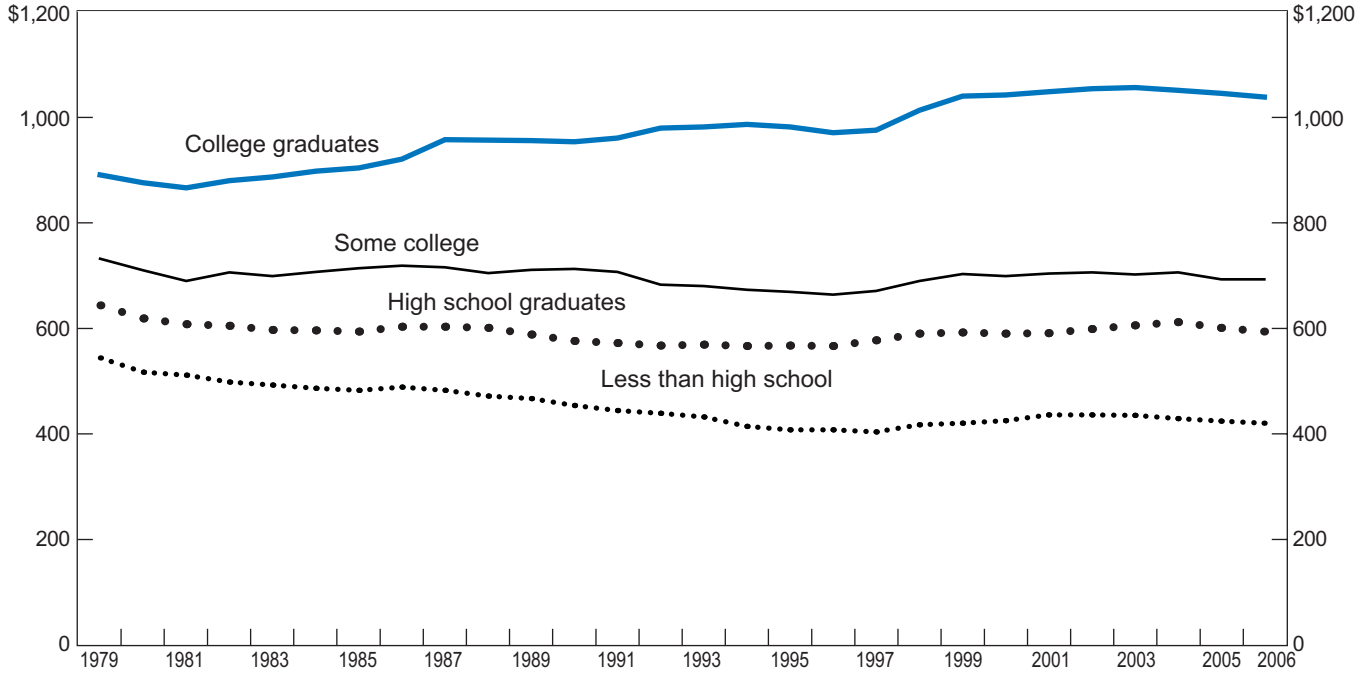
of teens aged 16–19 employed in restaurants was about unchanged (–2,000); their share of restaurant employment declined from 25 percent to 22 percent. Within retail, employment gains of 365,000 and 385,000, respectively, came in the age groups of 20–24 and 45–54; in addition, an increase of 553,000 occurred among 55- to 64-year-olds. Within restaurants, young persons aged 20–24 increased their employment levels by 351,000, those aged 25–34 saw their employment rise by 287,000, and employment of 45 to 54-year-olds grew by 191,000. A recent analysis by Andrew Sum, Ishwar Khatiwada, and Sheila Palma ventured that teens are facing intense competition for jobs from young adults, older adults, and recent immigrants.[23]

Education pays dividends in the workplace

CPS data indicate that higher educational attainment is associated with lower unemployment and higher earnings. CPS data on persons aged 25 and older show that the unemployment rate in 2007 for persons with less than a high school diploma, 7.1 percent, was higher than the rates for high school graduates (4.4 percent), for persons with some college (3.6 percent), and for college graduates (2.0 percent). In addition, the data demonstrate that median weekly earnings for full-time wage and salary workers increase as one's educational attainment increases. In 2006, median weekly earnings for full-time workers aged 25 and older with a bachelor's degree or higher were $1,039, compared with $692 for workers with some college, $595 for high school graduates, and $419 for persons with less than a high school diploma. When median weekly earnings are adjusted to constant 2006 dollars, they show that earnings for college graduates have trended upward since 1979 (although they have moved downward somewhat recently), while earnings for the lower education levels are below what they were in 1979; constant-dollar median weekly earnings for those with less than a high school diploma have declined by the most among the three education groups. (See chart 6.) Aaronson, Park, and Sullivan theorize that teens may be studying harder and graduating more frequently in recognition of the growing value of education; as a corollary, they may be lowering their rate of participation in the labor force.[24]

IN SUM, TEENS ARE ATTENDING SCHOOL at higher rates than ever before. At the same time, they are less likely to

Chart 6. Median weekly earnings of full-time wage and salary workers aged 25 and older by educational attainment, in constant 2006 dollars, 1979–2006



NOTE: The Consumer Price Index research series using current methods (CPI-U-RS) is used to convert current dollars to constant dollars. Since 1992, data on educational attainment have been based on the "highest diploma or degree received" rather than the "number of years of school completed."

work during school months. This trend is apparent among both sexes and among blacks, whites, and Hispanics. Greater academic pressure and stricter education requirements may have made it more difficult and costly, in terms of time spent away from education, for teens to pursue paid work. Declines in real earnings also may have made concentrating on education more attractive to young people. □

Notes

[1] Some studies and policy recommendations have encouraged teenagers to work, while others have espoused the negative effects of teen employment. Donna S. Rothstein summarizes these issues and presents original research in "High School Employment and Youths' Academic Achievement," *Journal of Human Resources*, Winter 2007, pp. 194–213.

[2] The CPS enrollment data analyzed in this article are from the basic monthly survey and may differ from enrollment data collected through the CPS October school enrollment supplement.

[3] Data on the well-being of youths can be accessed at the Internet site of the Federal Interagency Forum on Child and Family Statistics: **www.childstats.gov** (visited Feb. 5, 2008). The Forum is a working group of Federal agencies that collect, analyze, and report data on issues related to children and families. The Forum has partners from 20 Federal agencies, as well as partners in private research organizations.

[4] See, for example, Charles Dervarics, "Minorities Overrepresented Among America's 'Disconnected' Youth," (Washington, DC, Population Reference Bureau, August 2004), on the Internet at **www.prb.org/Articles/2004/MinoritiesOverrepresentedAmongAmericaDisconnectedYouth.aspx** (visited Feb. 27, 2008); or Rima Shore, "Reducing the Number of Disconnected Youth," *Kids Count Indicator Brief (*Baltimore, MD, The Annie E. Casey Foundation, July 2003), on the Internet at **www.aecf.org/upload/publicationfiles/brief%20disconnected20%youth.pdf** (visited Feb. 27, 2008).

[5] "Births: Final Data for 2005," *National Vital Statistics Reports* (Atlanta, GA, Centers for Disease Control and Prevention, Dec. 5, 2007), on the Internet at **www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_06.pdf** (visited Feb. 5, 2008).

[6] The racial groups are *white alone, non-Hispanic; black alone, non-Hispanic; and Hispanic*. (Thus, persons of Hispanic origin can be of any race.) The definitions of the racial and ethnic groups for 2003 through 2007 differ from those of earlier years. Before 2003, the 1977 Office of Management and Budget (OMB) standards on race and ethnicity were used to classify persons into racial groups. For 2003 and later data, the revised 1997 OMB standards were used; two major changes were that individuals were allowed to choose more than one racial category and that individuals were asked whether they were of Hispanic ethnicity before being asked about their race. Data from 2003 onward categorized by race and ethnicity are not strictly comparable with data for earlier years.

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[8] *The Condition of Education 2007*, NCES 2007–064 (Washington, DC, National Center for Education Statistics, June 2007), on the Internet at **http://nces.ed.gov/pubs2007/2007064.pdf** (visited Feb. 5, 2008).

[9] *High School Coursetaking: Findings from The Condition of Education 2007*, NCES 2007–065, Table SA–3, on the Internet at **http://nces.ed.gov/programs/coe/2007/analysis/2007065.pdf** (visited Feb. 5, 2008).

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Labor productivity trends since 2000, by sector and industry

Unlike the late 1990s, when rapid output gains led to increased productivity growth, reductions in labor hours were an important contributor to productivity increases from 2000 to 2005

Corey Holman, Bobbie Joyeux, and Christopher Kask

U.S. productivity (as measured by output per hour) surged during the latter half of the 1990s, led by rapid output growth in industries that produced, sold, or intensively used information technology (IT) products. This surge was the focus of a great deal of attention by economists and policymakers. Recent interest has focused on productivity growth since 2000. After slowing and, in some sectors, declining during the recession that occurred in 2001, productivity growth rebounded, resulting in robust increases over the period from 2000 through 2005.[1]

This article focuses on labor productivity trends from 2000 through 2005 in some of the sectors and industries that make up the nonfarm business sector. These measures provide information on shifts in industrial efficiency and competitiveness in the component industries and sectors underlying the aggregate productivity statistics. The data used in this analysis are from the Bureau of Labor Statistics (BLS) industry productivity program, which produces data on productivity and related measures for selected sectors and industries of the U.S. economy.[2]

Productivity shifts among sectors and industries reflect recent events and economic conditions, as well as long-term structural shifts taking place in the American economy. Notable among the latter category are the declining importance of goods-producing sectors vis-à-vis the service-providing sectors, the rapid growth of IT, and the increased use of outsourcing and offshoring. While productivity continued to advance after 2000, the components of this growth differed from those that led to the productivity surge of the latter half of the 1990s.

Labor productivity is an indicator of productive efficiency that measures the relationship between an industry's output and the labor hours used in producing that output. Industry output is measured as sectoral output, the total value, in real terms, of goods and services produced for sale outside the industry.[3] For most industries, real output is estimated by deflating revenues or value of production to remove the effects of price changes. In a few industries, output is measured using physical quantities produced. Industry labor input generally represents the number of hours paid in an industry. For manufacturing and mining industries, labor input includes hours of wage and salary workers. In service-providing industries, where self-employed and unpaid family workers are a significant share of the workforce, labor hours also include the hours of self-employed and unpaid family workers.

Sector- and industry-level productivity measures may reveal trends that are not apparent when examining measures for the larger economy. BLS publishes productivity measures for detailed industries and sector-level measures for the

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mining, manufacturing, wholesale trade, and retail trade sectors.[4] The BLS productivity series essentially cover all of the industries and employment in these four sectors.[5] For this article, measures were also developed for four additional sectors where the industry coverage is substantial but not complete: utilities; information; accommodation and food services; and other services, except public administration.[6] In each of these sectors, labor productivity measures cover more than 70 percent of employment in the sector. Productivity growth in these four sectors is derived from trends in the component industries for which BLS maintains measures. Growth rates for these sectors are presented here for illustrative purposes, with the caveat that they may not be representative of the industries in each sector that are not included. It is not possible to gauge the extent to which these rates accurately represent the rates of change for each sector as a whole. For the sectors not examined in this article, BLS industry coverage varies widely but accounts for less than 70 percent of total sector employment.[7]

The sources of the productivity acceleration during the second half of the 1990s are well documented.[8] Output growth in industries involved in the production or distribution of IT products, and those that had invested heavily in IT, accelerated from the already rapid pace seen during the first half of the decade.[9] Growth in labor hours was moderate, at best, during the period, and the result was an acceleration in productivity growth to very rapid rates. These developments were most pronounced in IT and closely related industries, but were not limited to those industries.[10] Output growth accelerated during the latter half of the decade in more than half of the industries studied and, in nearly 30 percent of them, output growth rates more than doubled relative to the 1990–95 period. Productivity trends followed a similar pattern.

The recession of 2001 marked the end of the long business expansion that had begun in 1991. The recession lasted only three quarters, but was associated with declines in output and labor input in a number of industries. In addition, the terrorist attacks of September 11, 2001, negatively affected business activity during the 2000–05 period. *Air transportation* and related industries such as *traveler accommodation* were particularly affected in the aftermath of the attacks, as were industries in the finance and insurance sector. In most industries, the downturn in production or sales was relatively short-lived and output growth recovered quickly. Consequently, more than 60 percent of the industries studied recorded increases in output over the 2000–05 period as a whole. In contrast, the downturn in labor hours was more prolonged. Labor hours declined over the period in about 80 percent of the industries studied. In many cases, this was due to employment that, by 2005, had not yet returned to pre-recession levels.

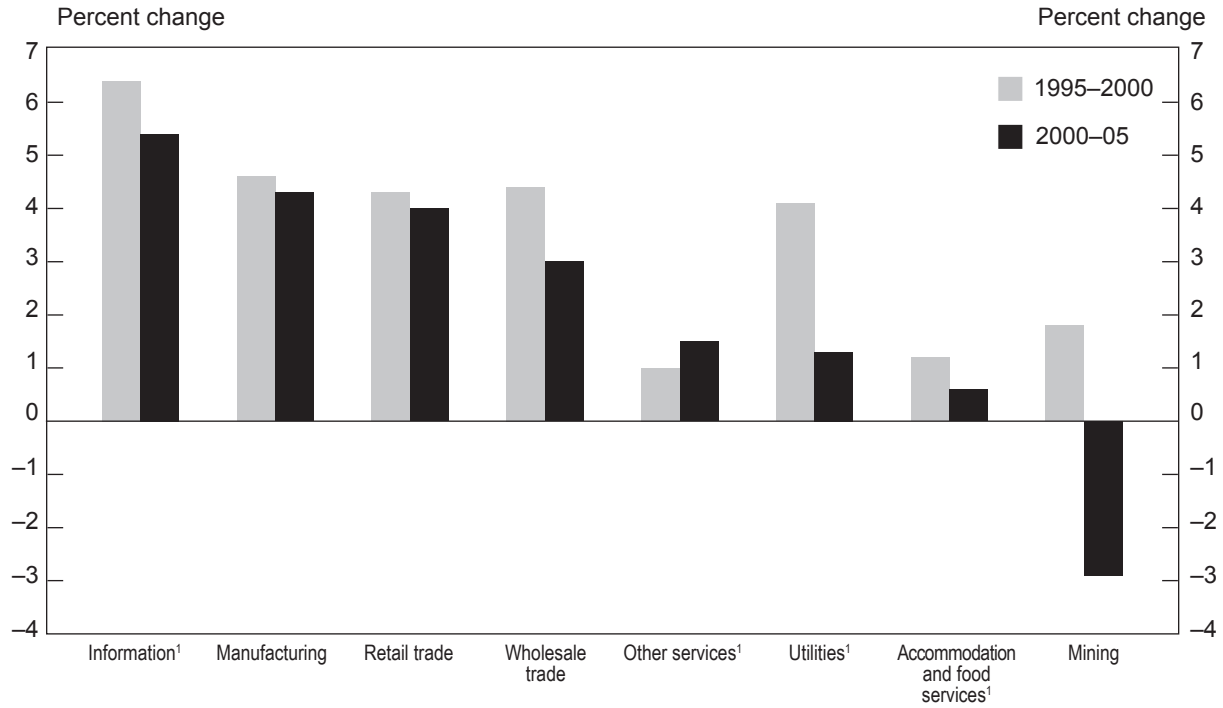
Productivity growth was slower from 2000 to 2005 than from 1995 to 2000 in seven of the eight sectors examined in this article. Still, during the recent 5-year period, productivity continued to grow fastest in those sectors where it had grown fastest from 1995 to 2000 and, with a few exceptions, slowest in the sectors where it had grown slowest during the early period. (See chart 1.) Productivity growth was strongest in the information sector in each period, followed by manufacturing. The retail trade sector also performed well during both periods. Productivity growth was slowest in other services and in accommodation and food services between 1995 and 2000, and these sectors had among the lowest productivity increases during the recent period as well. Productivity performance differed in the 2000–05 period relative to the second half of the 1990s in three sectors. Productivity growth slowed considerably in the wholesale trade and utilities sectors from 2000 to 2005 and fell sharply in mining after the sector had enjoyed moderate productivity growth during the 1995–2000 period. In contrast, the other services sector, which includes industries providing personal services such as *automotive repair and maintenance*, was the only sector to record an acceleration in productivity growth from the earlier period to the later period.

While the pattern of productivity growth in most sectors was similar in the latter half of the 1990s and the first 5 years of the current decade, the components of productivity growth differed during the two periods. (See chart 2.) Strong output growth occurred in most sectors between 1995 and 2000 and was the main contributor to productivity growth during that period. In contrast, during the 2000–05 period, output growth was lower in all sectors and reductions in labor input played an important role in contributing to the productivity increases in several sectors.

Sectors with strong productivity growth

Information. The information sector had the fastest productivity growth among the sectors studied from 1995 to 2000 as well as from 2000 to 2005. (See chart 1.) Productivity remained strong in the latter period, growing at an average annual rate of 5.4 percent, compared with an average rate of 6.4 percent in the 1995 to 2000 period. The source of the productivity growth, however, shifted between the two periods. During the second half of the

Chart 1. Average annual percent change in output per hour by sector, 1995–2000 and 2000–05



[1] Industry productivity measures cover less than 100 percent of sector employment. Rates of change shown for these sectors are not necessarily representative of industries not included.

1990s, productivity grew rapidly as output grew much faster than labor hours. As output growth slowed considerably in the more recent period, a drop in hours was mainly responsible for the increase in information sector productivity from 2000 through 2005. (See chart 2.) The BLS labor productivity measures, however, do not cover all the industries in the information sector. The measures for the sector are based on trends in the component industries for which BLS maintains measures, which cover approximately 72 percent of employment in the sector.

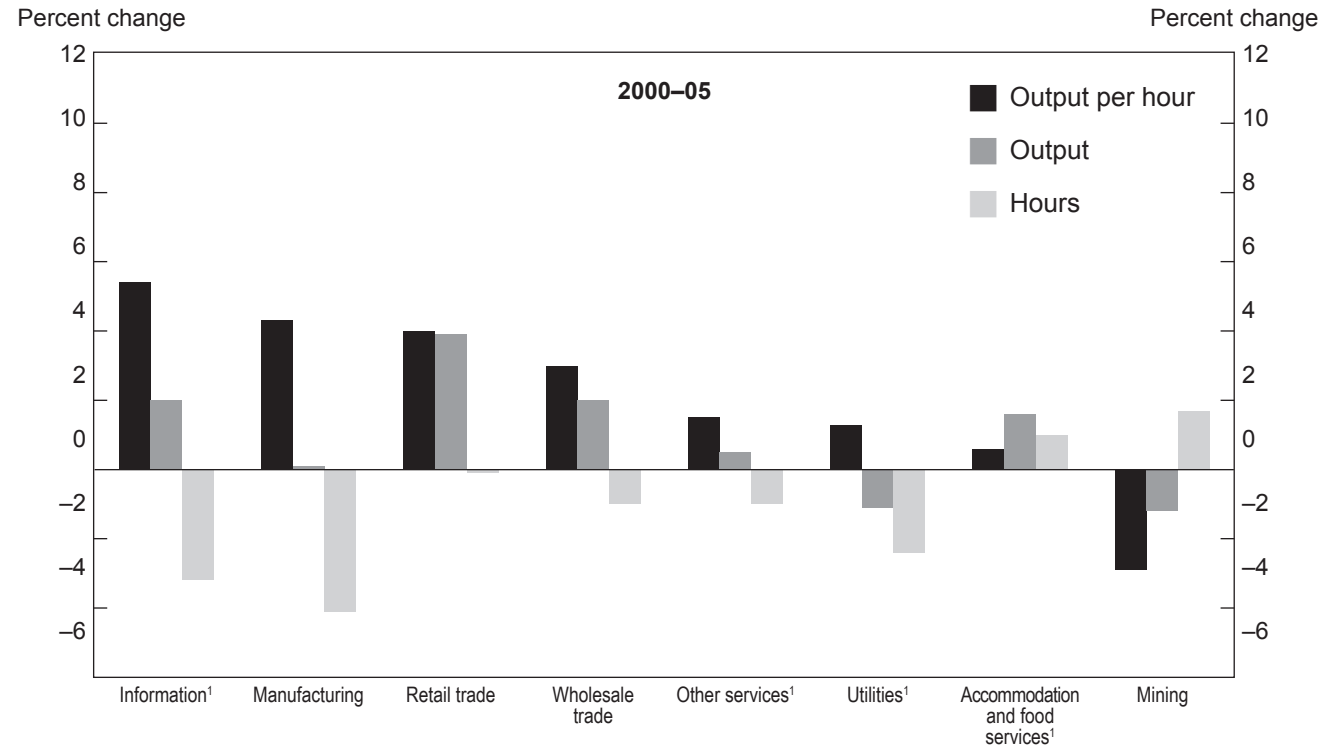
Productivity gains in the information sector during the 1990s were marked by large investments in IT and related products. In contrast, the 2000–05 period saw establishments in industries affected by the economic downturn struggling to increase efficiency in order to remain competitive. Offshoring of jobs, particularly those involving routine computer programming, played a role in the labor hour declines and reduced hours growth that occurred in certain industries in this sector.[11]

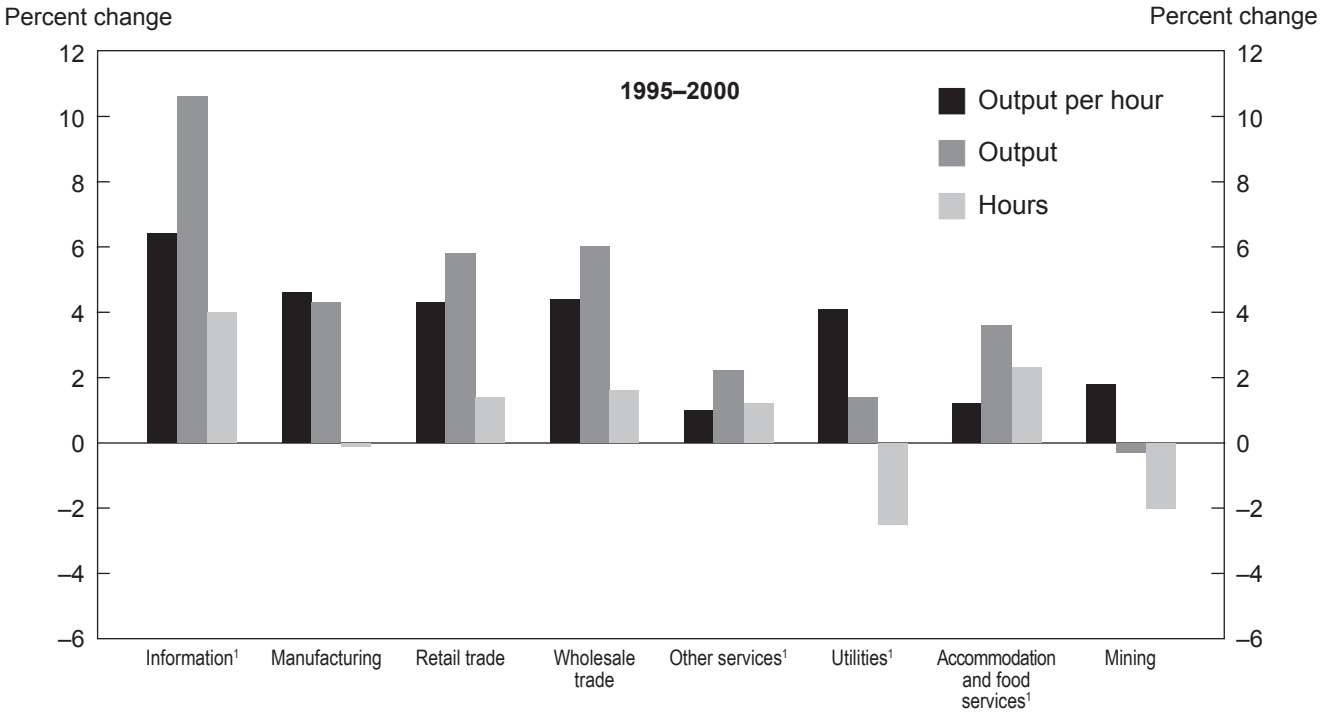
Productivity in the *wireless telecommunications carriers (except satellite)* industry increased almost 21 percent annually between 2000 and 2005, the most rapid productivity increase during this period among the industries studied. (See table 1.) Output grew more than 21 percent per year, reflecting continued strong demand for cellular telephones and other wireless handheld devices, while labor hours increased only slightly.

Productivity in the *software publishing* industry grew an average 7.5 percent annually from 2000 to 2005, down somewhat from its 10.2-percent rate of increase during the preceding 5-year period. (See appendix table A-1.) As in other IT industries, output growth slowed sharply from 23.6 percent per year during the latter half of the 1990s to 3.2 percent in the more recent 5-year period. Labor hours decreased substantially, 4 percent per year, from 2000 to 2005. Both employment and average hours fell, as offshoring of routine programming tasks became more commonplace in the industry.[12]

Among other information sector industries studied, two stand out. *Cable and other subscription programming* and *cable and other program distribution* both recorded relatively strong output growth and moderate growth in

Chart 2. **Average annual percent change in output per hour, output, and hours, by sector, 1995–2000 and 2000–05**





[1] Industry productivity measures cover less than 100 percent of sector employment. Rates of change shown for these sectors are not necessarily representative of industries not included.

Table 1. Average annual percent change in productivity, output, and hours, 1990–95, 1995–2000, and 2000–05, in industries with the largest productivity increases and decreases in 2000–05

NAICS Code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
	Largest increases									
5172	Wireless telecommunications carriers (except satellite)	5.1	11.1	20.8	28.2	27.4	21.6	22.0	14.6	0.7
3341	Computer and peripheral equipment manufacturing	27.6	36.3	19.7	23.3	34.4	8.7	–3.4	–1.4	–9.2
4234	Professional and commercial equipment and supplies merchant wholesalers	16.9	19.6	17.1	17.4	24.6	12.3	.5	4.2	–4.1
443	Electronics and appliance stores	13.0	14.6	16.3	15.6	19.1	16.0	2.4	3.9	–.2
3343	Audio and video equipment manufacturing	13.0	–2.3	13.6	10.4	–3.6	4.0	–2.2	–1.3	–8.5
4541	Electronic shopping and mail-order houses	10.8	17.2	12.2	17.7	25.0	11.2	6.2	6.7	–1.0
3344	Semiconductor and other electronic component manufacturing	23.8	29.5	10.7	24.6	34.0	1.4	.6	3.4	–8.4
3313	Alumina and aluminum production and processing	1.1	.1	9.7	–.5	.4	2.6	–1.6	.3	–6.5
56151	Travel agencies	–.3	5.1	9.5	2.4	4.9	.9	2.7	–.2	–7.9
81292	Photofinishing	.0	–7.3	8.9	–2.1	–8.0	–6.8	–2.1	–.8	–14.4
	Largest declines									
425	Wholesale electronic markets and agents and brokers	5.1	4.7	–6.2	6.1	6.8	–.5	.9	2.0	6.0
3161	Leather and hide tanning and finishing	4.3	7.6	–4.7	3.7	2.0	–13.8	–.6	–5.3	–9.6
3159	Apparel accessories and other apparel manufacturing	2.0	–2.6	–3.6	3.0	–6.6	–11.8	.9	–4.1	–8.4
541921	Photography studios, portrait	2.3	.3	–3.0	3.3	1.9	1.5	1.0	1.6	4.6
3162	Footwear manufacturing	4.3	4.8	–2.5	–2.9	–6.5	–12.4	–7.0	–10.9	–10.1
3342	Communications equipment manufacturing	9.0	17.1	–2.5	9.8	17.7	–11.4	.8	.5	–9.1
211	Oil and gas extraction	4.7	4.6	–2.0	–.7	–.6	–1.7	–5.2	–5.0	.3
2121	Coal mining	5.3	5.6	–1.4	–1.2	–.4	.2	–6.2	–5.7	1.7
48421	Used household and office goods moving	–2.1	–1.3	–1.4	.7	1.4	–2.1	2.8	2.8	–.7
3332	Industrial machinery manufacturing	3.6	6.0	–1.3	6.1	5.6	–6.6	2.4	–.4	–5.4
3312	Steel product manufacturing from purchased steel	3.6	–.9	–1.3	4.0	.3	–5.6	.4	1.2	–4.4

labor hours between 2000 and 2005. For both industries, output and labor hours growth were down during the most recent period relative to the latter half of the 1990s. However, with output growth in the range of 6 percent annually and moderate increases in labor hours, these industries recorded productivity gains of about 3 percent to 4 percent per year.

While *wired telecommunications carriers* still is the largest industry covered in the information sector in terms of revenues, its share is rapidly declining. Output declined an average 4.6 percent per year between 2000 and 2005, reflecting shrinking demand. Firms in the industry responded to increased competition and price pressure from wireless carriers and internet services by reducing

employment. Labor hours dropped more than 7 percent per year, on average, during the period and the industry managed to increase productivity at an average rate of 2.7 percent per year.

Manufacturing. The manufacturing sector had the second-highest productivity growth among the sectors studied, behind only the information sector, in both the 1995–2000 and 2000–05 periods. Manufacturing productivity growth in the 2000–05 period was down only slightly from the boom years of the late 1990s. Among industries within the sector, productivity growth in 2000–05 was widespread and substantial, occurring in 90 percent of manufacturing industries and averaging 4 percent or more per year in 40 percent of the industries. In contrast to the sector's performance from 1995 to 2000, however, manufacturing productivity growth from 2000 to 2005 was attributable to reductions in labor hours rather than to gains in output, as manufacturing output was flat over the period.[13] Whereas output increased in 79 percent of manufacturing industries from 1995 to 2000, it increased in slightly more than half the industries during the 2000–05 period. At the same time, labor hours declined in 95 percent of manufacturing industries between 2000 and 2005, up from 57 percent in the 1995–2000 period.[14]

IT manufacturing industries—*computers and peripheral equipment, semiconductors and other electronic components,* and *communications equipment*—were at the center of the productivity growth resurgence of the late 1990s, and contributed substantially to the performance of the manufacturing sector and the economy as a whole during that period. Output and productivity grew much more slowly in all three IT manufacturing industries from 2000 to 2005 relative to their performance between 1995 and 2000. The *computer and peripheral equipment manufacturing* industry, which had the fastest productivity growth among all the measured industries in the 1995–2000 period, also fared best among the manufacturing industries in the latter period by matching relatively strong output growth with substantial cuts in labor hours. In contrast, output growth in *semiconductor and other electronic components manufacturing* slowed dramatically in the 2000–05 period compared with the 1995–2000 period, from 34 percent per year to 1.4 percent per year, respectively. This reflects a significant downturn in the industry in 2001 and 2002, years in which production and inventories were sharply reduced. Despite the slowdown in output growth in semiconductor manufacturing, however, sizeable reductions in labor hours resulted in continued productivity growth over the 2000–05 period.

Communications equipment manufacturing had the largest reversal in productivity performance between the 1995–2000 and 2000–05 periods. After recording the third fastest increase in output and productivity from 1995 to 2000 among the manufacturing industries studied, output dropped sharply between 2000 and 2005. Even when combined with large cuts in labor hours, productivity in *communications equipment manufacturing* declined over the period. Conversely, *audio and video equipment manufacturing* saw productivity decline between 1995 and 2000, but recorded the second highest productivity growth in the manufacturing sector from 2000 to 2005.

Manufacturing employment has declined for more than two decades as production has grown more efficient, productive activity has shifted toward services, and the use of outsourcing and offshoring has grown. Manufacturing employment fell slightly during the early 1990s, was essentially flat from 1995 through 2000, and fell more rapidly after 2000 as the recession took hold. The manufacturing sector was the most harshly affected by the recession, in terms of jobs lost.[15] Although the recession was neither deep nor prolonged by historical standards, employment levels remained depressed for an unusually long period. For the sector as a whole and in many manufacturing industries, employment in 2005 remained below pre-recession levels, and this is reflected in substantial reductions in labor hours over the period.

The housing and residential construction boom that began in the years following the 2001 recession benefited a number of manufacturing industries, including *wood products manufacturing, cement and concrete manufacturing, architectural and structural metals manufacturing,* and *construction machinery manufacturing* (part of the *agriculture, construction, and mining machinery manufacturing* industry examined here).[16] While the boom was cut short by the housing and construction slump that began in mid-2005, that reversal occurred too late in the period studied to have had much affect on the productivity trends examined in this article.

An examination of the performance of productivity in manufacturing industries during the 1995–2000 and 2000–05 periods shows that in the earlier period, productivity growth was spurred mainly by increases in output; in the latter period, the primary contributor to manufacturing productivity growth was declining labor hours.

Retail trade. Productivity growth in the retail trade sector between 2000 and 2005 was nearly unchanged from the 1995–2000 period. Growth slowed in both output and hours in the latter period, with hours declining slightly.

This resulted in very similar productivity growth in both periods. Although retail trade output grew more slowly than it had during the latter half of the 1990s, the sector had the most rapid output growth from 2000 to 2005 among the sectors studied. Output in the retail trade sector grew nearly twice as fast as it did in the wholesale trade and information sectors. Because labor hours were basically unchanged between 2000 and 2005, all of the increase in output was reflected in productivity growth.

In most retail trade industries, productivity growth from 2000 to 2005 resulted from a combination of increases in output and declines in hours. Output grew between 2000 and 2005 in almost all the retail trade industries studied, but at a slower pace than during the latter half of the 1990s. Output grew 4 percent or higher per year in only a third of the industries, compared with two-thirds of the industries during the 1995–2000 period. At the same time, nearly 60 percent of the retail trade industries had declines in labor hours between 2000 and 2005, up from only 11 percent in the 1995–2000 period.

Electronics and appliance stores and *electronic shopping and mail-order houses* experienced the fastest productivity growth in the retail trade sector during both the first half and the second half of the 1990s, and did so again between 2000 and 2005. Both of these industries are associated with IT products, involving their distribution in the first case, and relying heavily on their use in the second. To achieve such strong productivity growth, these industries combined rapid output growth with flat or declining labor hours. *Other general merchandise stores*, which includes *warehouse clubs and supercenters*, had the third fastest productivity growth in the sector during both halves of the 1990s, but saw its productivity growth surpassed by an increased number of retail trade industries in the 2000–05 period. Although output continued to grow very rapidly in the latest period, *other general merchandise stores* was among the few industries to record strong increases in employment and labor hours, resulting in a drop-off in productivity growth.

The expansion of e-commerce and online shopping reflects changes in consumer shopping habits that adversely affected *department stores*. Growth in *warehouse clubs and supercenters* has also contributed to a more competitive climate for *department stores* and exerted downward pressure on department store sales. As output grew rapidly in *electronic shopping and mail order houses* and in *warehouse clubs and supercenters*, growth in output of *department stores* slowed in each successive 5-year period examined, ending with a slight decline between 2000 and 2005. Labor productivity growth in the industry followed a similar pattern. Within the *department stores* industry, *discount department stores* enjoyed substantial gains in market share at the expense of *department stores (except discount department stores)* during the first half of the 1990s. *Discount department stores* continued to surpass the latter industry with respect to output growth from 1995 to 2000 and maintained slightly more favorable output performance between 2000 and 2005. The stiff competition from various sides led to a wave of consolidations and closures in the *department stores (except discount department stores)* industry that appears to have paid off in terms of improved efficiency. While output in this industry declined between 2000 and 2005, labor productivity jumped as a result of sharp reductions in labor hours.

The housing boom also had a positive impact on industries in the retail trade sector. *Furniture stores* as well as industries in the *building material and garden equipment and supplies dealers* subsector benefited the most.

Sectors with moderate or weak productivity

Wholesale trade. In contrast to the retail trade sector, wholesale trade had significantly lower productivity growth from 2000 to 2005 relative to the 1995–2000 period. Output grew much more slowly in the latter period and labor hours fell, but not enough to offset the drop in output growth. Output grew 4 percent or more in only half as many industries from 2000 to 2005 as during the 1995–2000 period, and the share of wholesale trade industries with declines in labor hours rose from about one-quarter to about three-quarters. A mix of declining hours and increasing output resulted in increases in productivity in most wholesale trade industries between 2000 and 2005.

Wholesalers had been quick to adapt IT products to their needs and incorporate them into production processes, all made possible by the earlier development and widespread use of universal product codes (UPCs), or bar codes. Wholesalers' swift adoption of the new technologies contributed to the sector's strong productivity growth during the 1990s.[17] Nevertheless, the industries with the best productivity performance during the 1990s were those involved in distributing the IT products themselves. *Professional and commercial equipment wholesalers*, which includes the wholesaling of computers, computer peripheral equipment, and software, and *electrical and electronic goods wholesalers*, which includes the wholesaling of semiconductors, had the most rapid productivity growth in the sector. As output growth accelerated, productivity in these industries grew at double-digit rates throughout the

1990s. From 2000 to 2005, output growth dropped sharply in both industries. In *professional and commercial equipment wholesaling*, output expanded at a relatively strong 12.3 percent per year, about half as rapid as its growth during the late 1990s. Aided by a substantial drop in labor hours, productivity growth in the industry remained in the double-digit range. Output growth in *electrical and electronic goods wholesaling*, however, dropped to below 2 percent per year in the 2000–05 period. Productivity in this industry grew 6 percent per year between 2000 and 2005, mainly as a result of declining labor hours.

Among the wholesale trade industries with moderate to strong output and productivity growth are those with substantial e-commerce sales. Wholesaling of *drugs and druggists' sundries; motor vehicles and motor vehicle parts and supplies*; and *professional and commercial equipment and supplies* all have large e-commerce markets accounting for a significant portion of sales. These electronic transactions helped to bolster output and productivity growth even as labor input was flat or declining. Another wholesale trade industry with strong output and productivity growth during the 2000–05 period was *lumber and other construction materials merchant wholesalers*. This industry benefited from the housing construction boom that occurred during the period. It had the second highest output growth in the sector and was among the few wholesale trade industries to record increases in labor hours over the period.

Other services (except public administration). Productivity rose 1.5 percent per year on average in the other services sector from 2000 to 2005, faster than during the 1995–2000 period. Productivity rose in all but one of the measured industries in this sector, *funeral homes and funeral services*. Other industries covered in the sector include: *automotive repair and maintenance; hair, nail and skin care services*; *dry cleaning and laundry services;* and *photofinishing*. Together, these industries account for about 73 percent of total employment in the sector.

Among the covered industries in the sector, productivity grew most rapidly, by far—8.9 percent per year—in *photofinishing*. This represented a reversal of the industry's productivity performance during the 1990s. *Photofinishing* productivity was flat from 1990 to 1995, as output and labor hours each dropped an average of 2.1 percent per year. From 1995 to 2000, establishments in this industry struggled to adjust to changing market conditions and the advent of new technologies such as digital cameras, online photo sharing, and at-home printing. During this period, productivity fell an average 7.3 percent per year, as output declined 8.0 percent per year and hours fell less than 1 percent per year. During the 2000–05 period, the industry recorded average annual productivity growth of 8.9 percent despite increased competition from home-use products. While output fell 6.8 percent per year, hours declined more rapidly than in any other measured industry, 14.4 percent per year, as establishments in the industry increased their use of IT products.

Just two industries in the other services sector, *automotive repair and maintenance* and *hair, nail and skin care services*, experienced output growth from 2000 to 2005. Although output growth was slight in *automotive repair and maintenance*, it contributed to a small productivity increase. Moderate output growth was responsible for the productivity increase in *hair, nail and skin care services*.

More industries in other services experienced declining hours in the 2000–05 period than in the 1995–2000 period. In addition to *photofinishing*, a decrease in hours fueled productivity growth in *dry cleaning and laundry services* between 2000 and 2005. *Hair, nail and skin care services* was the only industry in the sector in which hours edged up slightly.

Utilities. Labor productivity in the utilities sector rose 1.3 percent per year, on average, from 2000 to 2005, a drop-off from the 4.1-percent productivity growth that occurred from 1995 to 2000. Demand for both electric power and natural gas has increased, but supplies are limited. Declining domestic production of natural gas resulting from the depletion of some domestic oil and natural gas fields and weather- and transportation-related supply disruptions may have played a role in restricting output growth in the utilities sector between 2000 and 2005. Despite a drop in output, utilities productivity growth remained positive during the period because the industries in the sector, *electric power generation and supply* and *natural gas distribution*, reduced labor hours substantially. The BLS measures for utilities industries cover approximately 92 percent of total employment in the sector.

Accommodation and food services. Productivity in the sector increased modestly at an annual rate of 0.6 percent from 2000 to 2005, a reduction from the 1.2-percent rate of productivity growth recorded in the previous 5-year period. Growth in both output and hours slowed in the recent period relative to the previous one, as the economic slowdown and travel fears related to the terrorist attacks in 2001 hampered growth in the *traveler accommodation* industry. While establishments in both the *traveler accommodation* industry and *the food services and drinking places* subsector increased their adoption of IT capital and IT-

based processes for booking reservations, billing, and inventory control, they remain labor-intensive industries. In contrast to a number of other sectors, labor hours continued to increase and output growth, however modest, was responsible for the small productivity increase that the sector recorded during the 2000–05 period. BLS measures cover most of the industries in this sector, accounting for more than 99 percent of the sector's employment.

In the *food services and drinking places* industry, output and hours both grew more slowly from 2000 to 2005 than in the previous 5-year period, while in *traveler accommodation*, output and hours declined. Productivity grew modestly in both industries from 2000 to 2005, which represented a significant slowdown for the *traveler accommodation* industry and a small increase for the *food services and drinking places* industry.

Sector with declining productivity

Mining. The mining sector was the only sector studied where productivity declined between 2000 and 2005. After increasing in both halves of the 1990's, productivity in the mining sector declined at an average rate of nearly 3 percent per year between 2000 and 2005. A sharp drop in output as well as a rise in labor hours were responsible for the reversal in productivity growth.

Demand and supply factors, including strong domestic demand for energy supplies, international competition for energy resources, uncertainties surrounding foreign oil production, declining domestic oil production, and supply disruptions related to weather and transportation problems each contributed to a rise in prices of energy-related products from 2000 to 2005. In response, labor input began to climb in 2004 and 2005 as producers attempted to increase production to meet strong demand. While *coal mining* output increased slightly, labor hours grew faster. In the *oil and gas extraction* industry, labor hours edged up, but output continued to fall as production from onshore conventional fields declined and producers relied more heavily on unconventional and remote sources.[18] Consequently, productivity declined in both the *coal mining* and *oil and gas extraction* industries over the period.

Nonmetallic mineral mining and quarrying experienced moderate output growth from 2000 to 2005, possibly as a result of heightened demand for building materials in connection with increased construction activity. In combination with declining hours, this output growth spurred a healthy productivity increase in the industry. Output fell in the *metal ore mining* industry, but hours fell even more, leading to a modest increase in productivity. The strong productivity growth in the nonenergy-related mining industries, however, did not fully offset the declines in the larger energy-related industries which set the tone for the sector as a whole.

Additional industries

BLS publishes productivity measures for a number of service-providing industries that are not included in the sectors discussed above. These additional industries are in the transportation and warehousing; finance and insurance; real estate and rental and leasing; professional, scientific, and technical services; administrative and support and waste management and remediation services; health care and social assistance; and arts, entertainment, and recreation sectors. This section discusses notable productivity trends in several of these industries.

Travel agencies adjusted well to the increasing prevalence of IT, with productivity growing at a rate of 9.5 percent from 2000 through 2005. Travel information and booking services have become more accessible to the public through the internet, and travel agents have shifted their focus from the basic services available on the internet to travel packages and group trips. Industry output growth slowed considerably between the 1995–2000 and 2000–05 periods, but labor hours fell rapidly, resulting in an increase in productivity growth over the 2000–05 period.

Output in the *air transportation* industry dipped in the first half of the 2000–05 period, falling 3.8 percent per year between 2000 and 2002 due to travel fears related to the September 11th terrorist attacks combined with the effects of the economic recession. Output surged after 2002, however, growing an average 2.5 percent per year over the 2000–05 period. Price pressures and increased competition helped foment a great deal of industry restructuring during this period, leading to a decline in labor hours of 3.9 percent per year. As a result, productivity grew a strong 6.7 percent per year between 2000 and 2005.

Productivity growth in the *commercial banking* industry ratcheted down from the first half of the 1990s to the second half and then dropped further in the 2000–05 period, growing at an average rate of only 1.1 percent per year. While output growth rebounded during the latest period, labor hours reversed the declines recorded during the 1990s and began to increase at an average rate of 0.9 percent per year.

Deregulation and the intensive use of IT transformed *commercial banking* over the past quarter-century.[19] The increased competition that deregulation generated led banks to rely heavily on technology to reduce costs and to

offer many new products and services. For example, the rapid growth in the number of ATMs and the increased number of services offered through them allowed banks to exploit technology and improve service to the public while reducing staff and operating costs. The highly competitive climate in banking also led to a number of mergers during the 1990s, as banks consolidated and streamlined their operations.[20] However, the data indicate that the greatest productivity gains in *commercial banking* may have been realized in the early 1990s, when the largest reductions in *commercial banking* employment occurred. Between 1990 and 1995, for example, productivity grew 3.4 percent per year, on average. Between 1995 and 2000, productivity rose a modest 1.4 percent per year, as output grew and employment and hours declined more gradually than in the previous period. From 2000 through 2005, *commercial banking* employment rose steadily and labor hours increased nearly 1 percent per year. Although output growth revived during this period, the increase in labor hours resulted in a further drop in productivity growth to a rate of 1.1 percent per year.

Productivity in the *medical and diagnostic laboratories* industry slumped to an average 1.0 percent per year from 2000 to 2005, after growing 7.7 percent per year over the prior 5 years. During the 1990s, substantial investments in IT capital allowed for rapid output growth with only moderate growth in labor hours. The 2000–05 period saw a marked increase in hours growth. In addition, output grew more slowly, averaging 5.8 percent per year from 2000 to 2005, compared with 10.1 percent per year in the previous period.

Productivity in *portrait photography* studios declined at a relatively rapid 3 percent annually from 2000 to 2005. Output in the industry increased 1.5 percent per year, but hours increased 4.6 percent annually. Much of the productivity slowdown in this industry occurred after 2003, when labor hours grew particularly rapidly.

Summary and conclusions

Labor productivity in the total nonfarm business sector increased at a 3-percent annual rate from 2000 to 2005. This figure, however, masks structural and cyclical shifts that occurred in the economy over the period.[21] An analysis of productivity by sector and industry helps to reveal trends that are hidden in the aggregate data. This analysis shows, for example, that between 2000 and 2005, productivity growth in IT industries, and their contribution to aggregate productivity growth, were substantially reduced relative to the 1995–2000 period. At the same time, a number of industries were able to maintain strong productivity growth in the face of flat or declining output by reducing employment and labor hours.

The cyclical effects of the economic downturn in 2001 had a dramatic impact on productivity from 2000 to 2005. The drop in employment and hours was more protracted than the decline in output, particularly in the manufacturing and information sectors. Most growth in industry productivity during this period resulted from slower output growth than occurred in the previous 5-year period, combined with even slower growth or declines in labor hours. In addition to the effects of the recession on economic activity, other developments affected specific industries or sectors. For example, the negative supply and demand shocks from the terrorist attacks in September 2001 hurt output growth during this period in travel-related and financial industries in particular. In contrast, industries involved in producing or distributing construction materials benefited from the housing boom that accelerated in 2003 and lasted until mid-2005.

Structural shifts in the economy also affected productivity trends in many industries. Some industries saw dramatic declines in output, compared with the previous period, as customers substituted more advanced or high-tech products for traditional ones. *Wireless telecommunications carriers*, for example, benefited while *wired telecommunications carriers* were hurt as wireless technology matured and customers cut back on wired telephone services. Similarly, the growth of digital imaging technology boosted the output of digital camera manufacturers and software developers and led to increased productive efficiency in *photofinishing* establishments as employment and hours were reduced. In addition, outsourcing and offshoring may have allowed producers in some industries to decrease labor hours. From 2000 to 2005, most sectors and industries were faced with weaker output growth, yet continued to improve efficiency and maintain productivity growth. □

Notes

[1] The National Bureau of Economic Research reports that a business cycle peak occurred in the first quarter of 2001, with the trough following in the fourth quarter of that year. During a recession, productivity typically falls or grows at rates below those seen during business cycle expansions.

[2] Current industry productivity measures are available on the BLS Labor Productivity and Costs Web site at www.bls.gov/lpc/home. htm. Measures examined here are mainly for three- and four-digit industries, classified according to the North American Industry Classification System (NAICS).

[3] Sectoral output is measured by industry revenues or, for goods-producing industries, by value of production. Value of production is derived by adjusting industry value of shipments for changes in inventories and subtracting shipments between establishments in the same industry (intra-industry transfers) and resales of finished goods.

[4] Measures for the manufacturing sector are compiled by the BLS Division of Major Sector Productivity, as are the measures for the business and nonfarm business sectors.

[5] All the industries in these sectors are covered at the four-digit NAICS level except the *support activities for mining* industry, NAICS 2131. Productivity measures for the mining sector exclude the output of NAICS 2131, which is all consumed within the sector, but include employment and hours of workers in NAICS 2131.

[6] *Religious, grantmaking, civic, professional, and similar organizations* and *private households* are excluded from the BLS other services sector measures.

[7] While the goal of the industry productivity program is to develop industry measures covering as much of the nonfarm business economy as possible, lack of reliable source data or conceptual problems in defining or measuring industry output limit the development of productivity measures for certain industries. These problems affect efforts to measure output and productivity in service industries in particular.

[8] See, for example, Dale W. Jorgenson, Mun S. Ho, and Kevin Stiroh, "A Retrospective Look at the U.S. Productivity Growth Resurgence," Federal Reserve Bank of New York Staff Reports, Staff Report No. 277, February 2007. On the Internet at: **www.newyorkfed.org/research/staff_reports/sr277.pdf**.

[9] Dale Jorgenson and other productivity researchers divide the industries of the economy into three categories: IT-producing, IT-using, and non-IT (see, for example, Dale W. Jorgenson, "Moore's Law and the Emergence of the New Economy," Semiconductor Industry Association 2005 Annual Report, pp. 17–20. On the Internet at: **www.sia-online.org/downloads/SIA_AR_2005_Jorgenson.pdf**). The IT-producing industries group includes three manufacturing industries and one information sector industry: *computers and peripheral equipment manufacturing*, *semiconductors and other electronic components manufacturing, communications equipment manufacturing*, and *software publishers*. In this article, we adopt this grouping of IT-producing industries and refer to them simply as IT industries.

[10] Jorgenson, "Moore's Law," p. 18.

[11] See Robert W. Bednarzik, "Restructuring information technology: is offshoring a concern?," *Monthly Labor Review*, August 2005, pp. 11–21. In comparing the results of several studies on the topic, the author notes that "offshoring appears to have a small employment impact in the aggregate, but certain occupations and industries are hard hit."

[12] U. S. Government Accountability Office, Report to Congressional Committees, "Offshoring: U.S. Semiconductor and Software Industries Increasingly Produce in China and India," GAO-06–423, September 2006. On the Internet at: **www.gao.gov/new.items/d06423.pdf**. See also the following report prepared by Global Insight (USA), Inc. for the Information Technology Association of America (ITAA), "Executive Summary: The Comprehensive Impact of Offshore Software and IT Services Outsourcing on the U.S. Economy and the IT Industry," October 2005. On the Internet at **www.itaa.org/itserv/docs/OffshoreITOExecutiveSummary2005FINAL.pdf**.

[13] Increased outsourcing of workers and offshoring of production can result in industry labor productivity growth because the outsourced or foreign labor used is not counted as labor input in the domestic industry whose output is being measured. See Susan Houseman, "Outsourcing, Offshoring, and Productivity Measurement in U.S. Manufacturing," Upjohn Institute Staff Working Paper No. 06–130, June 2006, revised September 2006 and April 2007. Purchases of intermediate goods and contract labor are included as purchased materials or services inputs in the BLS multifactor productivity measures.

[14] Research indicates that, during the period studied, manufacturers obtained some workers from staffing firms rather than hiring them outright, and the prevalence of this practice has increased since 1990 (see Matthew Dey, Susan Houseman, and Anne Polivka, "Manufacturers' Outsourcing to Employment Services," Upjohn Institute Staff Working Paper No. 07–132, December 2006). In the employment statistics classified according to NAICS, these workers are counted in the industry group in which the staffing firms are classified, *employment services*, rather than as manufacturing employees. From 2000 to 2005, manufacturing employment fell 3.7 percent per year, while employment in the *employment services* industry fell only 1.4 percent per year.

[15] See Julie Hatch Maxfield, "Jobs in 2005: How do they compare with their March 2001 counterparts?" *Monthly Labor Review*, July 2006, pp. 15–26, for a discussion of the duration of employment downturns in the most recent and previous recessions. Table 2 on page 18 shows employment changes by sector during the most recent and previous recessions.

[16] See Matthew Miller, "A visual essay: post-recessionary employment growth related to the housing market," *Monthly Labor Review*, October 2006, pp. 23–34.

[17] Christopher Kask, David Kiernan, and Brian Friedman, "Labor productivity growth in wholesale trade, 1990–2000," *Monthly Labor Review*, December 2002, pp. 3–14.

[18] U.S. Department of Energy, Energy Information Administration, *Annual Energy Outlook 2007 with Projections to 2030*, February 2007. On the Internet at: **www.eia.doe.gov/oiaf/aeo/**.

[19] Teresa L. Morisi, "Commercial banking transformed by computer technology," *Monthly Labor Review*, August 1996, pp. 30–36.

[20] Kevin J. Stiroh and Jennifer P. Poole, "Explaining the Rising Concentration of Banking Assets in the 1990s," *Current Issues in Economics and Finance*, Federal Reserve Bank of New York, August 2000.

[21] The industry and sector productivity measures discussed in this article are based on sectoral output, the total value, in real terms, of goods and services produced for sale outside the industry. In contrast, BLS productivity data for the nonfarm business sector are based on value-added output, which measures only the contribution of labor and capital to production and excludes the value of intermediates.

Appendix table A–1. Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS Code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
	Mining									
21	Mining	3.6	1.8	–2.9	–0.3	–0.3	–1.2	–3.8	–2.0	1.7
211	Oil and gas extraction	4.7	4.6	–2.0	–.7	–.6	–1.7	–5.2	–5.0	.3
212	Mining, except oil and gas	3.5	2.5	1.3	.3	.1	.6	–3.1	–2.3	–.7
2121	Coal mining	5.3	5.6	–1.4	–1.2	–.4	.2	–6.2	–5.7	1.7
2122	Metal ore mining	4.3	4.4	1.3	2.5	–.5	– 3.7	–1.7	–4.7	–4.9
2123	Nonmetallic mineral mining and quarrying	1.1	–.2	3.9	.7	1.0	2.9	–.3	1.3	–1.0
	Utilities									
22	Utilities	4.5	4.1	1.3	2.5	1.4	–1.1	–2.0	–2.5	–2.4
2211	Electric power generation and supply	4.5	3.9	1.3	2.3	1.5	–1.0	–2.1	–2.3	–2.3
2212	Natural gas distribution	4.5	4.9	1.8	2.9	1.3	–.9	–1.5	–3.4	–2.6
	Manufacturing									
31–33	Manufacturing	3.4	4.6	4.3	3.3	4.5	.1	–.1	–.1	–4.1
311	Food	1.2	1.4	2.9	2.0	1.5	1.5	.8	.1	–1.4
3111	Animal food	.5	3.2	8.6	1.2	1.7	3.7	.7	–1.4	–4.5
3112	Grain and oilseed milling	2.2	2.8	4.0	1.7	1.3	1.5	–.5	–1.4	–2.4
3113	Sugar and confectionery products	.8	3.3	3.6	.8	2.4	–.2	.0	–.9	–3.7
3114	Fruit and vegetable preserving and specialty	2.3	2.6	3.4	2.1	1.6	.7	–.2	–1.0	–2.6
3115	Dairy products	1.4	–.4	2.7	1.1	–.6	1.9	–.3	–.2	–.7
3116	Animal slaughtering and processing	1.0	.7	2.7	3.3	2.5	1.3	2.3	1.8	–1.4
3117	Seafood product preparation and packaging	–1.6	5.0	5.8	–1.5	.4	3.1	.2	–4.3	–2.5
3118	Bakeries and tortilla manufacturing	1.3	1.5	1.3	2.1	1.5	.4	.8	.0	–.8
3119	Other food products	2.4	1.6	.5	2.7	1.6	1.8	.3	.0	1.3
312	Beverages and tobacco products	3.2	–3.0	2.5	1.4	–.9	–.3	–1.8	2.1	–2.7
3121	Beverage	3.3	–2.5	5.6	1.9	.6	3.1	–1.4	3.2	–2.4
3122	Tobacco and tobacco products	4.2	–.3	–.6	1.0	–3.3	–5.0	–3.1	–3.0	–4.4
313	Textile mills	3.4	3.2	6.7	2.9	–1.1	–4.8	–.5	–4.2	–10.8
3131	Fiber, yarn, and thread mills	4.3	2.0	8.2	3.3	–.5	–1.2	–1.0	–2.4	–8.7
3132	Fabric mills	4.9	2.9	6.4	3.4	–2.1	–6.5	–1.4	–4.9	–12.2
3133	Textile and fabric finishing mills	.6	4.4	6.0	2.3	.0	–4.6	1.7	–4.1	–10.1
314	Textile product mills	.8	2.7	4.6	1.7	2.3	–.2	.9	–.4	–4.6
3141	Textile furnishings mills	1.0	2.5	5.3	1.2	2.9	.4	.2	.4	–4.7
3149	Other textile product mills	1.0	2.6	3.3	3.0	1.2	–1.4	2.0	–1.3	–4.5

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
315	Apparel	4.1	5.3	–0.9	1.8	–4.4	–13.0	–2.2	–9.3	–12.1
3151	Apparel knitting mills	4.9	–.1	1.9	4.6	–8.5	–9.5	–.3	–8.5	–11.2
3152	Cut and sew apparel	4.0	7.0	–1.1	1.1	–3.5	–13.7	–2.7	–9.8	–12.7
3159	Accessories and other apparel	2.0	–2.6	–3.6	3.0	–6.6	–11.8	.9	–4.1	–8.4
316	Leather and allied products	2.5	7.9	.0	–2.1	–.8	–9.9	–4.4	–8.1	–9.9
3161	Leather and hide tanning and finishing	4.3	7.6	–4.7	3.7	2.0	–13.8	–.6	–5.3	–9.6
3162	Footwear	4.3	4.8	–2.5	–2.9	–6.5	–12.4	–7.0	–10.9	–10.1
3169	Other leather products	–6.3	8.8	6.4	–7.5	2.8	–4.0	–1.2	–5.5	–9.8
321	Wood products	.0	1.0	3.7	1.6	2.4	1.1	1.6	1.4	–2.5
3211	Sawmills and wood preservation	2.6	3.1	3.9	1.4	2.8	1.1	–1.2	–.3	–2.8
3212	Plywood and engineered wood products	–.3	–.5	2.2	2.6	2.6	1.2	2.9	3.1	–1.0
3219	Other wood products	–1.1	.6	4.1	1.4	2.2	1.1	2.5	1.5	–2.9
322	Paper and paper products	2.4	1.7	3.3	2.0	.3	–1.3	–.3	–1.3	–4.5
3221	Pulp, paper, and paperboard mills	3.2	3.4	5.1	1.8	–.3	–1.5	–1.4	–3.6	–6.2
3222	Converted paper products	1.5	.8	2.6	1.9	.7	–1.1	.3	–.1	–3.7
323	Printing and related support activities	.3	1.1	2.7	.8	.9	–2.0	.5	–.2	–4.6
324	Petroleum and coal products	3.6	4.8	1.7	1.5	1.6	.9	–2.0	–3.0	–.9
325	Chemicals	1.6	2.5	4.5	1.1	1.7	2.2	–.4	–.8	–2.1
3251	Basic chemicals	–.5	5.2	6.8	–1.4	–.1	1.6	–.9	–5.1	–4.8
3252	Resin, rubber, and artificial fibers	4.6	2.8	3.1	2.8	1.3	–.5	–1.7	–1.5	–3.5
3253	Agricultural chemicals	.9	.5	7.8	.5	–1.3	3.3	–.4	–1.8	–4.2
3254	Pharmaceuticals and medicines	1.0	–.1	2.4	3.0	4.1	4.2	2.0	4.1	1.8
3255	Paints, coatings, and adhesives	1.2	1.8	4.1	.7	1.3	.6	–.4	–.5	–3.4
3256	Soaps, cleaning compounds, and toiletries	2.5	1.4	8.2	1.7	1.3	5.5	–.8	–.1	–2.5
3259	Other chemical products and preparations	3.8	5.1	.6	2.3	2.9	–3.1	–1.4	–2.0	–3.8
326	Plastics and rubber products	2.1	3.2	3.8	4.6	3.8	–.1	2.4	.6	–3.7
3261	Plastics products	2.1	3.5	3.8	5.0	4.2	.3	2.9	.7	–3.4
3262	Rubber products	2.2	1.8	3.2	3.0	2.2	–1.7	.8	.4	–4.7
327	Nonmetallic mineral products	1.5	1.8	2.2	1.3	3.2	.6	–.2	1.4	–1.6
3271	Clay products and refractories	1.7	1.1	2.5	2.4	.1	–3.3	.7	–1.0	–5.6
3272	Glass and glass products	2.0	4.3	2.6	1.4	3.4	–2.0	–.6	–.9	–4.4

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
3273	Cement and concrete products	0.6	0.4	0.8	0.9	4.7	1.8	0.3	4.3	1.0
3274	Lime and gypsum products	1.1	1.8	3.5	–.3	2.9	2.1	–1.4	1.0	–1.3
3279	Other nonmetallic mineral products	2.8	1.1	4.1	1.6	1.8	2.4	–1.2	.7	–1.7
331	Primary metals	2.5	1.2	5.8	1.7	.8	–.5	–.7	–.3	–5.9
3311	Iron and steel mills and ferroalloy production	5.1	3.3	8.6	1.7	1.4	1.4	–3.2	–1.8	–6.6
3312	Steel products from purchased steel	3.6	–.9	–1.3	4.0	.3	–5.6	.4	1.2	–4.4
3313	Alumina and aluminum production	1.1	.1	9.7	–.5	.4	2.6	–1.6	.3	–6.5
3314	Other nonferrous metal production	1.3	–.1	3.6	.8	–1.5	–2.2	–.5	–1.4	–5.6
3315	Foundries	1.5	2.2	4.3	2.8	2.6	–1.9	1.3	.5	–5.9
332	Fabricated metal products	2.2	1.5	2.1	2.9	3.1	–1.2	.6	1.5	–3.2
3321	Forging and stamping	1.1	5.2	3.9	3.4	4.8	–1.2	2.3	–.4	–4.9
3322	Cutlery and hand tools	2.6	1.7	1.9	3.1	1.9	–4.8	.5	.1	–6.6
3323	Architectural and structural metals	1.2	1.5	1.4	1.9	5.6	–.7	.6	4.0	–2.1
3324	Boilers, tanks, and shipping containers	1.6	–.6	–.1	.1	–.5	–2.9	–1.4	.2	–2.8
3325	Hardware	2.8	3.3	3.0	2.5	1.2	–5.3	–.2	–2.1	–8.0
3326	Spring and wire products	3.1	2.6	5.4	4.8	1.8	–1.3	1.7	–.8	–6.3
3327	Machine shops and threaded products	4.4	1.9	1.3	6.5	3.8	–.4	2.0	1.8	–1.7
3328	Coating, engraving, and heat treating metals	4.7	.6	5.2	6.5	3.1	.9	1.8	2.4	–4.1
3329	Other fabricated metal products	2.2	.7	2.4	1.0	1.3	–.9	–1.1	.6	–3.3
333	Machinery	2.0	2.9	3.7	3.2	2.6	–1.0	1.2	–.3	–4.5
3331	Agriculture, construction, and mining machinery	2.7	1.0	5.4	1.9	1.2	4.0	–.8	.1	–1.3
3332	Industrial machinery	3.6	6.0	–1.3	6.1	5.6	–6.6	2.4	–.4	–5.4
3333	Commercial and service industry machinery	1.6	–.5	2.4	2.0	–.6	–4.3	.4	.0	–6.5
3334	HVAC and commercial refrigeration equipment	1.3	2.3	5.0	4.7	3.7	.0	3.4	1.4	–4.7
3335	Metalworking machinery	2.8	1.4	3.6	4.1	.5	–3.1	1.3	–.8	–6.4
3336	Turbine and power transmission equipment	1.2	4.7	2.7	2.4	3.4	.4	1.1	–1.3	–2.2
3339	Other general purpose machinery	1.6	3.9	3.8	3.0	3.1	–1.1	1.4	–.8	–4.8
334	Computer and electronic products	15.4	20.8	7.4	13.3	21.7	.1	–1.8	.7	–6.8
3341	Computer and peripheral equipment	27.6	36.3	19.7	23.3	34.4	8.7	–3.4	–1.4	–9.2
3342	Communications equipment	9.0	17.1	–2.5	9.8	17.7	–11.4	.8	.5	–9.1
3343	Audio and video equipment	13.0	–2.3	13.6	10.4	–3.6	4.0	–2.2	–1.3	–8.5
3344	Semiconductors and electronic components	23.8	29.5	10.7	24.6	34.0	1.4	.6	3.4	–8.4
3345	Electronic instruments	4.5	3.6	3.7	–.3	2.8	1.4	–4.6	–.8	–2.1

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
3346	Magnetic media manufacturing and reproduction	4.7	0.1	6.3	9.6	–1.1	0.4	4.7	–1.3	–5.6
335	Electrical equipment and appliances	4.2	3.6	3.1	3.2	3.3	–3.5	–.9	–.2	–6.4
3351	Electric lighting equipment	.8	2.1	5.6	1.7	2.5	–.7	.9	.4	–5.9
3352	Household appliances	3.7	5.0	7.1	4.1	3.0	1.5	.4	–1.9	–5.2
3353	Electrical equipment	5.9	.3	3.3	3.7	–.4	–3.7	–2.1	–.7	–6.7
3359	Other electrical equipment and components	3.9	5.4	.3	2.8	6.5	–6.5	–1.0	1.1	–6.8
336	Transportation equipment	1.9	3.2	5.1	1.0	4.0	1.7	–.9	.7	–3.3
3361	Motor vehicles	.7	4.4	6.0	3.7	3.5	2.1	3.0	–.8	–3.7
3362	Motor vehicle bodies and trailers	5.1	.3	2.9	10.2	3.2	1.7	4.8	2.9	–1.2
3363	Motor vehicle parts	3.9	4.0	5.2	9.0	5.3	.1	4.9	1.3	–4.8
3364	Aerospace products and parts	1.4	1.6	4.0	–8.2	2.2	1.2	–9.5	.7	–2.7
3365	Railroad rolling stock	1.1	7.7	.4	5.0	5.0	–3.5	3.9	–2.5	–3.9
3366	Ship and boat building	–1.3	5.5	1.8	–4.0	4.8	2.3	–2.7	–.7	.5
3369	Other transportation equipment	8.4	7.1	6.7	11.0	7.9	5.5	2.4	.8	–1.1
337	Furniture and related products	1.5	1.8	4.3	2.0	4.5	.7	.5	2.6	–3.5
3371	Household and institutional furniture	2.0	1.0	3.6	2.3	3.3	1.0	.3	2.3	–2.5
3372	Office furniture and fixtures	.6	3.4	6.4	1.6	6.3	–.5	.9	2.8	–6.5
3379	Other furniture–related products	1.3	1.0	4.4	2.1	5.1	2.0	.8	4.1	–2.3
339	Miscellaneous manufacturing	2.0	3.5	4.9	2.9	4.1	2.3	.8	.5	–2.5
3391	Medical equipment and supplies	3.1	3.5	5.3	3.6	5.2	4.8	.5	1.7	–.5
3399	Other miscellaneous manufacturing	1.2	3.4	4.1	2.3	3.1	–.1	1.1	–.3	–4.1
	Wholesale trade									
42	Wholesale trade	3.3	4.4	3.0	4.1	6.0	2.0	.7	1.6	–1.0
423	Durable goods	5.9	6.8	6.0	6.7	8.9	3.7	.7	2.0	–2.2
4231	Motor vehicle and motor vehicle parts and supplies	3.8	4.3	4.7	5.5	4.9	2.5	1.7	.6	–2.1
4232	Furniture and home furnishings	2.6	1.8	2.5	3.2	3.9	.1	.5	2.0	–2.3
4233	Lumber and other construction materials	–1.3	1.2	5.4	.3	4.0	7.5	1.6	2.8	2.0
4234	Professional and commercial equipment and supplies	16.9	19.6	17.1	17.4	24.6	12.3	.5	4.2	–4.1
4235	Metals and minerals (excluding petroleum)	.4	–2.2	1.9	1.2	.1	–1.2	.8	2.4	–3.0
4236	Electrical and electronic goods	10.8	12.8	6.0	11.1	16.0	1.7	.3	2.9	–4.0
4237	Hardware, plumbing, heating equipment and supplies	2.4	.9	.2	3.1	3.1	.6	.7	2.2	.4
4238	Machinery, equipment and supplies	2.0	3.2	2.4	1.4	4.3	.6	–.6	1.0	–1.8

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
4239	Miscellaneous durable goods	1.9	2.9	3.1	5.0	2.2	1.7	3.1	–0.6	–1.3
424	Nondurable goods	–.1	1.3	1.7	.7	2.0	.4	.8	.7	–1.3
4241	Paper and paper products	3.3	1.1	6.6	4.1	1.2	.4	.7	.1	–5.8
4242	Drugs and druggists' sundries	3.3	–1.9	5.5	4.5	3.7	5.4	1.2	5.7	–.1
4243	Apparel, piece goods and notions	–1.8	3.7	5.2	.2	3.2	2.0	2.0	–.5	–3.1
4244	Grocery and related products	1.5	–.3	.4	2.7	.8	.2	1.1	1.1	–.2
4245	Farm product raw materials	1.9	3.7	.6	.4	–.4	–1.2	–1.5	–4.0	–1.8
4246	Chemicals and allied products	–.5	–2.3	.0	.7	–.3	–.7	1.1	2.0	–.7
4247	Petroleum and petroleum products	–1.7	6.5	2.0	–6.2	5.9	–3.3	–4.6	–.6	–5.2
4248	Beer, wine and distilled alcoholic beverages	–1.6	1.3	–.7	–1.0	3.3	2.3	.6	1.9	3.0
4249	Miscellaneous nondurable goods	–1.7	2.9	1.6	.2	2.2	–.4	2.0	–.6	–1.9
425	Electronic markets and agents and brokers	5.1	4.7	–6.2	6.1	6.8	–.5	.9	2.0	6.0
	Retail trade									
44–45	Retail trade	2.9	4.3	4.0	3.8	5.8	3.9	.8	1.4	–.1
441	Motor vehicle and parts dealers	2.9	3.6	2.1	4.2	6.1	2.8	1.2	2.3	.6
4411	Automobile dealers	2.6	3.5	1.7	4.0	6.0	2.6	1.4	2.4	.9
4412	Other motor vehicle dealers	4.8	5.5	3.2	5.6	11.0	8.3	.8	5.2	4.9
4413	Auto parts, accessories, and tire stores	3.8	2.6	1.3	4.9	4.2	.1	1.0	1.5	–1.2
442	Furniture and home furnishings stores	3.5	4.4	5.5	3.9	7.4	5.6	.4	2.9	.1
4421	Furniture stores	2.0	3.6	5.1	2.5	6.4	5.1	.5	2.7	.1
4422	Home furnishings stores	5.6	5.3	6.0	6.0	8.6	6.2	.3	3.1	.2
443	Electronics and appliance stores	13.0	14.6	16.3	15.6	19.1	16.0	2.4	3.9	–.2
444	Building material and garden supply stores	2.9	4.3	3.6	4.4	7.0	6.4	1.4	2.6	2.7
4441	Building material and supplies dealers	2.7	4.3	3.2	4.5	7.1	6.8	1.8	2.7	3.4
4442	Lawn and garden equipment and supplies stores	4.0	4.2	5.6	3.2	6.2	3.7	–.7	1.9	–1.8
445	Food and beverage stores	–1.0	–.2	3.2	–.5	.4	.7	.4	.6	–2.5
4451	Grocery stores	–.8	–.3	3.0	–.3	.2	.5	.5	.5	–2.4
4452	Specialty food stores	–4.1	–.9	5.3	–2.6	.6	3.2	1.6	1.5	–2.0
4453	Beer, wine and liquor stores	–.7	2.3	6.1	–2.4	2.7	1.9	–1.8	.4	–3.9
446	Health and personal care stores	.1	4.2	3.5	1.1	6.6	3.8	1.0	2.4	.3

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS Code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
447	Gasoline stations	3.4	1.6	2.9	2.1	1.6	1.4	–1.3	.0	–1.5
448	Clothing and clothing accessories stores	5.8	5.9	3.7	3.6	6.7	5.5	–2.1	.7	1.8
4481	Clothing stores	5.5	6.4	4.1	4.0	6.8	6.4	–1.4	.4	2.1
4482	Shoe stores	6.4	2.7	3.8	1.4	3.5	2.7	–4.7	.8	–1.1
4483	Jewelry, luggage, and leather goods stores	6.7	6.7	1.3	3.8	9.2	4.0	–2.7	2.3	2.7
451	Sporting goods, hobby, book, and music stores	2.9	5.0	6.4	5.0	5.9	3.0	2.0	.9	–3.2
4511	Sporting goods and musical instrument stores	3.0	6.3	7.0	4.4	7.0	5.0	1.3	.7	–1.9
4512	Book, periodical, and music stores	2.7	2.4	4.8	6.2	3.9	–1.3	3.4	1.4	–5.8
452	General merchandise stores	4.1	5.5	3.8	6.2	6.4	5.9	2.0	.8	2.0
4521	Department stores	2.4	2.3	.7	5.3	3.3	–.2	2.8	.9	–.9
4529	Other general merchandise stores	7.3	11.1	6.3	8.2	11.8	12.2	.8	.7	5.6
453	Miscellaneous store retailers	5.0	5.1	4.5	6.9	6.9	1.3	1.7	1.7	–3.1
4531	Florists	2.4	6.9	.9	.4	5.0	–4.2	–2.0	–1.8	–5.1
4532	Office supplies, stationery and gift stores	6.7	6.8	8.1	8.2	9.7	2.8	1.5	2.8	–5.0
4533	Used merchandise stores	4.1	6.3	6.5	8.1	9.4	1.7	3.9	2.9	–4.5
4539	Other miscellaneous store retailers	3.4	3.3	–.2	6.9	4.5	.8	3.3	1.2	1.0
454	Nonstore retailers	7.8	13.8	7.5	9.4	15.1	7.3	1.4	1.1	–.2
4541	Electronic shopping and mail–order houses	10.8	17.2	12.2	17.7	25.0	11.2	6.2	6.7	–1.0
4542	Vending machine operators	–1.9	5.2	–1.1	–3.4	2.3	–3.5	–1.5	–2.7	–2.4
4543	Direct selling establishments	4.7	5.6	–.2	4.2	2.9	1.2	–.5	–2.6	1.3
	Transportation and warehousing									
481	Air transportation	4.2	.6	6.7	3.5	4.9	2.5	–.7	4.3	–3.9
482111	Line–haul railroads	5.7	4.4	3.9	3.3	2.0	2.1	–2.2	–2.3	–1.7
48412	General freight trucking, long-distance	1.4	1.2	2.0	4.9	4.0	2.3	3.4	2.7	.3
48421	Used household and office goods moving	–2.1	–1.3	–1.4	.7	1.4	–2.1	2.8	2.8	–.7
491	Postal service	.7	1.5	1.1	1.7	2.6	–1.1	1.0	1.1	–2.2
492	Couriers and messengers	–6.0	3.7	.4	4.1	4.2	–1.7	10.8	.5	–2.1
	Information									
51	Information	4.3	6.4	5.4	5.2	10.6	2.0	.9	4.0	–3.2
511	Publishing	4.3	7.1	3.1	5.2	10.3	–.3	.8	2.9	–3.3

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)			Output			Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
5111	Newspaper, book, and directory publishers	–.8	3.2	0.1	–1.3	3.7	–2.9	–0.6	0.5	–3.0
5112	Software publishers	20.8	10.2	7.5	32.3	23.6	3.2	9.5	12.2	–4.0
51213	Motion picture and video exhibition	–1.9	1.4	–.7	–.6	4.4	–1.6	1.3	3.0	–.8
515	Broadcasting, except internet	.9	.2	2.6	2.4	3.4	2.4	1.5	3.1	–.2
5151	Radio and television broadcasting	1.4	–2.5	2.0	2.1	–1.0	.3	.7	1.6	–1.6
5152	Cable and other subscription programming	–1.5	8.7	2.8	3.6	18.0	6.2	5.2	8.5	3.3
5171	Wired telecommunications carriers	5.8	7.0	2.7	4.3	10.7	–4.6	–1.4	3.5	–7.1
5172	Wireless telecommunications carriers	5.1	11.1	20.8	28.2	27.4	21.6	22.0	14.6	.7
5175	Cable and other program distribution	–1.5	–.2	3.8	3.6	8.2	6.7	5.2	8.4	2.8
	Finance and insurance									
52211	Commercial banking	3.4	1.4	1.1	2.3	.9	2.1	–1.1	–.5	.9
	Real estate and rental and leasing									
532111	Passenger car rental	2.1	2.2	–.3	3.7	6.9	.7	1.5	4.6	1.0
53212	Truck, trailer and RV rental and leasing	5.3	6.4	3.7	3.0	8.4	3.2	–2.2	1.9	–.5
53223	Video tape and disc rental	4.2	2.4	2.9	6.3	5.9	3.1	2.0	3.4	.2
	Professional and technical services									
541213	Tax preparation services	3.5	2.2	1.2	5.6	5.6	5.0	2.0	3.4	3.8
54131	Architectural services	2.6	.2	2.9	2.1	6.9	3.6	–.5	6.7	.8
54133	Engineering services	–1.0	1.5	2.3	–.7	5.8	3.4	.4	4.2	1.1
54181	Advertising agencies	–1.0	1.0	4.1	–2.1	4.3	1.0	–1.1	3.3	–3.0
541921	Photography studios, portrait	2.3	.3	–3.0	3.3	1.9	1.5	1.0	1.6	4.6
	Administrative and support services									
56131	Employment placement agencies	—	.7	5.6	—	8.4	1.9	—	7.7	–3.5
56151	Travel agencies	–.3	5.1	9.5	2.4	4.9	.9	2.7	–.2	–7.9
56172	Janitorial services	–.9	2.3	3.8	.7	4.8	4.0	1.6	2.5	.1
	Health care and social assistance									
6215	Medical and diagnostic laboratories	—	7.7	1.0	—	10.1	5.8	—	2.2	4.7
621511	Medical laboratories	—	6.9	.0	—	9.3	3.9	—	2.2	3.9
621512	Diagnostic imaging centers	—	9.2	2.0	—	11.7	8.9	—	2.3	6.7
	Arts, entertainment, and recreation									
713110	Amusement and theme parks	–3.1	1.9	.7	2.6	2.6	1.0	5.9	.6	.3
713950	Bowling centers	–.4	.3	2.6	–3.1	–2.2	2.3	–2.7	–2.5	–.2

Appendix table A–1. Continued—Average annual percent change in productivity, output, and hours by industry, 1990–95, 1995–2000, and 2000–05

NAICS code	Industry	Productivity (output per hour)						Hours		
		1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05	1990–95	1995–2000	2000–05
	Accommodation and food services									
72	Accommodation and food services	0.5	1.2	0.6	2.2	3.6	1.6	1.7	2.3	1.0
7211	Traveler accommodations	3.6	2.7	.7	4.2	5.3	–.4	.6	2.5	–1.1
722	Food services and drinking places	–.4	.6	.9	1.6	2.9	2.5	2.0	2.2	1.6
7221	Full–service restaurants	–.7	1.4	.5	1.5	3.5	2.3	2.2	2.0	1.8
7222	Limited–service eating places	.1	–.4	1.1	2.3	1.9	3.3	2.2	2.3	2.1
7223	Special food services	.2	2.7	.7	.5	6.0	.6	.3	3.2	–.1
7224	Drinking places, alcoholic beverages	–3.2	–.8	3.8	–1.7	1.2	1.0	1.6	2.0	–2.7
	Other services									
81	Other services	2.1	1.0	1.5	2.5	2.2	.5	.4	1.2	–1.0
8111	Automotive repair and maintenance	2.8	1.2	.6	3.4	2.8	.3	.6	1.6	–.2
81211	Hair, nail and skin care services	2.6	3.0	3.8	3.3	4.5	3.9	.6	1.4	.1
81221	Funeral homes and funeral services	.8	–1.5	–.4	1.2	–.5	–.6	.4	1.1	–.2
8123	Drycleaning and laundry services	.9	1.6	2.3	.8	2.0	–1.4	–.1	.4	–3.7
81292	Photofinishing	.0	–7.3	8.9	–2.1	–8.0	–6.8	–2.1	–.8	–14.4

Gender and nonstandard work hours in 12 European countries

Labor force surveys conducted in several European countries in 2005 indicate high levels of nonstandard work hours, varying by gender; by contrast, nonstandard work hours for both men and women vary little by whether they have or do not have children

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Across the continent of Europe, countries have adopted or advocated measures aimed at reducing the workweek for employees and making a shorter workweek more feasible. The reasons have been many and have included combating unemployment by spreading available work, alleviating various health and safety concerns, attaining a balance between work and family obligations, and, of late in several countries, encouraging gender equality, with an eye toward achieving a more symmetrical distribution of paid and unpaid work between men and women. In the scholarly literature on this topic, much attention has been paid to the number of hours Europeans work and to gender gaps in employment, but remarkably little consideration has been given to *when* employees' hours are worked and even less to gender gaps in the *timing* of work. Accordingly, across Europe, the question of which hours employees work and what factors enter into decisions regarding a person's working those hours demands increased attention.

Consequences of nonstandard hours

Why is nonstandard-hour employment important? An overarching concern is that nonstandard work schedules may not be in the interest of most employees. Specifically, workers' health and safety, family and marital life, and children's well-being may be affected.

Health and safety concerns have long been associated with atypical schedules, and many scholars have focused their attention on this issue. Ample research from Europe and the United States has found that working nonstandard hours—especially night work and rotating shifts—is associated with greater health risks due to changes to an individual's circadian rhythms. These changes are linked to such biological functions as body temperature, hormone levels, and sleep. As a consequence, late-hour workers are subject to higher risks of gastrointestinal disorders, cardiovascular disease, breast cancer, miscarriage, preterm birth, and low birth weight of their newborns.[1] Chronic sleep deprivation and the resulting fatigue and stress can affect job productivity[2] and the incidence of workplace accidents.[3]

The social consequences of nonstandard work schedules are also troublesome, especially for families. Working atypical hours[4] and weekends changes the temporal structure of family life, constraining the time that family members spend with one another and threatening the quality and stability of relationships, especially when

there are children.[5] For example, married fathers in the United States who work fixed night shifts are 6 times more likely than their counterparts who work days to face marital dissolution, after other factors are controlled for; for married mothers, fixed nights increase the odds by a factor of 3.[6]

In addition, there is worrisome evidence that children whose parents work nonstandard shifts fare more poorly than other children. One longitudinal study found that children whose mothers had ever worked evenings, nights, or rotating shifts in the first 3 years of the children's lives performed significantly more poorly on tests of cognitive development at age 2 and expressive language at age 3.[7] The researcher concluded that these negative effects might be due in part to the type of care the child received: children whose parents work nonstandard schedules are less likely to be cared for in formal childcare settings that provide important school-readiness experiences.

The possible effects of parents' schedules are not limited to preschool children: parents who work nonstandard hours, particularly those working evenings and weekends, have less time to spend with their school-aged children,[8] and this may translate into less supervision, less help with homework, and fewer positive inputs. Examining the effects of nonstandard work hours on older children, Jody Heymann found that, after other family and parental characteristics are controlled for, each hour that a parent works between 6 p.m. and 9 p.m. corresponds to a 16-percent increase in the likelihood that his or her children score low in mathematics at school.[9] Further, children of parents who work nights are nearly 3 times as likely to get suspended from school.[10] Yet another study examined 10- to 14-year-olds and found that parental work schedules have complex links with adolescents' home life and socioemotional outcomes; for example, levels of depression reported by adolescents are higher when mothers work evenings and when fathers work irregular hours.[11]

In contrast to the preceding findings, there may be positive aspects of atypical work hours. For example, job opportunities may increase with the expansion of the workday and workweek, drawing workers into employment who might otherwise refrain from performing paid work, and in some countries the existence of pay premiums may make late and weekend work especially desirable. Further, among parents, women's employment at nonstandard times may reflect—or even increase—men's willingness to assume caregiving responsibilities while their female partners are at the workplace. Finally, there are undoubtedly some workers, both men and women, who, because of competing commitments (such as attending school) or personal preferences (say, being a "night owl"), voluntarily choose late-hour or weekend employment over a standard daytime weekday-only schedule.

Research questions

In response to the preceding concerns about nonstandard work hours (and even potential benefits thereof), this article assesses a number of aspects of nonstandard work in 12 European countries: the prevalence of nonstandard work schedules across those countries; the distribution of nonstandard schedules within each country; the gender differences, if any, in nonstandard schedules; and the effect, if any, that having children has on nonstandard schedules. Cross-country variation in work schedule behavior clearly reflects multiple factors that themselves vary cross-nationally: largely private factors relating to employee preferences, demographic factors such as the composition of a nation's population and workforce, and societal consumption patterns. National-level policies and collective agreements surely matter as well, but may be less influential than independently operating consumer and employer demand factors in determining prevalence levels.

The article focuses largely on descriptive questions about work schedule patterns across countries. Three interrelated questions are asked about late-hour work, shift work, and weekend employment in Europe, with a focus on 12 countries. The first question is, "How prevalent is nonstandard employment in these European countries, and how does it vary across those countries?"

The second question is, "How, and to what extent, does gender play a role in nonstandard work schedules?" Is nonstandard-hour work, like part-time work, disproportionately women's work, or, instead, are employed women underrepresented on nonstandard shifts? The literature, both European and American, on gender gaps in employment is large and focuses mostly on differences between men and women in employment rates, wages, occupations, industries, and hours worked.[12] It is well established that women's work-hour patterns are distinct from men's in all industrialized countries. Throughout the industrialized world, employed women are much more likely than men to work part time (fewer than 30 or 35 hours per week), and even among full-time employees, women average a shorter workweek than do their male counterparts. However, relatively little is known about gender differences in *which hours* people work—that is, how men and women differ in the extent to which they usually work evenings, nights, rotating shifts, and weekends.

An earlier *Review* article reported that many European countries experienced a rise in weekend work—particularly Sunday employment—during the 1992–2001 period.[13] Moreover, women's share of weekend employment differs among countries, and there are differences by sector. In all 16 European countries studied in that article, women were seen to be more concentrated in the service sector than in the industrial sector, and the service sector was found to disproportionately draw women into weekend work, while the industrial sector disproportionately drew men into weekend work.

The analysis that follows extends the study of the role of gender in work scheduling in the 2005 article to consider evening and night work, as well as rotating shifts. In the process, weekend employment is revisited, with a focus on the year 2005. The key issue is whether employed women are as likely as employed men to work these schedules and thus to experience both their disadvantages and their benefits.

The third question is, "Does having children matter?" Harriet Presser estimates that, in the United States, 1 in 5 employed persons works mostly at nonstandard times (during the evenings, at night, or on rotating shifts), and 1 in 3 works Saturdays or Sundays (or both).[14] Despite these high levels, there is little national discourse on this issue.[15] Interestingly, in the United States, parental status plays no significant role in determining who works at nonstandard times, but because levels of nonstandard work hours are generally high for both men and women, the prevalence of nonstandard work schedules among dual-earner parents is high: about 31 percent of couples with a child under age 5 have at least one spouse who works nonstandard hours, and the figure rises to 60 percent if one includes weekends.[16] Thus, childcare issues are highly relevant to working at nonstandard times. Indeed, when mothers are asked directly, more than one-third (35 percent) report that childcare is their primary reason for working nonstandard hours, a finding which suggests that they can rely on informal care from family and friends at such times. Another 9 percent indicated care for another family member as their primary reason.[17]

The 35-percent figure may be even higher if the majority of women who indicate "job-related reasons" as the primary reason for working nonstandard hours have elected to work in occupations that allow or require them to work during hours when other family members are available for childcare. In other words, despite the limited availability of childcare arrangements at nonstandard times, many American parents work at those times. Although it is not possible to duplicate this U.S. research with the European data presented here, Presser's U.S. results point up the utility of asking a parallel question with regard to Europe: are employed parents in European countries, who would also have to rely primarily on informal childcare arrangements to work nonstandard schedules, more or less likely to do so than nonparents?

The next section of the article presents the data, methods, and measures used to answer the questions posed in the preceding paragraphs. The three subsequent sections present the results of the analysis: the first reports findings on the prevalence of nonstandard employment across countries, the second addresses the question "Does gender matter?" and the third reports findings on differences between parents and nonparents. The final section presents some conclusions garnered from the analysis carried out in the prior sections.

Data, methods, and measures

Data and methods. This study is based on data from the 2005 labor force surveys from 12 European countries. The data were obtained from Eurostat, the statistical office of the European Union. The study comprises 4 Nordic countries (Denmark, Finland, Norway, and Sweden); 2 English-speaking countries (Ireland and the United Kingdom); and 6 continental European countries (Austria, Belgium, France, Italy, Luxembourg, and the Netherlands).[18] These are all of the countries for which comparable 2005 labor force survey data on work schedules could be obtained from Eurostat.

The labor force survey samples are generally large: the number of sampled units in the 12 countries examined ranges from about 8,500 in Luxembourg to approximately 75,000 in Italy and France.[19] Reduced samples were drawn that restricted the study to those aged 25 to 64 years, to wage and salary earners, and to those working in nonagricultural occupations and industries.[20]

Eurostat limits the availability of the individual records for the 12 countries examined to certain qualifying institutions through a cumbersome process. For this analysis, Eurostat made available detailed "cross-classification tables," which report clusters of individuals with identical sets of characteristics, all expressed as categorical data. Weights corresponding to each cluster are provided and capture both the original survey weights (to correct for sampling, nonresponse, and other types of bias) and weights that account for how many identical observations appear in the raw data. When the weights are applied, the data yield population estimates.

All descriptive results reported in all charts in this article

are weighted to provide national estimates. The multivariate analyses reported in Tables 1–4 are the authors', carried out with the use of logistic regressions. The logistic regression models were estimated with the aforementioned clustered data, unweighted, to allow for the most accurate standard errors possible. All of the charts present the authors' calculations based on the European labor force surveys.

Work schedule measures. The study focuses on two types of workers: *nonday* workers, who work evenings, nights, or rotating shifts (or any combination of these); and *weekend* workers, who work Saturdays or Sundays (or both). Each group was constructed in accordance with a set of rules established for this study.

Separate questions were asked in the surveys as to whether respondents worked evenings, nights, shifts, Saturdays, and Sundays. For most countries examined, the response categories for these five variables were "usually," "sometimes," "never," and "no answer." Some countries combined "sometimes" and "never" into one category. The analysis that follows focuses on a usually/not usually dichotomy for all variables, because the usual work schedule behaviors of those employed are the items of interest. (Those with "no answer" were relatively few and treated as missing cases.)

The distinction between evening and night work varies across countries. The variability is within the range of 6 p.m. to midnight for evening work and within the range of 10 p.m. to 6 a.m. for night work.[21] Because of definitional differences and the focus herein on nonstandard hours regardless of whether they are evening or night hours, both types of late schedules are combined.

In addition to evening and night workers (or both), shift workers are included in the broad category of nonday workers. Shift workers are defined here as those whose work schedules regularly rotate to include at least two different segments of the 24-hour clock, such as from day to evening, from day to night, from evening to night, or a shift involving all three segments. In three countries—Denmark, the United Kingdom, and Italy—individuals are asked whether or not they work in organizations that have a shift system, regardless of whether the individual works a rotating shift. For these countries, for the purposes of this study, a person was designated as working a rotating shift if the person answered yes to the organizational question *and* also indicated that he or she worked either sometimes or usually in the evenings or nights (or both). The same rule was applied to the other countries in which the person was asked about his or her own work schedule, rather than that of the organization: if the person worked a shift *and* worked either sometimes or usually in the evenings or nights (or both), he or she was coded as a shift worker. This rule excludes from the category of shift workers those who work two different daytime schedules, but never in the evening or night.[22] Such a schedule would apply particularly to part-timers who vary their daytime hours.

In sum, the definition of nonday work presented here includes those who usually work evenings or nights (or both) or who work a rotating shift that at least sometimes includes evenings or nights (or both).[23] The focus in this study is on a single year (2005), forgoing an analysis of trends, a decision necessitated by changes over the years in the way that nonday employment is measured in some countries.

Weekend employment is measured more precisely: those who work weekends usually work Saturdays or usually work Sundays (or both). For both weekend and nonday employment, note that neither the number of weekend hours worked nor the number of nonday hours worked is known (although the total number of weekly hours worked, regardless of schedule, is known). As previously noted, an earlier article examined the trend in weekend employment in many European countries for the years 1992–2001, distinguishing Saturday from Sunday work.[24] Because the present analysis focuses on the broader issue of nonstandard work schedules in 2005, including nonday employment, Saturday work and Sunday work are combined in the analysis that follows.

Prevalence of nonday and weekend employment

This section and the next two present cross-national results in the form of a regional breakdown that is widely accepted in the comparative study of welfare states. We use this country typology because a large body of comparative research has established that these groupings are relatively homogeneous with regard to both social policy provisions and employment outcomes, especially women's employment rates. The Nordic countries, for example, tend to have high rates of women's employment, sizable service economies, and extensive redistributive social welfare policies. The continental countries typically have lower rates of women's employment, smaller service sectors, and less redistributive social policies. The English-speaking countries generally have moderate rates of women's employment and much more market-oriented regulatory and social welfare systems.[25] This typology, a starting point for the empirical analysis that follows, helps organize the

findings and makes it easier to place them in the context of the larger comparative literature.

The discussion begins by reporting the prevalence of nonday employment. The top panel of chart 1 (page 88) shows the percentage of nonagricultural wage and salary earners aged 25 to 64 years who usually work nondays—that is, evenings, nights, or rotating shifts—in the 12 countries constituting the universe for analysis. The chart reveals considerable variation across countries, with the prevalence of nonday employment ranging from as low as 14.5 percent in Luxembourg to twice that level, or 29.4 percent, in the United Kingdom. The results do indicate some homogeneity across the three clusters of countries. For example, in each of the four Nordic countries, about one-fourth of the employed work nondays. The continental countries also exhibit a degree of homogeneity: the 5 countries with the *lowest* rates of nonday work among all 12 countries examined are continental countries with about one-fifth or fewer employees working nondays. The Netherlands is a marked exception, reporting the second-highest level overall (27.4 percent).[26]

What about weekend employment? As the middle panel of chart 1 shows, there is far more cross-national variation in the percentage of employees working Saturday or Sunday (or both) than there is in the percentage working nondays, and the country clusters are less cohesive. For example, the percentage working weekends ranges from a low of 10.4 percent in Sweden to a high of 33.8 percent in Italy.[27] Overall, the continental countries are registering the highest levels of weekend employment; the four countries in which weekend employment is most prevalent (the Netherlands, Austria, Italy, and France) are in this cluster.

Although Saturday work and Sunday work are combined for this analysis, in most of the six continental countries Saturday employment is about twice as prevalent as Sunday employment. Accordingly, it is the high levels of Saturday employment that are generating the high levels of weekend employment in a number of the continental countries, in contrast to the other two regions. (Separate Saturday and Sunday figures are not shown.[28]) Whereas Italy has the highest level of Saturday employment, it is relatively low in Sunday employment, yet has the highest level of weekend employment when both days are combined; in contrast, the Netherlands, for example, has a relatively high level of Sunday employment, but is low in Saturday employment, compared with most other countries, and shows an overall moderate level of weekend employment when both days are combined.

Furthermore, some employees usually work late or work rotating hours and weekends. The bottom panel of chart 1 shows that a substantial minority of employees in the six continental countries have such schedules. The range is from 6.4 percent in Belgium to as high as 16.9 percent in the Netherlands, with considerable variation within as well as across regions.

Clearly, the prevalence of nonstandard-hour work varies across Europe, as well as within these established welfare-state clusters. Thus, at least some of the factors that shape nonstandard work hours in those countries—both micro-level factors and country-level institutional factors—vary by country.

Does gender matter?

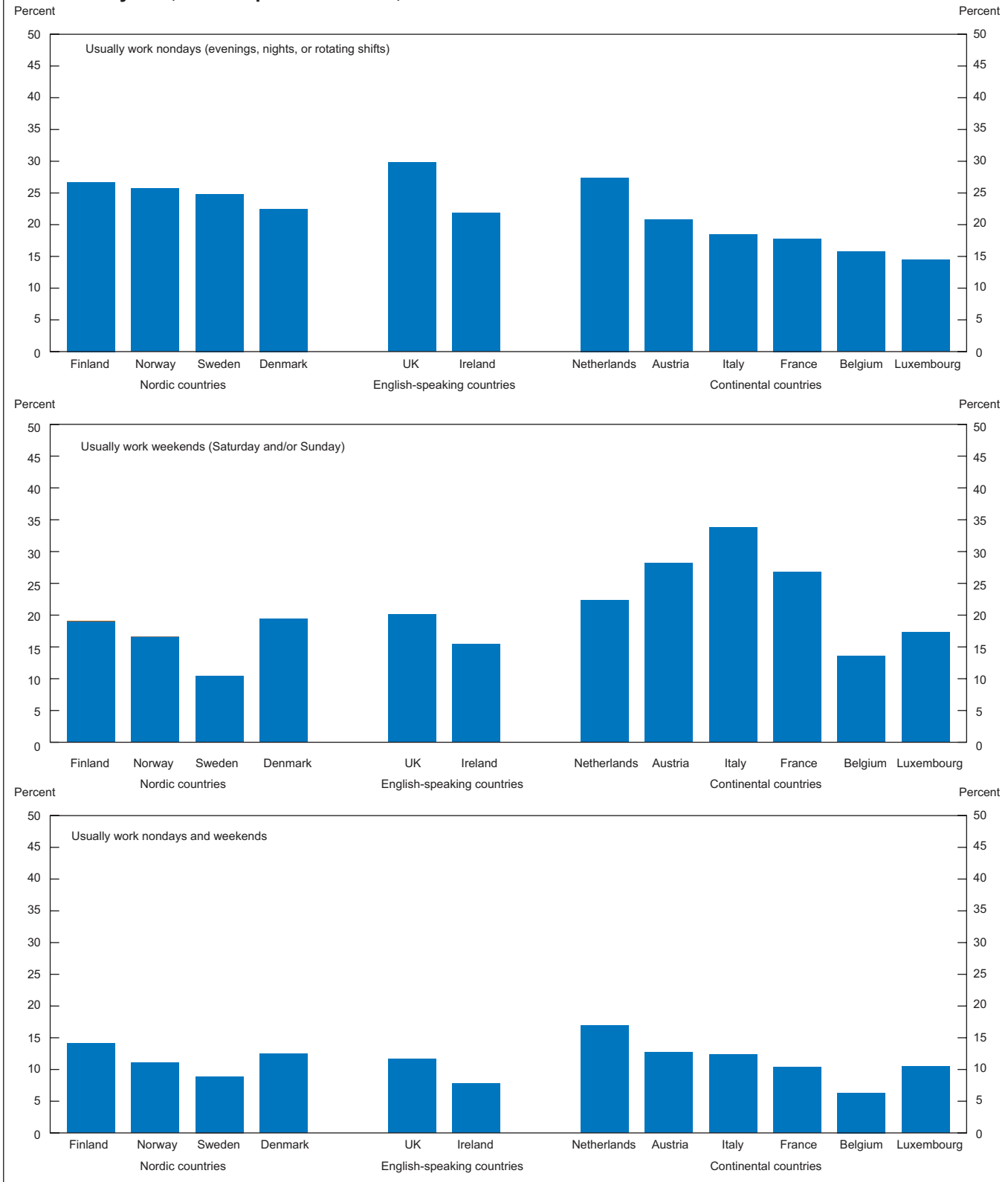
As noted earlier, all labor markets—including those throughout Europe—are gender differentiated. On average, women's engagement in paid work differs from men's in all aspects, including likelihood of employment, wages, occupations, industries, and total hours worked. Yet, very little is known about gender differences relating to when workers work their contracted hours.

On the one hand, some factors suggest that women workers will be overrepresented in nonstandard schedules. For example, across the 12 countries examined, women are more likely to be employed in the service sector rather than in the industrial sector, and in most of the countries nonday and weekend employment is higher in the service sector. (Results are not shown.) It is also possible that, in some cases, these nonstandard schedules are considered unattractive; thus, they may fall to women because women often lack men's bargaining power in the workplace.

On the other hand, women's total hours, on average, are less than men's, perhaps reducing the overflow of their worktime into the evening, night, or weekend. Women also are more likely than men to assume child-rearing and other family responsibilities that may constrain nonday employment. In addition, cultural factors may depress women's work, especially at night; in fact, some of these countries had bans on women's night work as recently as the 1990s. (In 1976, the European Union outlawed bans on women's night work, but some countries, including Luxembourg, continued to ban night work for women into the 1990s.) In addition, in cases where nonstandard worktimes bring extra pay, women may find it harder than men to have access to such schedules.

The interplay between gender and work scheduling is complex. The remainder of this section approaches this issue from a descriptive perspective, asking, "What, in fact, are the differences in nonstandard work schedules by gen-

Chart 1. Prevalence of nonday work schedules: nonagricultural wage and salary earners aged 25–64 years, 12 European countries, 2005



der?" "Do the within-country gender differentials shape up differently between nonday work and weekend work?" "Is weekend work considered more benign than nonday employment for family life—as has been shown for the United States[29]—and thus, are employed women more likely to be 'included' in weekend work, relative to their engagement in evening and night schedules?"

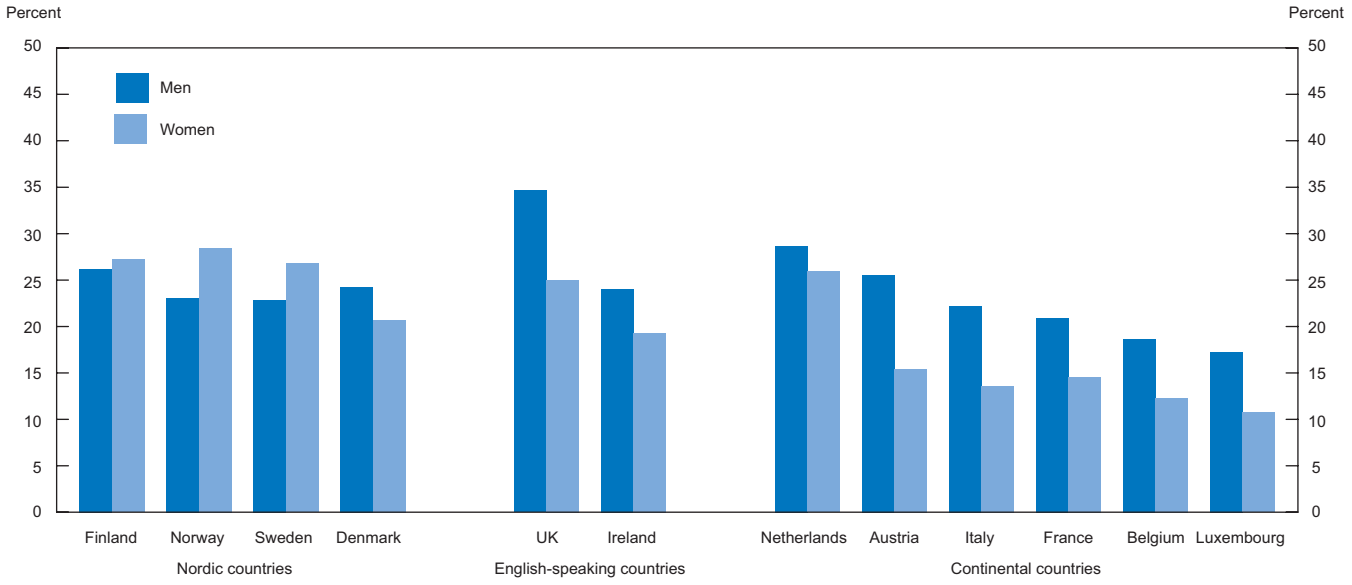
Nonday employment: bivariate analyses. The analysis by gender begins with nonday work. Chart 2 shows that, in most of the countries examined, the overwhelming pattern is that men are more likely to work nonday hours than are women. The exceptions are three of the Nordic countries: Finland, Sweden (in both of which countries there are no significant differences by gender), and Norway (where women are more likely than men to work nondays).[30] Interestingly, these are countries with large service sectors; they are also countries in which public policies have long emphasized gender equality in the labor market, reflected in men's and women's rates of employment.

Among the countries in which male employees are more likely than their female counterparts to work nondays, the largest gender gaps are seen in the United Kingdom—the country with the highest percentage of nonday work overall—and in Austria. In both countries, the likelihood that employed men work nonday hours is about 10 percentage points higher than among women workers. In other countries, employed men also are more likely to work nondays than are employed women, but by a smaller percentage, with a very small (but significant) margin in the Netherlands.

Economic sector.[31] What happens when the analysis controls for the sector of employment? As previously noted, in all of the countries studied, employed women are more likely than their male counterparts to be employed in the service sector; moreover, the countries vary in the proportion of their labor force that is engaged in services (results not shown). Such differences can be controlled for by an examination of the extent to which gender differences persist *within* economic sectors, service or industrial. In particular, considering only service employment, one can ask, "Do the relatively high levels of women engaged in nonday work in the Nordic countries disappear?"

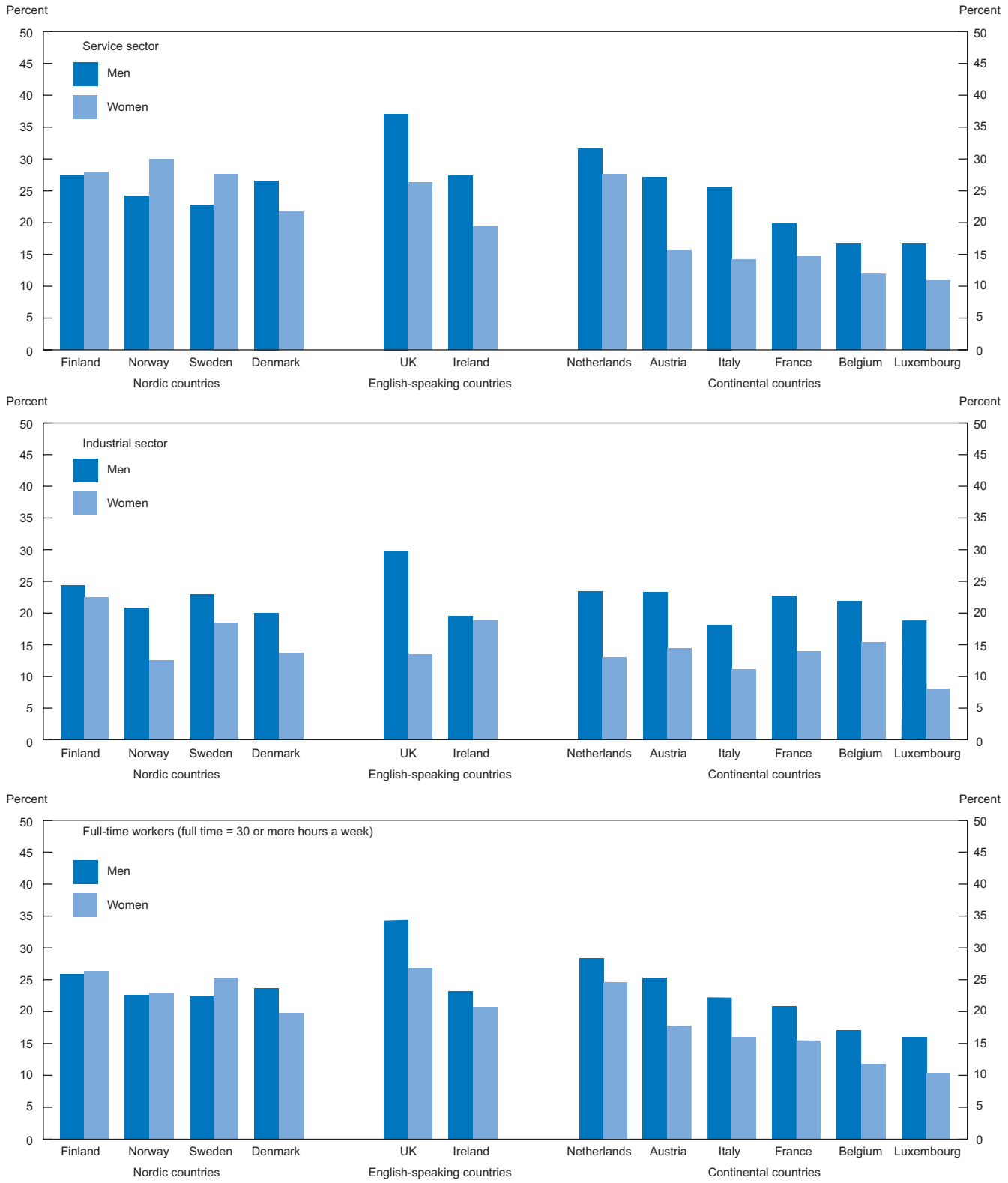
The gender differences in nonday employment for service-sector workers are reported in the top panel of chart 3 (page 90). Remarkably, the same pattern of gender differences for all workers appears for all countries within the service sector. (Compare the top panel of chart 3 with chart 2.) The absolute levels are different, because men and women in most of the Nordic countries are more likely to work nondays in the service sector than in the industrial sector. But the relatively high levels of women's nonday employment in the Nordic countries hold, as do the

Chart 2. Nonday work by gender: nonagricultural wage and salary earners aged 25–64 years who usually work nondays (evenings, nights, or rotating shifts), 12 European countries, 2005



Note: All within-country gender gaps are significant at the .05 level or lower, except in Finland and Sweden.

Chart 3. Nonday work by gender: selected sectors and full-time status, nonagricultural wage and salary earners aged 25–64 years who usually work nondays, 12 European countries, 2005



Note: All within-country gender gaps are significant at the .05 level or lower, except in Finland, Norway, and Sweden for full-time workers.

gender differences in the other countries (more nonday work among men than among women). In sum, within the disproportionately female service sector of most of the countries examined, nonday work is still more "men's work" than it is "women's work."

The results within the industrial sector are somewhat different. Comparing the top and middle panels of chart 3 reveals that, in most countries, women employed in the industrial sector are considerably less likely to work nondays than are women working in the service sector, whereas the differences are less marked for men. The middle panel of chart 3 also shows that, within the industrial sector, in all of the countries studied, including the Nordic countries, employed men are more likely to work nonstandard hours than are employed women, and in some countries (including the United Kingdom and Luxembourg), the gender difference is more than twofold. In short, among industrial workers, nonday work is significantly more prevalent among men in all of these countries.

Full-time workers. As noted earlier, women typically work fewer hours than do men in all of the countries examined. This difference prompts the question, "Would gender differences in nonday employment be minimized if only those working 30 or more hours per week were considered?"[32] The bottom panel of chart 3 indicates that the direction of the within-country gender differentials evident among all employed workers (as shown in chart 2) remains nearly the same for full-time workers: within the full-time working subsample, employed women's likelihood of nonday work is not significantly different from men's in Finland, Norway, and Sweden, and men's is significantly greater in the other countries. (However, the gender differences, regardless of direction, are, for the most part, substantially smaller among full-time workers.)

In sum, gender differences in nonday employment are evident in all of the countries studied, with men showing significantly higher levels than women in nine countries, and women showing the same or higher levels than men in three (all Nordic). Because women are more likely than men to be in the service sector and less likely to work full time, within-sector differences were examined, and full-time employees were assessed separately. Results showed that the gender pattern in nonday employment for some countries is altered somewhat. In particular, men's dominance in nonday work was found to be universal in the industrial sector, and gender differences in nonday work narrow among full-time workers. These findings lead to the question, "To what extent do gender differences in nonday employment result from differences not just in these selected job-related factors, but in other work-related factors—as well as from sociodemographic characteristics?" The answer to this question turns on a multivariate analysis.

Nonday employment: multivariate analyses. When the additional variables are controlled for, do the gender gaps reported earlier in this article persist? Table 1 (page 92) shows the results of a logistic regression analysis that includes measures of both sociodemographic and employment characteristics.[33] These results are from stepwise models in which nonday employment is first regressed on gender alone; then the sociodemographic characteristics of age, education, marital status, and immigration status are added;[34] and, finally, the employment characteristics of hours worked, multiple jobholding, industry, and occupation are added. Country-specific regressions were estimated for each of the 12 countries studied.

The first model listed in table 1, a regression of nonday employment on gender alone, reveals that men are more likely to work nonday shifts than are women in all of the countries examined, with the exception of three of the Nordic countries (Sweden, Finland, and Norway). The findings in table 1 are consistent with those reported in chart 2: there are no significant gender differences in Sweden and Finland, and in Norway women are more likely than men to work nondays. In the other nine countries, the gender differentials are statistically significant—in favor of men working nondays.

The second model, which adds sociodemographic controls, shows results similar to those of the first model, except that in Finland the positive relationship (women working more nondays than men) is statistically significant. The overall finding (except in Finland) suggests that gender differences in nonday employment (in either direction) are not explained by differences between women and men in the sociodemographic characteristics measured here.

The third model adds employment characteristics. The first thing to notice is that adding employment characteristics shifts the earlier results in some of the Nordic countries. In Finland and Norway, there is now no statistically significant difference between women and men in nonday employment; that is, female and male workers are equally likely to work nondays. However, in Sweden, being a woman is now negatively associated with nonday work, although the differential is small in cross-national terms. The other nine countries still show a statistically significant negative relationship between being a woman

Table 1. Gender coefficients on usual nonday employment for nonagricultural wage and salary earners aged 25 to 64 years, 12 European countries

Country	Model 1[1]		Model 2[2]		Model 3[3]	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Nordic countries						
Sweden	0.029	0.037	0.062	0.038	[5]–0.241	0.048
Finland	.081	.044	[5].154	.045	.018	.052
Denmark	[4]–.198	.067	[5]–.223	.068	[5]–.286	.081
Norway	[5].172	.047	[5].210	.048	–.017	.059
English-speaking countries						
United Kingdom	[5]–.346	.024	[5]–.354	.025	[5]–.235	.031
Ireland	[5]–.253	.036	[5]–.233	.036	[5]–.210	.046
Continental countries						
France	[5]–.433	.035	[5]–.422	.035	[5]–.303	.041
Austria	[5]–.658	.041	[5]–.686	.041	[5]–.465	.052
Netherlands	[5]–.167	.024	[5]–.175	.024	[5]–.269	.033
Belgium	[5]–.457	.065	[5]–.451	.067	[5]–.322	.079
Luxembourg	[5]–.600	.074	[5]–.598	.075	[5]–.461	.100
Italy	[5]–.664	.030	[5]–.644	.031	[5]–.447	.035

[1] Regression of nonday employment on gender alone.
[2] Regression of nonday employment on gender, age, education, immigration status, and marital status.
[3] Regression of nonday employment on gender, age, education, immigration status, marital status, hours worked, multiple jobs, industry, and occupation.
[4] $p < .01$.
[5] $p < .001$.
NOTE: Variables are as follows: *Gender*: male (ref.), female; *Age*: 25–34 years (ref.), 35–44 years, 45–54 years, 55–64 years; *Education*: low, medium (ref.), high; *Immigration*: born in member state (ref.), less than 11 years, 11 years or more; *Marital Status*: single, married (ref.), separated; *Hours worked*: 1–9 hours, 10–24 hours, 25–29 hours, 30–34 hours, 35–39 hours (ref.), 40+ hours; *Multiple jobs*: one job (ref.), more than one job; *Sector*: industry (ref.), service; *Occupation*: legislators and managers, professionals (ref.), technicians, clerks, sales and services, crafts, plant and machine operators, elementary occupations.

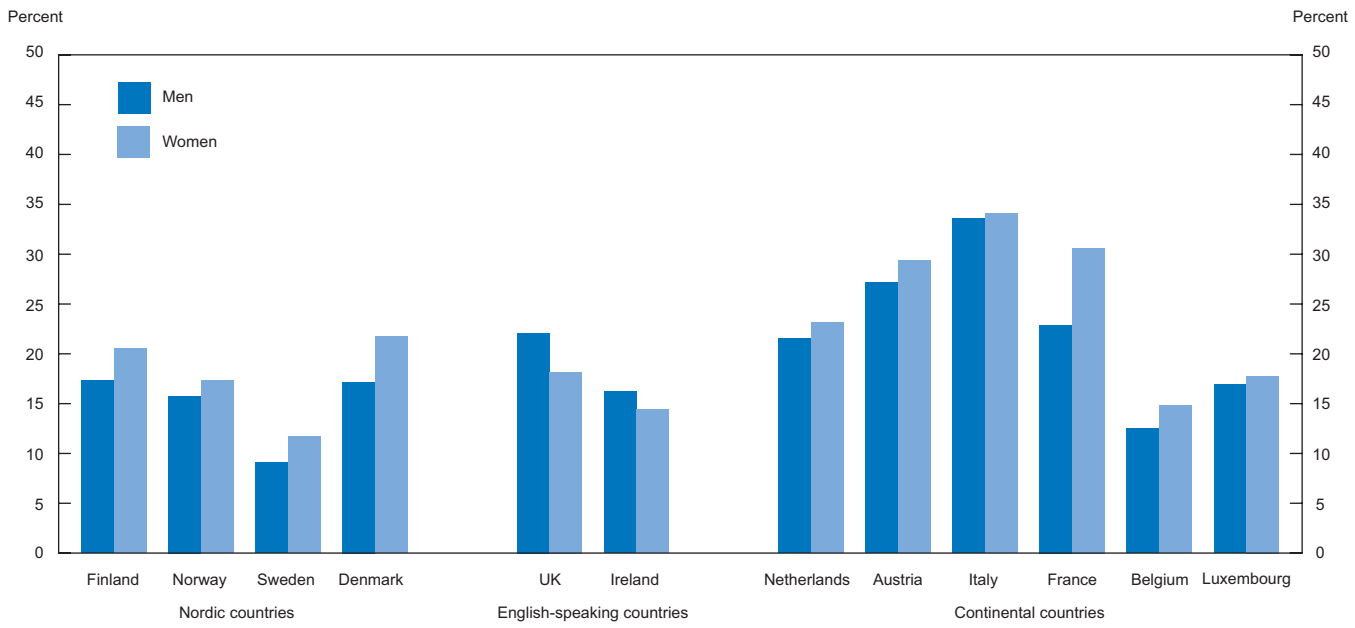
and nonday employment, but the effect of being a woman is generally reduced (with the Netherlands the one exception). This means that, in these countries, women's relative exclusion from nonday employment is lessened once job characteristics are controlled for.

Although the preceding analysis suggests that gender differences in employment reduce, but do not substantially remove, the male dominance in nonday employment, it may be that more refined measures of the same variables would have larger effects. For example, these data from Eurostat allow only eight broad occupational groupings (excluding agriculture) and only two broad economic sectors (industrial and service, again excluding agriculture). Controlling for broader, rather than more detailed, job-related characteristics tends to lessen gender differences.

Weekend employment: bivariate analyses. What about weekend employment? As noted earlier, the analysis presented here regards weekend employment as more benign than nonday employment with respect to personal and family life, in that weekend employment conforms to a traditional diurnal lifestyle and need not alter one's circadian rhythms, unless weekend workers also work late hours. Such considerations may serve to minimize gender differences in weekend work in the countries studied. However, gender differences in family pressures and in responsibilities assumed may constrain the willingness of women more so than men to work weekends.

The results reported in chart 4 clearly indicate that men's dominance in nonday employment does not carry over to weekend work. In all of the countries examined, except for the United Kingdom and Ireland, employed women are *more* likely to work weekends than are employed men (although the gender differences are not statistically significant in Norway, Italy, and Luxembourg). Among the countries in which employed women are significantly

Chart 4. Weekend work by gender: nonagricultural wage and salary earners aged 25–64 years who usually work weekends (Saturday and/or Sunday), 12 European countries, 2005



Note: All within-country gender gaps are significant at the .05 level or lower, except in Norway, Italy, and Luxembourg.

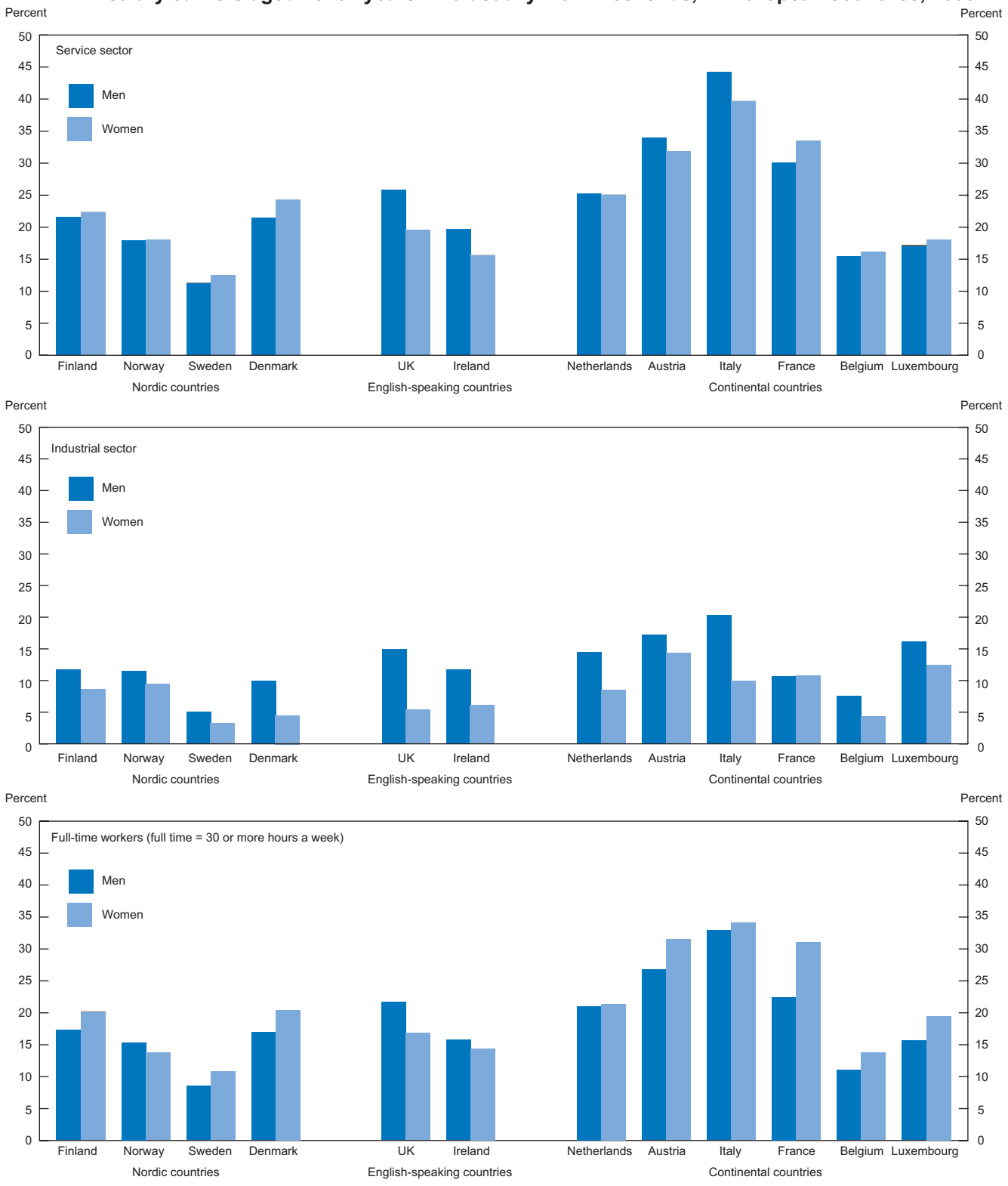
more likely to work weekends than are their male counterparts, the largest difference is in France (30.6 percent for women and 22.9 percent for men), the smallest in the Netherlands (23.2 percent and 21.5 percent, respectively). Comparing chart 4 with chart 2 reveals that gender differentials in nonday employment in the countries studied are not highly associated with gender differences in weekend employment. This finding points to the need to keep nonday and weekend employment separate when studying the role of gender in nonstandard work schedules.

Economic sector. Does the pattern of gender difference in weekend employment (in which women are more likely than men to work weekends) persist *within* economic sectors? The answer is, "Partially," in the service sector, and "No," within the industrial sector. The top panel of chart 5 (page 94) shows that, within the service sector, employed men are still more likely than employed women to work weekends in the two English-speaking countries. In the other countries, women's dominance in weekend work reverses or fades markedly: in Italy, men are now significantly more likely to work weekends, and in the remaining countries the gender differential either has narrowed substantially or is no longer statistically significant. Clearly, some of women's overrepresentation in weekend work is due to their high levels of employment in the service sector.

Comparing the middle panel of chart 5 with the top panel shows that weekend employment is more common in the service sector than in the industrial sector in all of the countries studied. Moreover, in almost all of these countries, within the industrial sector *men* are more likely to work weekends than are women—with Italy showing a marked difference (20.4 percent of men, and 10.0 percent of women, working weekends). France is an exception to the pattern of higher levels among men, having about equal percentages for both genders. In sum, women's overall overrepresentation in weekend employment disappears within the industrial sector.

Full-time workers. As noted earlier, women typically work fewer hours than men do in all of the countries studied. This fact leads to the question whether gender gaps in weekend work shape up differently when only those working full time are considered. As shown in the bottom panel of chart 5, the gender pattern among full-time employees (those working 30 or more hours per week) is similar to that noted for all workers: in most of the countries, women are more likely than men to work

Chart 5. Weekend work by gender: selected sectors and full-time status, nonagricultural wage and salary earners aged 25–64 years who usually work weekends, 12 European countries, 2005



Note: All within-country gender gaps are significant at the .05 level or lower, except in Norway, the Netherlands, Austria, Belgium, and Luxembourg for the service sector; in France for the industrial sector; and in Ireland and the Netherlands for full-time workers.

weekends.

In sum, gender differences in weekend employment are evident in all of the countries examined, with women showing higher levels than men in 10 countries: everywhere except the two English-speaking countries. Some variations in this overarching pattern do appear in some countries when workers are broken out by economic sector or by hours worked. Accordingly, the next issue addressed is whether the gender gaps observed in weekend employment persist after these and other employment variables, as well as sociodemographic differences between employed men and women, are controlled for.

Weekend employment: multivariate analyses. Table 2 reports the logistic regression results for weekend employment, with control variables identical to those of table 1. Model 1 reports the relationship between being a woman and weekend work, with the direction of this relationship consistent with the findings reported in chart 4. Again, in the two English-speaking countries, employed men are more likely than employed women to work weekends, whereas everywhere else, employed women are more likely to work weekends (although the gender differences are not significant in Norway, Luxembourg, and Italy). Controlling for the sociodemographic variables (Model 2) does not alter the nature of the relationship in any of these countries (except that the significance disappears in Ireland).

However, as reported in Model 3, controlling for job-related factors has a substantial effect on the gender-gap results. In 4 of the 7 countries that showed an unadjusted positive relationship (weekend employment was more prevalent among employed women than among employed men), the relationship changes to a negative one (men work more on weekends) after the employment variables are added as controls. This is the case in Sweden, Finland, Denmark, and the Netherlands: in all of these countries,

Table 2. Gender coefficients on usual weekend employment for nonagricultural wage and salary earners aged 25 to 64 years, 12 European countries

Country	Model 1[1]		Model 2[2]		Model 3[3]	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
Nordic countries						
Sweden	[6]0.200	0.049	[6]0.244	0.050	[6]–0.344	0.062
Finland	[6].0188	.049	[6].241	.049	[4]–.149	.058
Denmark	[6].291	.071	[6].294	.072	[4]–.207	.090
Norway	.010	.054	.064	.055	[6]–.313	.069
English-speaking countries						
United Kingdom	[6]–.118	.028	[6]–.102	.029	[6]–.235	.037
Ireland	[4]–.086	.041	–.055	.042	–.095	.053
Continental countries						
France	[6].384	.031	[6].411	.031	.054	.037
Austria	[5].114	.036	[5].106	.036	–.013	.047
Netherlands	[6].098	.025	[6].094	.026	[6]–.239	.036
Belgium	[6].223	.068	[6].234	.069	–.063	.083
Luxembourg	.055	.065	.057	.068	[4].202	.093
Italy	.027	.025	.050	.026	[6]–.106	.030

[1] Regression of weekend employment on gender alone.
[2] Regression of weekend employment on gender, age, education, immigration status, and marital status.
[3] Regression of weekend employment on gender, age, education, immigration status, marital status, hours worked, multiple jobs, industry, and occupation.
[4] $p < .05$.
[5] $p < .01$.
[6] $p < .001$.
NOTE: Variables are as follows: *Gender*: male (ref.), female; *Age*: 25–34 years (ref.), 35–44 years, 45–54 years, 55–64 years; *Education*: low, medium (ref.), high; *Immigration:* born in member state (ref.), less than 11 years, 11 years or more; *Marital Status*: single, married (ref.), separated; *Hours worked*: 1–9 hours, 10–24 hours, 25–29 hours, 30–34 hours, 35–39 hours (ref.), 40+ hours; *Multiple jobs*: one job (ref.), more than one job; *Sector*: industry (ref.), service; *Occupation*: legislators and managers, professionals (ref.), technicians, clerks, sales and services, crafts, plant and machine operators, elementary occupations.

after employment characteristics are controlled for, men are significantly more likely to work weekends. Three countries (France, Austria, and Belgium) shift from showing significantly higher levels of weekend employment for women to virtually no gender difference, and in two countries (Norway and Italy), the absence of a gender difference changes to a greater likelihood of weekend work among men. Apparently, then, in all of the seven countries that showed an unadjusted positive relationship, it is gender differences in hours worked, multiple jobholding, industry, or occupation (or any combination of these factors) that accounts for women's higher (unadjusted) levels of weekend employment or for the lack of difference between women and men. All else being equal—to the extent that all else can be held equal—women's greater engagement in weekend work disappears nearly everywhere once these job-related factors are accounted for. The lone exception is Luxembourg, where being a woman has a significantly positive effect on the odds of working weekends.

Does having children matter?

Clearly, employed women and men report different likelihoods of working nonstandard work schedules. To some extent, gender differences in job characteristics explain the observed gender gaps in nonstandard work schedules. Indeed, as regards weekend employment, gender gaps in job-related factors often reverse the effects of gender altogether.

This section addresses the question of how the presence of children is correlated with the timing of work. As previously noted, research focused on the United States finds that several child-related factors come into play in workers' atypical schedules. Many parents may be choosing these schedules for reasons related to childcare. On the one hand, nonstandard work schedules may allow two-earner couples, as well as parents and grandparents or other relatives or friends, to work different hours and do "tag-team" parenting at little or no financial cost. On the other hand, the absence of formal childcare at nonstandard times makes nonday and weekend employment difficult for parents, especially if they are not married. The relative unavailability of childcare both before and after school hours may constrain women's employment at nonstandard hours, because it is women more than men who, when they are employed, are deemed responsible for arranging for the care of children. The final empirical analysis of work schedule behavior set forth in this article assesses the effects of parental status on the likelihood of working nonstandard hours.

Because, in the Eurostat files provided, only 7 of the 12 countries surveyed include data on the presence of children, a separate set of tabulations and regressions is presented for both nonday and weekend work in just those 7 countries. Also, the analysis is restricted to employees aged 25 to 44 years, because this is the age group most relevant for families with children under age 15.[35]

Nonday employment. In five countries (the United Kingdom, the Netherlands, Austria, Italy, and Luxembourg) of the seven with data on the presence of children—Belgium and France excluded—employed women with children are *less* likely to work nonday hours than are their counterparts with children. (See the top panel of chart 6.) These differences, however, are remarkably small, and only in Italy (where mothers are less likely to work nondays) is there a statistically significant gap between parents and nonparents.

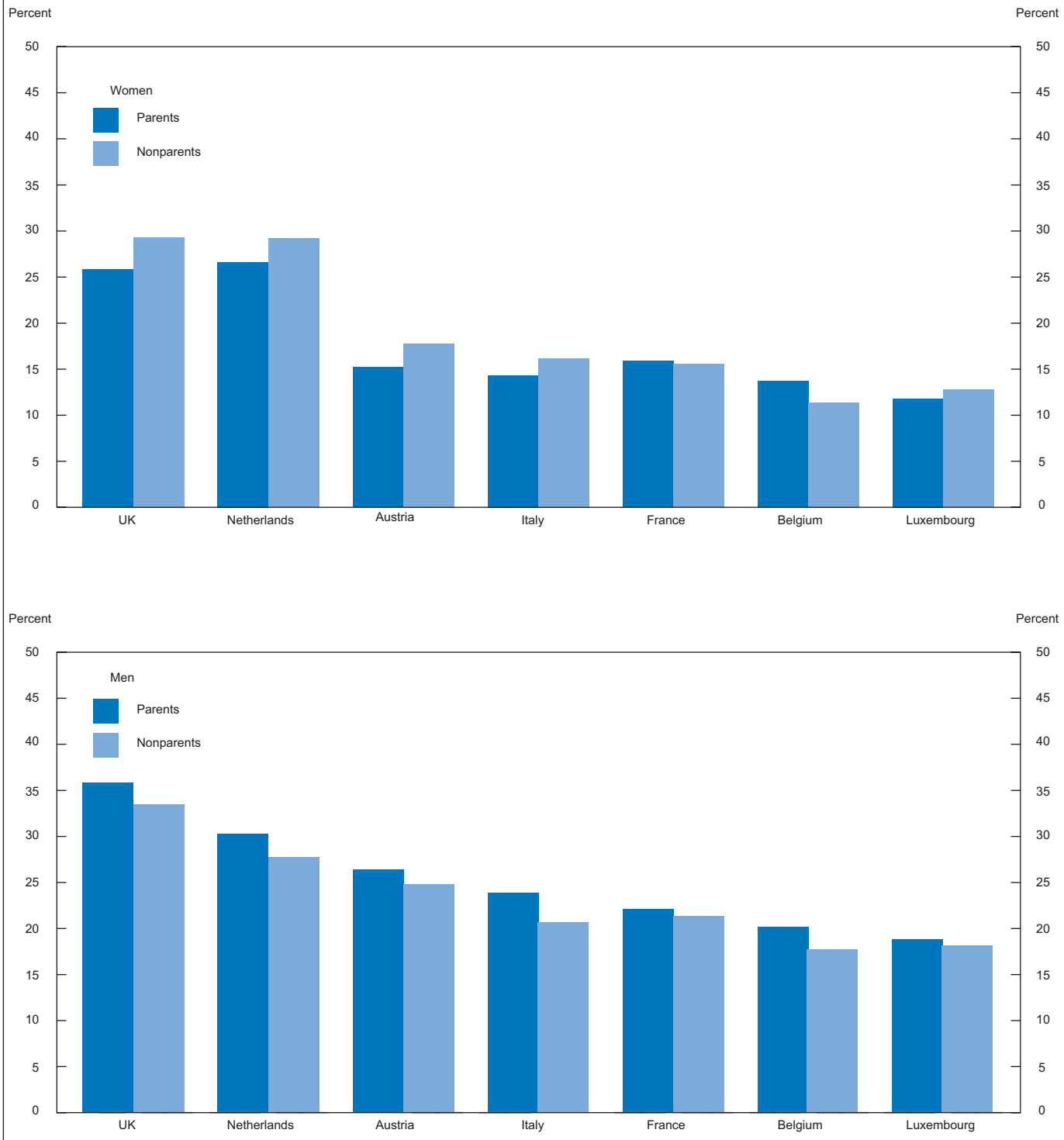
The results are somewhat different for men. As the bottom panel of chart 6 reports, among employed men, fathers are *more* likely to work nondays than are men without children—in all seven countries. However, again, the differences by parental status are small—with significant differences found only in the United Kingdom and Italy.

Table 3 (page 98) reports the results of a multivariate analysis in which the effects of parental status on the odds of nonday employment are estimated. Because the bivariate results showed differences between men and women, the multivariate results were estimated separately by gender. Using the same format as tables 1 and 2, table 3 first reports a model that includes parental status only, then adds sociodemographic characteristics in a second model, and, finally, adds job-related factors in a third model.

The multivariate results confirm that parental status has virtually no effect on the likelihood of working nondays, either with or without controls. Among women, the differential (less nonday work among parents) is statistically significant only in Italy, and once both sociodemographic and job-related controls are added, there are no evident parental effects at all. Among working men also, we see virtually no effects of the presence of children. The lone exception is the United Kingdom, where, with all of the controls in place, fathers are somewhat more likely than nonfathers to work nonday schedules.

Weekend employment. As indicated in the top panel of chart 7 (page 99), among women workers, there is little systematic relationship between weekend employment and parental status. In four countries, mothers are *less* likely than are employed nonmothers to work weekends, while in three

Chart 6. **Nonday work by parental status: women and men, nonagricultural wage and salary earners aged 25–44 years who usually work nondays, 7 European countries, 2005**



Note: Within-country parent-nonparent gaps are significant at the .05 level only in Italy for women and only in the United Kingdom and Italy for men.

Table 3. Parental status coefficients on usual nonday employment for nonagricultural wage and salary earners aged 25 to 44 years, 7 European countries

Country	Women						Men					
	Model 1[1]		Model 2[2]		Model 3[3]		Model 1[1]		Model 2[2]		Model 3[3]	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
English-speaking countries												
United Kingdom ...	–0.031	0.086	–0.083	0.092	–0.053	0.096	[5]0.209	0.071	0.147	0.077	[5]0.212	0.081
Continental countries												
France	.122	.149	.185	.153	.094	.158	.116	.104	.172	.108	.205	.112
Austria	–.151	.122	–.067	.131	–.013	.134	.048	.084	.007	.093	.041	.097
Netherlands.	.108	.121	.092	.126	.034	.130	.134	.083	.068	.088	.074	.093
Belgium	.182	.179	.316	.200	.322	.209	.075	.168	–.017	.184	–.040	.191
Luxembourg	–.063	.237	.035	.261	.168	.276	.160	.165	[4].371	.189	.323	.199
Italy.....	[4]–.135	.067	.044	.084	–.033	.088	[4].125	.052	.060	.068	.057	.071

[1] Regression of nonday employment on parental status alone.
[2] Regression of nonday employment on parental status, age, education, immigration status, and marital status.
[3] Regression of nonday employment on parental status, age, education, immigration status, marital status, hours worked, multiple jobs, industry, and occupation.
[4] $p < .05$.
[5] $p < .01$.
NOTE: Variables are as follows: *Parental status*: nonparent (ref.), parent; *Age*: 25–34 years (ref.), 35–44 years, 45–54 years, 55–64 years; *Education*: low, medium (ref.), high; *Immigration*: born in member state (ref.), less than 11 years, 11 years or more; *Marital Status*: single, married (ref.), separated; *Hours worked*: 1–9 hours, 10–24 hours, 25–29 hours, 30–34 hours, 35–39 hours (ref.), 40+ hours; *Multiple jobs*: one job (ref.), more than one job; *Sector*: industry (ref.), service; *Occupation*: legislators and managers, professionals (ref.), technicians, clerks, sales and services, crafts, plant and machine operators, elementary occupations.

countries the reverse is true, although the differences are not statistically significant in any of these countries.

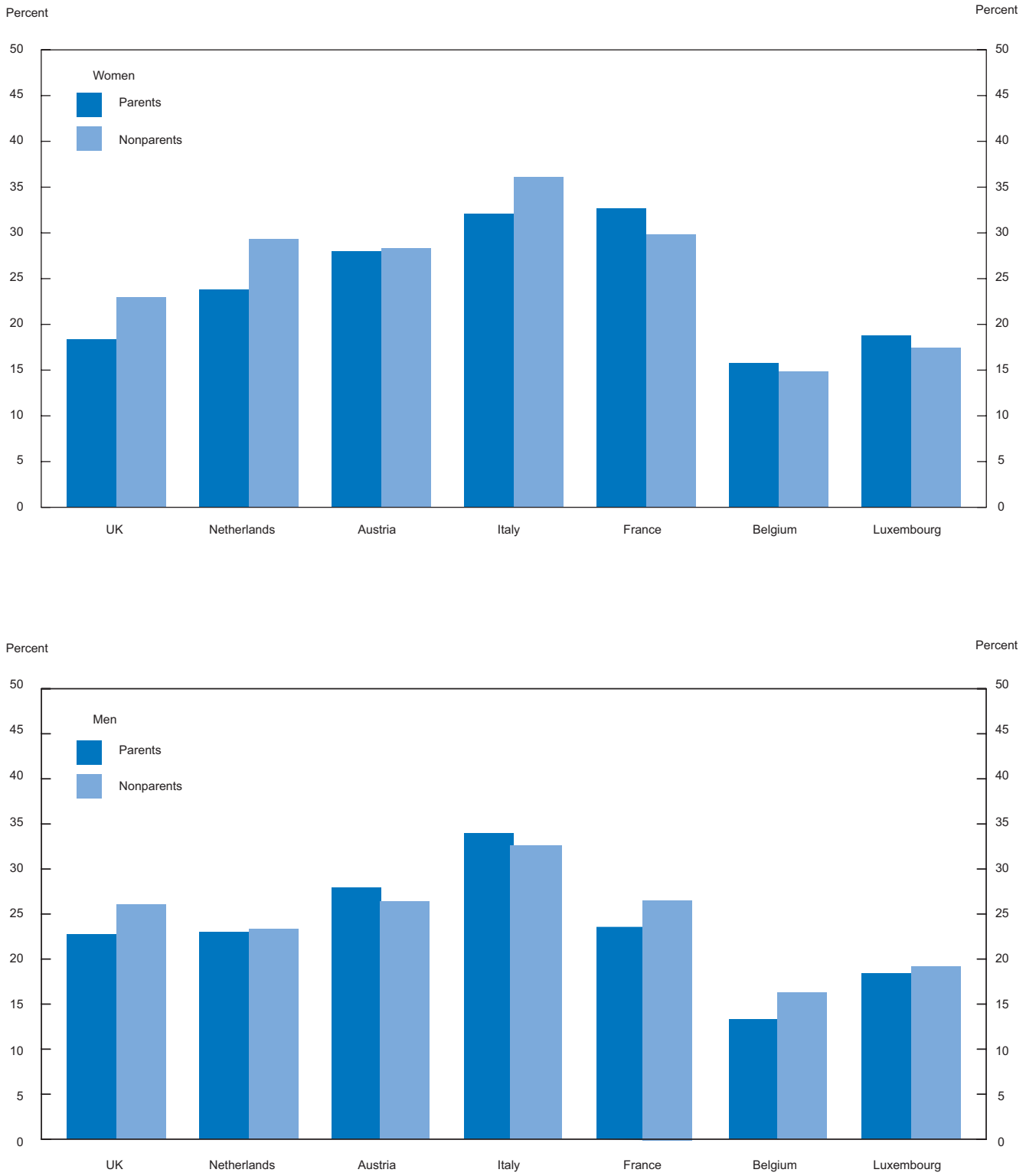
Likewise, employed men exhibit considerable variability across countries in the relationship between parental status and weekend employment. (See the bottom panel of chart 7.) In more of these cases than not, fathers are less likely to work weekends than are employed men without children, but again, the differences are clearly small (and significant only in the United Kingdom).

Table 4 (page 100) presents a multivariate analysis that regresses weekend employment on parental status—again, with sociodemographic controls added in Model 2 and job-related factors included in Model 3. Like the nonday results presented in table 3, the multivariate results indicate that parental status has virtually no effect on the likelihood of working weekends, either with or without controls. Among women, with all of the controls in place, the differential is significant only in France (where mothers are *more* likely to work weekends) and in Italy (where mothers are *less* likely to work weekends). Among men, there are no statistically significant effects of parenthood in any of the seven countries with data on the presence of children.

The absence of parenting effects on both nonday and weekend employment suggests that, in these European countries, as in the United States, workers generally sort—or are sorted—into standard and nonstandard schedules more as a result of demand-side factors (for example, job availability and remuneration) and less as a result of factors related to family composition.

THE FINDINGS PRESENTED IN THIS ARTICLE indicate clearly that, across the 12 European countries examined, a substantial amount of work is being performed at nonstandard hours. In all 12 countries, 15 percent or more of all employees aged 25 to 64 years *usually* work nonday hours; in 5 countries, at least 1 employee in 4 usually works nondays. The prevalence of weekend work, although more varied than nonday work, is also substantial: in all 12 countries, 10 percent or more of all employees aged 25 to 64 years *usually* work weekends, and in 7 countries, between about one-fifth and one-third usually work Saturdays or Sundays (or both).

Chart 7. Weekend work by parental status: women and men, nonagricultural wage and salary earners aged 25–44 years who usually work weekends, 7 European countries, 2005



Note: Within-country parent-nonparent gaps are significant at the .05 level only in the United Kingdom for men.

Table 4. Parental status coefficients on usual weekend employment for nonagricultural wage and salary earners aged 25 to 44 years, 7 European countries

Country	Women						Men					
	Model 1[1]		Model 2[2]		Model 3[3]		Model 1[1]		Model 2[2]		Model 3[3]	
	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error	Coefficient	Standard error
English-speaking countries												
United Kingdom	–0.141	0.095	–0.071	0.102	–0.082	0.108	–0.090	0.079	–0.053	0.088	0.044	0.094
Continental countries												
France	.220	.123	[5].345	.127	[5].357	.132	–.121	.099	–.034	.103	–.057	.111
Austria	.015	.104	–.067	.111	–.013	.117	.073	.084	.111	.092	.128	.098
Netherlands	–.060	.121	–.025	.127	–.098	.134	–.020	.087	.079	.093	.106	.101
Belgium	.012	.160	.033	.183	.125	.196	–.270	.179	–.224	.198	–.204	.210
Luxembourg	.134	.207	.258	.229	.405	.260	–.038	.158	.209	.184	.116	.202
Italy	[4]–.135	.054	–.115	.069	[4]–.186	.075	.030	.048	.004	.063	.030	.067

[1] Regression of weekend employment on parental status alone.
[2] Regression of weekend employment on parental status, age, education, immigration status, and marital status.
[3] Regression of weekend employment on parental status, age, education, immigration status, marital status, hours worked, multiple jobs, industry, and occupation.
[4] $p < .05$.
[5] $p < .01$.
NOTE: Variables are as follows: *Parental status*: nonparent (ref.), parent; *Age*: 25–34 years (ref.), 35–44 years, 45–54 years, 55–64 years; *Education*: low, medium (ref.), high; *Immigration*: born in member state (ref.), less than 11 years, 11 years or more; *Marital Status*: single, married (ref.), separated; *Hours worked*: 1-9 hours, 10–24 hours, 25–29 hours, 30–34 hours, 35–39 hours (ref.), 40+ hours; *Multiple jobs*: one job (ref.), more than one job; *Sector*: industry (ref.), service; *Occupation*: legislators and managers, professionals (ref.), technicians, clerks, sales and services, crafts, plant and machine operators, elementary occupations.

Given, then, that a substantial minority of the workforce in the 12 European countries examined works at nonstandard times, and given that there are potential negative as well as positive consequences of such employment for these workers and their families, more research on this issue is needed. Especially important is gaining a better understanding of the underlying dynamics at the microlevel that lead people to work at nonstandard times and of the reasons for variations by country at the macrolevel.

The European labor force surveys offer a start, in that they enable the researcher to describe some basic parameters and assess the extent of gender differences. However, this multicountry data source has methodological limitations because the collection of data on which hours people work is not fully standardized. Accordingly, compromises have to be made in country comparisons for 2005; for example, when each type of work schedule is of interest and they all have consequences that are different from one another,[36] evening, night, and shift work for that year have to be pooled into one nonday category in order to maximize comparability. In addition, it is important to note that those who report that they usually work evenings, nights, or weekends do not report the number of hours they are so employed; instead, they report only the total weekly hours worked, which may include daytime hours. Not only may countries vary in this regard, but so might the consequences for workers and their families. Further, because the data on nonday employment are not comparable over time for many of the countries, no trends in this regard can be assessed at a time when "flexibilization" of worktime is becoming a major issue in many European countries.

Explaining the variability in the level of nonstandard work schedules among the 12 European countries in 2005 also is not straightforward. The regional distinction shows some homogeneity within country clusters for nonday employment. Such homogeneity is especially evident in the four Nordic countries, with about one-fourth of the employed working nondays in each of the countries. And there is some degree of homogeneity among the Continental countries as well: the 5 countries with the *lowest* rates among the 12 examined are all Continental countries in which about one-fifth or fewer employees work nondays. However, intraregional homogeneity is not as evident for weekend employment.

These findings raise interesting questions about the role that public policy plays in shaping nonstandard-hour work in Europe. Throughout Europe, most employees are subject to European Union-required protections that limit their maximum number of weekly work hours, grant them a minimum number of paid days off per year, and protect them from disproportionate losses in compensation due to working part time. With regard to regulating work schedules, the European Union's 1993 Working Time Directive requires that every worker be entitled to a minimum daily rest period of 11 consecutive hours per 24-hour period and that, within each 7-day period, every worker be entitled to a minimum uninterrupted rest period of 24 hours (plus the 11 hours of daily rest). However, aside from these rest-break regulations, the European Union does not regulate work schedules, neither directly setting retail hours, nor specifying times of day when employment is allowable, nor establishing pay premiums for nonstandard-hour work. Given, then, the absence of supranational policy, it is perhaps not surprising that nonstandard hours are quite prevalent in a number of European countries—and that they vary substantially across countries.

Simply put, this article has asked the question, "Within countries, does gender matter," and the answer is "Yes." Like other aspects of the labor force, nonstandard work schedules vary by gender. Except in three Nordic countries, men are more likely than women to usually work nonday hours—and two of the exceptions are not statistically significant when adjustments are made for differences in sociodemographic and employment characteristics. Even within the service sector, which disproportionately includes women and in which employment at nonstandard times is relatively high, this pattern of male dominance holds. It also obtains when only those employed full time are examined.

But male dominance in nonday employment does not carry over to weekend work: in all but the two English-speaking countries, employed women are more likely to work weekends than are employed men. However, a number of exceptions arise within the service sectors of the countries examined: three continental countries join the English-speaking countries with higher male than female employment on weekends. Moreover, within the industrial sector, male dominance in weekend work is evident in almost all countries, the lone exception being France, with equal percentages for both genders. As with nonday employment, the gender pattern in weekend employment is similar when only those who work full time are examined: a multivariate analysis reveals that, for most of the countries in which women are more likely than men to work weekends, controlling for employment variables reverses the pattern, and men are seen to be significantly more likely than women to work weekends after adjustments for gender differences in hours worked, multiple jobs, industry, and occupation. Thus, gender differences in job-related factors appear to explain the higher levels of women in weekend employment in these countries.

Finally, the question of whether having children matters was raised. The answer is generally "No," but there are some differences by type of nonstandard work. With regard to motherhood and nonday employment, in 6 of the 7 countries for which data on children were available, differences by parental status were very small or nonexistent. Men showed more consistent differentials by parental status, with higher rates of nonday employment for fathers relative to nonfathers in all 7 countries (although the differences are generally not significant). Multivariate analyses confirmed that the independent effects of parental status are very small for both genders. With regard to the relationship between parental status and weekend employment, there is more variation by country than for nonday employment, for both men and women. However, regression analyses showed no significant difference by parental status for men, and significant differences (in opposite directions) for women in only two countries (France and Italy). Generally, then, one can conclude that parental status makes little difference for either men or women, a conclusion that points again to the potentially strong effects of job-related characteristics on determining who works at nonstandard times. □

Notes

ACKNOWLEDGMENTS: The authors gratefully acknowledge the financial support of the Russell Sage Foundation. They also thank Sylvain Jouhette and other staff at Eurostat for technical assistance.

[1] See *Biological Rhythms: Implications for the Worker*, publication OTA-BA-463 (U.S. Congress, Office of Technology Assessment, 1991); Henrik Bøggild and Anders Knutsson, "Shift Work, Risk Factors, and Cardiovascular Disease," *Scandinavian Journal of Work and Environmental Health*, vol. 25, no. 2, 1999, pp. 85–99; and Alexander Wedderburn (ed.), "Shiftwork and Health," special issue of the *Bulletin of European Studies on Time* (BEST), vol. 1 (Luxembourg, Office for Official Publications of the European Communities, 2000), on the Internet at **www.eurofound.ie**, Web site of the European Foundation for the Improvement of Living and Working Conditions (visited Feb. 25, 2008).

[2] Donald I. Tepas and Jana M. Price, "What Is Stress and What Is

Fatigue?" in Peter A. Hancock and Paula A. Desmond (eds.), *Stress, Workload, and Fatigue* (Mahwah, NJ, Lawrence Erlbaum Associates, 2001).

[3] Timo Kauppinen, *The 24-Hour Society and Industrial Relations Strategies* (Oslo, Norway, European Industrial Relations Association, 2001).

[4] It is interesting that, in the United States, the term is "nonstandard" or "atypical" hours, whereas Europeans researchers frequently say "unsocial" hours. (See, for example, Jill Rubery, Mark Smith, and Colette Fagan, "National Working-Time Regimes and Equal Opportunities," *Feminist Economics*, March 1998, pp. 71–101.)

[5] Harriet B. Presser, *Working in a 24/7 Economy: Challenges for American Families* (New York, Russell Sage Foundation, 2003).

[6] Presser's research suggests that the increased tendency toward marital instability does not result from spouses in troubled marriages seeking nonstandard hours; rather, the causality seems to run the other way.

[7] Wen-Jui Han, "Maternal Nonstandard Work Schedules and Child Cognitive Outcomes," *Child Development*, January–February 2005, pp. 137–54.

[8] Jody Heymann, *The Widening Gap: Why America's Working Families Are in Jeopardy—and What Can Be Done About It* (New York, Basic Books, 2001); Presser, *Working in a 24/7 Economy*.

[9] Heymann, T*he Widening Gap*.

[10] *Ibid.*

[11] Wen-Jui Han and Jane Waldfogel, "Maternal Nonstandard Work Schedules and Adolescents' Socio-Emotional Well-being," paper presented at the Annual Meeting of the Population Association of America, Philadelphia, Mar. 31-Apr. 2, 2005.

[12] See, for example, Janet C. Gornick, "Gender Equality in the Labor Market," in Diane Sainsbury (ed.), *Gender Policy Regimes and Welfare States* (Oxford, U.K., Oxford University Press, 1999), pp. 210–42; Janet C. Gornick and Marcia K. Meyers, *Families That Work: Policies for Reconciling Parenthood and Employment* (New York, Russell Sage Foundation, 2003 (paperback, 2005)); and Rubery, Smith, and Fagan, "National Working-Time Regimes" and *Women's Employment in Europe: Trends and Prospects* (London and New York, Routledge, 1999).

[13] Harriet B. Presser and Janet C. Gornick, "The female share of weekend employment: a study of 16 countries," *Monthly Labor Review*, August 2005, pp. 41–53.

[14] Presser, *Working in a 24/7 Economy*.

[15] The Fair Labor Standards Act deals with minimum-wage and overtime compensation when individuals work more than 40 hours a week, but it does not explicitly treat the work shifts of adults.

[16] Presser, *Working in a 24/7 Economy*.

[17] *Ibid*.

[18] All of the European countries in this article, except for Norway, are members of the European Union. Four Union countries—Germany, Greece, Portugal, and Spain—are omitted due to unavailable data or problems in comparability with work schedule questions. Note that Norway voluntarily implements European Union directives.

[19] For reasons of confidentiality, Eurostat would not provide the precise unweighted sample sizes for each of these countries after the subsample for analysis was selected.

[20] The restriction of the sample to wage and salary earners is based on an interest in examining workers who are subject to employer demands and have less control over working at nonstandard times than the self-employed have. Also, in the labor force surveys, questions about shift work were asked only of wage and salary earners. Restricting the sample to nonagricultural workers excludes those working in agricultural industries or in agricultural occupations. Excluding these workers minimizes measurement error because it is difficult to measure their work hours.

[21] Denmark does not specifically identify evening and night work hours in its survey, "but if the work period is mostly placed in the evening it is defined as evening work and if it takes place in the typical sleeping hours it is defined as night work" (Lone Solbjerghoj and Lars Peter Smed Christensen, personal communications, Dec. 14, 2003, and Feb. 20, 2006, respectively).

[22] If such workers usually work evenings or nights, they are included in the nonday category.

[23] This definition differs from that used by Presser in *Working in a 24/7 Economy*, in that it does not specify how much of the total hours worked is worked during nonstandard times. Whereas the U.S. survey asks respondents when they worked the *most* hours the previous week, the European labor force surveys include persons who usually work *some*, but not necessarily *most*, of their hours at nonstandard times.

[24] Presser and Gornick, "The female share of weekend employment."

[25] See, for example, Gosta Esping-Anderson, *The Three Worlds of Welfare Capitalism* (Princeton, NJ, Princeton University Press, 1990); and Gornick and Meyers, *Families That Work*.

[26] For ease of comparison, we adopt this country ordering in all of the charts. That is, the countries are ordered first by region and, within region, by declining levels of nonday employment.

[27] The low level for Sweden may be a consequence of a new survey filtering pattern employed by that country since 2003 (as reported by Gunborg Johansson, the Swedish delegate to Eurostat, September 6, 2006). The new pattern led to a substantial drop in the percentage reporting that they usually worked weekends, compared with previous years' percentages.

[28] For a 1997 analysis of separate Saturday and Sunday employment, with a focus on women's share of such employment in the continental countries, see Presser and Gornick, "The female share of weekend employment."

[29] Presser, *Working in a 24/7 Economy.*

[30] In Finland, Norway, and Sweden, the results among women are driven mostly by their greater likelihood (relative to men) of working rotating shifts, rather than evenings and nights in themselves. (Results are not shown.)

[31] In the subsequent analyses of economic sectors, the labor force survey variable "industrial sector—main job" is used. This variable is variously coded as "agriculture," "industry," and "services" in the data set employed in this article. The agriculture sector was excluded from the study, and nonstandard-hour work in the industry sector is contrasted here with nonstandard-hour work in the services sector. It is important to emphasize that this analysis employs an industrial classification, not an occupational classification. Although many of these service-sector workers work in service occupations, an occupational distinction is not what is captured here.

[32] Ten of the countries had the option "hours vary" in their surveys, and the range of responses in this category was from 1 percent to 6 percent. These cases were treated as missing in the analysis of full-time workers.

[33] Tables 1–4 report unexponentiated betas, meaning that they indicate the effect (negative or positive) of being a woman on the logarithm of the odds of being employed nondays (or weekends). A negative coefficient indicates that women are less likely to work these nonstandard hours; a positive coefficient means that women are more likely to work such hours.

[34] A model also was examined that considered the socioeconomic characteristics listed, absent marital status, followed by a model that added marital status. The aim was to see if marital status would substantially affect the gender coefficients. That turned out not to be the case for any of the countries in the analysis.

[35] Furthermore, in these data, if adults report that they have no children at home, it is not possible to distinguish those who never had children from those whose children have grown up and left home. When the sample is limited to adults under age 45, the likelihood that the childless adults in the sample have never had children increases dramatically. In other words, it is then easier to distinguish between parents and nonparents.

[36] Presser, *Working in a 24/7 Economy*.

Taxes and labor markets

Tax Policy and Labor Market Performance. By Jonas Agell and Peter Birch Sorensen, eds., Cambridge, MA., The MIT Press, 2006, 340 pp., $42/hardback.

How to improve economic growth rates in developed nations continues to be an area of concern to economists, particularly to Europeans who fret over their ability to compete with lower labor costs in less developed countries. Over the past two decades, European members of the Organisation for Economic Cooperation and Development (OECD) countries have tended to report higher unemployment rates and lower labor force participation rates than the United States, although the reasons for the differences have been matters of dispute among policymakers. Also, even after adjusting for conceptual differences within the European Union (EU), these unemployment rates have varied. For example, in August 2007 the Bureau of Labor Statistics reported that the unemployment rate in the Netherlands stood at 3.4 percent, while the German unemployment rate stood at 8.7 percent. This compares to a 4.6-percent unemployment rate for the United States.

Many economists have pointed to a structurally more rigid European labor market, in comparison to the flexibility of the U.S. labor force, as a continuing obstacle which causes overall higher rates of employment and lower levels of economic growth in the EU. Jonas Agell and Peter Birch Sorensen have compiled a series of essays focused on one aspect of this more rigid structure—the role of taxes in influencing labor markets, both in the U.S. and Europe. Specifically, they have published a volume using papers presented by authors coming from a variety of European and American academic institutions. Their findings were presented at seminars hosted by CESifo, a research group located in Munich, Germany, which looks at topical economic issues from a European perspective and serves as an international network of economists.

The book utilizes essays that search for answers to two questions: How do tax structures affect the working of labor markets? And, how could changes in tax structures affect these markets?

The essays break down into three sections—a broad approach to taxation and labor markets, taxation as it affects wages of both men and women, and taxation and the underground (informal) economy. The issues touch on many of the questions that face economists, such as concerns over economic efficiency and equity trade-offs and whether changing incentives can have a discernable effect on the overall economy.

For the most part, the essays assume that labor markets are affected by rational behavior that can be influenced by monetary policy. As an article of faith, progressively higher tax rates are assumed to produce disincentives which lead to individuals choosing to work fewer hours. Conversely, lower rates are assumed to have the opposite effect. Newer theories of behavioral economics, which might confound these assumptions, are not to be found in this volume.

In fairness, some of the essayists do acknowledge that labor market structures are influenced by nonmonetary factors such as culture and beliefs. For example, Frederick van der Ploeg concludes his essay on the relationship between social policy and economic growth by discussing the complications in proposing new tax policies in communities where existing ideologies, such as a belief in poverty as a result of poor luck rather than due to lack of effort, can dramatically affect the acceptance of these policies in a real world filled with complexity. At the same time, much of his essay seems to struggle to reconcile a rational economic approach with a messier real world where outside factors have greater influence than can be expressed by any equation.

The other consistent theme for these essays is their grounding in empirical evidence, both as a supporter of theory and as a means of testing theory. Throughout the book a great deal of work appears in the form of data and data analysis as an underpinning to the ideas expressed by the authors. All eight chapters take a rigorous approach to expressing theories based on the available evidence. Mathematical formulas flow through the chapters showing structural equations and tables showing multivariate statistics.

Being true to the academic origins of these papers, the essays include information not only supporting theories but also providing evidence that weakens the theories. In the name of intellectual honesty, there are few hard answers to the questions being asked by the academicians. For example, the essay by Tranaes, Arnberg, and Holm provides theory, data, and multivariable wage equation on the relationship between progressive taxation and wages, only to summarize by suggesting that their work is incomplete and needs further empirical elaboration before they are ready to present conclusive evidence on the relationship between equity and efficiency. Other authors

are equally forthcoming on their degrees of confidence, or lack of it, in their own conclusions which vary from very firm to concluding that the results presented are only preliminary and subject to revision.

In some ways, although the book appears to be filled with complex formulas and theories, it takes a simplified approach to taxation by only considering the role of taxes in reducing income. It is a quirk of economists who study public policy to focus on either public sector revenue or expenditures, but fewer tackle the more complicated issues of the interrelationship between these two sides of the public ledger and the private labor market. For the most part, this book also fails to fully consider the ways that taxation and expenditures interact with private labor markets, for example infrastructure improvements, that can lead to more efficient labor markets.

A warning to potential readers: The volume is not meant for the casual reader or as an introduction to the subject. Individuals already deeply involved in these issues will welcome these essays as stimuli to new perspectives on guiding tax policy to service labor policies, while novices may wish to approach the subject using simpler texts.

—Michael Wald
Office of Public Affairs
U.S. Department of Labor

Current Labor Statistics
Monthly Labor Review
February 2008

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

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

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

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Notes on Current Labor Statistics

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

General notes

The following notes apply to several tables in this section:

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

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

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

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

Sources of information

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

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

www.bls.gov/cps/

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

www.bls.gov/ces/

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

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

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

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

www.bls.gov/lpc/

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

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

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

Symbols

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

Comparative Indicators

(Tables 1–3)

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

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

Data on **changes in compensation, prices, and productivity** are presented in table 2. Measures of rates of change of compensation

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

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

Notes on the data

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

Employment and Unemployment Data

(Tables 1; 4–29)

Household survey data

Description of the series

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

Definitions

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

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

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

Notes on the data

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

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

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

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

Establishment survey data

Description of the series

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

Definitions

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

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

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

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

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

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

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

Notes on the data

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

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

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

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

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

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

Unemployment data by State

Description of the series

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

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

Notes on the data

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

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

Quarterly Census of Employment and Wages

Description of the series

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

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

market trends and major industry developments.

Definitions

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

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

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

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

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

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

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

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

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

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

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

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

Notes on the data

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

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

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

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

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

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

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

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

Job Openings and Labor Turnover Survey

Description of the series

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

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

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

Definitions

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

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

job openings, and multiplying that quotient by 100.

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

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

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

Notes on the data

The JOLTS data series on job openings, hires, and separations are relatively new. The full sample is divided into panels, with one panel enrolled each month. A full complement of panels for the original data series based on the 1987 Standard Industrial Classification (SIC) system was not completely enrolled in the survey until January 2002. The 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 2002 North American Classification System (NAICS). Within a sample establishment, specific job

categories are selected and classified into about 800 occupations according to the 2000 Standard Occupational Classification (SOC) System. Individual occupations are combined to represent one of ten intermediate aggregations, such as professional and related occupations, or one of five higher level 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 con-version to the 2002 North American Industry Classification System (NAICS) and the 2000 Standard Occupational Classification (SOC) system. The NAICS and SOC data shown prior to 2006 are for informational purposes only. ECI series based on NAICS and SOC became the official BLS estimates starting in March 2006.

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

ADDITIONAL INFORMATION on the Employment Cost Index is available at **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 **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 stop-pages data is available at **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 meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of homeownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

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

Producer Price Indexes

Description of the series

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

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

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

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

International Price Indexes

Description of the series

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

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manu-

factures, 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**

International Comparisons

(Tables 51–53)

Labor force and unemployment

Description of the series

Tables 51 and 52 present comparative measures of the labor force, employment, and unemployment approximating U.S. concepts for the United States, Canada, Australia, Japan, and six European countries. The Bureau adjusts the figures for these selected countries, for all known major definitional differences, to the extent that data to prepare adjustments are available. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For additional 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 BLS Web site at: **www.bls.gov/opub/mlr/2000/06/art1full.pdf**).

Definitions

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

Notes on the data

The foreign country data are adjusted as closely as possible to U.S. concepts, with the exception of lower age limits and the treatment of layoffs. These adjustments include, but are not limited to: including older persons in the labor force by imposing no upper age limit, adding unemployed students to the unemployed, excluding the military and family workers working fewer than 15 hours from the employed, and excluding persons engaged in passive job search from the unemployed.

Data for the United States relate to the population 16 years of age and older. The U.S. concept of the working age population has no upper age limit. The adjusted to U.S. concepts statistics have been adapted, insofar as possible, to the age at which compulsory schooling ends in each country, and the Swedish statistics have been adjusted to include persons older than the Swedish upper age limit of 64 years. The adjusted statistics presented here relate to the population 16 years of age and older in France, Sweden, and the United Kingdom; 15 years of age and older in Australia, Japan, Germany, Italy, and the Netherlands. An exception to this rule is that the Canadian statistics are adjusted to cover the population 16 years of age and older, whereas the age at which compulsory schooling ends remains at 15 years. In the labor force participation rates and employment-population ratios, the denominator is the civilian noninstitutionalized working age population, except for Japan and Germany, which include the institutionalized working age population.

In the United States, the unemployed include persons who are not employed and who were actively seeking work during the reference period, as well as persons on layoff. In the United States, as in Australia and Japan, passive job seekers are not in the labor force; job search must be active, such as placing or answering advertisements, contacting employers directly, or registering with an employment agency (simply reading ads is not enough to qualify as active search). Canada and the European countries classify passive jobseekers as unemployed. An adjustment is made to exclude them in Canada, but not in the European countries where the phenomenon is less prevalent. In some countries, persons on layoff are

classified as employed due to their strong job attachment. No adjustment is made for the countries that classify those on layoff as employed. Persons without work and waiting to start a new job are counted as unemployed under U.S. concepts if they were actively seeking work during the reference period; if they were not actively seeking work, they are not counted in the labor force. Persons without work and waiting to start a new job are counted among the unemployed for all other countries, whether or not they were actively seeking work.

For more qualifications and historical annual data, see *Comparative Civilian Labor Force Statistics, Ten Countries,* on the Internet at **http:/www.bls.gov/fls/flscomparelf.htm**

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

Manufacturing Productivity and Labor Costs

Description of the series

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

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

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

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). For the United States and Canada, it is defined according to the North American Industry Classification System (NAICS 97).

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

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

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

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

Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France include parts of mining as well.

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

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

Occupational Injury and Illness Data

(Tables 54–55)

Survey of Occupational Injuries and Illnesses

Description of the series

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

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

Definitions

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

Occupational injury is any injury such as a cut, fracture, sprain, or amputation that

results from a work-related event or a single, instantaneous exposure in the work environment.

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

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

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

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

Notes on the data

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

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

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

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

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

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

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

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at: **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 accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

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

Definition

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

Notes on the data

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

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

1. Labor market indicators

Selected indicators	2006	2007	2005	2006				2007			
			IV	I	II	III	IV	I	II	III	IV
Employment data											
Employment status of the civilian noninstitutional population (household survey): [1]											
Labor force participation rate	66.2	66.0	66.1	66.0	66.2	66.2	66.3	66.2	66.0	66.0	66.0
Employment-population ratio	63.1	63.0	62.8	62.9	63.1	63.1	63.4	63.2	63.0	62.9	62.8
Unemployment rate	4.6	4.6	4.9	4.7	4.7	4.7	4.4	4.5	4.5	4.7	4.8
Men	4.6	4.7	4.9	4.7	4.7	4.6	4.5	4.6	4.6	4.8	4.9
16 to 24 years	11.2	11.6	11.6	11.3	11.2	11.4	11.0	10.8	11.5	11.8	12.2
25 years and older	3.5	3.6	3.7	3.5	3.6	3.5	3.3	3.6	3.5	3.6	3.7
Women	4.6	4.5	5.0	4.8	4.6	4.7	4.4	4.4	4.4	4.6	4.7
16 to 24 years	9.7	9.4	9.9	9.7	9.3	10.1	9.7	9.0	9.0	9.8	9.9
25 years and older	3.7	3.6	4.2	3.9	3.8	3.8	3.5	3.5	3.6	3.7	3.8
Employment, nonfarm (payroll data), in thousands: [1]											
Total nonfarm	136,086	137,626	134,883	135,647	135,910	136,528	136,982	137,310	137,625	137,837	138,119
Total private	114,113	115,423	112,996	113,748	113,996	114,472	114,899	115,167	115,423	115,610	115,813
Goods-producing	22,531	22,221	22,402	22,563	22,570	22,564	22,436	22,362	22,267	22,138	21,988
Manufacturing	14,155	13,883	14,205	14,208	14,200	14,138	14,033	13,953	13,890	13,822	13,774
Service-providing	113,556	115,405	112,481	113,084	113,340	113,964	114,546	114,948	115,358	115,699	116,131
Average hours:											
Total private	33.9	33.8	33.8	33.8	33.9	33.8	33.9	33.9	33.9	33.8	33.8
Manufacturing	41.1	41.2	40.9	41.0	41.2	41.3	41.1	41.2	41.4	41.3	41.3
Overtime	4.4	4.2	4.6	4.5	4.5	4.4	4.2	4.1	4.1	4.1	4.1
Employment Cost Index[1, 2, 3]											
Total compensation:											
Civilian nonfarm[4]	3.3	3.3	.6	.7	.9	1.1	.6	.9	.8	1.0	.6
Private nonfarm	3.2	3.0	.5	.8	.9	.8	.7	.8	.9	.8	.6
Goods-producing[5]	2.5	2.4	.2	.3	1.0	.7	.5	.4	1.0	.5	.6
Service-providing[5]	3.4	3.2	.5	1.0	.8	.9	.7	.9	.9	.9	.6
State and local government	4.1	4.1	.9	.5	.4	2.3	.9	1.0	.6	1.8	.7
Workers by bargaining status (private nonfarm):											
Union	3.0	2.0	.4	.5	1.3	.6	.6	-.3	1.2	.5	.7
Nonunion	3.2	3.2	.5	.9	.8	.9	.6	1.0	.9	.8	.6

[1] Quarterly data seasonally adjusted.

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

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

[4] Excludes Federal and private household workers.

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

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

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

Selected measures	2006	2007	2005	2006				2007			
			IV	I	II	III	IV	I	II	III	IV
Compensation data[1, 2, 3]											
Employment Cost Index—compensation:											
Civilian nonfarm	3.3	3.3	0.6	0.7	0.9	1.1	0.6	0.9	0.8	1.0	0.6
Private nonfarm	3.2	3.0	.5	.8	.9	.8	.7	.8	.9	.8	.6
Employment Cost Index—wages and salaries:											
Civilian nonfarm	3.2	3.4	.6	.7	.8	1.1	.6	1.1	.7	1.0	.7
Private nonfarm	3.2	3.3	.5	.7	1.0	.8	.7	1.1	.8	.9	.6
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items	3.2	2.8	–1.0	1.5	1.6	.0	-.5	1.8	1.5	.1	.7
Producer Price Index:											
Finished goods	3.0	3.9	-.1	.3	1.7	-.9	.1	2.2	1.9	.1	1.9
Finished consumer goods	3.5	4.5	–.4	.2	2.1	-1.3	-.2	2.8	2.5	.2	2.1
Capital equipment	1.6	1.8	.6	.8	.2	.0	1.3	.3	-.1	-.1	1.1
Intermediate materials, supplies, and components	6.5	4.0	1.0	.9	3.0	-.4	-.8	3.6	3.2	.1	1.8
Crude materials	1.4	12.2	.2	-11.1	1.8	1.2	4.0	5.7	3.8	-2.4	12.7
Productivity data[4]											
Output per hour of all persons:											
Business sector	1.0	1.6	-1.1	2.5	.8	-1.5	1.2	.2	3.6	6.5	.6
Nonfarm business sector	1.0	1.6	-1.4	2.5	.8	-1.6	1.8	.7	2.2	6.0	1.8
Nonfinancial corporations[5]	1.3	-	2.4	3.1	-1.8	3.1	1.3	.7	2.1	3.7	-

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

[2] Excludes Federal and private household workers.

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

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

[5] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly change					Four quarters ending—				
	2006	2007				2006	2007			
	IV	I	II	III	IV	IV	I	II	III	IV
Average hourly compensation:[1]										
All persons, business sector	11.4	5.5	2.4	4.4	2.8	4.8	4.4	5.2	5.9	3.8
All persons, nonfarm business sector	12.2	5.9	1.0	4.0	3.9	5.0	4.7	5.0	5.7	3.7
Employment Cost Index—compensation:[2]										
Civilian nonfarm[3]	.6	.9	.8	1.0	.6	3.3	3.5	3.3	3.3	3.3
Private nonfarm	.7	.8	.9	.8	.6	3.2	3.2	3.1	3.1	3.0
Union	.6	-.3	1.2	.5	.7	3.0	2.2	2.1	2.0	2.0
Nonunion	.6	1.0	.9	.8	.6	3.2	3.3	3.3	3.2	3.2
State and local government	.9	1.0	.6	1.8	.7	4.1	4.6	4.8	4.3	4.1
Employment Cost Index—wages and salaries:[2]										
Civilian nonfarm[3]	.6	1.1	.7	1.0	.7	3.2	3.6	3.4	3.3	3.4
Private nonfarm	.7	1.1	.8	.9	.6	3.2	3.6	3.3	3.4	3.3
Union	.6	.5	.9	.7	.3	2.3	2.5	2.5	2.7	2.3
Nonunion	.6	1.2	.8	.9	.7	3.3	3.7	3.4	3.4	3.5
State and local government	.7	.6	.5	1.7	.7	3.5	3.8	3.8	3.5	3.5

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

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

[3] Excludes Federal and private household workers.

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

[Numbers in thousands]

Employment status	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
TOTAL															
Civilian noninstitutional population[1]	228,815	231,867	230,108	230,650	230,834	231,034	231,253	231,480	231,713	231,958	232,211	232,461	232,715	232,939	233,156
Civilian labor force	151,428	153,124	152,709	152,958	152,725	152,884	152,542	152,776	153,085	153,182	152,886	153,506	153,306	153,828	153,866
Participation rate	66.2	66.0	66.4	66.3	66.2	66.2	66.0	66.0	66.1	66.0	65.8	66.0	65.9	66.0	66.0
Employed	144,427	146,047	145,949	145,915	145,888	146,145	145,713	145,913	146,087	146,045	145,753	146,260	146,016	146,647	146,211
Employment-population ratio[2]	63.1	63.0	63.4	63.3	63.2	63.3	63.0	63.0	63.0	63.0	62.8	62.9	62.7	63.0	62.7
Unemployed	7,001	7,078	6,760	7,043	6,837	6,738	6,829	6,863	6,997	7,137	7,133	7,246	7,291	7,181	7,655
Unemployment rate	4.6	4.6	4.4	4.6	4.5	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.8	4.7	5.0
Not in the labor force	77,387	78,743	77,399	77,692	78,110	78,150	78,711	78,704	78,628	78,776	79,325	78,955	79,409	79,111	79,290
Men, 20 years and over															
Civilian noninstitutional population[1]	102,145	103,555	102,751	102,956	103,046	103,143	103,248	103,361	103,477	103,598	103,723	103,847	103,973	104,087	104,197
Civilian labor force	77,562	78,596	78,322	78,407	78,358	78,410	78,428	78,497	78,503	78,619	78,526	78,689	78,664	79,075	79,004
Participation rate	75.9	75.9	76.2	76.2	76.0	76.0	76.0	75.9	75.9	75.9	75.7	75.8	75.7	76.0	75.8
Employed	74,431	75,337	75,238	75,154	75,148	75,286	75,279	75,343	75,292	75,324	75,274	75,332	75,274	75,834	75,499
Employment-population ratio[2]	72.9	72.8	73.2	73.0	72.9	73.0	72.9	72.9	72.8	72.7	72.6	72.5	72.4	72.9	72.5
Unemployed	3,131	3,259	3,084	3,252	3,210	3,124	3,149	3,154	3,212	3,295	3,252	3,357	3,389	3,240	3,505
Unemployment rate	4.0	4.1	3.9	4.1	4.1	4.0	4.0	4.0	4.1	4.2	4.1	4.3	4.3	4.1	4.4
Not in the labor force	24,584	24,959	24,429	24,550	24,688	24,733	24,820	24,864	24,973	24,979	25,197	25,158	25,309	25,012	25,193
Women, 20 years and over															
Civilian noninstitutional population[1]	109,992	111,330	110,528	110,803	110,880	110,964	111,057	111,157	111,259	111,367	111,479	111,590	111,703	111,805	111,903
Civilian labor force	66,585	67,516	67,127	67,359	67,247	67,446	67,077	67,318	67,481	67,566	67,616	67,795	67,623	67,776	67,866
Participation rate	60.5	60.6	60.7	60.8	60.6	60.8	60.4	60.6	60.7	60.7	60.7	60.8	60.5	60.6	60.6
Employed	63,834	64,799	64,525	64,647	64,686	64,859	64,479	64,710	64,828	64,792	64,826	65,033	64,827	64,980	64,912
Employment-population ratio[2]	58.0	58.2	58.4	58.3	58.3	58.5	58.1	58.2	58.3	58.2	58.2	58.3	58.0	58.1	58.0
Unemployed	2,751	2,718	2,601	2,712	2,561	2,588	2,597	2,608	2,653	2,774	2,790	2,762	2,796	2,796	2,954
Unemployment rate	4.1	4.0	3.9	4.0	3.8	3.8	3.9	3.9	3.9	4.1	4.1	4.1	4.1	4.1	4.4
Not in the labor force	43,407	43,814	43,401	43,444	43,633	43,517	43,980	43,839	43,778	43,801	43,863	43,795	44,080	44,029	44,037
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,678	16,982	16,829	16,891	16,908	16,927	16,948	16,962	16,977	16,993	17,009	17,024	17,040	17,048	17,056
Civilian labor force	7,281	7,012	7,260	7,192	7,120	7,028	7,037	6,961	7,100	6,997	6,744	7,021	7,020	6,977	6,996
Participation rate	43.7	41.3	43.1	42.6	42.1	41.5	41.5	41.0	41.8	41.2	39.7	41.2	41.2	40.9	41.0
Employed	6,162	5,911	6,185	6,114	6,055	6,000	5,954	5,860	5,968	5,930	5,653	5,895	5,914	5,832	5,801
Employment-population ratio[2]	36.9	34.8	36.8	36.2	35.8	35.4	35.1	34.5	35.2	34.9	33.2	34.6	34.7	34.2	34.0
Unemployed	1,119	1,101	1,074	1,079	1,066	1,027	1,082	1,101	1,133	1,067	1,092	1,126	1,105	1,145	1,196
Unemployment rate	15.4	15.7	14.8	15.0	15.0	14.6	15.4	15.8	16.0	15.3	16.2	16.0	15.7	16.4	17.1
Not in the labor force	9,397	9,970	9,570	9,698	9,788	9,900	9,911	10,001	9,877	9,996	10,264	10,003	10,020	10,071	10,059
White[3]															
Civilian noninstitutional population[1]	186,264	188,253	187,115	187,471	187,582	187,704	187,843	187,993	188,148	188,312	188,479	188,644	188,813	188,956	189,093
Civilian labor force	123,834	124,935	124,766	124,896	124,636	124,852	124,433	124,639	124,918	124,945	124,596	125,316	125,151	125,430	125,460
Participation rate	66.5	66.4	66.7	66.6	66.4	66.5	66.2	66.3	66.4	66.3	66.1	66.4	66.3	66.4	66.3
Employed	118,833	119,792	119,828	119,742	119,651	120,065	119,505	119,711	119,835	119,713	119,340	119,992	119,883	120,194	119,889
Employment-population ratio[2]	63.8	63.6	64.0	63.9	63.8	64.0	63.6	63.7	63.7	63.6	63.3	63.6	63.5	63.6	63.4
Unemployed	5,002	5,143	4,938	5,154	4,986	4,787	4,928	4,928	5,083	5,232	5,256	5,324	5,268	5,235	5,571
Unemployment rate	4.0	4.1	4.0	4.1	4.0	3.8	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.4
Not in the labor force	62,429	63,319	62,349	62,574	62,945	62,852	63,410	63,355	63,230	63,368	63,883	63,329	63,662	63,526	63,633
Black or African American[3]															
Civilian noninstitutional population[1]	27,007	27,485	27,231	27,276	27,310	27,346	27,385	27,422	27,459	27,498	27,541	27,584	27,627	27,666	27,704
Civilian labor force	17,314	17,496	17,545	17,657	17,535	17,418	17,483	17,405	17,456	17,593	17,524	17,483	17,430	17,453	17,538
Participation rate	64.1	63.7	64.4	64.7	64.2	63.7	63.8	63.5	63.6	64.0	63.6	63.4	63.1	63.1	63.3
Employed	15,765	16,051	16,091	16,242	16,141	15,979	16,048	15,939	15,989	16,172	16,176	16,046	15,946	15,980	15,961
Employment-population ratio[2]	58.4	58.4	59.1	59.5	59.1	58.4	58.6	58.1	58.2	58.8	58.7	58.2	57.7	57.8	57.6
Unemployed	1,549	1,445	1,455	1,415	1,394	1,439	1,435	1,466	1,467	1,421	1,347	1,437	1,483	1,473	1,577
Unemployment rate	8.9	8.3	8.3	8.0	8.0	8.3	8.2	8.4	8.4	8.1	7.7	8.2	8.5	8.4	9.0
Not in the labor force	9,693	9,989	9,685	9,619	9,775	9,928	9,902	10,017	10,003	9,905	10,017	10,101	10,197	10,212	10,165

See footnotes at end of table.

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

[Numbers in thousands]

Employment status	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Hispanic or Latino ethnicity															
Civilian noninstitutional population[1]	30,103	31,383	30,596	30,877	30,965	31,055	31,147	31,238	31,329	31,423	31,520	31,617	31,714	31,809	31,903
Civilian labor force	20,694	21,602	21,185	21,428	21,301	21,368	21,436	21,434	21,460	21,613	21,781	21,872	21,778	21,872	21,888
Participation rate	68.7	68.8	69.2	69.4	68.8	68.8	68.8	68.6	68.5	68.8	69.1	69.2	68.7	68.8	68.6
Employed	19,613	20,382	20,136	20,206	20,183	20,257	20,263	20,197	20,245	20,345	20,578	20,619	20,554	20,623	20,517
Employment-population ratio[2]	65.2	64.9	65.8	65.4	65.2	65.2	65.1	64.7	64.6	64.7	65.3	65.2	64.8	64.8	64.3
Unemployed	1,081	1,220	1,048	1,222	1,118	1,111	1,173	1,237	1,216	1,269	1,204	1,253	1,224	1,249	1,371
Unemployment rate	5.2	5.6	4.9	5.7	5.2	5.2	5.5	5.8	5.7	5.9	5.5	5.7	5.6	5.7	6.3
Not in the labor force	9,409	9,781	9,411	9,450	9,664	9,687	9,711	9,804	9,869	9,809	9,738	9,745	9,936	9,938	10,016

[1] The population figures are not seasonally adjusted.

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

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

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

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Characteristic															
Employed, 16 years and older	144,427	146,047	145,949	145,915	145,888	146,145	145,713	145,913	146,087	146,045	145,753	146,260	146,016	146,647	146,211
Men	77,502	78,254	78,324	78,221	78,184	78,297	78,293	78,277	78,243	78,237	78,066	78,229	78,177	78,604	78,260
Women	66,925	67,792	67,625	67,694	67,704	67,849	67,420	67,637	67,845	67,808	67,687	68,030	67,838	68,043	67,951
Married men, spouse present	45,700	46,314	45,976	46,150	46,273	46,505	46,466	46,472	46,448	46,307	46,193	46,235	46,189	46,339	46,213
Married women, spouse present	35,272	35,832	35,508	35,664	35,788	36,174	36,009	36,126	36,111	35,938	35,794	35,712	35,449	35,689	35,565
Persons at work part time[1]															
All industries:															
Part time for economic reasons	4,162	4,401	4,209	4,237	4,247	4,285	4,371	4,469	4,311	4,332	4,517	4,499	4,401	4,513	4,665
Slack work or business conditions	2,658	2,877	2,693	2,757	2,737	2,786	2,854	2,952	2,803	2,751	2,955	2,991	2,788	3,008	3,174
Could only find part-time work	1,189	1,210	1,224	1,190	1,209	1,217	1,238	1,248	1,197	1,210	1,175	1,166	1,215	1,223	1,236
Part time for noneconomic reasons	19,591	19,756	19,960	19,812	19,927	20,033	19,919	19,610	20,076	19,957	19,779	19,812	19,337	19,539	19,526
Nonagricultural industries:															
Part time for economic reasons	4,071	4,317	4,139	4,142	4,130	4,206	4,301	4,391	4,210	4,259	4,466	4,397	4,302	4,453	4,577
Slack work or business conditions	2,596	2,827	2,632	2,686	2,666	2,741	2,830	2,893	2,736	2,711	2,916	2,922	2,745	2,981	3,120
Could only find part-time work	1,178	1,199	1,217	1,171	1,194	1,203	1,232	1,246	1,198	1,205	1,152	1,153	1,207	1,205	1,219
Part time for noneconomic reasons	19,237	19,419	19,596	19,477	19,552	19,624	19,550	19,192	19,734	19,569	19,469	19,451	19,157	19,224	19,225

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

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

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Characteristic															
Total, 16 years and older	4.6	4.6	4.4	4.6	4.5	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.8	4.7	5.0
Both sexes, 16 to 19 years	15.4	15.7	14.8	15.0	15.0	14.6	15.4	15.8	16.0	15.3	16.2	16.0	15.7	16.4	17.1
Men, 20 years and older	4.0	4.1	3.9	4.1	4.1	4.0	4.0	4.0	4.1	4.2	4.1	4.3	4.3	4.1	4.4
Women, 20 years and older	4.1	4.0	3.9	4.0	3.8	3.8	3.9	3.9	3.9	4.1	4.1	4.1	4.1	4.1	4.4
White, total [1]	4.0	4.1	4.0	4.1	4.0	3.8	4.0	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.4
Both sexes, 16 to 19 years	13.2	13.9	13.3	13.2	13.1	13.3	13.3	13.9	14.2	13.8	14.4	14.3	14.0	14.7	14.4
Men, 16 to 19 years	14.6	15.7	15.1	14.2	14.4	14.6	14.4	15.2	16.3	15.5	16.5	16.4	15.9	17.8	16.8
Women, 16 to 19 years	11.7	12.1	11.5	12.2	11.8	11.8	12.1	12.5	12.0	12.0	12.2	12.2	12.0	11.8	12.1
Men, 20 years and older	3.5	3.7	3.5	3.7	3.7	3.4	3.5	3.5	3.6	3.8	3.8	3.9	3.8	3.7	3.9
Women, 20 years and older	3.6	3.6	3.4	3.6	3.4	3.4	3.5	3.4	3.5	3.6	3.7	3.5	3.6	3.7	4.0
Black or African American, total [1]	8.9	8.3	8.3	8.0	8.0	8.3	8.2	8.4	8.4	8.1	7.7	8.2	8.5	8.4	9.0
Both sexes, 16 to 19 years	29.1	29.4	25.4	29.0	28.7	24.7	30.6	30.1	31.0	27.0	31.2	28.9	27.9	29.7	34.7
Men, 16 to 19 years	32.7	33.8	27.1	34.3	35.5	25.7	34.3	35.4	33.5	31.1	33.2	33.9	36.0	34.6	39.5
Women, 16 to 19 years	25.9	25.3	24.0	24.3	22.3	23.8	27.1	24.8	28.7	23.5	29.4	24.2	20.1	24.9	30.1
Men, 20 years and older	8.3	7.9	7.3	7.5	7.5	8.9	8.3	8.2	8.3	7.6	6.8	7.5	8.2	7.9	8.4
Women, 20 years and older	7.5	6.7	7.6	6.5	6.4	6.2	6.0	6.7	6.4	6.9	6.5	7.1	7.1	7.0	7.0
Hispanic or Latino ethnicity	5.2	5.6	4.9	5.7	5.2	5.2	5.5	5.8	5.7	5.9	5.5	5.7	5.6	5.7	6.3
Married men, spouse present	2.4	2.5	2.4	2.5	2.6	2.5	2.5	2.6	2.4	2.7	2.5	2.5	2.6	2.6	2.7
Married women, spouse present	2.9	2.8	2.7	2.7	2.7	2.6	2.7	2.8	2.7	2.9	3.1	2.9	2.9	3.0	3.1
Full-time workers	4.5	4.6	4.4	4.5	4.4	4.4	4.4	4.4	4.5	4.6	4.6	4.7	4.7	4.6	4.9
Part-time workers	5.1	4.9	4.7	4.9	4.9	4.5	5.0	4.9	4.7	5.1	4.9	4.7	5.0	5.0	5.6
Educational attainment [2]															
Less than a high school diploma	6.8	7.1	6.6	6.9	7.2	6.9	7.1	6.7	6.8	7.2	6.7	7.5	7.4	7.6	7.6
High school graduates, no college [3]	4.3	4.4	4.3	4.2	4.3	4.1	4.1	4.5	4.1	4.5	4.4	4.6	4.6	4.5	4.7
Some college or associate degree	3.6	3.6	3.3	3.7	3.6	3.5	3.6	3.4	3.5	3.6	3.7	3.4	3.5	3.3	3.7
Bachelor's degree and higher [4]	2.0	2.0	1.9	2.1	1.9	1.8	1.8	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.2

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

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

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Less than 5 weeks	2,614	2,542	2,650	2,596	2,567	2,338	2,442	2,467	2,505	2,496	2,610	2,537	2,508	2,633	2,793
5 to 14 weeks	2,121	2,232	2,013	2,298	2,181	2,156	2,147	2,187	2,140	2,220	2,201	2,330	2,454	2,157	2,330
15 weeks and over	2,266	2,303	2,094	2,133	2,151	2,183	2,259	2,236	2,296	2,402	2,375	2,392	2,367	2,398	2,520
15 to 26 weeks	1,031	1,061	994	995	935	976	1,066	1,099	1,136	1,091	1,124	1,112	1,052	1,014	1,182
27 weeks and over	1,235	1,243	1,099	1,138	1,216	1,207	1,193	1,137	1,159	1,311	1,252	1,280	1,315	1,384	1,338
Mean duration, in weeks	16.8	16.8	16.1	16.5	16.6	17.2	17.0	16.6	16.8	17.3	16.9	16.6	17.0	17.2	16.6
Median duration, in weeks	8.3	8.5	7.5	8.2	8.2	8.6	8.6	8.3	8.3	8.9	8.6	8.9	8.7	8.7	8.4

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		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Job losers[1]	3,321	3,515	3,242	3,399	3,449	3,240	3,316	3,375	3,418	3,629	3,632	3,622	3,731	3,609	3,857
On temporary layoff	921	976	968	1,017	1,016	865	1,019	997	862	983	981	963	1,064	979	975
Not on temporary layoff	2,400	2,539	2,274	2,382	2,433	2,375	2,297	2,379	2,555	2,646	2,652	2,660	2,668	2,630	2,882
Job leavers	827	793	803	791	810	755	749	768	810	823	794	839	790	783	798
Reentrants	2,237	2,142	2,169	2,195	2,029	2,143	2,169	2,149	2,125	2,082	2,076	2,154	2,103	2,160	2,343
New entrants	616	627	592	615	580	600	599	557	628	602	603	685	709	669	697
Percent of unemployed															
Job losers[1]	47.4	49.7	47.6	48.6	50.2	48.1	48.5	49.3	49.0	50.8	51.1	49.6	50.9	50.0	50.1
On temporary layoff	13.2	13.8	14.2	14.5	14.8	12.8	14.9	14.6	12.4	13.8	13.8	13.2	14.5	13.6	12.7
Not on temporary layoff	34.3	35.9	33.4	34.0	35.4	35.3	33.6	34.7	36.6	37.1	37.3	36.4	36.4	36.4	37.5
Job leavers	11.8	11.2	11.8	11.3	11.8	11.2	11.0	11.2	11.6	11.5	11.2	11.5	10.8	10.8	10.4
Reentrants	32.0	30.3	31.9	31.4	29.5	31.8	31.7	31.4	30.4	29.2	29.2	29.5	28.7	29.9	30.4
New entrants	8.8	8.9	8.7	8.8	8.4	8.9	8.8	8.1	9.0	8.4	8.5	9.4	9.7	9.3	9.1
Percent of civilian labor force															
Job losers[1]	2.2	2.3	2.1	2.2	2.3	2.1	2.2	2.2	2.2	2.4	2.4	2.4	2.4	2.3	2.5
Job leavers	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Reentrants	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5
New entrants	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.5

[1] Includes persons who completed temporary jobs.

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

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

[Civilian workers]

Sex and age	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total, 16 years and older	4.6	4.6	4.4	4.6	4.5	4.4	4.5	4.5	4.6	4.7	4.7	4.7	4.8	4.7	5.0
16 to 24 years	10.5	10.5	10.1	10.2	9.8	9.8	10.2	10.1	10.6	10.6	10.8	11.0	10.8	10.7	11.8
16 to 19 years	15.4	15.7	14.8	15.0	15.0	14.6	15.4	15.8	16.0	15.3	16.2	16.0	15.7	16.4	17.1
16 to 17 years	17.2	17.5	16.4	16.6	16.4	16.3	16.6	16.8	17.0	17.0	18.6	18.6	17.5	19.0	19.6
18 to 19 years	14.1	14.5	13.6	13.7	13.9	13.6	15.0	15.3	15.7	14.0	14.6	14.3	14.3	14.4	15.4
20 to 24 years	8.2	8.2	7.8	8.0	7.4	7.6	7.8	7.4	8.1	8.5	8.4	8.8	8.6	8.0	9.4
25 years and older	3.6	3.6	3.5	3.6	3.6	3.5	3.5	3.5	3.5	3.7	3.6	3.7	3.7	3.7	3.9
25 to 54 years	3.8	3.7	3.6	3.7	3.7	3.5	3.6	3.6	3.6	3.8	3.8	3.8	3.8	3.8	4.1
55 years and older	3.0	3.1	3.0	3.3	3.1	3.1	3.0	3.2	3.1	3.2	3.2	3.1	3.1	3.0	3.2
Men, 16 years and older	4.6	4.7	4.5	4.7	4.7	4.5	4.6	4.6	4.7	4.7	4.7	4.9	4.9	4.7	5.1
16 to 24 years	11.2	11.6	10.7	10.9	10.8	10.6	11.0	11.4	11.9	11.5	11.6	12.2	12.0	11.8	12.8
16 to 19 years	16.9	17.6	16.2	16.2	16.6	16.1	16.5	17.5	18.0	16.9	18.0	18.3	18.1	19.5	19.8
16 to 17 years	18.6	19.4	18.4	16.7	19.1	17.7	17.5	18.7	18.5	19.3	21.7	21.9	19.0	21.4	22.1
18 to 19 years	15.7	16.5	14.7	15.4	15.1	15.0	16.4	17.1	18.5	15.4	15.2	16.2	16.8	17.8	18.4
20 to 24 years	8.7	8.9	8.2	8.5	8.2	8.2	8.6	8.7	9.3	9.2	8.9	9.5	9.3	8.6	9.8
25 years and older	3.5	3.6	3.4	3.6	3.7	3.5	3.5	3.5	3.4	3.6	3.6	3.7	3.7	3.6	3.8
25 to 54 years	3.6	3.7	3.5	3.7	3.8	3.5	3.5	3.5	3.5	3.7	3.7	3.8	3.8	3.7	4.0
55 years and older	3.0	3.2	3.2	3.4	3.2	3.3	3.2	3.4	3.1	3.4	3.4	3.3	3.1	3.1	3.2
Women, 16 years and older	4.6	4.5	4.4	4.5	4.3	4.3	4.4	4.4	4.4	4.6	4.6	4.5	4.6	4.6	4.9
16 to 24 years	9.7	9.4	9.4	9.5	8.7	8.9	9.3	8.6	9.2	9.6	10.0	9.8	9.6	9.4	10.7
16 to 19 years	13.8	13.8	13.4	13.7	13.2	13.1	14.2	14.1	13.9	13.6	14.4	13.7	13.3	13.4	14.4
16 to 17 years	15.9	15.7	14.5	16.5	13.6	15.0	15.7	15.0	15.6	14.8	15.5	15.6	16.1	17.1	17.3
18 t0 19 years	12.4	12.5	12.4	11.9	12.6	12.1	13.5	13.2	12.6	12.6	13.9	12.3	11.6	10.7	12.3
20 to 24 years	7.6	7.3	7.4	7.5	6.5	6.9	6.9	5.9	6.8	7.7	7.9	7.9	7.7	7.4	8.8
25 years and older	3.7	3.6	3.5	3.6	3.5	3.4	3.5	3.6	3.6	3.8	3.7	3.7	3.7	3.8	3.9
25 to 54 years	3.9	3.8	3.8	3.7	3.6	3.5	3.7	3.8	3.7	3.9	3.9	3.8	3.9	4.0	4.1
55 years and older[1]	2.9	3.0	2.4	3.3	3.0	2.8	2.5	2.7	3.2	3.5	3.4	3.0	3.0	2.8	2.9

[1] Data are not seasonally adjusted.

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

10. Unemployment rates by State, seasonally adjusted

State	Nov. 2006	Oct. 2007[p]	Nov. 2007[p]	State	Nov. 2006	Oct. 2007[p]	Nov. 2007[p]
Alabama	3.6	3.1	3.5	Missouri	4.9	5.6	5.2
Alaska	6.6	6.1	6.4	Montana	2.9	3.1	3.4
Arizona	4.1	3.5	4.1	Nebraska	2.9	3.2	3.1
Arkansas	5.4	5.7	5.7	Nevada	4.3	5.2	5.4
California	4.7	5.6	5.6	New Hampshire	3.5	3.2	3.4
Colorado	4.1	3.7	4.1	New Jersey	4.4	4.1	4.2
Connecticut	4.2	4.7	5.0	New Mexico	3.9	3.1	3.4
Delaware	3.4	3.4	3.4	New York	4.2	4.6	4.6
District of Columbia	6.1	5.8	5.7	North Carolina	4.9	4.8	4.7
Florida	3.3	4.2	4.3	North Dakota	3.4	3.4	3.1
Georgia	4.6	4.7	4.4	Ohio	5.5	5.9	5.6
Hawaii	2.1	2.7	2.9	Oklahoma	4.1	4.4	4.5
Idaho	3.2	2.5	2.7	Oregon	5.4	5.5	5.5
Illinois	4.0	5.3	5.2	Pennsylvania	4.7	4.5	4.2
Indiana	4.7	4.6	4.7	Rhode Island	5.1	4.9	5.2
Iowa	3.5	3.9	3.9	South Carolina	6.6	5.8	5.9
Kansas	4.5	3.8	3.8	South Dakota	3.2	2.9	2.8
Kentucky	5.6	5.6	5.0	Tennessee	5.0	4.6	4.9
Louisiana	4.3	3.3	3.5	Texas	4.7	4.1	4.2
Maine	4.7	4.8	4.9	Utah	2.6	2.8	2.8
Maryland	3.9	4.0	3.7	Vermont	3.7	4.3	3.9
Massachusetts	5.2	4.3	4.3	Virginia	3.0	3.1	3.2
Michigan	7.1	7.7	7.4	Washington	5.0	4.8	4.7
Minnesota	4.1	4.7	4.4	West Virginia	5.1	5.0	4.6
Mississippi	7.0	6.1	6.3	Wisconsin	4.7	5.2	5.1
				Wyoming	3.2	2.9	2.9

[p] = preliminary

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

State	Nov. 2006	Oct. 2007[p]	Nov. 2007[p]	State	Nov. 2006	Oct. 2007[p]	Nov. 2007[p]
Alabama	2,219,935	2,210,937	2,220,156	Missouri	3,049,887	3,067,158	3,060,134
Alaska	348,014	348,242	350,916	Montana	495,620	504,748	503,826
Arizona	3,016,926	3,055,244	3,049,470	Nebraska	976,697	990,612	992,167
Arkansas	1,367,627	1,377,001	1,379,873	Nevada	1,318,823	1,366,635	1,363,851
California	17,982,376	18,240,867	18,377,967	New Hampshire	739,943	747,206	748,497
Colorado	2,679,371	2,718,757	2,725,331	New Jersey	4,530,721	4,500,165	4,522,109
Connecticut	1,854,913	1,895,187	1,905,804	New Mexico	939,071	946,450	946,631
Delaware	442,211	445,441	445,353	New York	9,509,529	9,471,033	9,524,055
District of Columbia	317,858	318,056	320,796	North Carolina	4,513,101	4,534,074	4,537,155
Florida	9,087,965	9,272,637	9,294,148	North Dakota	360,389	366,134	366,408
Georgia	4,781,358	4,878,007	4,881,968	Ohio	5,952,567	5,980,339	6,007,576
Hawaii	647,664	646,717	647,811	Oklahoma	1,726,770	1,736,826	1,742,523
Idaho	755,022	766,479	764,021	Oregon	1,910,020	1,938,539	1,954,890
Illinois	6,666,752	6,739,333	6,790,042	Pennsylvania	6,330,996	6,332,808	6,336,050
Indiana	3,278,972	3,197,193	3,230,540	Rhode Island	578,236	580,356	580,974
Iowa	1,668,502	1,675,335	1,675,235	South Carolina	2,144,142	2,144,449	2,149,538
Kansas	1,469,026	1,488,757	1,487,344	South Dakota	433,599	439,350	440,480
Kentucky	2,049,146	2,060,500	2,057,244	Tennessee	3,004,572	3,043,296	3,059,641
Louisiana	2,006,419	1,987,819	2,008,622	Texas	11,554,288	11,562,298	11,639,205
Maine	715,706	710,699	712,421	Utah	1,328,918	1,360,463	1,360,441
Maryland	3,030,610	3,010,237	3,021,836	Vermont	362,706	358,456	357,908
Massachusetts	3,418,755	3,412,662	3,420,130	Virginia	4,028,752	4,071,430	4,088,687
Michigan	5,080,452	5,012,002	5,020,412	Washington	3,347,565	3,449,690	3,478,114
Minnesota	2,956,880	2,948,784	2,940,502	West Virginia	811,710	820,945	818,019
Mississippi	1,317,718	1,321,573	1,342,591	Wisconsin	3,070,223	3,081,920	3,097,383
				Wyoming	287,373	289,942	289,737

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

[p] = preliminary

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

[In thousands]

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
TOTAL NONFARM	136,174	137,969	137,167	137,329	137,419	137,594	137,716	137,904	137,973	138,066	138,159	138,203	138,362	138,477	138,495
TOTAL PRIVATE	114,184	115,717	115,053	115,189	115,245	115,397	115,487	115,668	115,739	115,856	115,886	115,923	116,033	116,120	116,107
GOODS-PRODUCING	22,570	22,378	22,520	22,554	22,465	22,497	22,460	22,446	22,436	22,421	22,349	22,309	22,266	22,221	22,146
Natural resources and mining	684	722	705	706	711	715	717	718	721	726	728	728	728	733	738
Logging	65.3	63.5	64.6	64.8	65.2	65.7	65.3	63.4	64.1	62.8	62.4	62.4	61.9	62.2	62.4
Mining	618.6	658.9	640.0	641.1	645.4	649.5	652.0	654.5	656.5	663.5	665.2	665.4	666.4	670.7	675.7
Oil and gas extraction	135.9	150.0	143.2	145.1	145.9	147.1	147.2	148.3	149.3	150.8	151.5	151.9	153.6	154.5	155.2
Mining, except oil and gas[1]	221.1	228.0	222.4	222.2	222.9	224.4	225.9	227.1	228.3	228.9	230.1	229.9	230.7	231.7	233.8
Coal mining	78.8	80.5	79.9	80.0	79.7	79.6	79.9	79.4	79.6	80.3	80.6	81.1	81.3	82.2	82.4
Support activities for mining	261.7	280.8	274.4	273.8	276.6	278.0	278.9	279.1	278.9	283.8	283.6	283.6	282.1	284.5	286.7
Construction	7,689	7,624	7,684	7,718	7,641	7,692	7,671	7,659	7,665	7,649	7,620	7,595	7,575	7,538	7,489
Construction of buildings	1,806.0	1,771.9	1,799.7	1,801.4	1,791.7	1,797.1	1,788.5	1,784.9	1,788.9	1,782.1	1,768.0	1,765.2	1,748.2	1,735.9	1,719.3
Heavy and civil engineering	983.1	995.6	993.5	1,003.8	993.2	1,001.7	1,001.6	999.9	999.4	996.2	994.2	990.3	991.8	989.7	985.6
Speciality trade contractors	4,899.6	4,856.1	4,890.5	4,912.5	4,856.1	4,893.1	4,881.0	4,874.4	4,876.3	4,870.7	4,857.7	4,839.7	4,834.6	4,812.3	4,783.6
Manufacturing	14,197	14,032	14,131	14,130	14,113	14,090	14,072	14,069	14,050	14,046	14,001	13,986	13,963	13,950	13,919
Production workers	10,168	10,079	10,126	10,121	10,114	10,096	10,093	10,105	10,091	10,098	10,062	10,064	10,045	10,040	10,019
Durable goods	9,001	8,890	8,972	8,952	8,943	8,928	8,921	8,913	8,897	8,900	8,873	8,862	8,845	8,843	8,823
Production workers	6,369	6,303	6,349	6,325	6,326	6,313	6,316	6,323	6,309	6,313	6,290	6,294	6,281	6,283	6,265
Wood products	560.2	524.3	540.4	539.4	532.6	530.6	528.0	529.0	526.5	529.2	523.2	518.3	516.9	511.5	507.6
Nonmetallic mineral products	507.9	497.8	504.0	504.1	501.9	500.9	499.6	500.7	500.5	499.1	495.3	495.3	494.8	492.6	490.5
Primary metals	462.1	450.5	454.6	454.9	454.4	453.9	453.2	452.6	449.2	450.9	447.8	446.9	446.7	447.4	446.3
Fabricated metal products	1,553.9	1,567.6	1,564.9	1,566.2	1,566.1	1,563.9	1,566.4	1,565.4	1,569.0	1,569.5	1,568.2	1,569.9	1,572.9	1,568.8	1,566.6
Machinery	1,191.4	1,222.6	1,210.1	1,213.3	1,215.4	1,217.9	1,216.9	1,221.8	1,224.3	1,228.2	1,223.3	1,223.3	1,226.4	1,229.6	1,231.1
Computer and electronic products[1]	1,316.4	1,304.5	1,319.9	1,319.4	1,317.5	1,313.5	1,310.6	1,308.6	1,306.4	1,304.3	1,300.5	1,296.9	1,291.9	1,294.7	1,291.2
Computer and peripheral equipment	198.8	197.2	199.8	196.4	197.8	197.8	198.7	197.9	196.2	196.5	196.5	196.9	196.6	197.6	197.5
Communications equipment	144.4	142.4	143.8	143.7	143.7	143.7	143.7	142.7	142.9	142.7	142.7	142.3	139.9	141.0	139.7
Semiconductors and electronic components	462.8	461.9	466.2	470.5	468.8	467.8	465.7	465.3	464.2	462.5	458.3	455.9	455.2	455.4	455.1
Electronic instruments	437.5	434.9	438.3	437.5	436.8	434.4	433.8	435.4	435.5	434.5	434.5	434.2	434.0	434.5	434.0
Electrical equipment and appliances	435.5	436.0	437.4	437.3	436.4	437.3	437.6	436.9	436.0	436.8	434.6	435.0	435.3	436.1	433.0
Transportation equipment	1,765.0	1,703.2	1,741.0	1,722.3	1,724.4	1,717.9	1,718.1	1,708.4	1,702.9	1,699.5	1,700.2	1,699.4	1,684.0	1,684.5	1,678.3
Furniture and related products	556.3	529.3	541.1	536.6	535.8	533.5	533.2	533.0	529.4	530.3	526.9	525.7	522.8	524.6	522.5
Miscellaneous manufacturing	651.6	654.6	658.2	658.2	658.9	658.9	657.7	656.3	652.9	652.1	652.5	651.6	653.2	652.9	655.9
Nondurable goods	5,197	5,141	5,159	5,178	5,170	5,162	5,151	5,156	5,153	5,146	5,128	5,124	5,118	5,107	5,096
Production workers	3,799	3,776	3,777	3,796	3,788	3,783	3,777	3,782	3,782	3,785	3,772	3,770	3,764	3,757	3,754
Food manufacturing	1,484.3	1,497.7	1,485.1	1,493.9	1,492.8	1,495.0	1,493.5	1,499.8	1,502.4	1,505.9	1,497.0	1,494.8	1,498.2	1,493.2	1,497.2
Beverages and tobacco products	194.7	197.9	195.5	197.0	197.8	197.3	198.2	198.5	200.4	200.2	198.5	198.0	197.0	197.1	194.7
Textile mills	195.6	171.8	185.0	182.3	179.1	177.3	174.6	173.5	172.5	169.9	168.3	166.7	167.0	165.7	163.5
Textile product mills	161.1	154.6	157.7	158.6	157.9	156.7	156.5	155.3	154.6	153.5	153.0	152.5	152.2	152.0	150.5
Apparel	238.4	217.4	230.4	227.7	225.2	223.7	221.4	220.1	217.8	217.7	214.4	212.5	210.5	210.7	208.8
Leather and allied products	37.4	35.9	36.5	36.5	36.4	36.6	36.1	35.9	35.9	35.3	35.6	36.3	35.8	35.5	35.0
Paper and paper products	469.3	457.4	462.6	462.4	460.5	457.4	458.4	457.8	457.3	456.7	456.3	456.0	456.4	454.0	454.7
Printing and related support activities	635.9	629.4	636.7	634.7	634.6	633.5	630.9	629.9	629.6	629.0	626.2	629.0	627.5	627.2	623.7
Petroleum and coal products	114.3	117.0	117.1	117.4	117.4	118.2	117.6	119.2	117.2	116.2	116.1	116.7	116.2	117.1	115.8
Chemicals	868.7	872.7	871.0	872.1	872.5	870.6	869.7	872.3	873.8	873.3	874.9	875.3	872.3	870.4	871.7
Plastics and rubber products	796.9	789.6	781.7	795.8	795.7	795.2	794.3	793.2	791.1	788.5	787.9	786.1	784.4	783.6	780.2
SERVICE-PROVIDING	113,605	115,591	114,647	114,775	114,954	115,097	115,256	115,458	115,537	115,645	115,810	115,894	116,096	116,256	116,349
PRIVATE SERVICE-PROVIDING	91,615	93,339	92,533	92,635	92,780	92,900	93,027	93,222	93,303	93,435	93,537	93,614	93,767	93,899	93,961
Trade, transportation, and utilities	26,231	26,472	26,345	26,378	26,393	26,436	26,427	26,459	26,465	26,489	26,494	26,518	26,510	26,554	26,526
Wholesale trade	5,897.6	6,005.3	5,955.0	5,949.0	5,960.0	5,961.3	5,978.7	5,990.5	6,007.4	6,016.3	6,022.5	6,033.8	6,045.4	6,048.2	6,047.0
Durable goods	3,076.5	3,137.2	3,104.3	3,102.5	3,112.0	3,114.0	3,124.7	3,134.5	3,141.5	3,146.5	3,147.0	3,151.5	3,154.7	3,160.1	3,157.4
Nondurable goods	2,040.1	2,064.1	2,055.0	2,050.5	2,049.7	2,050.1	2,052.2	2,053.4	2,061.4	2,063.1	2,068.0	2,073.8	2,080.6	2,079.7	2,078.9
Electronic markets and agents and brokers	781.0	804.1	795.7	796.0	798.3	797.2	801.8	802.6	804.5	806.7	807.5	808.5	810.1	808.4	810.7
Retail trade	15,319.3	15,382.0	15,323.7	15,357.5	15,364.6	15,403.7	15,376.9	15,394.5	15,383.3	15,389.8	15,385.6	15,383.0	15,362.6	15,394.6	15,370.3
Motor vehicles and parts dealers[1]	1,907.9	1,908.5	1,908.5	1,906.8	1,910.3	1,907.2	1,911.2	1,911.5	1,909.0	1,907.6	1,908.2	1,910.3	1,907.2	1,907.7	1,905.9
Automobile dealers	1,246.7	1,246.0	1,244.8	1,244.1	1,244.9	1,243.5	1,246.9	1,247.7	1,246.7	1,245.9	1,246.4	1,247.5	1,247.7	1,246.2	1,243.0
Furniture and home furnishings stores	588.5	587.5	591.4	588.1	587.6	585.6	586.7	585.2	584.3	584.5	586.5	583.9	586.2	596.6	592.9
Electronics and appliance stores	538.4	536.3	531.4	535.3	538.2	538.4	540.7	539.3	535.9	537.4	532.7	534.0	530.6	536.2	536.0

See notes at end of table.

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

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
Building material and garden supply stores	1,322.6	1,302.3	1,314.1	1,318.0	1,323.4	1,313.8	1,313.8	1,314.9	1,314.9	1,303.9	1,305.9	1,288.4	1,283.2	1,280.7	1,279.0
Food and beverage stores	2,827.9	2,870.1	2,843.7	2,844.0	2,849.9	2,856.3	2,858.6	2,861.1	2,867.7	2,869.3	2,873.5	2,878.8	2,883.2	2,891.9	2,891.3
Health and personal care stores	955.5	970.5	959.7	964.1	964.8	966.5	969.8	968.5	968.8	967.4	970.8	973.5	973.5	978.1	980.5
Gasoline stations	861.0	852.1	854.8	853.7	852.9	854.5	852.4	852.5	852.4	852.0	851.1	854.3	851.1	850.8	846.5
Clothing and clothing accessories stores	1,439.0	1,458.3	1,460.1	1,446.9	1,445.1	1,449.7	1,452.7	1,451.6	1,451.3	1,456.7	1,460.3	1,462.1	1,460.0	1,473.6	1,465.7
Sporting goods, hobby, book, and music stores	646.6	662.3	648.9	655.8	654.9	653.9	655.6	659.5	657.4	665.7	666.7	669.6	664.9	665.4	661.5
General merchandise stores[1]	2,912.8	2,913.4	2,885.4	2,923.9	2,917.3	2,956.4	2,915.4	2,928.5	2,920.3	2,918.9	2,906.4	2,902.6	2,902.6	2,893.5	2,895.3
Department stores	1,550.9	1,556.1	1,537.7	1,568.7	1,565.3	1,570.6	1,560.9	1,566.2	1,561.1	1,560.3	1,549.9	1,547.2	1,548.5	1,542.8	1,547.6
Miscellaneous store retailers	884.9	878.5	881.4	880.3	880.2	880.3	879.0	879.3	880.2	883.1	880.3	883.1	877.0	873.3	865.6
Nonstore retailers	434.4	442.2	444.3	440.6	440.0	441.1	441.0	442.6	441.1	443.3	443.2	442.4	443.1	446.8	450.1
Transportation and warehousing	4,465.8	4,531.2	4,517.0	4,522.6	4,519.6	4,520.8	4,519.6	4,520.1	4,520.1	4,528.4	4,529.8	4,545.8	4,545.5	4,555.2	4,551.3
Air transportation	486.5	491.8	488.3	490.8	485.5	485.5	490.0	484.4	491.4	492.2	492.5	494.6	495.8	500.1	502.0
Rail transportation	225.3	227.7	226.4	227.9	228.9	229.1	228.3	227.9	226.6	227.5	227.4	227.7	227.1	226.7	227.5
Water transportation	64.1	69.3	67.8	67.1	68.1	68.0	67.3	68.3	69.9	70.7	70.6	70.5	70.3	70.7	70.4
Truck transportation	1,437.2	1,447.5	1,453.6	1,457.9	1,454.7	1,457.2	1,452.5	1,455.5	1,449.8	1,444.3	1,443.5	1,445.6	1,440.1	1,438.3	1,436.2
Transit and ground passenger transportation	394.3	394.5	390.2	391.6	393.3	390.3	389.9	390.9	389.4	397.1	400.1	401.2	399.8	395.1	392.8
Pipeline transportation	39.0	40.9	39.7	40.3	40.6	41.0	40.5	40.8	40.8	40.8	41.0	41.1	41.3	41.6	41.3
Scenic and sightseeing transportation	27.0	27.3	27.8	27.8	28.0	27.3	27.0	26.7	26.4	27.0	27.4	27.7	28.0	28.4	28.4
Support activities for transportation	570.7	584.3	575.9	575.9	579.4	579.6	581.6	581.8	583.0	583.4	584.3	587.5	590.8	593.3	594.0
Couriers and messengers	585.3	591.6	596.4	593.0	590.6	591.0	589.8	588.5	588.7	589.3	588.1	590.3	590.2	596.8	595.2
Warehousing and storage	636.4	656.2	650.9	650.3	650.5	651.8	652.7	655.3	654.1	656.1	654.9	659.6	662.1	664.2	663.5
Utilities	548.5	553.5	549.2	549.0	549.0	550.1	551.5	553.4	554.4	554.6	556.0	555.6	556.3	555.9	556.9
Information	3,055	3,087	3,073	3,071	3,084	3,086	3,096	3,097	3,093	3,091	3,087	3,093	3,088	3,083	3,070
Publishing industries, except Internet	903.8	904.5	906.1	907.0	907.8	907.4	906.1	907.7	906.2	906.3	904.0	900.6	901.4	900.5	899.4
Motion picture and sound recording industries	377.5	382.5	378.3	378.2	385.2	387.1	394.2	391.9	389.3	383.6	380.3	385.9	381.1	372.0	360.4
Broadcasting, except Internet.	331.3	336.7	335.6	335.3	337.4	337.1	337.8	336.6	337.1	336.0	336.3	337.4	335.4	336.9	333.2
Internet publishing and broadcasting	34.5	41.6	37.0	36.9	37.9	39.0	39.9	40.6	41.3	42.4	43.1	44.0	44.5	44.9	44.6
Telecommunications	972.9	975.0	978.0	975.6	976.2	973.0	974.6	973.9	972.7	973.7	973.1	974.1	974.8	978.5	982.4
ISPs, search portals, and data processing	383.2	394.2	386.1	386.1	387.3	390.0	390.8	394.2	394.4	396.9	397.5	398.2	397.9	398.1	398.5
Other information services	51.4	52.3	52.1	51.9	51.9	52.3	52.1	52.1	52.2	51.8	52.2	52.3	53.3	52.4	51.7
Financial activities	8,363	8,446	8,438	8,440	8,446	8,445	8,448	8,464	8,460	8,476	8,463	8,439	8,437	8,421	8,417
Finance and insurance	6,183.5	6,244.5	6,239.8	6,238.9	6,244.4	6,242.6	6,241.4	6,256.1	6,256.0	6,270.1	6,256.4	6,241.6	6,235.5	6,229.1	6,223.2
Monetary authorities—central bank	21.5	21.9	21.8	21.7	22.0	22.1	22.2	22.4	22.2	21.6	21.8	21.6	21.6	21.5	21.5
Credit intermediation and related activities[1]	2,936.8	2,930.7	2,959.7	2,961.5	2,962.8	2,957.6	2,945.3	2,948.7	2,939.5	2,946.5	2,926.8	2,909.2	2,900.8	2,891.3	2,884.3
Depository credit intermediation[1]	1,803.2	1,830.2	1,824.6	1,824.3	1,823.1	1,824.3	1,818.6	1,824.7	1,824.9	1,833.8	1,834.6	1,839.1	1,838.7	1,836.5	1,837.0
Commercial banking	1,319.3	1,336.2	1,336.9	1,336.9	1,334.7	1,335.2	1,327.7	1,332.5	1,332.1	1,338.4	1,337.7	1,340.2	1,340.4	1,338.9	1,339.0
Securities, commodity contracts, investments	816.3	843.0	829.2	831.0	831.4	834.5	836.8	841.6	844.4	845.8	848.7	849.7	850.0	850.6	850.9
Insurance carriers and related activities	2,315.9	2,353.5	2,333.9	2,329.6	2,333.2	2,333.4	2,342.4	2,348.5	2,354.5	2,361.2	2,362.6	2,365.3	2,366.7	2,369.9	2,370.7
Funds, trusts, and other financial vehicles	93.1	95.4	95.2	95.1	95.0	95.0	94.7	94.9	95.4	95.0	96.5	95.8	96.4	95.8	95.8
Real estate and rental and leasing	2,179.6	2,201.4	2,198.0	2,201.5	2,202.0	2,202.5	2,206.5	2,207.4	2,204.1	2,205.7	2,206.4	2,197.7	2,201.5	2,191.9	2,193.9
Real estate	1,503.3	1,522.7	1,516.4	1,518.5	1,518.4	1,523.5	1,525.4	1,527.7	1,524.5	1,525.4	1,528.1	1,521.2	1,523.4	1,517.4	1,522.8
Rental and leasing services	647.4	646.6	650.9	651.9	652.4	647.9	650.0	647.8	646.9	647.6	645.4	643.9	645.6	642.2	637.9
Lessors of nonfinancial intangible assets	28.9	32.0	30.7	31.1	31.2	31.1	31.1	31.9	32.7	32.7	32.9	32.6	32.5	32.3	33.2
Professional and business services	17,552	17,920	17,792	17,804	17,840	17,834	17,859	17,893	17,886	17,911	17,942	17,954	18,024	18,063	18,106
Professional and technical services[1]	7,371.7	7,661.8	7,499.8	7,515.6	7,544.3	7,553.7	7,591.3	7,625.3	7,638.5	7,666.9	7,689.0	7,731.0	7,762.9	7,789.2	7,821.9
Legal services	1,173.4	1,179.3	1,179.0	1,176.2	1,178.8	1,178.1	1,181.8	1,183.4	1,179.9	1,177.9	1,178.4	1,181.6	1,182.1	1,178.9	1,179.6
Accounting and bookkeeping services	889.3	950.1	925.1	922.1	927.8	924.4	927.5	934.5	941.1	951.1	957.7	968.3	973.4	979.1	985.6
Architectural and engineering services	1,385.6	1,438.1	1,411.4	1,419.2	1,422.7	1,424.0	1,426.0	1,431.4	1,433.5	1,437.1	1,440.1	1,444.5	1,454.3	1,458.6	1,466.1

See notes at end of table

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

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
Computer systems design and related services	1,278.2	1,344.0	1,303.3	1,305.2	1,311.1	1,319.7	1,328.5	1,338.3	1,341.8	1,352.9	1,355.6	1,363.8	1,365.8	1,372.3	1,373.7
Management and technical consulting services	920.9	997.0	953.8	958.1	967.1	970.5	985.4	989.2	990.9	992.5	1,001.7	1,010.2	1,020.8	1,029.9	1,042.2
Management of companies and enterprises	1,809.4	1,847.6	1,826.0	1,830.8	1,836.7	1,837.1	1,839.9	1,841.5	1,844.6	1,847.8	1,852.1	1,853.2	1,858.9	1,862.1	1,867.5
Administrative and waste services	8,370.7	8,410.8	8,466.4	8,457.3	8,458.9	8,443.5	8,427.7	8,426.3	8,402.6	8,396.2	8,400.6	8,370.1	8,402.2	8,411.9	8,416.9
Administrative and support services[1]	8,023.5	8,056.4	8,117.0	8,106.1	8,107.4	8,092.5	8,076.3	8,073.4	8,048.8	8,041.8	8,045.1	8,013.7	8,046.1	8,052.2	8,057.5
Employment services[1]	3,656.6	3,558.3	3,674.2	3,667.1	3,651.6	3,637.1	3,602.1	3,584.4	3,553.3	3,525.9	3,523.4	3,484.8	3,515.3	3,518.3	3,515.8
Temporary help services	2,631.3	2,595.2	2,641.6	2,641.8	2,629.2	2,621.2	2,613.1	2,602.7	2,588.0	2,577.9	2,578.6	2,561.2	2,584.1	2,595.7	2,595.8
Business support services	790.7	802.1	806.9	803.6	803.3	801.9	801.6	804.8	801.3	805.5	803.4	802.5	798.6	798.5	804.1
Services to buildings and dwellings	1,797.1	1,840.4	1,817.7	1,812.1	1,823.8	1,819.7	1,829.7	1,835.1	1,840.8	1,847.3	1,848.7	1,850.4	1,858.1	1,852.3	1,871.3
Waste management and remediation services	347.2	354.4	349.4	351.2	351.5	351.0	351.4	352.9	353.8	354.4	355.5	356.4	356.1	359.7	359.4
Educational and health services	17,838	18,377	18,063	18,102	18,138	18,188	18,246	18,293	18,364	18,422	18,484	18,505	18,554	18,583	18,627
Educational services	2,918.4	3,003.1	2,948.6	2,959.5	2,955.9	2,972.4	2,978.7	2,983.4	3,014.4	3,022.8	3,039.7	3,020.0	3,028.4	3,027.7	3,034.8
Health care and social assistance	14,919.9	15,374.3	15,113.9	15,142.6	15,181.7	15,215.9	15,266.8	15,309.7	15,349.4	15,399.5	15,443.9	15,484.5	15,525.9	15,555.4	15,592.3
Ambulatory health care services[1]	5,283.1	5,475.6	5,369.2	5,375.3	5,395.6	5,409.2	5,428.4	5,446.7	5,455.1	5,482.5	5,507.0	5,523.4	5,548.7	5,555.2	5,568.0
Offices of physicians	2,153.6	2,224.8	2,185.5	2,187.4	2,196.7	2,204.3	2,210.5	2,214.7	2,213.2	2,224.6	2,232.5	2,240.6	2,248.4	2,255.9	2,259.7
Outpatient care centers	489.4	497.9	493.6	494.1	496.8	494.8	495.8	495.1	495.5	496.1	498.7	500.7	502.3	502.9	503.5
Home health care services	867.1	920.6	890.9	896.4	901.1	904.1	907.2	911.3	918.8	925.3	931.9	932.8	938.4	938.7	941.2
Hospitals	4,427.1	4,530.1	4,469.5	4,478.3	4,484.4	4,490.8	4,499.7	4,511.0	4,526.3	4,539.1	4,546.3	4,555.6	4,567.0	4,575.3	4,585.0
Nursing and residential care facilities[1]	2,900.9	2,980.7	2,940.5	2,947.6	2,957.5	2,961.4	2,972.4	2,973.2	2,983.7	2,984.0	2,988.5	2,992.3	2,995.3	3,001.4	3,006.8
Nursing care facilities	1,584.2	1,610.3	1,596.4	1,600.1	1,605.7	1,603.9	1,609.1	1,606.5	1,608.0	1,611.3	1,613.8	1,614.7	1,615.3	1,617.0	1,619.9
Social assistance[1]	2,308.9	2,387.9	2,334.7	2,341.4	2,344.2	2,354.5	2,366.3	2,378.8	2,384.3	2,393.9	2,402.1	2,413.2	2,414.9	2,423.5	2,432.5
Child day care services	806.7	813.1	803.6	804.3	802.7	804.9	810.5	812.3	811.6	815.7	815.3	819.8	816.6	818.7	819.1
Leisure and hospitality	13,143	13,565	13,373	13,396	13,425	13,449	13,481	13,537	13,554	13,566	13,589	13,630	13,677	13,712	13,734
Arts, entertainment, and recreation	1,927.0	1,973.5	1,957.2	1,960.4	1,963.3	1,963.2	1,953.5	1,968.5	1,971.1	1,962.9	1,968.0	1,977.4	1,995.7	1,998.3	1,999.6
Performing arts and spectator sports	398.8	412.2	406.4	408.0	406.0	405.9	402.8	409.5	412.1	405.6	410.7	412.6	421.1	422.4	429.3
Museums, historical sites, zoos, and parks	123.9	130.7	127.1	127.7	127.5	128.2	128.8	130.7	131.2	132.4	131.8	132.3	132.2	131.8	131.1
Amusements, gambling, and recreation	1,404.3	1,430.6	1,423.7	1,424.7	1,429.8	1,429.1	1,421.9	1,428.3	1,427.8	1,424.9	1,425.5	1,432.5	1,442.4	1,444.1	1,439.2
Accommodations and food services	11,216.2	11,591.8	11,415.9	11,435.8	11,461.3	11,486.0	11,527.9	11,568.5	11,582.5	11,602.9	11,621.4	11,652.3	11,681.7	11,713.2	11,734.8
Accommodations	1,833.4	1,863.6	1,863.2	1,858.1	1,860.3	1,860.0	1,860.5	1,862.8	1,852.8	1,858.1	1,850.8	1,864.3	1,869.1	1,882.9	1,877.9
Food services and drinking places	9,382.8	9,728.1	9,552.7	9,577.7	9,601.0	9,626.0	9,667.4	9,705.7	9,729.7	9,744.8	9,770.6	9,788.0	9,812.6	9,830.3	9,856.9
Other services	5,432	5,472	5,449	5,444	5,454	5,462	5,470	5,479	5,481	5,480	5,478	5,475	5,477	5,483	5,481
Repair and maintenance	1,248.5	1,257.8	1,251.6	1,246.3	1,248.9	1,255.9	1,257.4	1,260.4	1,261.9	1,256.6	1,260.6	1,261.8	1,259.8	1,261.2	1,256.1
Personal and laundry services	1,284.2	1,291.0	1,287.4	1,285.8	1,290.3	1,290.8	1,292.6	1,296.5	1,291.2	1,294.4	1,292.4	1,290.5	1,288.7	1,290.1	1,291.3
Membership associations and organizations	2,899.3	2,923.1	2,909.7	2,912.3	2,915.2	2,915.7	2,919.5	2,921.9	2,927.6	2,929.0	2,925.2	2,923.0	2,928.1	2,931.2	2,933.6
Government	21,990	22,252	22,114	22,140	22,174	22,197	22,229	22,236	22,234	22,210	22,273	22,280	22,329	22,357	22,388
Federal	2,728	2,714	2,713	2,718	2,718	2,716	2,716	2,713	2,708	2,713	2,714	2,710	2,710	2,711	2,707
Federal, except U.S. Postal Service	1,958.3	1,950.6	1,948.6	1,951.1	1,951.8	1,949.7	1,950.0	1,947.5	1,943.5	1,950.5	1,952.1	1,949.2	1,949.9	1,950.6	1,950.1
U.S. Postal Service	770.1	762.9	764.5	767.1	766.5	766.5	766.4	765.5	764.0	762.3	761.9	760.9	759.6	760.6	756.6
State	5,080	5,144	5,111	5,117	5,133	5,134	5,140	5,133	5,139	5,143	5,137	5,159	5,162	5,170	5,181
Education	2,294.9	2,327.2	2,311.8	2,311.4	2,324.0	2,324.5	2,326.4	2,321.7	2,326.5	2,323.3	2,320.3	2,336.9	2,336.9	2,340.2	2,348.3
Other State government	2,785.2	2,817.2	2,798.9	2,805.7	2,809.4	2,809.2	2,813.7	2,811.3	2,812.7	2,819.4	2,817.1	2,822.1	2,824.9	2,829.5	2,832.7
Local	14,182	14,394	14,290	14,305	14,323	14,347	14,373	14,390	14,387	14,354	14,422	14,411	14,457	14,476	14,500
Education	7,938.5	8,054.1	8,015.6	8,018.7	8,025.1	8,044.1	8,056.0	8,062.7	8,043.1	8,011.8	8,066.1	8,048.4	8,083.7	8,093.3	8,109.8
Other local government	6,243.0	6,339.8	6,274.1	6,286.4	6,298.0	6,302.9	6,317.0	6,327.7	6,344.0	6,342.6	6,355.7	6,363.0	6,372.9	6,383.0	6,389.8

[1] Includes other industries not shown separately.
NOTE: See "Notes on the data" for a description of the most recent benchmark revision.
p = preliminary.

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

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
TOTAL PRIVATE	33.9	33.8	33.9	33.8	33.7	33.9	33.8	33.8	33.9	33.8	33.8	33.8	33.8	33.8	33.8
GOODS-PRODUCING	40.5	40.5	40.7	40.2	40.2	40.6	40.4	40.5	40.7	40.6	40.6	40.6	40.6	40.6	40.5
Natural resources and mining	45.6	45.9	45.6	45.0	45.9	45.9	45.8	45.7	45.9	45.9	45.7	46.2	46.0	46.2	46.1
Construction	39.0	38.9	39.8	38.7	38.4	39.0	38.8	38.9	39.0	38.9	38.7	38.8	39.0	39.0	38.9
Manufacturing	41.1	41.2	41.0	40.9	40.9	41.2	41.1	41.1	41.4	41.3	41.4	41.3	41.2	41.3	41.1
Overtime hours	4.4	4.2	4.2	4.1	4.1	4.3	4.2	4.1	4.3	4.2	4.1	4.1	4.1	4.1	3.9
Durable goods	41.4	41.5	41.2	41.1	41.1	41.4	41.2	41.3	41.7	41.6	41.7	41.6	41.5	41.5	41.3
Overtime hours	4.4	4.2	4.2	4.1	4.1	4.3	4.2	4.1	4.4	4.2	4.1	4.1	4.1	4.1	3.9
Wood products	39.8	39.5	39.3	38.7	39.1	39.5	39.6	39.5	39.7	39.9	39.6	39.7	39.5	39.4	39.7
Nonmetallic mineral products	43.0	42.3	42.7	42.0	41.6	42.4	42.2	42.3	42.5	42.6	42.8	42.7	42.4	42.8	41.0
Primary metals	43.6	42.9	43.3	42.8	43.0	43.2	43.0	42.8	43.3	43.2	43.0	42.6	42.5	42.6	42.4
Fabricated metal products	41.4	41.5	41.0	41.0	41.1	41.6	41.4	41.4	41.6	41.7	41.7	41.8	41.7	41.6	41.4
Machinery	42.4	42.6	42.3	41.8	42.3	42.3	42.4	42.3	42.5	42.5	42.6	42.7	42.9	42.9	42.7
Computer and electronic products	40.5	40.6	40.4	40.3	40.3	40.4	40.4	40.4	40.7	40.2	40.7	40.7	40.7	41.0	41.1
Electrical equipment and appliances	41.0	41.3	40.4	40.7	40.9	40.9	41.1	41.3	41.9	41.7	41.3	41.3	40.9	41.2	41.4
Transportation equipment	42.7	42.8	42.5	42.8	42.5	42.8	42.3	42.9	43.3	43.2	43.2	42.7	42.6	42.4	42.3
Furniture and related products	38.8	39.1	39.0	38.9	38.8	38.9	38.9	38.9	39.2	39.3	39.7	39.4	39.1	39.0	38.8
Miscellaneous manufacturing	38.7	38.8	38.7	38.5	37.9	38.5	38.6	38.6	39.0	39.0	39.1	39.5	38.8	38.6	38.9
Nondurable goods	40.6	40.9	40.6	40.6	40.6	40.9	40.9	40.8	40.9	40.9	40.8	40.8	40.8	40.9	40.9
Overtime hours	4.4	4.1	4.3	4.1	4.2	4.3	4.2	4.1	4.2	4.1	4.1	4.1	4.1	4.1	4.0
Food manufacturing	40.1	40.7	40.4	40.4	40.5	41.0	40.7	40.6	40.5	40.8	40.6	40.7	40.8	40.6	40.9
Beverage and tobacco products	40.7	40.8	40.7	40.8	40.5	40.7	41.3	40.5	40.8	40.7	40.9	40.7	40.7	40.3	41.6
Textile mills	40.6	40.4	41.0	40.6	40.7	40.5	40.2	40.2	40.5	40.2	39.8	40.5	40.4	40.7	40.8
Textile product mills	40.0	39.7	39.2	39.3	39.5	39.6	39.9	39.8	40.5	40.6	39.9	39.9	39.4	38.5	38.6
Apparel	36.5	37.4	36.7	37.5	37.0	36.7	37.3	37.3	37.7	37.7	37.4	37.4	37.0	37.6	38.0
Leather and allied products	38.9	38.0	38.2	38.2	38.0	37.9	37.6	38.9	37.8	37.4	37.5	37.7	37.7	38.3	38.8
Paper and paper products	42.9	43.0	42.4	42.5	42.4	43.1	43.0	42.9	43.0	42.9	43.1	43.1	43.3	43.1	42.9
Printing and related support activities	39.2	39.1	39.5	39.2	39.4	39.3	39.4	39.1	39.1	38.8	39.1	38.8	38.8	39.0	38.9
Petroleum and coal products	45.0	44.1	44.7	45.3	45.1	44.7	44.9	44.6	44.5	44.2	43.7	43.4	42.8	44.4	43.4
Chemicals	42.5	42.0	42.0	41.8	41.8	41.9	42.2	42.0	42.0	42.1	42.0	41.9	41.6	42.1	41.9
Plastics and rubber products	40.6	41.3	40.6	40.8	40.4	40.9	41.2	41.1	41.4	41.5	41.4	41.6	41.6	42.1	41.3
PRIVATE SERVICE-PROVIDING	32.5	32.4	32.4	32.4	32.4	32.5	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
Trade, transportation, and utilities	33.4	33.4	33.4	33.4	33.3	33.4	33.3	33.4	33.4	33.3	33.3	33.4	33.3	33.4	33.3
Wholesale trade	38.0	38.2	38.0	38.0	38.1	38.2	38.1	38.3	38.3	38.1	38.2	38.2	38.1	38.1	38.2
Retail trade	30.5	30.2	30.4	30.4	30.2	30.2	30.2	30.2	30.2	30.1	30.1	30.3	30.2	30.3	30.1
Transportation and warehousing	36.9	37.0	36.9	37.1	37.1	37.2	36.9	37.0	37.0	36.8	37.0	37.0	36.8	36.8	36.8
Utilities	41.4	42.4	42.0	41.9	42.3	42.5	42.3	42.4	42.6	42.6	42.5	42.6	42.2	42.6	42.8
Information	36.6	36.4	36.6	36.5	36.6	36.7	36.5	36.3	36.3	36.5	36.3	36.3	36.1	36.1	36.1
Financial activities	35.8	35.9	36.0	36.0	36.0	36.0	36.0	35.9	36.0	35.9	35.8	35.7	35.7	35.8	35.7
Professional and business services	34.6	34.8	34.6	34.5	34.6	34.8	34.7	34.8	34.7	34.7	34.7	34.8	34.8	34.9	35.0
Education and health services	32.5	32.6	32.4	32.5	32.4	32.6	32.6	32.5	32.6	32.6	32.6	32.6	32.6	32.6	32.6
Leisure and hospitality	25.7	25.5	25.7	25.6	25.5	25.6	25.6	25.6	25.5	25.4	25.4	25.4	25.3	25.2	25.2
Other services	30.9	30.9	30.9	30.9	30.7	31.0	30.9	31.0	30.9	30.8	30.8	30.9	30.8	30.9	30.8

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

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

p = preliminary.

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

Industry	Annual average		2006		2007										
	2005	2006	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.[p]	Nov.[p]
TOTAL PRIVATE															
Current dollars	$16.13	$16.76	$16.99	$17.07	$17.10	$17.16	$17.21	$17.25	$17.32	$17.40	$17.45	$17.50	$17.54	$17.55	$17.63
Constant (1982) dollars	8.18	8.24	8.36	8.36	8.36	8.36	8.32	8.30	8.26	8.29	8.31	8.35	8.35	8.32	8.29
GOODS-PRODUCING	17.60	18.02	18.21	18.29	18.34	18.37	18.45	18.53	18.61	18.65	18.67	18.71	18.75	18.73	18.83
Natural resources and mining	18.72	19.90	20.43	20.52	20.60	20.77	20.77	20.81	20.85	20.90	20.95	21.11	21.00	21.05	21.12
Construction	19.46	20.02	20.37	20.44	20.55	20.57	20.68	20.73	20.91	20.92	20.94	20.99	21.10	21.06	21.27
Manufacturing	16.56	16.80	16.89	16.95	16.98	17.03	17.09	17.18	17.20	17.26	17.28	17.31	17.32	17.31	17.36
Excluding overtime	15.68	15.95	16.09	16.12	16.17	16.22	16.24	16.34	16.38	16.41	16.44	16.49	16.50	16.49	16.54
Durable goods	17.33	17.67	17.79	17.86	17.90	17.96	18.03	18.12	18.15	18.22	18.22	18.26	18.26	18.26	18.28
Nondurable goods	15.27	15.32	15.35	15.41	15.44	15.47	15.49	15.60	15.60	15.63	15.68	15.70	15.73	15.70	15.79
PRIVATE SERVICE-PROVIDING	15.74	16.42	16.67	16.74	16.77	16.84	16.88	16.91	16.98	17.07	17.13	17.18	17.23	17.25	17.31
Trade,transportation, and utilities	14.92	15.40	15.54	15.58	15.59	15.61	15.66	15.69	15.71	15.80	15.84	15.88	15.92	15.93	15.97
Wholesale trade	18.16	18.91	19.14	19.20	19.25	19.22	19.32	19.39	19.38	19.54	19.56	19.63	19.69	19.74	19.76
Retail trade	12.36	12.58	12.64	12.67	12.69	12.71	12.72	12.75	12.75	12.77	12.82	12.84	12.86	12.85	12.87
Transportation and warehousing	16.70	17.28	17.50	17.53	17.49	17.50	17.54	17.57	17.65	17.76	17.81	17.79	17.90	17.91	18.02
Utilities	26.68	27.42	27.47	27.33	27.40	27.50	27.66	27.68	27.71	27.77	27.84	28.01	28.18	28.37	28.27
Information	22.06	23.23	23.47	23.60	23.72	23.77	23.83	23.86	23.87	23.99	23.96	23.98	23.96	23.96	23.98
Financial activities	17.94	18.80	19.20	19.29	19.32	19.42	19.51	19.53	19.59	19.68	19.69	19.77	19.81	19.82	19.92
Professional and business services	18.08	19.12	19.51	19.64	19.63	19.80	19.83	19.84	20.03	20.13	20.18	20.28	20.36	20.35	20.48
Education and health services	16.71	17.38	17.63	17.67	17.74	17.75	17.78	17.80	17.89	17.96	18.05	18.10	18.17	18.21	18.29
Leisure and hospitality	9.38	9.75	9.94	10.02	10.08	10.16	10.19	10.29	10.32	10.38	10.45	10.50	10.53	10.59	10.60
Other services	14.34	14.77	14.94	15.02	15.03	15.06	15.07	15.10	15.14	15.20	15.26	15.29	15.31	15.34	15.38

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

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

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

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
TOTAL PRIVATE	$16.76	$17.41	$17.07	$17.16	$17.21	$17.22	$17.34	$17.28	$17.30	$17.42	$17.40	$17.62	$17.58	$17.63	$17.77
Seasonally adjusted	–	–	17.07	17.10	17.16	17.21	17.25	17.32	17.40	17.45	17.50	17.54	17.57	17.64	17.71
GOODS-PRODUCING	18.02	18.64	18.37	18.27	18.26	18.35	18.48	18.59	18.67	18.69	18.78	18.87	18.83	18.88	18.92
Natural resources and mining	19.90	20.99	20.61	20.72	20.81	20.85	20.94	20.86	20.80	20.88	20.98	20.95	21.04	21.46	21.56
Construction	20.02	20.94	20.52	20.42	20.45	20.53	20.62	20.84	20.89	21.00	21.11	21.30	21.23	21.30	21.43
Manufacturing	16.80	17.23	17.09	17.04	17.03	17.06	17.19	17.19	17.25	17.20	17.29	17.37	17.31	17.38	17.45
Durable goods	17.67	18.17	18.04	17.94	17.95	18.01	18.10	18.12	18.21	18.08	18.25	18.33	18.27	18.32	18.40
Wood products	13.40	13.68	13.64	13.71	13.55	13.58	13.60	13.61	13.71	13.62	13.62	13.65	13.82	13.74	13.92
Nonmetallic mineral products	16.59	16.98	16.73	16.73	16.81	16.95	16.86	17.03	17.21	17.09	16.94	16.99	16.99	17.18	16.94
Primary metals	19.35	19.63	19.45	19.43	19.33	19.33	19.66	19.57	19.65	19.78	19.67	19.77	19.76	19.80	19.87
Fabricated metal products	16.17	16.53	16.44	16.33	16.31	16.35	16.40	16.49	16.45	16.51	16.57	16.61	16.68	16.75	16.93
Machinery	17.20	17.70	17.78	17.62	17.63	17.68	17.71	17.64	17.61	17.84	17.70	17.80	17.70	17.74	17.75
Computer and electronic products	18.96	19.94	19.57	19.59	19.57	19.62	19.84	19.91	19.96	20.06	20.02	20.17	20.25	20.10	20.21
Electrical equipment and appliances	15.53	15.87	15.72	15.73	15.87	15.91	15.93	15.97	15.99	16.05	15.98	16.02	15.71	15.64	15.62
Transportation equipment	22.41	22.96	22.76	22.47	22.53	22.62	22.87	22.85	23.13	22.62	23.30	23.39	23.18	23.29	23.19
Furniture and related products	13.79	14.31	14.13	14.11	14.05	14.29	14.37	14.34	14.40	14.36	14.31	14.37	14.38	14.32	14.47
Miscellaneous manufacturing	14.36	14.67	14.47	14.54	14.50	14.57	14.41	14.42	14.73	14.82	14.76	14.75	14.67	14.78	15.10
Nondurable goods	15.32	15.65	15.47	15.51	15.46	15.45	15.65	15.60	15.62	15.72	15.68	15.75	15.69	15.81	15.86
Food manufacturing	13.13	13.53	13.33	13.42	13.33	13.36	13.49	13.51	13.51	13.56	13.61	13.65	13.60	13.61	13.67
Beverages and tobacco products	18.19	18.47	18.34	17.92	17.91	18.49	18.45	18.58	18.22	18.64	17.79	18.39	18.68	19.29	19.45
Textile mills	12.55	13.00	12.63	12.90	12.87	12.81	13.00	12.89	12.97	13.13	13.20	13.15	12.93	12.97	13.18
Textile product mills	11.94	11.93	11.90	11.98	11.96	11.93	11.93	11.92	11.97	12.05	11.90	11.82	11.81	11.90	12.00
Apparel	10.61	10.96	10.64	10.87	10.82	10.70	10.80	10.91	10.92	11.05	11.01	11.09	11.07	11.15	11.10
Leather and allied products	11.44	12.01	11.70	11.89	11.82	11.81	11.87	11.85	11.97	12.17	12.08	12.22	12.08	12.27	12.11
Paper and paper products	18.01	18.43	18.23	18.18	18.10	18.16	18.47	18.45	18.46	18.68	18.30	18.54	18.49	18.55	18.71
Printing and related support activities	15.80	16.14	15.91	15.84	15.87	15.87	16.00	15.92	15.99	16.19	16.28	16.37	16.47	16.36	16.56
Petroleum and coal products	24.08	25.09	23.96	24.90	24.73	24.66	25.01	24.78	24.44	25.06	25.36	25.88	24.85	26.40	24.86
Chemicals	19.60	19.56	19.87	19.67	19.55	19.46	19.71	19.52	19.60	19.68	19.46	19.50	19.34	19.53	19.67
Plastics and rubber products	14.96	15.35	15.16	15.22	15.22	15.19	15.32	15.29	15.36	15.27	15.43	15.42	15.38	15.46	15.61
PRIVATE SERVICE-PROVIDING	16.42	17.09	16.73	16.87	16.94	16.92	17.05	16.93	16.94	17.09	17.03	17.29	17.25	17.31	17.48
Trade, transportation, and utilities	15.40	15.82	15.41	15.61	15.65	15.66	15.82	15.70	15.77	15.92	15.85	16.03	15.97	15.91	15.94
Wholesale trade	18.91	19.56	19.24	19.30	19.25	19.24	19.53	19.28	19.42	19.69	19.56	19.83	19.74	19.81	20.05
Retail trade	12.58	12.80	12.51	12.69	12.72	12.74	12.86	12.77	12.78	12.88	12.82	12.94	12.88	12.80	12.74
Transportation and warehousing	17.28	17.76	17.47	17.48	17.42	17.51	17.56	17.55	17.77	17.93	17.87	17.99	17.93	18.04	18.01
Utilities	27.42	27.93	27.38	27.39	27.50	27.73	27.88	27.75	27.52	27.74	27.77	28.31	28.48	28.30	28.77
Information	23.23	23.92	23.68	23.84	23.80	23.74	23.93	23.82	23.76	23.82	23.87	24.17	24.13	23.96	24.18
Financial activities	18.80	19.66	19.27	19.29	19.42	19.49	19.66	19.54	19.55	19.68	19.66	19.89	19.80	19.88	20.00
Professional and business services	19.12	20.15	19.67	19.81	19.95	19.88	20.13	19.95	19.96	20.27	20.03	20.36	20.21	20.32	20.81
Education and health services	17.38	18.03	17.68	17.78	17.76	17.79	17.80	17.84	17.92	18.08	18.10	18.22	18.21	18.33	18.44
Leisure and hospitality	9.75	10.41	10.13	10.15	10.24	10.23	10.30	10.33	10.29	10.33	10.39	10.52	10.61	10.69	10.81
Other services	14.77	15.22	15.06	15.07	15.10	15.11	15.20	15.15	15.13	15.15	15.19	15.34	15.31	15.36	15.52

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

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

Industry	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.[p]	Dec.[p]
TOTAL PRIVATE	$567.87	$589.36	$578.67	$573.14	$574.81	$580.31	$587.83	$582.34	$588.20	$595.76	$591.60	$602.60	$594.20	$594.13	$605.96
Seasonally adjusted	–	–	578.67	577.98	578.29	583.42	583.05	585.42	589.86	589.81	591.50	592.85	593.87	596.23	598.60
GOODS-PRODUCING	729.87	755.73	753.17	728.97	723.10	741.34	742.90	754.75	765.47	756.95	768.10	775.56	770.15	768.42	770.04
Natural resources and mining	908.01	962.54	939.82	924.11	942.69	946.59	954.86	953.30	960.96	956.30	962.98	978.37	980.46	989.31	996.07
CONSTRUCTION	781.04	814.83	806.44	773.92	764.83	794.51	791.81	819.01	829.33	827.40	833.85	839.22	840.71	828.57	822.91
Manufacturing	690.83	710.51	712.65	695.23	689.72	701.17	704.79	706.51	715.88	703.48	717.54	724.33	716.63	721.27	729.41
Durable goods	731.81	753.16	757.68	733.75	730.57	743.81	745.72	750.17	763.00	743.09	762.85	768.03	761.86	762.11	772.80
Wood products	533.44	540.17	540.14	522.35	514.90	532.34	537.20	541.68	553.88	546.16	543.44	548.73	548.65	537.23	555.41
Nonmetallic mineral products	713.34	718.42	709.35	685.93	680.81	708.51	711.49	723.78	741.75	731.45	735.20	739.07	732.27	737.02	687.76
Primary metals	842.94	842.14	857.75	839.38	827.32	835.06	845.38	835.64	850.85	846.58	841.88	846.16	837.82	843.48	856.40
Fabricated metal products	668.84	686.85	685.55	667.90	663.82	678.53	678.96	682.69	685.97	681.86	692.63	699.28	700.56	700.15	709.37
Machinery	728.99	753.28	768.10	736.52	740.46	749.63	750.90	746.17	750.19	754.63	750.48	761.84	762.87	762.82	772.13
Computer and electronic products	767.86	810.08	808.24	785.56	784.76	792.65	797.57	802.37	812.37	800.39	812.81	826.97	828.23	830.13	848.82
Electrical equipment and appliances	635.87	654.97	653.95	641.78	641.15	647.54	654.72	656.37	668.38	661.26	658.38	664.83	648.82	650.62	665.41
Transportation equipment	957.43	983.01	992.34	961.72	953.02	972.66	969.69	984.84	1,008.47	940.99	1,011.22	1,008.11	992.10	989.83	1,001.81
Furniture and related products	535.35	560.14	560.96	546.06	540.93	554.45	554.68	553.52	568.80	562.91	576.69	571.93	562.26	559.91	570.12
Miscellaneous manufacturing	556.16	569.06	568.67	558.34	548.10	563.86	554.79	556.61	577.42	570.57	577.12	584.10	570.66	570.51	596.45
Nondurable goods	621.78	639.63	635.82	629.71	619.95	628.82	638.52	634.92	638.86	638.23	641.31	652.05	643.29	652.95	656.60
Food manufacturing	526.02	551.01	547.86	539.48	529.20	541.08	540.95	545.80	547.16	551.89	556.65	566.48	560.32	562.09	568.67
Beverages and tobacco products	741.31	753.79	740.94	718.59	709.24	745.15	774.90	761.78	757.95	762.38	740.06	746.63	750.94	775.46	805.23
Textile mills	509.41	525.40	524.15	523.74	521.24	520.09	525.20	519.47	526.58	519.95	524.04	536.52	515.91	526.58	546.97
Textile product mills	477.56	473.31	477.19	472.01	470.03	474.81	473.62	470.84	488.38	485.62	474.81	476.35	462.95	459.34	470.40
Apparel	387.27	409.53	390.49	406.54	399.26	394.83	403.92	408.03	413.87	413.27	410.67	411.44	411.80	420.36	421.80
Leather and allied products	445.50	456.79	452.79	449.44	445.61	449.96	447.50	463.34	454.86	449.07	450.58	459.47	456.62	476.08	478.35
Paper and paper products	772.26	792.30	783.89	772.65	754.77	775.43	792.36	789.66	795.63	799.50	788.73	812.05	806.16	808.78	812.01
Printing and related support activities	618.81	631.77	634.81	620.93	625.28	625.28	628.80	617.70	620.41	621.70	638.18	644.98	643.98	641.31	652.46
Petroleum and coal products	1,084.03	1,107.51	1,054.24	1,115.52	1,088.12	1,082.57	1,115.45	1,102.71	1,094.91	1,115.17	1,103.16	1,141.31	1,071.04	1,195.92	1,056.55
Chemicals	833.59	820.79	842.49	824.17	817.19	815.37	833.73	817.89	821.24	822.62	819.27	820.95	800.68	824.17	832.04
Plastics and rubber products	607.82	633.75	626.11	622.50	610.32	621.27	632.72	628.42	638.98	623.02	637.26	646.10	639.81	650.87	654.06
PRIVATE SERVICE-PROVIDING	532.84	554.47	542.05	539.84	543.77	544.82	555.83	546.84	550.55	560.55	553.48	567.11	557.18	559.11	573.34
Trade, transportation, and utilities	514.61	528.22	517.78	513.57	514.89	518.35	526.81	522.81	529.87	536.50	530.98	543.42	531.80	529.80	538.77
Wholesale trade	718.30	747.70	731.12	723.75	727.65	729.20	751.91	738.42	743.79	758.07	747.19	767.42	752.09	754.76	775.94
Retail trade	383.16	386.77	384.06	378.16	376.51	380.93	387.09	384.38	388.51	394.13	389.73	397.26	387.69	386.56	389.84
Transportation and warehousing	637.14	656.95	648.14	639.77	637.57	646.12	647.96	645.84	659.27	667.00	666.55	671.03	659.82	665.68	675.38
Utilities	1,136.08	1,185.08	1,144.48	1,136.69	1,157.75	1,170.21	1,184.90	1,179.38	1,172.35	1,181.72	1,180.23	1,217.33	1,210.40	1,202.75	1,225.60
Information	850.81	871.03	864.32	863.01	866.32	864.14	880.62	857.52	860.11	883.72	868.87	889.46	871.09	864.96	882.57
Financial activities	672.40	706.01	689.87	688.65	695.24	695.79	719.56	693.67	699.89	718.32	699.90	722.01	702.90	707.73	728.00
Professional and business services	662.23	700.96	678.62	673.54	686.28	687.85	706.56	692.27	694.61	709.45	697.04	716.67	701.29	707.14	736.67
Education and health services	564.95	587.20	572.83	576.07	573.65	576.40	582.06	576.23	582.40	594.83	590.06	599.44	591.83	595.73	606.68
Leisure and hospitality	250.11	265.03	257.30	251.72	257.02	258.82	264.71	263.42	265.48	271.68	270.14	269.31	267.37	266.18	272.41
Other services	456.60	470.05	463.85	461.14	462.06	465.39	469.68	468.14	469.03	471.17	470.89	477.07	471.55	473.09	481.12

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

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

17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

Timespan and year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Private nonfarm payrolls, 278 industries											
Over 1-month span:												
2002	43.5	37.2	33.6	38.8	40.8	38.5	39.2	41.7	48.0	50.2	52.2	52.9
2003	51.6	50.2	62.1	64.9	59.9	57.6	56.5	51.4	56.5	55.0	51.4	55.6
2004	52.5	61.3	52.7	60.8	54.9	58.5	59.0	60.4	53.6	53.1	62.2	60.4
2005	64.2	64.6	64.0	62.8	56.7	55.9	59.4	55.9	55.8	57.7	53.6	57.6
2006	54.9	54.7	55.0	52.9	57.9	51.8	57.4	53.2	55.6	53.4	52.2	48.4
Over 3-month span:												
2002	39.6	33.8	34.9	33.8	35.3	42.3	39.2	34.4	42.6	48.6	48.7	50.2
2003	55.9	53.2	57.0	64.2	70.3	65.6	59.9	55.2	57.9	59.0	60.4	55.8
2004	51.3	55.9	56.8	61.3	57.2	59.4	62.8	63.7	59.9	53.4	57.2	62.2
2005	70.5	66.7	66.0	66.9	63.3	62.4	60.3	62.6	57.7	59.0	57.7	59.9
2006	64.6	60.6	61.2	59.4	60.1	56.5	57.4	56.3	57.2	55.2	54.0	51.8
Over 6-month span:												
2002	34.7	33.1	31.1	33.3	33.5	36.5	32.7	32.4	40.8	44.8	47.7	47.5
2003	49.8	51.8	55.0	60.8	63.5	63.7	63.3	62.6	58.3	62.1	55.4	55.2
2004	54.1	57.2	57.6	56.3	56.5	58.1	65.8	63.8	61.9	59.2	62.8	60.8
2005	63.8	63.3	67.1	68.2	67.1	67.1	63.5	62.9	62.6	62.1	61.5	61.0
2006	62.2	60.3	65.3	62.8	61.7	61.3	58.8	57.0	59.0	59.2	55.5	53.4
Over 12-month span:												
2002	34.5	31.5	32.9	33.5	34.2	35.1	32.7	33.1	37.1	36.7	37.2	39.2
2003	40.3	42.1	44.8	48.4	50.7	57.7	57.0	55.2	56.7	58.3	60.1	60.3
2004	60.1	61.0	59.5	58.8	58.3	60.3	60.6	62.8	60.3	58.8	59.7	61.3
2005	67.3	65.3	66.0	64.7	65.8	65.3	67.6	66.4	66.5	66.4	65.5	65.1
2006	64.6	64.4	63.8	64.0	62.6	62.2	62.1	62.2	63.7	62.9	61.7	58.8
	Manufacturing payrolls, 84 industries											
Over 1-month span:												
2002	34.5	17.3	17.3	10.7	22.0	17.3	17.3	31.5	26.8	38.1	42.3	42.3
2003	41.1	45.2	47.0	63.1	50.0	48.2	56.5	43.5	41.7	43.5	40.5	42.3
2004	36.9	48.2	43.5	48.2	38.7	37.5	42.3	45.8	44.0	44.6	48.2	51.8
2005	63.1	48.2	56.0	53.0	47.0	58.9	51.2	44.6	40.5	47.6	43.5	38.7
2006	52.4	38.7	30.4	33.3	42.3	42.9	51.8	29.2	41.7	43.5	45.2	31.5
Over 3-month span:												
2002	15.5	11.3	13.7	9.5	8.9	11.9	15.5	15.5	17.9	29.2	30.4	33.3
2003	45.2	42.9	43.5	57.7	60.1	58.3	55.4	46.4	47.0	42.9	42.9	37.5
2004	35.1	39.9	40.5	42.3	35.1	33.9	40.5	41.7	42.3	40.5	39.9	43.5
2005	56.5	52.4	52.4	51.2	47.6	54.8	48.2	52.4	39.3	42.3	35.7	39.9
2006	48.2	38.1	42.9	31.0	33.3	38.1	37.5	33.3	34.5	35.1	39.3	34.5
Over 6-month span:												
2002	11.9	11.3	7.1	8.3	9.5	10.7	7.1	9.5	12.5	16.1	25.0	24.4
2003	28.0	32.7	35.1	47.0	50.0	52.4	54.2	52.4	48.8	51.2	41.1	38.7
2004	31.5	35.1	36.3	34.5	32.1	33.3	44.0	39.3	32.1	36.9	34.5	39.3
2005	42.9	41.7	50.0	50.6	51.2	53.0	45.8	45.8	47.6	45.2	44.6	39.9
2006	39.9	37.5	37.5	36.9	36.3	38.1	35.1	29.2	31.0	33.9	33.3	29.2
Over 12-month span:												
2002	10.7	6.0	6.5	6.0	8.3	7.1	7.1	8.3	10.7	10.7	9.5	10.7
2003	13.1	14.3	13.1	20.2	23.2	35.7	36.9	38.1	36.3	44.0	44.6	44.6
2004	44.6	44.6	41.7	40.5	37.5	36.3	32.1	33.9	32.7	33.3	33.3	37.5
2005	44.6	40.5	40.5	40.5	39.3	42.3	48.8	48.8	44.6	45.2	43.5	41.7
2006	41.7	42.3	39.3	39.9	36.3	33.3	32.7	33.3	33.3	32.7	35.7	32.7

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

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

Data for the two most recent months are preliminary.

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

Industry and region	Levels[1] (in thousands)							Percent						
	2007							2007						
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]
Total[2]	4,280	4,186	4,168	4,119	4,059	4,024	4,039	3.0	2.9	2.9	2.9	2.8	2.8	2.8
Industry														
Total private[2]	3,810	3,711	3,709	3,664	3,597	3,573	3,603	3.2	3.1	3.1	3.1	3.0	3.0	3.0
Construction	139	167	149	138	155	144	160	1.8	2.1	1.9	1.8	2.0	1.9	2.1
Manufacturing	344	340	328	319	304	309	307	2.4	2.4	2.3	2.2	2.1	2.2	2.2
Trade, transportation, and utilities	676	684	703	691	598	637	665	2.5	2.5	2.6	2.5	2.2	2.3	2.4
Professional and business services	763	693	676	661	730	685	682	4.1	3.7	3.6	3.5	3.9	3.7	3.6
Education and health services	711	717	700	720	701	719	705	3.7	3.7	3.6	3.7	3.6	3.7	3.6
Leisure and hospitality	568	547	585	653	653	605	609	4.0	3.9	4.1	4.6	4.6	4.2	4.2
Government	465	475	449	455	465	456	437	2.0	2.1	2.0	2.0	2.0	2.0	1.9
Region[3]														
Northeast	732	741	682	611	664	627	656	2.8	2.8	2.6	2.3	2.5	2.4	2.5
South	1,635	1,612	1,690	1,651	1,641	1,613	1,562	3.2	3.2	3.3	3.2	3.2	3.1	3.0
Midwest	805	754	778	828	742	772	823	2.5	2.3	2.4	2.5	2.3	2.4	2.5
West	1,106	1,120	1,024	1,048	1,019	976	985	3.5	3.5	3.2	3.3	3.2	3.1	3.1

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

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

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

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

[p] = preliminary.

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

Industry and region	Levels[1] (in thousands)							Percent						
	2007							2007						
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]
Total[2]	4,741	4,802	4,836	4,714	4,870	4,657	4,636	3.4	3.5	3.5	3.4	3.5	3.4	3.3
Industry														
Total private[2]	4,335	4,443	4,369	4,355	4,507	4,293	4,205	3.7	3.8	3.8	3.8	3.9	3.7	3.6
Construction	358	408	371	336	334	357	353	4.7	5.3	4.9	4.4	4.4	4.7	4.7
Manufacturing	355	359	349	365	407	356	340	2.5	2.6	2.5	2.6	2.9	2.6	2.4
Trade, transportation, and utilities	910	924	922	994	1,034	931	933	3.4	3.5	3.5	3.7	3.9	3.5	3.5
Professional and business services	865	879	797	800	840	894	809	4.8	4.9	4.4	4.5	4.7	4.9	4.5
Education and health services	493	502	501	448	514	531	461	2.7	2.7	2.7	2.4	2.8	2.9	2.5
Leisure and hospitality	854	874	901	906	916	864	879	6.3	6.4	6.6	6.6	6.7	6.3	6.4
Government	395	385	396	370	377	349	391	1.8	1.7	1.8	1.7	1.7	1.6	1.7
Region[3]														
Northeast	684	750	761	689	672	764	754	2.6	2.9	2.9	2.7	2.6	2.9	2.9
South	1,842	1,898	1,841	1,848	1,925	1,821	1,766	3.7	3.8	3.7	3.7	3.9	3.7	3.6
Midwest	1,082	1,039	1,081	1,125	1,084	1,038	1,019	3.4	3.3	3.4	3.5	3.4	3.2	3.2
West	1,117	1,135	1,148	1,068	1,211	1,016	1,042	3.6	3.7	3.7	3.5	3.9	3.3	3.4

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

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

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

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

[p] = preliminary.

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

Industry and region	Levels[1] (in thousands)							Percent						
	2007							2007						
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]
Total[2]	4,543	4,507	4,446	4,430	4,639	4,599	4,345	3.3	3.3	3.2	3.2	3.4	3.3	3.1
Industry														
Total private[2]	4,234	4,173	4,120	4,146	4,376	4,327	4,038	3.7	3.6	3.6	3.6	3.8	3.7	3.5
Construction	363	384	371	364	359	326	327	4.7	5.0	4.9	4.8	4.7	4.3	4.4
Manufacturing	382	379	380	379	408	402	320	2.7	2.7	2.7	2.7	2.9	2.9	2.3
Trade, transportation, and utilities	974	987	926	954	1,007	1,034	933	3.7	3.7	3.5	3.6	3.8	3.9	3.5
Professional and business services	728	733	742	832	888	842	818	4.1	4.1	4.1	4.6	4.9	4.7	4.5
Education and health services	473	414	430	411	428	423	426	2.6	2.2	2.3	2.2	2.3	2.3	2.3
Leisure and hospitality	850	837	808	723	803	808	803	6.3	6.2	6.0	5.3	5.9	5.9	5.8
Government	310	323	322	289	289	287	301	1.4	1.5	1.4	1.3	1.3	1.3	1.3
Region[3]														
Northeast	634	622	667	631	680	798	642	2.5	2.4	2.6	2.4	2.6	3.1	2.5
South	1,699	1,744	1,710	1,760	1,802	1,708	1,668	3.4	3.5	3.5	3.6	3.6	3.4	3.4
Midwest	1,033	1,014	1,038	998	992	992	951	3.2	3.2	3.3	3.1	3.1	3.1	3.0
West	1,191	1,149	1,053	1,018	1,160	1,126	1,118	3.9	3.7	3.4	3.3	3.8	3.6	3.6

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

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

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

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

[p]= preliminary

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

Industry and region	Levels[1] (in thousands)							Percent						
	2007							2007						
	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]
Total[2]	2,627	2,640	2,539	2,450	2,682	2,515	2,461	1.9	1.9	1.8	1.8	1.9	1.8	1.8
Industry														
Total private[2]	2,475	2,493	2,391	2,308	2,534	2,374	2,322	2.1	2.2	2.1	2.0	2.2	2.0	2.0
Construction	129	176	145	135	137	116	104	1.7	2.3	1.9	1.8	1.8	1.5	1.4
Manufacturing	195	186	202	189	208	190	168	1.4	1.3	1.4	1.4	1.5	1.4	1.2
Trade, transportation, and utilities	618	572	545	559	607	571	580	2.3	2.2	2.1	2.1	2.3	2.1	2.2
Professional and business services	411	418	395	420	482	418	355	2.3	2.3	2.2	2.3	2.7	2.3	2.0
Education and health services	271	276	270	253	260	267	256	1.5	1.5	1.5	1.4	1.4	1.4	1.4
Leisure and hospitality	595	597	557	410	558	577	575	4.4	4.4	4.1	3.0	4.1	4.2	4.2
Government	152	148	148	146	147	142	141	.7	.7	.7	.7	.7	.6	.6
Region[3]														
Northeast	380	314	313	306	340	368	315	1.5	1.2	1.2	1.2	1.3	1.4	1.2
South	1,049	1,097	1,070	1,012	1,121	993	986	2.1	2.2	2.2	2.0	2.3	2.0	2.0
Midwest	555	553	564	543	542	541	525	1.7	1.7	1.8	1.7	1.7	1.7	1.6
West	648	669	598	582	697	614	623	2.1	2.2	1.9	1.9	2.3	2.0	2.0

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

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

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

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

[p] = preliminary.

22. Quarterly Census of Employment and Wages: 10 largest counties, second quarter 2007.

County by NAICS supersector	Establishments, second quarter 2007 (thousands)	Employment		Average weekly wage[1]	
		June 2007 (thousands)	Percent change, June 2006-07[2]	Second quarter 2007	Percent change, second quarter 2006-07[2]
United States[3]	8,945.9	137,018.2	1.2	$820	4.6
Private industry	8,655.0	115,502.9	1.2	810	4.7
Natural resources and mining	124.1	1,955.3	2.3	838	6.2
Construction	889.2	7,834.7	-.6	863	5.2
Manufacturing	361.0	13,954.1	-2.1	993	4.3
Trade, transportation, and utilities	1,909.4	26,388.1	1.4	715	4.8
Information	143.5	3,054.6	-.3	1,255	5.5
Financial activities	867.5	8,218.0	.0	1,206	5.8
Professional and business services	1,468.2	18,027.5	2.2	999	5.7
Education and health services	817.5	17,375.3	2.9	760	3.4
Leisure and hospitality	721.6	13,888.6	2.3	342	4.0
Other services	1,138.3	4,516.7	1.5	527	3.7
Government	290.8	21,515.3	1.3	875	4.5
Los Angeles, CA	394.6	4,229.3	.7	924	4.9
Private industry	390.5	3,623.3	.3	899	4.2
Natural resources and mining	.5	12.6	5.2	1,124	-15.2
Construction	14.1	161.0	.6	944	7.6
Manufacturing	15.3	451.1	([4])	983	([4])
Trade, transportation, and utilities	55.3	808.4	.3	782	4.5
Information	8.7	212.3	([4])	1,528	3.8
Financial activities	25.0	246.2	-2.0	1,420	4.1
Professional and business services	43.0	608.0	.1	1,048	4.6
Education and health services	27.9	469.5	.8	838	3.7
Leisure and hospitality	27.0	403.1	2.0	504	2.4
Other services	173.6	251.0	1.7	431	4.6
Government	4.0	606.0	3.0	1,078	([4])
Cook, IL	137.6	2,559.5	.2	981	4.1
Private industry	136.3	2,246.2	.5	973	4.0
Natural resources and mining	.1	1.4	-2.3	997	1.2
Construction	12.1	98.7	-1.5	1,174	2.7
Manufacturing	7.1	239.5	-1.6	983	2.6
Trade, transportation, and utilities	27.6	476.9	-.4	788	2.9
Information	2.5	58.7	.1	1,418	7.9
Financial activities	15.8	218.9	-.5	1,620	9.6
Professional and business services	28.1	442.6	1.9	1,229	3.1
Education and health services	13.5	366.2	2.0	826	3.1
Leisure and hospitality	11.5	242.4	1.5	421	1.4
Other services	13.8	96.9	-.2	697	3.1
Government	1.4	313.3	-1.8	1,037	5.1
New York, NY	117.1	2,363.8	1.9	1,540	6.4
Private industry	116.8	1,913.3	2.3	1,659	6.6
Natural resources and mining	.0	.1	-3.1	2,638	106.3
Construction	2.3	35.2	7.6	1,504	9.5
Manufacturing	3.1	38.2	-4.5	1,265	18.1
Trade, transportation, and utilities	21.9	249.1	1.7	1,141	4.8
Information	4.3	135.5	.4	1,897	4.3
Financial activities	18.4	379.6	2.3	3,042	8.2
Professional and business services	24.3	486.5	2.6	1,771	7.2
Education and health services	8.5	284.7	1.1	993	3.8
Leisure and hospitality	11.1	209.0	3.1	732	4.0
Other services	17.2	87.1	1.7	897	2.4
Government	.3	450.6	.2	1,037	3.4
Harris, TX	94.7	2,023.3	4.4	1,026	6.9
Private industry	94.2	1,779.4	4.9	1,044	7.0
Natural resources and mining	1.5	78.7	10.4	2,857	6.6
Construction	6.5	152.9	7.6	979	7.5
Manufacturing	4.6	181.3	4.0	1,273	7.5
Trade, transportation, and utilities	21.5	421.2	3.7	917	6.4
Information	1.3	33.1	3.8	1,258	10.0
Financial activities	10.4	120.6	2.5	1,242	5.6
Professional and business services	18.7	339.8	5.3	1,156	7.5
Education and health services	9.9	210.2	4.4	841	4.1
Leisure and hospitality	7.2	179.2	5.0	377	2.7
Other services	10.9	58.7	2.0	597	8.0
Government	.5	243.9	1.2	894	4.6
Maricopa, AZ	97.7	1,798.0	.9	827	3.9
Private industry	97.1	1,614.4	.8	812	3.7
Natural resources and mining	.5	9.8	-2.8	703	9.3
Construction	10.3	169.4	-7.6	842	4.6
Manufacturing	3.5	133.5	-2.9	1,118	3.6
Trade, transportation, and utilities	20.9	373.0	2.7	805	4.8
Information	1.6	31.0	-.8	1,014	7.0
Financial activities	12.4	150.8	-.6	1,052	3.4
Professional and business services	21.0	316.7	1.9	803	4.3
Education and health services	9.4	195.9	4.8	857	3.5
Leisure and hospitality	7.0	179.2	1.9	390	2.1
Other services	7.0	51.0	3.4	564	2.0
Government	.7	183.6	1.6	946	5.2

See footnotes at end of table.

22. Continued—Quarterly Census of Employment and Wages: 10 largest counties, second quarter 2007.

County by NAICS supersector	Establishments, second quarter 2007 (thousands)	Employment		Average weekly wage[1]	
		June 2007 (thousands)	Percent change, June 2006-07[2]	Second quarter 2007	Percent change, second quarter 2006-07[2]
Orange, CA	94.7	1,519.5	-1.0	$952	3.4
Private industry	93.3	1,363.2	-1.3	939	2.8
Natural resources and mining	.2	6.2	-6.8	588	10.7
Construction	7.1	105.6	-3.5	1,016	7.2
Manufacturing	5.4	177.1	([4])	1,150	([4])
Trade, transportation, and utilities	17.8	278.2	.4	892	([4])
Information	1.4	30.1	-2.2	1,340	7.5
Financial activities	11.4	128.1	-7.7	1,445	([4])
Professional and business services	19.2	274.6	([4])	1,000	([4])
Education and health services	9.8	139.6	2.9	833	3.3
Leisure and hospitality	7.0	175.1	1.7	410	5.1
Other services	14.0	48.4	-.4	561	4.1
Government	1.4	156.3	1.1	1,062	6.7
Dallas, TX	67.6	1,492.6	3.2	1,011	5.4
Private industry	67.1	1,330.0	3.2	1,022	5.4
Natural resources and mining	.6	7.1	-4.7	2,879	-1.1
Construction	4.4	84.1	4.4	935	1.4
Manufacturing	3.2	144.2	-.4	1,202	8.1
Trade, transportation, and utilities	15.0	307.2	2.3	974	6.1
Information	1.7	48.6	-4.6	1,371	7.3
Financial activities	8.7	145.7	2.8	1,331	5.2
Professional and business services	14.4	274.3	5.9	1,108	5.8
Education and health services	6.6	144.7	6.6	968	6.8
Leisure and hospitality	5.2	131.2	3.6	430	2.6
Other services	6.4	40.6	1.2	602	2.9
Government	.5	162.5	2.9	920	5.0
San Diego, CA	91.7	1,334.7	.2	890	4.8
Private industry	90.4	1,108.8	-.1	868	4.7
Natural resources and mining	.8	11.6	-4.1	540	4.0
Construction	7.2	90.9	-6.5	916	6.3
Manufacturing	3.2	102.4	([4])	1,190	6.6
Trade, transportation, and utilities	14.6	219.8	.3	730	5.8
Information	1.3	37.5	.5	1,873	1.7
Financial activities	9.9	81.5	-3.3	1,108	3.5
Professional and business services	16.4	217.9	.6	1,076	6.0
Education and health services	8.0	127.1	([4])	812	4.1
Leisure and hospitality	6.9	163.6	2.8	389	3.5
Other services	22.1	56.6	1.1	482	2.8
Government	1.3	225.9	1.7	996	4.8
King, WA	75.9	1,182.2	2.9	1,028	3.8
Private industry	75.4	1,027.6	3.3	1,033	3.5
Natural resources and mining	.4	3.3	3.4	1,224	1.4
Construction	6.8	72.9	11.0	1,002	6.5
Manufacturing	2.5	112.0	1.9	1,386	.8
Trade, transportation, and utilities	14.8	219.5	2.0	903	6.1
Information	1.8	75.8	5.0	1,829	4.1
Financial activities	7.0	76.4	-1.0	1,272	3.3
Professional and business services	12.9	188.1	4.4	1,180	1.1
Education and health services	6.3	120.6	2.7	812	4.5
Leisure and hospitality	6.0	113.7	3.9	427	2.4
Other services	16.7	45.4	.9	571	7.9
Government	.5	154.6	.6	995	6.0
Miami-Dade, FL	85.9	1,002.1	1.0	814	3.8
Private industry	85.6	868.2	.8	788	3.7
Natural resources and mining	.5	9.2	.3	496	6.0
Construction	6.2	53.5	1.5	841	-1.1
Manufacturing	2.6	48.0	-1.7	735	1.9
Trade, transportation, and utilities	23.1	252.6	.9	747	2.3
Information	1.5	20.7	-.7	1,163	4.6
Financial activities	10.4	71.6	-.9	1,161	5.6
Professional and business services	17.3	136.4	-1.5	949	7.5
Education and health services	8.9	135.4	3.1	796	4.6
Leisure and hospitality	5.7	101.8	1.3	458	2.5
Other services	7.6	35.7	1.9	525	5.8
Government	.3	133.9	2.4	969	4.8

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

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

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

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

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

23. Quarterly Census of Employment and Wages: by State, second quarter 2007.

State	Establishments, second quarter 2007 (thousands)	Employment		Average weekly wage[1]	
		June 2007 (thousands)	Percent change, June 2006-07	Second quarter 2007	Percent change, second quarter 2006-07
United States[2]	8,945.9	137,018.2	1.2	$820	4.6
Alabama	120.1	1,965.4	1.1	697	3.6
Alaska	21.1	325.8	-.5	832	5.6
Arizona	158.9	2,612.4	1.2	786	4.4
Arkansas	82.7	1,186.5	.3	639	4.2
California	1,291.3	15,832.5	.8	935	5.4
Colorado	179.4	2,326.9	2.2	832	4.8
Connecticut	112.5	1,714.2	.9	1,033	6.4
Delaware	29.1	430.2	.0	870	2.2
District of Columbia	31.9	683.2	.8	1,357	4.3
Florida	604.8	7,894.2	.2	743	3.2
Georgia	270.4	4,091.5	1.4	792	6.5
Hawaii	38.6	631.2	1.4	736	4.2
Idaho	57.1	679.1	3.0	626	2.3
Illinois	358.6	5,956.3	.8	874	4.4
Indiana	158.2	2,933.4	.5	702	2.6
Iowa	93.4	1,518.6	.9	664	3.9
Kansas	85.7	1,370.7	2.0	702	4.8
Kentucky	109.8	1,828.2	1.7	700	4.2
Louisiana	119.9	1,880.2	3.2	711	4.1
Maine	50.0	619.6	.6	658	4.1
Maryland	164.0	2,584.9	.7	899	5.3
Massachusetts	210.1	3,300.7	1.2	1,008	4.8
Michigan	257.1	4,252.9	-1.4	807	2.9
Minnesota	170.7	2,730.9	.0	834	5.6
Mississippi	69.7	1,137.4	.9	609	3.6
Missouri	174.7	2,764.6	.8	727	3.4
Montana	42.3	449.8	1.7	611	6.3
Nebraska	58.7	930.9	1.6	654	3.5
Nevada	74.7	1,297.9	1.0	776	3.7
New Hampshire	49.0	643.7	.7	823	6.3
New Jersey	278.1	4,066.7	.4	989	4.3
New Mexico	53.7	833.3	1.1	686	5.2
New York	576.8	8,688.8	1.3	1,020	5.9
North Carolina	251.0	4,090.5	3.0	718	4.1
North Dakota	25.1	347.7	1.5	619	4.7
Ohio	290.5	5,384.6	-.1	740	3.4
Oklahoma	99.1	1,538.5	1.6	665	4.1
Oregon	130.8	1,761.6	1.7	742	4.5
Pennsylvania	338.7	5,740.3	1.1	802	4.6
Rhode Island	36.1	492.9	.3	774	2.5
South Carolina	115.8	1,917.4	3.0	665	2.9
South Dakota	30.1	404.3	2.1	590	4.8
Tennessee	140.7	2,768.7	.7	729	3.6
Texas	548.7	10,296.1	3.4	827	5.9
Utah	86.3	1,233.7	4.4	698	6.6
Vermont	24.7	306.6	-.5	698	5.0
Virginia	227.4	3,731.5	1.0	859	4.4
Washington	216.7	2,989.8	2.7	835	4.6
West Virginia	48.7	717.1	.3	659	3.6
Wisconsin	158.2	2,845.8	.4	709	3.7
Wyoming	24.4	288.3	3.3	739	8.0
Puerto Rico	56.9	1,020.7	-1.6	460	6.0
Virgin Islands	3.4	46.9	3.4	707	4.1

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

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

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

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

Year	Average establishments	Average annual employment	Total annual wages (in thousands)	Average annual wage per employee	Average weekly wage
	Total covered (UI and UCFE)				
1997	7,369,473	121,044,432	$3,674,031,718	$30,353	$584
1998	7,634,018	124,183,549	3,967,072,423	31,945	614
1999	7,820,860	127,042,282	4,235,579,204	33,340	641
2000	7,879,116	129,877,063	4,587,708,584	35,323	679
2001	7,984,529	129,635,800	4,695,225,123	36,219	697
2002	8,101,872	128,233,919	4,714,374,741	36,764	707
2003	8,228,840	127,795,827	4,826,251,547	37,765	726
2004	8,364,795	129,278,176	5,087,561,796	39,354	757
2005	8,571,144	131,571,623	5,351,949,496	40,677	782
2006	8,784,027	133,833,834	5,692,569,465	42,535	818
	UI covered				
1997	7,317,363	118,233,942	$3,553,933,885	$30,058	$578
1998	7,586,767	121,400,660	3,845,494,089	31,676	609
1999	7,771,198	124,255,714	4,112,169,533	33,094	636
2000	7,828,861	127,005,574	4,454,966,824	35,077	675
2001	7,933,536	126,883,182	4,560,511,280	35,943	691
2002	8,051,117	125,475,293	4,570,787,218	36,428	701
2003	8,177,087	125,031,551	4,676,319,378	37,401	719
2004	8,312,729	126,538,579	4,929,262,369	38,955	749
2005	8,518,249	128,837,948	5,188,301,929	40,270	774
2006	8,731,111	131,104,860	5,522,624,197	42,124	810
	Private industry covered				
1997	7,121,182	102,175,161	$3,071,807,287	$30,064	$578
1998	7,381,518	105,082,368	3,337,621,699	31,762	611
1999	7,560,567	107,619,457	3,577,738,557	33,244	639
2000	7,622,274	110,015,333	3,887,626,769	35,337	680
2001	7,724,965	109,304,802	3,952,152,155	36,157	695
2002	7,839,903	107,577,281	3,930,767,025	36,539	703
2003	7,963,340	107,065,553	4,015,823,311	37,508	721
2004	8,093,142	108,490,066	4,245,640,890	39,134	753
2005	8,294,662	110,611,016	4,480,311,193	40,505	779
2006	8,505,496	112,718,858	4,780,833,389	42,414	816
	State government covered				
1997	65,352	4,214,451	$137,057,432	$32,521	$625
1998	67,347	4,240,779	142,512,445	33,605	646
1999	70,538	4,296,673	149,011,194	34,681	667
2000	65,096	4,370,160	158,618,365	36,296	698
2001	64,583	4,452,237	168,358,331	37,814	727
2002	64,447	4,485,071	175,866,492	39,212	754
2003	64,467	4,481,845	179,528,728	40,057	770
2004	64,544	4,484,997	184,414,992	41,118	791
2005	66,278	4,527,514	191,281,126	42,249	812
2006	66,921	4,565,908	200,329,294	43,875	844
	Local government covered				
1997	130,829	11,844,330	$345,069,166	$29,134	$560
1998	137,902	12,077,513	365,359,945	30,251	582
1999	140,093	12,339,584	385,419,781	31,234	601
2000	141,491	12,620,081	408,721,690	32,387	623
2001	143,989	13,126,143	440,000,795	33,521	645
2002	146,767	13,412,941	464,153,701	34,605	665
2003	149,281	13,484,153	480,967,339	35,669	686
2004	155,043	13,563,517	499,206,488	36,805	708
2005	157,309	13,699,418	516,709,610	37,718	725
2006	158,695	13,820,093	541,461,514	39,179	753
	Federal government covered (UCFE)				
1997	52,110	2,810,489	$120,097,833	$42,732	$822
1998	47,252	2,782,888	121,578,334	43,688	840
1999	49,661	2,786,567	123,409,672	44,287	852
2000	50,256	2,871,489	132,741,760	46,228	889
2001	50,993	2,752,619	134,713,843	48,940	941
2002	50,755	2,758,627	143,587,523	52,050	1,001
2003	51,753	2,764,275	149,932,170	54,239	1,043
2004	52,066	2,739,596	158,299,427	57,782	1,111
2005	52,895	2,733,675	163,647,568	59,864	1,151
2006	52,916	2,728,974	169,945,269	62,274	1,198

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

25. Annual data: Quarterly Census of Employment and Wages, establishment size and employment, private ownership, by supersector, first quarter 2006

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers[1]	5 to 9 workers	10 to 19 workers	20 to 49 workers	50 to 99 workers	100 to 249 workers	250 to 499 workers	500 to 999 workers	1,000 or more workers
Total all industries[2]										
Establishments, first quarter	8,413,125	5,078,506	1,392,481	919,182	636,264	216,815	123,061	30,375	10,965	5,476
Employment, March	111,001,540	7,540,432	9,219,319	12,406,793	19,195,647	14,903,811	18,408,166	10,383,792	7,421,575	11,522,005
Natural resources and mining										
Establishments, first quarter	123,076	69,188	23,230	15,106	9,842	3,177	1,783	516	175	59
Employment, March	1,631,257	111,354	153,676	203,446	296,339	216,952	267,612	177,858	115,367	88,653
Construction										
Establishments, first quarter	861,030	558,318	141,743	84,922	52,373	15,118	6,762	1,358	337	99
Employment, March	7,299,087	823,891	929,155	1,140,245	1,565,409	1,027,718	994,696	454,918	220,788	142,267
Manufacturing										
Establishments, first quarter	362,959	137,311	61,852	55,135	53,364	25,712	19,573	6,423	2,469	1,120
Employment, March	14,098,486	240,304	415,575	757,991	1,662,309	1,798,423	3,006,794	2,207,979	1,668,696	2,340,415
Trade, transportation, and utilities										
Establishments, first quarter	1,880,255	999,688	380,100	245,926	158,053	53,502	33,590	7,071	1,796	529
Employment, March	25,612,515	1,663,203	2,529,630	3,293,292	4,772,401	3,695,250	5,001,143	2,419,416	1,166,322	1,071,858
Information										
Establishments, first quarter	142,974	81,209	21,094	16,356	13,313	5,553	3,568	1,141	512	228
Employment, March	3,037,124	113,399	140,632	223,171	411,358	384,148	544,418	392,681	355,421	471,896
Financial activities										
Establishments, first quarter	836,365	541,333	151,952	80,853	40,558	12,146	6,245	1,890	928	460
Employment, March	8,102,371	874,114	1,002,449	1,068,474	1,206,411	832,505	936,343	655,392	641,926	884,757
Professional and business services										
Establishments, first quarter	1,403,142	948,773	192,581	121,585	80,222	30,997	20,046	5,849	2,169	920
Employment, March	17,162,560	1,333,479	1,265,155	1,639,285	2,431,806	2,148,736	3,038,221	1,995,309	1,469,170	1,841,399
Education and health services										
Establishments, first quarter	787,747	375,326	175,191	112,455	72,335	26,364	18,400	4,106	1,832	1,738
Employment, March	16,838,748	684,886	1,163,519	1,512,272	2,177,055	1,835,664	2,754,731	1,400,469	1,282,903	4,027,249
Leisure and hospitality										
Establishments, first quarter	699,767	270,143	118,147	128,663	131,168	38,635	10,459	1,602	648	302
Employment, March	12,633,387	430,588	796,935	1,802,270	3,945,588	2,583,745	1,475,115	540,014	437,645	621,487
Other services										
Establishments, first quarter	1,121,269	912,768	118,306	56,724	24,734	5,570	2,629	418	99	21
Employment, March	4,326,368	1,087,667	771,276	747,842	718,557	377,961	388,231	139,473	63,337	32,024

[1] Includes establishments that reported no workers in March 2006.

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

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

26. Average annual wages for 2005 and 2006 for all covered workers[1] by metropolitan area

Metropolitan area[2]	Average annual wages[3]		
	2005	2006	Percent change, 2005-06
Metropolitan areas[4]	$42,253	$44,165	4.5
Abilene, TX	27,876	29,842	7.1
Aguadilla-Isabela-San Sebastian, PR	18,717	19,277	3.0
Akron, OH	37,471	38,088	1.6
Albany, GA	31,741	32,335	1.9
Albany-Schenectady-Troy, NY	39,201	41,027	4.7
Albuquerque, NM	35,665	36,934	3.6
Alexandria, LA	30,114	31,329	4.0
Allentown-Bethlehem-Easton, PA-NJ	38,506	39,787	3.3
Altoona, PA	29,642	30,394	2.5
Amarillo, TX	31,954	33,574	5.1
Ames, IA	33,889	35,331	4.3
Anchorage, AK	41,712	42,955	3.0
Anderson, IN	31,418	32,184	2.4
Anderson, SC	29,463	30,373	3.1
Ann Arbor, MI	45,820	47,186	3.0
Anniston-Oxford, AL	31,231	32,724	4.8
Appleton, WI	34,431	35,308	2.5
Asheville, NC	30,926	32,268	4.3
Athens-Clarke County, GA	32,512	33,485	3.0
Atlanta-Sandy Springs-Marietta, GA	44,595	45,889	2.9
Atlantic City, NJ	36,735	38,018	3.5
Auburn-Opelika, AL	29,196	30,468	4.4
Augusta-Richmond County, GA-SC	34,588	35,638	3.0
Austin-Round Rock, TX	43,500	45,737	5.1
Bakersfield, CA	34,165	36,020	5.4
Baltimore-Towson, MD	43,486	45,177	3.9
Bangor, ME	30,707	31,746	3.4
Barnstable Town, MA	35,123	36,437	3.7
Baton Rouge, LA	34,523	37,245	7.9
Battle Creek, MI	37,994	39,362	3.6
Bay City, MI	33,572	35,094	4.5
Beaumont-Port Arthur, TX	36,530	39,026	6.8
Bellingham, WA	31,128	32,618	4.8
Bend, OR	31,492	33,319	5.8
Billings, MT	31,748	33,270	4.8
Binghamton, NY	33,290	35,048	5.3
Birmingham-Hoover, AL	39,353	40,798	3.7
Bismarck, ND	31,504	32,550	3.3
Blacksburg-Christiansburg-Radford, VA	32,196	34,024	5.7
Bloomington, IN	30,080	30,913	2.8
Bloomington-Normal, IL	39,404	41,359	5.0
Boise City-Nampa, ID	34,623	36,734	6.1
Boston-Cambridge-Quincy, MA-NH	54,199	56,809	4.8
Boulder, CO	49,115	50,944	3.7
Bowling Green, KY	31,306	32,529	3.9
Bremerton-Silverdale, WA	36,467	37,694	3.4
Bridgeport-Stamford-Norwalk, CT	71,095	74,890	5.3
Brownsville-Harlingen, TX	24,893	25,795	3.6
Brunswick, GA	30,902	32,717	5.9
Buffalo-Niagara Falls, NY	35,302	36,950	4.7
Burlington, NC	31,084	32,835	5.6
Burlington-South Burlington, VT	38,582	40,548	5.1
Canton-Massillon, OH	32,080	33,132	3.3
Cape Coral-Fort Myers, FL	35,649	37,065	4.0
Carson City, NV	38,428	40,115	4.4
Casper, WY	34,810	38,307	10.0
Cedar Rapids, IA	37,902	38,976	2.8
Champaign-Urbana, IL	33,278	34,422	3.4
Charleston, WV	35,363	36,887	4.3
Charleston-North Charleston, SC	33,896	35,267	4.0
Charlotte-Gastonia-Concord, NC-SC	43,728	45,732	4.6
Charlottesville, VA	37,392	39,051	4.4
Chattanooga, TN-GA	33,743	35,358	4.8
Cheyenne, WY	32,208	35,306	9.6
Chicago-Naperville-Joliet, IL-IN-WI	46,609	48,631	4.3
Chico, CA	30,007	31,557	5.2
Cincinnati-Middletown, OH-KY-IN	40,343	41,447	2.7
Clarksville, TN-KY	29,870	30,949	3.6
Cleveland, TN	32,030	33,075	3.3
Cleveland-Elyria-Mentor, OH	39,973	41,325	3.4
Coeur d'Alene, ID	28,208	29,797	5.6
College Station-Bryan, TX	29,032	30,239	4.2
Colorado Springs, CO	37,268	38,325	2.8
Columbia, MO	31,263	32,207	3.0
Columbia, SC	33,386	35,209	5.5
Columbus, GA-AL	31,370	32,334	3.1
Columbus, IN	38,446	40,107	4.3
Columbus, OH	39,806	41,168	3.4
Corpus Christi, TX	32,975	35,399	7.4
Corvallis, OR	39,357	40,586	3.1

See footnotes at end of table.

26. Average annual wages for 2005 and 2006 for all covered workers[1] by metropolitan area — Continued

Metropolitan area[2]	Average annual wages[3]		
	2005	2006	Percent change, 2005-06
Cumberland, MD-WV	$28,645	$29,859	4.2
Dallas-Fort Worth-Arlington, TX	45,337	47,525	4.8
Dalton, GA	32,848	33,266	1.3
Danville, IL	31,861	33,141	4.0
Danville, VA	28,449	28,870	1.5
Davenport-Moline-Rock Island, IA-IL	35,546	37,559	5.7
Dayton, OH	37,922	39,387	3.9
Decatur, AL	33,513	34,883	4.1
Decatur, IL	38,444	39,375	2.4
Deltona-Daytona Beach-Ormond Beach, FL	29,927	31,197	4.2
Denver-Aurora, CO	45,940	48,232	5.0
Des Moines, IA	39,760	41,358	4.0
Detroit-Warren-Livonia, MI	46,790	47,455	1.4
Dothan, AL	30,253	31,473	4.0
Dover, DE	33,132	34,571	4.3
Dubuque, IA	32,414	33,044	1.9
Duluth, MN-WI	32,638	33,677	3.2
Durham, NC	46,743	49,314	5.5
Eau Claire, WI	30,763	31,718	3.1
El Centro, CA	29,879	30,035	0.5
Elizabethtown, KY	30,912	32,072	3.8
Elkhart-Goshen, IN	35,573	35,878	0.9
Elmira, NY	32,989	33,968	3.0
El Paso, TX	28,666	29,903	4.3
Erie, PA	32,010	33,213	3.8
Eugene-Springfield, OR	32,295	33,257	3.0
Evansville, IN-KY	35,302	36,858	4.4
Fairbanks, AK	39,399	41,296	4.8
Fajardo, PR	20,011	21,002	5.0
Fargo, ND-MN	32,291	33,542	3.9
Farmington, NM	33,695	36,220	7.5
Fayetteville, NC	30,325	31,281	3.2
Fayetteville-Springdale-Rogers, AR-MO	34,598	35,734	3.3
Flagstaff, AZ	30,733	32,231	4.9
Flint, MI	37,982	39,409	3.8
Florence, SC	32,326	33,610	4.0
Florence-Muscle Shoals, AL	28,885	29,518	2.2
Fond du Lac, WI	32,634	33,376	2.3
Fort Collins-Loveland, CO	36,612	37,940	3.6
Fort Smith, AR-OK	29,599	30,932	4.5
Fort Walton Beach-Crestview-Destin, FL	32,976	34,409	4.3
Fort Wayne, IN	34,717	35,641	2.7
Fresno, CA	32,266	33,504	3.8
Gadsden, AL	28,438	29,499	3.7
Gainesville, FL	32,992	34,573	4.8
Gainesville, GA	33,828	34,765	2.8
Glens Falls, NY	31,710	32,780	3.4
Goldsboro, NC	28,316	29,331	3.6
Grand Forks, ND-MN	28,138	29,234	3.9
Grand Junction, CO	31,611	33,729	6.7
Grand Rapids-Wyoming, MI	36,941	38,056	3.0
Great Falls, MT	28,021	29,542	5.4
Greeley, CO	33,636	35,144	4.5
Green Bay, WI	35,467	36,677	3.4
Greensboro-High Point, NC	34,876	35,898	2.9
Greenville, NC	31,433	32,432	3.2
Greenville, SC	34,469	35,471	2.9
Guayama, PR	23,263	24,551	5.5
Gulfport-Biloxi, MS	31,688	34,688	9.5
Hagerstown-Martinsburg, MD-WV	33,202	34,621	4.3
Hanford-Corcoran, CA	29,989	31,148	3.9
Harrisburg-Carlisle, PA	39,144	39,807	1.7
Harrisonburg, VA	30,366	31,522	3.8
Hartford-West Hartford-East Hartford, CT	50,154	51,282	2.2
Hattiesburg, MS	28,568	30,059	5.2
Hickory-Lenoir-Morganton, NC	30,090	31,323	4.1
Hinesville-Fort Stewart, GA	30,062	31,416	4.5
Holland-Grand Haven, MI	36,362	36,895	1.5
Honolulu, HI	37,654	39,009	3.6
Hot Springs, AR	27,024	27,684	2.4
Houma-Bayou Cane-Thibodaux, LA	33,696	38,417	14.0
Houston-Baytown-Sugar Land, TX	47,157	50,177	6.4
Huntington-Ashland, WV-KY-OH	31,415	32,648	3.9
Huntsville, AL	42,401	44,659	5.3
Idaho Falls, ID	29,795	31,632	6.2
Indianapolis, IN	39,830	41,307	3.7
Iowa City, IA	34,785	35,913	3.2
Ithaca, NY	36,457	38,337	5.2
Jackson, MI	35,879	36,836	2.7
Jackson, MS	33,099	34,605	4.5

See footnotes at end of table.

26. Average annual wages for 2005 and 2006 for all covered workers[1] by metropolitan area — Continued

Metropolitan area[2]	Average annual wages[3]		
	2005	2006	Percent change, 2005-06
Jackson, TN	$33,286	$34,477	3.6
Jacksonville, FL	38,224	40,192	5.1
Jacksonville, NC	24,803	25,854	4.2
Janesville, WI	34,107	36,732	7.7
Jefferson City, MO	30,991	31,771	2.5
Johnson City, TN	29,840	31,058	4.1
Johnstown, PA	29,335	29,972	2.2
Jonesboro, AR	28,550	28,972	1.5
Joplin, MO	29,152	30,111	3.3
Kalamazoo-Portage, MI	36,042	37,099	2.9
Kankakee-Bradley, IL	31,802	32,389	1.8
Kansas City, MO-KS	39,749	41,320	4.0
Kennewick-Richland-Pasco, WA	38,453	38,750	0.8
Killeen-Temple-Fort Hood, TX	30,028	31,511	4.9
Kingsport-Bristol-Bristol, TN-VA	33,568	35,100	4.6
Kingston, NY	30,752	33,697	9.6
Knoxville, TN	35,724	37,216	4.2
Kokomo, IN	44,462	45,808	3.0
La Crosse, WI-MN	31,029	31,819	2.5
Lafayette, IN	35,176	35,380	0.6
Lafayette, LA	34,729	38,170	9.9
Lake Charles, LA	33,728	35,883	6.4
Lakeland, FL	32,235	33,530	4.0
Lancaster, PA	35,264	36,171	2.6
Lansing-East Lansing, MI	38,135	39,890	4.6
Laredo, TX	27,401	28,051	2.4
Las Cruces, NM	28,569	29,969	4.9
Las Vegas-Paradise, NV	38,940	40,139	3.1
Lawrence, KS	28,492	29,896	4.9
Lawton, OK	28,459	29,830	4.8
Lebanon, PA	30,704	31,790	3.5
Lewiston, ID-WA	29,414	30,776	4.6
Lewiston-Auburn, ME	31,008	32,231	3.9
Lexington-Fayette, KY	36,683	37,926	3.4
Lima, OH	32,630	33,790	3.6
Lincoln, NE	32,711	33,703	3.0
Little Rock-North Little Rock, AR	34,920	36,169	3.6
Logan, UT-ID	25,869	26,766	3.5
Longview, TX	32,603	35,055	7.5
Longview, WA	33,993	35,140	3.4
Los Angeles-Long Beach-Santa Ana, CA	46,592	48,680	4.5
Louisville, KY-IN	37,144	38,673	4.1
Lubbock, TX	30,174	31,977	6.0
Lynchburg, VA	32,025	33,242	3.8
Macon, GA	33,110	34,126	3.1
Madera, CA	29,356	31,213	6.3
Madison, WI	38,210	40,007	4.7
Manchester-Nashua, NH	45,066	46,659	3.5
Mansfield, OH	32,688	33,171	1.5
Mayaguez, PR	19,597	20,619	5.2
McAllen-Edinburg-Pharr, TX	25,315	26,712	5.5
Medford, OR	30,502	31,697	3.9
Memphis, TN-MS-AR	39,094	40,580	3.8
Merced, CA	30,209	31,147	3.1
Miami-Fort Lauderdale-Miami Beach, FL	40,174	42,175	5.0
Michigan City-La Porte, IN	30,724	31,383	2.1
Midland, TX	38,267	42,625	11.4
Milwaukee-Waukesha-West Allis, WI	40,181	42,049	4.6
Minneapolis-St. Paul-Bloomington, MN-WI	45,507	46,931	3.1
Missoula, MT	29,627	30,652	3.5
Mobile, AL	33,496	36,126	7.9
Modesto, CA	34,325	35,468	3.3
Monroe, LA	29,264	30,618	4.6
Monroe, MI	39,449	40,938	3.8
Montgomery, AL	33,441	35,383	5.8
Morgantown, WV	31,529	32,608	3.4
Morristown, TN	31,215	31,914	2.2
Mount Vernon-Anacortes, WA	31,387	32,851	4.7
Muncie, IN	32,172	30,691	-4.6
Muskegon-Norton Shores, MI	33,035	33,949	2.8
Myrtle Beach-Conway-North Myrtle Beach, SC	26,642	27,905	4.7
Napa, CA	40,180	41,788	4.0
Naples-Marco Island, FL	38,211	39,320	2.9
Nashville-Davidson--Murfreesboro, TN	38,753	41,003	5.8
New Haven-Milford, CT	43,931	44,892	2.2
New Orleans-Metairie-Kenner, LA	37,239	42,434	14.0
New York-Northern New Jersey-Long Island, NY-NJ-PA	57,660	61,388	6.5
Niles-Benton Harbor, MI	35,029	36,967	5.5
Norwich-New London, CT	42,151	43,184	2.5
Ocala, FL	30,008	31,330	4.4

See footnotes at end of table.

26. Average annual wages for 2005 and 2006 for all covered workers[1] by metropolitan area — Continued

Metropolitan area[2]	Average annual wages[3]		
	2005	2006	Percent change, 2005-06
Ocean City, NJ	$31,033	$31,801	2.5
Odessa, TX	33,475	37,144	11.0
Ogden-Clearfield, UT	31,195	32,890	5.4
Oklahoma City, OK	33,142	35,846	8.2
Olympia, WA	36,230	37,787	4.3
Omaha-Council Bluffs, NE-IA	36,329	38,139	5.0
Orlando, FL	36,466	37,776	3.6
Oshkosh-Neenah, WI	38,820	39,538	1.8
Owensboro, KY	31,379	32,491	3.5
Oxnard-Thousand Oaks-Ventura, CA	44,597	45,467	2.0
Palm Bay-Melbourne-Titusville, FL	38,287	39,778	3.9
Panama City-Lynn Haven, FL	31,894	33,341	4.5
Parkersburg-Marietta, WV-OH	30,747	32,213	4.8
Pascagoula, MS	34,735	36,287	4.5
Pensacola-Ferry Pass-Brent, FL	32,064	33,530	4.6
Peoria, IL	39,871	42,283	6.0
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	46,454	48,647	4.7
Phoenix-Mesa-Scottsdale, AZ	40,245	42,220	4.9
Pine Bluff, AR	30,794	32,115	4.3
Pittsburgh, PA	38,809	40,759	5.0
Pittsfield, MA	35,807	36,707	2.5
Pocatello, ID	27,686	28,418	2.6
Ponce, PR	19,660	20,266	3.1
Portland-South Portland-Biddeford, ME	35,857	36,979	3.1
Portland-Vancouver-Beaverton, OR-WA	41,048	42,607	3.8
Port St. Lucie-Fort Pierce, FL	33,235	34,408	3.5
Poughkeepsie-Newburgh-Middletown, NY	38,187	39,528	3.5
Prescott, AZ	29,295	30,625	4.5
Providence-New Bedford-Fall River, RI-MA	37,796	39,428	4.3
Provo-Orem, UT	30,395	32,308	6.3
Pueblo, CO	30,165	30,941	2.6
Punta Gorda, FL	31,937	32,370	1.4
Racine, WI	37,659	39,002	3.6
Raleigh-Cary, NC	39,465	41,205	4.4
Rapid City, SD	28,758	29,920	4.0
Reading, PA	36,210	38,048	5.1
Redding, CA	32,139	33,307	3.6
Reno-Sparks, NV	38,453	39,537	2.8
Richmond, VA	41,274	42,495	3.0
Riverside-San Bernardino-Ontario, CA	35,201	36,668	4.2
Roanoke, VA	32,987	33,912	2.8
Rochester, MN	41,296	42,941	4.0
Rochester, NY	37,991	39,481	3.9
Rockford, IL	35,652	37,424	5.0
Rocky Mount, NC	30,983	31,556	1.8
Rome, GA	33,896	34,850	2.8
Sacramento--Arden-Arcade--Roseville, CA	42,800	44,552	4.1
Saginaw-Saginaw Township North, MI	36,325	37,747	3.9
St. Cloud, MN	31,705	33,018	4.1
St. George, UT	26,046	28,034	7.6
St. Joseph, MO-KS	30,009	31,253	4.1
St. Louis, MO-IL	39,985	41,354	3.4
Salem, OR	31,289	32,764	4.7
Salinas, CA	36,067	37,974	5.3
Salisbury, MD	32,240	33,223	3.0
Salt Lake City, UT	36,857	38,630	4.8
San Angelo, TX	29,530	30,168	2.2
San Antonio, TX	35,097	36,763	4.7
San Diego-Carlsbad-San Marcos, CA	43,824	45,784	4.5
Sandusky, OH	32,631	33,526	2.7
San Francisco-Oakland-Fremont, CA	58,634	61,343	4.6
San German-Cabo Rojo, PR	18,745	19,498	4.0
San Jose-Sunnyvale-Santa Clara, CA	71,970	76,608	6.4
San Juan-Caguas-Guaynabo, PR	23,952	24,812	3.6
San Luis Obispo-Paso Robles, CA	33,759	35,146	4.1
Santa Barbara-Santa Maria-Goleta, CA	39,080	40,326	3.2
Santa Cruz-Watsonville, CA	38,016	40,776	7.3
Santa Fe, NM	33,253	35,320	6.2
Santa Rosa-Petaluma, CA	40,017	41,533	3.8
Sarasota-Bradenton-Venice, FL	33,905	35,751	5.4
Savannah, GA	34,104	35,684	4.6
Scranton--Wilkes-Barre, PA	32,057	32,813	2.4
Seattle-Tacoma-Bellevue, WA	46,644	49,455	6.0
Sheboygan, WI	35,067	35,908	2.4
Sherman-Denison, TX	32,800	34,166	4.2
Shreveport-Bossier City, LA	31,962	33,678	5.4
Sioux City, IA-NE-SD	31,122	31,826	2.3
Sioux Falls, SD	33,257	34,542	3.9
South Bend-Mishawaka, IN-MI	34,086	35,089	2.9
Spartanburg, SC	35,526	37,077	4.4

See footnotes at end of table.

26. Average annual wages for 2005 and 2006 for all covered workers[1] by metropolitan area — Continued

Metropolitan area[2]	Average annual wages[3]		
	2005	2006	Percent change, 2005-06
Spokane, WA	$32,621	$34,016	4.3
Springfield, IL	39,299	40,679	3.5
Springfield, MA	36,791	37,962	3.2
Springfield, MO	30,124	30,786	2.2
Springfield, OH	30,814	31,844	3.3
State College, PA	34,109	35,392	3.8
Stockton, CA	35,030	36,426	4.0
Sumter, SC	27,469	29,294	6.6
Syracuse, NY	36,494	38,081	4.3
Tallahassee, FL	33,548	35,018	4.4
Tampa-St. Petersburg-Clearwater, FL	36,374	38,016	4.5
Terre Haute, IN	30,597	31,341	2.4
Texarkana, TX-Texarkana, AR	31,302	32,545	4.0
Toledo, OH	35,848	37,039	3.3
Topeka, KS	33,303	34,806	4.5
Trenton-Ewing, NJ	52,034	54,274	4.3
Tucson, AZ	35,650	37,119	4.1
Tulsa, OK	35,211	37,637	6.9
Tuscaloosa, AL	34,124	35,613	4.4
Tyler, TX	34,731	36,173	4.2
Utica-Rome, NY	30,902	32,457	5.0
Valdosta, GA	25,712	26,794	4.2
Vallejo-Fairfield, CA	38,431	40,225	4.7
Vero Beach, FL	32,591	33,823	3.8
Victoria, TX	34,327	36,642	6.7
Vineland-Millville-Bridgeton, NJ	36,387	37,749	3.7
Virginia Beach-Norfolk-Newport News, VA-NC	34,580	36,071	4.3
Visalia-Porterville, CA	28,582	29,772	4.2
Waco, TX	32,325	33,450	3.5
Warner Robins, GA	36,762	38,087	3.6
Washington-Arlington-Alexandria, DC-VA-MD-WV	55,525	58,057	4.6
Waterloo-Cedar Falls, IA	33,123	34,329	3.6
Wausau, WI	33,259	34,438	3.5
Weirton-Steubenville, WV-OH	30,596	31,416	2.7
Wenatchee, WA	27,163	28,340	4.3
Wheeling, WV-OH	29,808	30,620	2.7
Wichita, KS	35,976	38,763	7.7
Wichita Falls, TX	29,343	30,785	4.9
Williamsport, PA	30,699	31,431	2.4
Wilmington, NC	31,792	32,948	3.6
Winchester, VA-WV	33,787	34,895	3.3
Winston-Salem, NC	36,654	37,712	2.9
Worcester, MA	41,094	42,726	4.0
Yakima, WA	27,334	28,401	3.9
Yauco, PR	17,818	19,001	6.6
York-Hanover, PA	36,834	37,226	1.1
Youngstown-Warren-Boardman, OH-PA	32,176	33,852	5.2
Yuba City, CA	32,133	33,642	4.7
Yuma, AZ	27,168	28,369	4.4

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

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

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

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

27. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1997	1998[1]	1999[1]	2000[1]	2001[1]	2002	2003	2004	2005	2006	2007
Civilian noninstitutional population	203,133	205,220	207,753	212,577	215,092	217,570	221,168	223,357	226,082	228,815	231,867
Civilian labor force	136,297	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320	151,428	153,124
Labor force participation rate	67.1	67.1	67.1	67.1	66.8	66.6	66.2	66	66	66.2	66
Employed	129,558	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730	144,427	146,047
Employment-population ratio	63.8	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7	63.1	63
Unemployed	6,739	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591	7,001	7,078
Unemployment rate	4.9	4.5	4.2	4	4.7	5.8	6	5.5	5.1	4.6	4.6
Not in the labor force	66,837	67,547	68,385	69,994	71,359	72,707	74,658	75,956	76,762	77,387	78,743

[1] Not strictly comparable with prior years.

28. Annual data: Employment levels by industry

[In thousands]

Industry	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total private employment	103,113	106,021	108,686	110,996	110,707	108,828	108,416	109,814	111,899	114,184	115,717
Total nonfarm employment	122,776	125,930	128,993	131,785	131,826	130,341	129,999	131,435	133,703	136,174	137,969
Goods-producing	23,886	24,354	24,465	24,649	23,873	22,557	21,816	21,882	22,190	22,570	22,378
Natural resources and mining	654	645	598	599	606	583	572	591	628	684	722
Construction	5,813	6,149	6,545	6,787	6,826	6,716	6,735	6,976	7,336	7,689	7,624
Manufacturing	17,419	17,560	17,322	17,263	16,441	15,259	14,510	14,315	14,226	14,197	14,032
Private service-providing	79,227	81,667	84,221	86,346	86,834	86,271	86,599	87,932	89,709	91,615	93,339
Trade, transportation, and utilities	24,700	25,186	25,771	26,225	25,983	25,497	25,287	25,533	25,959	26,231	26,472
Wholesale trade	5,663.90	5,795.20	5,892.50	5,933.20	5,772.70	5,652.30	5,607.50	5,662.90	5,764.40	5,897.60	6,005.30
Retail trade	14,388.90	14,609.30	14,970.10	15,279.80	15,238.60	15,025.10	14,917.30	15,058.20	15,279.60	15,319.30	15,382.00
Transportation and warehousing	4,026.50	4,168.00	4,300.30	4,410.30	4,372.00	4,223.60	4,185.40	4,248.60	4,360.90	4,465.80	4,531.20
Utilities	620.9	613.4	608.5	601.3	599.4	596.2	577	563.8	554	548.5	553.5
Information	3,084	3,218	3,419	3,631	3,629	3,395	3,188	3,118	3,061	3,055	3,087
Financial activities	7,178	7,462	7,648	7,687	7,807	7,847	7,977	8,031	8,153	8,363	8,446
Professional and business services	14,335	15,147	15,957	16,666	16,476	15,976	15,987	16,395	16,954	17,552	17,920
Education and health services	14,087	14,446	14,798	15,109	15,645	16,199	16,588	16,953	17,372	17,838	18,377
Leisure and hospitality	11,018	11,232	11,543	11,862	12,036	11,986	12,173	12,493	12,816	13,143	13,565
Other services	4,825	4,976	5,087	5,168	5,258	5,372	5,401	5,409	5,395	5,432	5,472
Government	19,664	19,909	20,307	20,790	21,118	21,513	21,583	21,621	21,804	21,990	22,252

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

Industry	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Private sector:											
Average weekly hours	34.5	34.5	34.3	34.3	34	33.9	33.7	33.7	33.8	33.9	33.8
Average hourly earnings (in dollars)	12.51	13.01	13.49	14.02	14.54	14.97	15.37	15.69	16.13	16.76	17.41
Average weekly earnings (in dollars)	431.86	448.56	463.15	481.01	493.79	506.72	518.06	529.09	544.33	567.87	589.36
Goods-producing:											
Average weekly hours	41.1	40.8	40.8	40.7	39.9	39.9	39.8	40	40.1	40.5	40.5
Average hourly earnings (in dollars)	13.82	14.23	14.71	15.27	15.78	16.33	16.8	17.19	17.6	18.02	18.64
Average weekly earnings (in dollars)	568.43	580.99	599.99	621.86	630.04	651.61	669.13	688.17	705.31	729.87	755.73
Natural resources and mining											
Average weekly hours	46.2	44.9	44.2	44.4	44.6	43.2	43.6	44.5	45.6	45.6	45.9
Average hourly earnings (in dollars)	15.57	16.2	16.33	16.55	17	17.19	17.56	18.07	18.72	19.9	20.99
Average weekly earnings (in dollars)	720.11	727.28	721.74	734.92	757.92	741.97	765.94	803.82	853.71	908.01	962.54
Construction:											
Average weekly hours	38.9	38.8	39	39.2	38.7	38.4	38.4	38.3	38.6	39	38.9
Average hourly earnings (in dollars)	15.67	16.23	16.8	17.48	18	18.52	18.95	19.23	19.46	20.02	20.94
Average weekly earnings (in dollars)	609.48	629.75	655.11	685.78	695.89	711.82	726.83	735.55	750.22	781.04	814.83
Manufacturing:											
Average weekly hours	41.7	41.4	41.4	41.3	40.3	40.5	40.4	40.8	40.7	41.1	41.2
Average hourly earnings (in dollars)	13.14	13.45	13.85	14.32	14.76	15.29	15.74	16.15	16.56	16.8	17.23
Average weekly earnings (in dollars)	548.22	557.12	573.17	590.65	595.19	618.75	635.99	658.59	673.37	690.83	710.51
Private service-providing:											
Average weekly hours	32.8	32.8	32.7	32.7	32.5	32.5	32.4	32.3	32.4	32.5	32.4
Average hourly earnings (in dollars)	12.07	12.61	13.09	13.62	14.18	14.59	14.99	15.29	15.74	16.42	17.09
Average weekly earnings (in dollars)	395.51	413.5	427.98	445.74	461.08	473.8	484.81	494.22	509.58	532.84	554.47
Trade, transportation, and utilities:											
Average weekly hours	34.3	34.2	33.9	33.8	33.5	33.6	33.6	33.5	33.4	33.4	33.4
Average hourly earnings (in dollars)	11.9	12.39	12.82	13.31	13.7	14.02	14.34	14.58	14.92	15.4	15.82
Average weekly earnings (in dollars)	407.57	423.3	434.31	449.88	459.53	471.27	481.14	488.42	498.43	514.61	528.22
Wholesale trade:											
Average weekly hours	38.8	38.6	38.6	38.8	38.4	38	37.9	37.8	37.7	38	38.2
Average hourly earnings (in dollars)	14.41	15.07	15.62	16.28	16.77	16.98	17.36	17.65	18.16	18.91	19.56
Average weekly earnings (in dollars)	559.39	582.21	602.77	631.4	643.45	644.38	657.29	667.09	685	718.3	747.7
Retail trade:											
Average weekly hours	38.8	38.6	38.6	38.8	38.4	38	37.9	37.8	37.7	38	30.2
Average hourly earnings (in dollars)	14.41	15.07	15.62	16.28	16.77	16.98	17.36	17.65	18.16	18.91	12.8
Average weekly earnings (in dollars)	559.39	582.21	602.77	631.4	643.45	644.38	657.29	667.09	685	718.3	747.7
Transportation and warehousing:											
Average weekly hours	39.4	38.7	37.6	37.4	36.7	36.8	36.8	37.2	37	36.9	37
Average hourly earnings (in dollars)	13.78	14.12	14.55	15.05	15.33	15.76	16.25	16.52	16.7	17.28	17.76
Average weekly earnings (in dollars)	542.55	546.86	547.97	562.31	562.7	579.75	598.41	614.82	618.58	637.14	656.95
Utilities:											
Average weekly hours	42	42	42	42	41.4	40.9	41.1	40.9	41.1	41.4	42.4
Average hourly earnings (in dollars)	20.59	21.48	22.03	22.75	23.58	23.96	24.77	25.61	26.68	27.42	27.93
Average weekly earnings (in dollars)	865.26	902.94	924.59	955.66	977.18	979.09	1,017.27	1,048.44	1,095.90	1,136.08	1,185.08
Information:											
Average weekly hours	36.3	36.6	36.7	36.8	36.9	36.5	36.2	36.3	36.5	36.6	36.4
Average hourly earnings (in dollars)	17.14	17.67	18.4	19.07	19.8	20.2	21.01	21.4	22.06	23.23	23.92
Average weekly earnings (in dollars)	622.4	646.52	675.32	700.89	731.11	738.17	760.81	777.05	805	850.81	871.03
Financial activities:											
Average weekly hours	35.7	36	35.8	35.9	35.8	35.6	35.5	35.5	35.9	35.8	35.9
Average hourly earnings (in dollars)	13.22	13.93	14.47	14.98	15.59	16.17	17.14	17.52	17.94	18.8	19.66
Average weekly earnings (in dollars)	472.37	500.95	517.57	537.37	558.02	575.51	609.08	622.87	645.1	672.4	706.01
Professional and business services:											
Average weekly hours	34.3	34.3	34.4	34.5	34.2	34.2	34.1	34.2	34.2	34.6	34.8
Average hourly earnings (in dollars)	13.57	14.27	14.85	15.52	16.33	16.81	17.21	17.48	18.08	19.12	20.15
Average weekly earnings (in dollars)	465.51	490	510.99	535.07	557.84	574.66	587.02	597.56	618.87	662.23	700.96
Education and health services:											
Average weekly hours	32.2	32.2	32.1	32.2	32.3	32.4	32.3	32.4	32.6	32.5	32.6
Average hourly earnings (in dollars)	12.56	13	13.44	13.95	14.64	15.21	15.64	16.15	16.71	17.38	18.03
Average weekly earnings (in dollars)	404.65	418.82	431.35	449.29	473.39	492.74	505.69	523.78	544.59	564.95	587.2
Leisure and hospitality:											
Average weekly hours	26	26.2	26.1	26.1	25.8	25.8	25.6	25.7	25.7	25.7	25.5
Average hourly earnings (in dollars)	7.32	7.67	7.96	8.32	8.57	8.81	9	9.15	9.38	9.75	10.41
Average weekly earnings (in dollars)	190.52	200.82	208.05	217.2	220.73	227.17	230.42	234.86	241.36	250.11	265.03
Other services:											
Average weekly hours	32.7	32.6	32.5	32.5	32.3	32	31.4	31	30.9	30.9	30.9
Average hourly earnings (in dollars)	11.29	11.79	12.26	12.73	13.27	13.72	13.84	13.98	14.34	14.77	15.22
Average weekly earnings (in dollars)	368.63	384.25	398.77	413.41	428.64	439.76	434.41	433.04	443.37	456.6	470.05

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

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
Civilian workers[2]	100.0	100.7	101.6	102.7	103.3	104.2	105.0	106.1	106.7	0.6	3.3
Workers by occupational group											
Management, professional, and related	100.0	100.9	101.6	103.0	103.7	104.7	105.5	106.7	107.2	.5	3.4
Management, business, and financial	100.0	101.3	101.9	102.7	103.2	104.4	105.2	106.2	106.6	.4	3.3
Professional and related	100.0	100.7	101.4	103.2	104.0	104.9	105.7	107.0	107.6	.6	3.5
Sales and office	100.0	100.5	101.6	102.4	103.0	103.8	104.8	105.5	106.4	.9	3.3
Sales and related	100.0	99.9	101.1	101.7	102.3	102.4	103.6	104.1	105.2	1.1	2.8
Office and administrative support	100.0	100.9	101.9	102.8	103.5	104.7	105.5	106.4	107.1	.7	3.5
Natural resources, construction, and maintenance	100.0	100.8	102.0	103.0	103.6	104.1	105.1	106.1	106.8	.7	3.1
Construction and extraction	100.0	100.7	102.0	103.0	103.7	104.3	105.7	106.5	107.4	.8	3.6
Installation, maintenance, and repair	100.0	100.9	102.0	103.0	103.6	103.7	104.4	105.6	106.2	.6	2.5
Production, transportation, and material moving	100.0	100.4	101.1	101.8	102.4	102.7	103.5	104.2	104.7	.5	2.2
Production	100.0	100.4	101.0	101.6	102.0	102.1	102.8	103.3	104.1	.8	2.1
Transportation and material moving	100.0	100.5	101.3	102.2	102.8	103.4	104.4	105.3	105.6	.3	2.7
Service occupations	100.0	100.8	101.4	102.5	103.5	104.8	105.5	106.9	107.7	.7	4.1
Workers by industry											
Goods-producing	100.0	100.3	101.3	102.0	102.5	102.9	103.9	104.4	105.0	.6	2.4
Manufacturing	100.0	100.1	101.0	101.4	101.8	102.0	102.9	103.2	103.8	.6	2.0
Service-providing	100.0	100.9	101.6	102.9	103.5	104.4	105.2	106.4	107.0	.6	3.4
Education and health services	100.0	100.6	101.3	103.5	104.2	104.9	105.5	107.2	107.9	.7	3.6
Health care and social assistance	100.0	101.1	102.0	103.5	104.3	105.4	106.1	107.1	107.9	.7	3.5
Hospitals	100.0	101.2	101.9	103.2	104.0	105.1	105.7	106.7	107.5	.7	3.4
Nursing and residential care facilities	100.0	101.0	101.4	102.6	103.7	104.5	105.0	105.6	106.3	.7	2.5
Education services	100.0	100.2	100.7	103.4	104.1	104.5	104.9	107.3	107.9	.6	3.7
Elementary and secondary schools	100.0	100.2	100.5	103.5	104.2	104.6	105.0	107.4	107.9	.5	3.6
Public administration[3]	100.0	100.6	101.2	102.4	103.8	105.6	106.6	108.0	109.1	1.0	5.1
Private industry workers	100.0	100.8	101.7	102.5	103.2	104.0	104.9	105.7	106.3	.6	3.0
Workers by occupational group											
Management, professional, and related	100.0	101.1	101.9	102.9	103.5	104.6	105.5	106.4	106.8	.4	3.2
Management, business, and financial	100.0	101.3	102.0	102.7	103.1	104.3	105.1	106.0	106.3	.3	3.1
Professional and related	100.0	101.0	101.8	103.1	103.9	104.9	105.9	106.7	107.3	.6	3.3
Sales and office	100.0	100.5	101.6	102.3	102.9	103.7	104.7	105.3	106.1	.8	3.1
Sales and related	100.0	99.9	101.1	101.7	102.3	102.4	103.6	104.2	105.2	1.0	2.8
Office and administrative support	100.0	100.9	101.9	102.7	103.4	104.5	105.4	106.0	106.7	.7	3.2
Natural resources, construction, and maintenance	100.0	100.8	102.1	103.0	103.6	104.0	105.0	105.9	106.7	.8	3.0
Construction and extraction	100.0	100.7	102.2	103.1	103.7	104.4	105.7	106.5	107.4	.8	3.6
Installation, maintenance, and repair	100.0	100.9	102.1	103.0	103.4	103.5	104.1	105.2	105.8	.6	2.3
Production, transportation, and material moving	100.0	100.4	101.1	101.7	102.3	102.5	103.3	103.9	104.5	.6	2.2
Production	100.0	100.4	101.0	101.6	102.0	102.1	102.8	103.2	104.0	.8	2.0
Transportation and material moving	100.0	100.4	101.2	102.0	102.6	103.1	104.1	104.9	105.3	.4	2.6
Service occupations	100.0	100.8	101.5	102.3	103.1	104.5	105.2	106.4	107.0	.6	3.8
Workers by industry and occupational group											
Goods-producing industries	100.0	100.3	101.3	102.0	102.5	102.9	103.9	104.4	105.0	.6	2.4
Management, professional, and related	100.0	100.2	100.7	101.6	102.0	102.7	103.8	104.3	104.4	.1	2.4
Sales and office	100.0	99.9	102.7	102.1	102.8	103.0	103.7	104.1	104.8	.7	1.9
Natural resources, construction, and maintenance	100.0	100.6	101.9	102.7	103.3	104.0	105.3	106.1	107.0	.8	3.6
Production, transportation, and material moving	100.0	100.3	101.0	101.6	102.0	102.1	102.9	103.3	104.0	.7	2.0
Construction	100.0	100.7	101.9	103.0	103.6	104.7	105.9	106.9	107.6	.7	3.9
Manufacturing	100.0	100.1	101.0	101.4	101.8	102.0	102.9	103.2	103.8	.6	2.0
Management, professional, and related	100.0	100.0	100.5	101.3	101.4	102.0	103.3	103.3	103.5	.2	2.1
Sales and office	100.0	99.5	102.8	101.3	102.1	102.4	103.2	103.5	104.3	.8	2.2
Natural resources, construction, and maintenance	100.0	100.1	100.8	101.5	102.1	101.7	102.4	102.8	103.9	1.1	1.8
Production, transportation, and material moving	100.0	100.2	100.9	101.5	101.9	101.9	102.6	103.1	103.8	.7	1.9
Service-providing industries	100.0	101.0	101.8	102.7	103.4	104.3	105.2	106.1	106.7	.6	3.2
Management, professional, and related	100.0	101.3	102.2	103.2	103.8	105.0	105.9	106.8	107.3	.5	3.4
Sales and office	100.0	100.6	101.5	102.3	102.9	103.7	104.8	105.4	106.3	.9	3.3
Natural resources, construction, and maintenance	100.0	101.2	102.5	103.6	104.0	104.0	104.5	105.7	106.2	.5	2.1
Production, transportation, and material moving	100.0	100.6	101.3	101.9	102.6	103.0	104.0	104.7	105.2	.5	2.5
Service occupations	100.0	100.9	101.5	102.3	103.1	104.5	105.3	106.4	107.1	.7	3.9
Trade, transportation, and utilities	100.0	100.8	101.4	102.4	103.0	103.1	104.2	104.7	105.5	.8	2.4

See footnotes at end of table.

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
Wholesale trade	100.0	100.3	100.8	102.4	102.9	103.7	104.6	104.2	105.3	1.1	2.3
Retail trade	100.0	100.6	101.2	101.9	102.7	102.9	103.9	105.1	106.1	1.0	3.3
Transportation and warehousing	100.0	100.4	101.0	101.6	102.2	102.8	104.0	104.5	104.5	.0	2.3
Utilities	100.0	107.8	109.3	110.1	110.4	102.8	104.7	105.0	105.6	.6	-4.3
Information	100.0	100.9	102.1	103.0	103.2	104.3	105.6	105.8	106.1	.3	2.8
Financial activities	100.0	101.2	101.8	102.1	102.5	104.2	104.6	105.4	105.6	.2	3.0
Finance and insurance	100.0	101.5	102.4	102.6	102.9	104.6	104.9	105.7	106.1	.4	3.1
Real estate and rental and leasing	100.0	99.8	99.3	100.2	100.8	102.2	103.0	104.1	103.7	-.4	2.9
Professional and business services	100.0	101.1	102.2	102.9	103.5	104.7	105.9	106.9	107.5	.6	3.9
Education and health services	100.0	101.0	101.8	103.2	104.1	105.1	105.7	106.9	107.7	.7	3.5
Education services	100.0	100.7	101.5	103.2	104.2	104.5	104.9	106.7	107.5	.7	3.2
Health care and social assistance	100.0	101.1	101.9	103.2	104.1	105.2	105.9	106.9	107.8	.8	3.6
Hospitals	100.0	101.3	102.0	103.2	103.9	105.0	105.6	106.5	107.3	.8	3.3
Leisure and hospitality	100.0	100.6	101.3	102.4	103.7	105.3	106.0	107.5	108.1	.6	4.2
Accommodation and food services	100.0	100.5	101.4	102.5	104.0	105.8	106.4	108.1	108.6	.5	4.4
Other services, except public administration	100.0	101.4	102.7	103.6	104.0	105.7	106.1	107.1	107.6	.5	3.5
State and local government workers	100.0	100.5	100.9	103.2	104.1	105.1	105.7	107.6	108.4	.7	4.1
Workers by occupational group											
Management, professional, and related	100.0	100.3	100.8	103.3	104.0	104.9	105.4	107.5	108.3	.7	4.1
Professional and related	100.0	100.2	100.8	103.4	104.0	104.8	105.3	107.5	108.2	.7	4.0
Sales and office	100.0	100.9	101.5	103.3	104.1	105.6	106.2	107.9	108.6	.6	4.3
Office and administrative support	100.0	101.0	101.6	103.5	104.2	105.7	106.4	108.2	108.9	.6	4.5
Service occupations	100.0	100.6	101.2	103.1	104.5	105.4	106.3	108.0	109.1	1.0	4.4
Workers by industry											
Education and health services	100.0	100.3	100.8	103.7	104.3	104.8	105.3	107.5	108.2	.7	3.7
Education services	100.0	100.2	100.5	103.5	104.1	104.6	105.0	107.4	108.0	.6	3.7
Schools	100.0	100.2	100.5	103.5	104.1	104.6	104.9	107.4	108.0	.6	3.7
Elementary and secondary schools	100.0	100.2	100.5	103.6	104.2	104.7	105.0	107.4	108.0	.6	3.6
Health care and social assistance	100.0	101.3	102.9	105.1	105.7	107.1	107.6	108.6	109.3	.6	3.4
Hospitals	100.0	100.9	101.3	103.3	104.3	105.6	106.3	107.5	108.2	.7	3.7
Public administration[3]	100.0	100.6	101.2	102.4	103.8	105.6	106.6	108.0	109.1	1.0	5.1

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

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

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

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

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
Wholesale trade	100.0	100.2	100.7	102.7	103.0	103.8	104.8	104.0	105.2	1.2	2.1
Retail trade	100.0	100.5	100.9	101.9	102.8	103.1	104.2	105.1	106.1	1.0	3.2
Transportation and warehousing	100.0	100.1	100.7	101.4	101.9	102.5	103.7	104.1	104.2	.1	2.3
Utilities	100.0	100.8	102.1	103.0	103.5	104.3	105.5	106.1	106.8	.7	3.2
Information	100.0	101.0	101.7	102.6	102.4	103.8	104.9	105.2	105.3	.1	2.8
Financial activities	100.0	101.3	102.3	102.5	102.8	104.7	104.9	106.0	105.9	-.1	3.0
Finance and insurance	100.0	101.6	102.8	102.9	103.2	105.4	105.5	106.5	106.6	.1	3.3
Real estate and rental and leasing	100.0	99.8	99.9	100.8	101.4	101.6	102.4	103.6	103.1	-.5	1.7
Professional and business services	100.0	101.0	102.3	103.0	103.5	104.8	105.9	106.7	107.5	.7	3.9
Education and health services	100.0	100.7	101.6	103.0	104.0	104.8	105.6	106.9	107.7	.7	3.6
Education services	100.0	100.7	101.4	103.1	104.1	104.2	104.6	106.4	107.4	.9	3.2
Health care and social assistance	100.0	100.7	101.6	103.0	103.9	104.9	105.8	107.0	107.8	.7	3.8
Hospitals	100.0	100.9	101.8	102.9	103.7	104.6	105.4	106.5	107.2	.7	3.4
Leisure and hospitality	100.0	100.6	101.3	102.3	103.7	105.7	106.4	108.1	108.8	.6	4.9
Accommodation and food services	100.0	100.5	101.3	102.2	103.8	106.0	106.5	108.4	109.0	.6	5.0
Other services, except public administration	100.0	101.3	102.6	103.4	103.8	105.7	106.1	107.3	107.9	.6	3.9
State and local government workers	100.0	100.3	100.8	102.8	103.5	104.1	104.6	106.4	107.1	.7	3.5
Workers by occupational group											
Management, professional, and related	100.0	100.2	100.7	102.9	103.5	104.0	104.3	106.3	107.0	.7	3.4
Professional and related	100.0	100.2	100.7	103.0	103.6	103.9	104.2	106.3	107.0	.7	3.3
Sales and office	100.0	100.6	101.2	102.6	103.2	104.5	104.8	106.3	107.0	.7	3.7
Office and administrative support	100.0	100.7	101.4	102.7	103.4	104.7	105.0	106.5	107.3	.8	3.8
Service occupations	100.0	100.3	100.8	102.4	103.9	104.5	105.2	106.5	107.7	1.1	3.7
Workers by industry											
Education and health services	100.0	100.2	100.7	103.1	103.6	104.0	104.2	106.3	107.1	.8	3.4
Education services	100.0	100.1	100.4	103.0	103.4	103.7	103.9	106.1	106.8	.7	3.3
Schools	100.0	100.1	100.4	103.0	103.4	103.6	103.9	106.1	106.8	.7	3.3
Elementary and secondary schools	100.0	100.0	100.3	103.0	103.4	103.6	103.8	106.0	106.6	.6	3.1
Health care and social assistance	100.0	101.0	103.0	104.8	105.5	106.6	107.2	108.2	109.2	.9	3.5
Hospitals	100.0	100.9	101.4	103.1	104.4	105.7	106.5	107.6	108.6	.9	4.0
Public administration [2]	100.0	100.5	101.1	102.0	103.5	104.5	105.2	106.4	107.4	.9	3.8

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

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

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

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
Wholesale trade	100.0	100.2	100.7	102.7	103.0	103.8	104.8	104.0	105.2	1.2	2.1
Retail trade	100.0	100.5	100.9	101.9	102.8	103.1	104.2	105.1	106.1	1.0	3.2
Transportation and warehousing	100.0	100.1	100.7	101.4	101.9	102.5	103.7	104.1	104.2	.1	2.3
Utilities	100.0	100.8	102.1	103.0	103.5	104.3	105.5	106.1	106.8	.7	3.2
Information	100.0	101.0	101.7	102.6	102.4	103.8	104.9	105.2	105.3	.1	2.8
Financial activities	100.0	101.3	102.3	102.5	102.8	104.7	104.9	106.0	105.9	-.1	3.0
Finance and insurance	100.0	101.6	102.8	102.9	103.2	105.4	105.5	106.5	106.6	.1	3.3
Real estate and rental and leasing	100.0	99.8	99.9	100.8	101.4	101.6	102.4	103.6	103.1	-.5	1.7
Professional and business services	100.0	101.0	102.3	103.0	103.5	104.8	105.9	106.7	107.5	.7	3.9
Education and health services	100.0	100.7	101.6	103.0	104.0	104.8	105.6	106.9	107.7	.7	3.6
Education services	100.0	100.7	101.4	103.1	104.1	104.2	104.6	106.4	107.4	.9	3.2
Health care and social assistance	100.0	100.7	101.6	103.0	103.9	104.9	105.8	107.0	107.8	.7	3.8
Hospitals	100.0	100.9	101.8	102.9	103.7	104.6	105.4	106.5	107.2	.7	3.4
Leisure and hospitality	100.0	100.6	101.3	102.3	103.7	105.7	106.4	108.1	108.8	.6	4.9
Accommodation and food services	100.0	100.5	101.3	102.2	103.8	106.0	106.5	108.4	109.0	.6	5.0
Other services, except public administration	100.0	101.3	102.6	103.4	103.8	105.7	106.1	107.3	107.9	.6	3.9
State and local government workers	100.0	100.3	100.8	102.8	103.5	104.1	104.6	106.4	107.1	.7	3.5
Workers by occupational group											
Management, professional, and related	100.0	100.2	100.7	102.9	103.5	104.0	104.3	106.3	107.0	.7	3.4
Professional and related	100.0	100.2	100.7	103.0	103.6	103.9	104.2	106.3	107.0	.7	3.3
Sales and office	100.0	100.6	101.2	102.6	103.2	104.5	104.8	106.3	107.0	.7	3.7
Office and administrative support	100.0	100.7	101.4	102.7	103.4	104.7	105.0	106.5	107.3	.8	3.8
Service occupations	100.0	100.3	100.8	102.4	103.9	104.5	105.2	106.5	107.7	1.1	3.7
Workers by industry											
Education and health services	100.0	100.2	100.7	103.1	103.6	104.0	104.2	106.3	107.1	.8	3.4
Education services	100.0	100.1	100.4	103.0	103.4	103.7	103.9	106.1	106.8	.7	3.3
Schools	100.0	100.1	100.4	103.0	103.4	103.6	103.9	106.1	106.8	.7	3.3
Elementary and secondary schools	100.0	100.0	100.3	103.0	103.4	103.6	103.8	106.0	106.6	.6	3.1
Health care and social assistance	100.0	101.0	103.0	104.8	105.5	106.6	107.2	108.2	109.2	.9	3.5
Hospitals	100.0	100.9	101.4	103.1	104.4	105.7	106.5	107.6	108.6	.9	4.0
Public administration [2]	100.0	100.5	101.1	102.0	103.5	104.5	105.2	106.4	107.4	.9	3.8

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

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

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

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
Civilian workers	100.0	100.9	101.6	102.8	103.6	104.0	105.1	106.1	106.8	0.7	3.1
Private industry workers	100.0	101.0	101.7	102.5	103.1	103.2	104.3	105.0	105.6	.6	2.4
Workers by occupational group											
Management, professional, and related	100.0	101.3	101.8	102.8	103.4	103.8	104.9	105.6	106.0	.4	2.5
Sales and office	100.0	100.8	101.6	102.0	102.9	103.4	104.3	105.2	106.0	.8	3.0
Natural resources, construction, and maintenance	100.0	101.1	102.7	103.5	104.0	103.4	104.8	105.3	105.9	.6	1.8
Production, transportation, and material moving	100.0	100.1	101.0	101.6	102.0	101.2	102.4	102.7	103.7	1.0	1.7
Service occupations	100.0	101.5	102.2	103.0	103.6	104.2	105.1	106.0	106.7	.7	3.0
Workers by industry											
Goods-producing	100.0	99.6	100.4	101.3	101.7	100.9	102.2	102.4	103.2	.8	1.5
Manufacturing	100.0	99.0	99.7	100.5	100.8	99.6	101.0	100.7	101.7	1.0	.9
Service-providing	100.0	101.5	102.3	103.0	103.7	104.1	105.2	106.0	106.6	.6	2.8
State and local government workers	100.0	100.7	101.3	104.1	105.2	107.0	108.0	110.3	111.0	.6	5.5

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

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

[December 2005 = 100]

Series	2005	2006				2007				Percent change	
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	3 months ended	12 months ended
										Dec. 2007	
COMPENSATION											
Workers by bargaining status[1]											
Union	100.0	100.5	101.8	102.4	103.0	102.7	103.9	104.4	105.1	0.7	2.0
Goods-producing	100.0	99.9	101.2	101.8	102.2	101.5	102.8	103.1	104.0	.9	1.8
Manufacturing	100.0	99.3	100.1	100.5	100.8	99.2	100.0	100.0	101.0	1.0	.2
Service-providing	100.0	101.0	102.2	102.9	103.6	103.7	104.7	105.4	106.0	.6	2.3
Nonunion	100.0	100.9	101.7	102.6	103.2	104.2	105.1	105.9	106.5	.6	3.2
Goods-producing	100.0	100.5	101.4	102.0	102.5	103.3	104.2	104.8	105.4	.6	2.8
Manufacturing	100.0	100.3	101.3	101.7	102.1	102.8	103.7	104.1	104.6	.5	2.4
Service-providing	100.0	101.0	101.8	102.7	103.4	104.4	105.3	106.2	106.8	.6	3.3
Workers by region[1]											
Northeast	100.0	100.9	101.8	102.5	103.3	104.0	105.1	106.2	106.8	.6	3.4
South	100.0	101.0	101.6	102.8	103.5	104.3	105.3	106.1	106.7	.6	3.1
Midwest	100.0	100.7	101.7	102.3	102.8	103.3	104.2	104.6	105.3	.7	2.4
West	100.0	100.6	101.8	102.5	103.0	104.2	104.9	105.7	106.5	.8	3.4
WAGES AND SALARIES											
Workers by bargaining status[1]											
Union	100.0	100.3	101.2	101.7	102.3	102.8	103.7	104.4	104.7	.3	2.3
Goods-producing	100.0	100.5	101.6	101.9	102.3	102.7	103.6	104.3	104.3	.0	2.0
Manufacturing	100.0	100.6	101.2	101.4	101.7	102.0	102.5	102.9	102.6	-.3	.9
Service-providing	100.0	100.1	100.9	101.6	102.2	102.9	103.8	104.6	104.9	.3	2.6
Nonunion	100.0	100.8	101.8	102.7	103.3	104.5	105.3	106.2	106.9	.7	3.5
Goods-producing	100.0	100.7	101.9	102.4	103.0	104.2	105.0	105.8	106.4	.6	3.3
Manufacturing	100.0	100.7	101.8	102.0	102.5	103.6	104.2	104.9	105.5	.6	2.9
Service-providing	100.0	100.8	101.7	102.7	103.4	104.6	105.4	106.3	107.0	.7	3.5
Workers by region[1]											
Northeast	100.0	100.8	101.7	102.5	103.1	104.0	105.0	106.1	106.6	.5	3.4
South	100.0	101.0	101.6	102.9	103.6	104.6	105.6	106.5	107.0	.5	3.3
Midwest	100.0	100.4	101.4	102.0	102.6	103.6	104.4	105.0	105.6	.6	2.9
West	100.0	100.7	102.1	102.7	103.2	104.8	105.4	106.2	107.0	.8	3.7

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

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

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

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

See footnotes at end of table.

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

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

See footnotes at end of table.

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

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

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

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

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

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

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

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

See footnotes at end of table.

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

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

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

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

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

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

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

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

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

37. Work stoppages involving 1,000 workers or more

Measure	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.[p]
Number of stoppages:															
Beginning in period	20	_	0	0	1	2	3	0	2	1	1	5	3	1	2
In effect during period	23	_	3	2	2	3	4	0	2	1	1	6	3	2	4
Workers involved:		_													
Beginning in period (in thousands)	70.1	_	.0	.0	2.8	7.8	5.5	.0	4.0	1.1	1.0	108.3	41.7	10.5	6.5
In effect during period (in thousands)	191.0	_	16.3	3.7	4.6	9.6	12.0	.0	4.0	1.1	1.0	108.3	41.7	14.2	20.7
Days idle:		_													
Number (in thousands)	2,687.5	_	326.0	58.8	73.4	142.8	101.1	.0	19.6	6.6	9.0	261.5	73.9	284.0	254.8
Percent of estimated working time [1]	.01	_	.01	0	0	0	0	0	0	0	0	.01	0	.01	.01

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

NOTE: p = preliminary.

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

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items	201.6	207.342	201.8	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208.936	210.177	210.036
All items (1967 = 100)	603.9	621.106	604.5	606.348	609.594	615.145	619.140	622.921	624.129	623.970	622.827	624.543	625.879	629.598	629.174
Food and beverages	195.7	203.300	197.4	199.198	200.402	200.869	201.292	202.225	202.885	203.533	204.289	205.279	206.124	206.563	206.936
Food	195.2	202.916	197.0	198.812	200.000	200.403	200.820	201.791	202.441	203.121	203.885	204.941	205.796	206.277	206.704
Food at home	193.1	201.245	194.3	196.671	198.193	198.766	199.020	200.334	200.950	201.401	202.126	203.193	204.333	204.745	205.208
Cereals and bakery products	212.8	222.107	214.8	216.276	219.041	218.458	220.494	220.939	222.605	223.297	223.981	223.372	224.691	225.668	226.461
Meats, poultry, fish, and eggs	186.6	195.616	188.6	189.609	190.491	192.508	193.665	195.886	197.175	196.690	197.204	198.323	198.474	198.616	198.755
Dairy and related products [1]	181.4	194.770	181.0	183.453	183.779	185.724	185.821	187.266	191.435	197.899	201.739	203.541	205.319	205.959	205.299
Fruits and vegetables	252.9	262.628	257.2	262.949	268.565	263.910	261.967	264.710	258.337	254.616	252.845	259.100	263.648	268.407	272.482
Nonalcoholic beverages and beverage materials	147.4	153.432	148.5	151.127	151.716	153.894	151.799	152.869	153.104	153.384	154.791	155.007	155.545	154.299	153.648
Other foods at home	169.6	173.275	168.7	170.878	171.483	171.819	172.633	172.657	173.790	174.440	174.686	174.201	174.695	173.963	174.057
Sugar and sweets	171.5	176.772	172.4	175.151	174.300	174.633	175.932	175.453	176.665	178.235	178.256	178.172	177.236	178.600	178.631
Fats and oils	168.0	172.921	166.7	170.152	171.667	170.851	169.817	171.495	171.581	173.691	174.251	174.105	176.050	175.327	176.068
Other foods	185.0	188.244	183.5	185.499	186.358	186.962	188.103	187.921	189.353	189.518	189.781	189.076	189.695	188.340	188.325
Other miscellaneous foods [1,2]	113.9	115.105	115.1	114.655	114.939	114.331	115.310	114.692	116.101	115.017	116.072	114.628	114.850	115.396	115.267
Food away from home [1]	199.4	206.659	202.2	203.171	203.909	204.082	204.725	205.233	205.934	206.931	207.756	208.805	209.275	209.854	210.233
Other food away from home [1,2]	136.6	144.068	139.1	140.919	141.626	141.366	143.155	143.160	143.157	144.785	145.376	146.752	146.074	146.628	145.814
Alcoholic beverages	200.7	207.026	201.1	202.968	204.385	205.663	206.166	206.599	207.383	207.624	208.264	208.408	209.126	209.018	208.704
Housing	203.2	209.586	204.8	206.057	207.177	208.080	208.541	208.902	210.649	211.286	211.098	210.865	210.701	210.745	210.933
Shelter	232.1	240.611	235.1	236.504	237.972	238.980	239.735	239.877	240.980	242.067	242.238	241.990	242.405	242.207	242.372
Rent of primary residence	225.1	234.679	230.0	230.806	231.739	232.495	232.980	233.549	234.071	234.732	235.311	236.058	237.135	238.169	239.102
Lodging away from home	136.0	142.813	127.7	133.633	139.160	142.247	144.832	144.112	148.622	153.016	150.236	144.480	143.172	136.703	133.545
Owners' equivalent rent of primary residence [3]	238.2	246.235	242.8	243.345	244.020	244.602	244.993	245.236	245.690	246.149	246.815	247.487	248.075	248.876	249.532
Tenants' and household insurance [1,2]	116.5	117.004	117.1	117.417	117.320	117.333	117.559	116.386	117.106	116.577	116.926	116.783	116.640	116.997	117.003
Fuels and utilities	194.7	200.632	192.6	194.378	194.890	196.414	196.393	198.574	206.199	206.140	204.334	204.264	200.836	202.161	203.006
Fuels	177.1	181.744	174.2	175.718	176.092	177.635	177.515	179.798	188.040	187.624	185.453	185.306	181.509	182.725	183.516
Fuel oil and other fuels	234.9	251.453	233.2	227.930	231.800	236.863	240.090	241.473	241.589	245.680	246.542	252.580	261.745	291.845	299.296
Gas (piped) and electricity	182.1	186.262	179.0	181.064	181.232	182.624	182.283	184.737	193.911	193.184	190.710	190.158	185.337	184.753	185.155
Household furnishings and operations	127.0	126.875	127.0	127.093	127.495	127.655	127.423	127.309	127.361	126.894	126.520	126.193	126.233	126.252	126.066
Apparel	119.5	118.998	118.6	115.988	119.017	122.582	122.934	121.452	117.225	113.500	114.439	119.535	121.846	121.204	118.257
Men's and boys' apparel	114.1	112.368	113.2	110.327	111.233	113.685	115.190	114.342	110.869	109.568	109.032	112.380	114.953	114.807	112.026
Women's and girls' apparel	110.7	110.296	110.2	105.891	110.871	116.911	117.118	114.444	107.826	101.291	103.237	110.973	113.402	112.166	109.418
Infants' and toddlers' apparel [1]	116.5	113.948	114.1	112.444	115.416	117.996	115.489	113.632	111.546	108.759	110.221	113.611	117.149	117.339	113.779
Footwear	123.5	122.374	123.0	120.915	121.930	123.505	123.672	123.041	120.602	119.375	120.329	123.183	124.675	125.005	122.258
Transportation	180.9	184.682	175.4	174.463	174.799	180.346	185.231	189.961	189.064	187.690	184.480	184.532	184.952	190.677	189.984
Private transportation	177.0	180.778	171.8	170.562	170.775	176.468	181.478	186.376	185.175	183.619	180.408	180.586	180.919	186.839	186.134
New and used motor vehicles [2]	95.6	94.303	94.8	94.840	94.591	94.493	94.307	93.981	93.842	93.961	94.121	93.985	94.201	94.562	94.754
New vehicles	137.6	136.254	137.1	137.603	137.340	137.228	136.963	136.295	135.820	135.415	135.204	134.927	135.344	136.250	136.664
Used cars and trucks [1]	140.0	135.747	136.2	135.257	134.597	134.382	134.363	134.481	135.067	136.024	137.138	137.142	136.950	136.616	136.943
Motor fuel	221.0	239.070	199.3	193.900	195.377	220.515	242.944	265.781	260.655	252.909	238.194	239.104	239.048	262.282	258.132
Gasoline (all types)	219.9	237.959	198.1	192.806	194.282	219.473	241.897	264.830	259.686	251.883	237.108	237.993	237.819	260.943	256.790
Motor vehicle parts and equipment	117.3	121.583	119.5	119.759	120.196	120.485	120.714	120.990	120.885	121.514	121.730	122.292	123.017	123.487	123.928
Motor vehicle maintenance and repair	215.6	222.963	218.8	219.262	220.530	221.160	221.508	221.999	222.553	223.487	224.019	224.302	224.939	225.672	226.120
Public transportation	226.6	230.002	217.8	221.403	224.061	225.893	227.567	228.251	233.389	235.767	233.112	230.694	232.725	233.758	233.408
Medical care	336.2	351.054	340.1	343.510	346.457	347.172	348.225	349.087	349.510	351.643	352.961	353.723	355.653	357.041	357.661
Medical care commodities	285.9	289.999	285.9	288.088	287.703	286.940	288.349	288.661	288.508	290.257	291.164	291.340	292.161	293.201	293.610
Medical care services	350.6	369.302	356.0	359.757	363.908	365.164	366.070	367.127	367.758	370.008	371.461	372.432	374.750	376.250	376.940
Professional services	289.3	300.792	292.4	295.219	298.393	298.990	299.248	299.700	300.052	301.131	302.259	302.410	303.532	303.780	304.784
Hospital and related services	468.1	498.922	477.2	482.258	487.881	490.104	492.110	494.122	494.916	499.400	501.026	504.206	510.006	515.359	515.677
Recreation [2]	110.9	111.443	110.8	111.012	111.174	111.244	111.481	111.659	111.563	111.347	111.139	111.400	111.753	111.842	111.705
Video and audio [1,2]	104.6	102.949	102.8	102.784	103.144	102.886	103.181	103.560	103.416	102.779	102.311	102.759	103.157	102.719	102.691
Education and communication [2]	116.8	119.577	118.0	117.815	117.971	118.231	118.301	118.787	118.734	119.025	120.311	121.273	121.557	121.409	121.506
Education [2]	162.1	171.388	167.6	167.624	167.927	168.114	168.152	168.403	168.601	169.490	172.873	175.486	176.339	176.717	176.927
Educational books and supplies	388.9	420.418	399.5	405.668	407.809	413.665	414.217	414.694	415.635	418.394	427.425	430.114	431.432	431.606	434.352
Tuition, other school fees, and child care	468.1	494.079	484.0	483.705	484.459	484.532	484.601	485.337	485.868	488.382	498.071	505.924	508.449	509.605	510.016
Communication [1,2]	84.1	83.367	83.1	82.778	82.845	83.122	83.203	83.772	83.594	83.553	83.655	83.690	83.659	83.250	83.282
Information and information processing [1,2]	81.7	80.720	80.6	80.246	80.311	80.601	80.683	81.151	80.880	80.840	80.944	80.976	80.946	80.519	80.546
Telephone services [1,2]	95.8	98.247	96.8	96.898	97.096	97.514	97.617	98.491	98.485	98.570	98.813	98.882	99.031	98.775	98.792
Information and information processing other than telephone services [1,4]	12.5	10.597	11.2	10.900	10.853	10.860	10.869	10.787	10.597	10.528	10.487	10.477	10.385	10.204	10.215
Personal computers and peripheral equipment [1,2]	10.8	9.688	10.3	10.259	10.174	10.191	10.172	9.971	9.700	9.601	9.524	9.455	9.324	8.946	8.936
Other goods and services	321.7	333.328	326.7	329.198	330.459	331.144	331.743	332.785	333.378	333.415	333.325	334.801	335.680	336.379	337.633
Tobacco and smoking products	519.9	554.184	527.3	543.477	548.896	550.021	547.663	549.703	552.314	553.987	555.217	559.636	560.626	561.967	566.696
Personal care [1]	190.2	195.622	193.3	193.560	193.987	194.390	195.058	195.641	195.835	195.704	195.521	196.202	196.763	197.156	197.643
Personal care products [1]	155.8	158.285	159.0	157.699	158.038	158.592	158.657	158.594	158.771	158.457	157.788	157.643	158.381	158.561	158.236
Personal care services [1]	209.7	216.559	212.5	214.045	214.616	215.091	215.380	216.228	215.860	216.720	217.028	217.589	217.887	218.604	219.656

See footnotes at end of table.

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

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

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Miscellaneous personal services	325.0	318.700	320.0	320.725	321.299	323.321	324.661	325.259	324.579	325.566	327.783	328.056	328.610	329.908	329.908
Commodity and service group:															
Commodities	164.0	167.509	162.1	161.978	162.890	165.710	167.777	169.767	168.921	167.938	166.955	167.952	168.664	171.043	170.511
Food and beverages	195.7	203.300	197.4	199.198	200.402	200.869	201.292	202.225	202.885	203.533	204.289	205.279	206.124	206.563	206.936
Commodities less food and beverages	145.9	147.515	142.5	141.529	142.290	146.037	148.749	151.136	149.669	148.016	146.317	147.289	147.924	151.067	150.162
Nondurables less food and beverages	176.7	182.526	170.9	168.788	170.479	178.548	184.555	190.075	187.249	183.947	180.480	182.902	184.091	190.560	188.635
Apparel	119.5	118.998	118.6	115.988	119.017	122.582	122.934	121.452	117.225	113.500	114.439	119.535	121.846	121.204	118.257
Nondurables less food, beverages, and apparel	216.3	226.224	207.3	205.498	206.395	217.451	227.113	237.116	235.097	231.983	225.694	226.509	227.026	238.067	236.735
Durables	114.5	112.473	113.3	113.263	113.210	113.163	112.989	112.637	112.375	112.177	112.036	111.746	111.889	112.103	112.093
Services	238.9	246.848	241.2	242.540	243.793	244.671	245.265	245.793	247.450	248.331	248.555	248.700	248.878	248.974	249.225
Rent of shelter [3]	241.9	250.813	245.0	246.476	248.024	249.087	249.877	250.055	251.200	252.358	252.530	252.272	252.713	252.495	252.669
Transportation services	230.8	233.731	230.8	231.367	232.077	232.200	232.217	231.777	233.202	234.632	234.563	234.322	235.458	236.449	236.504
Other services	277.5	285.559	280.9	281.282	281.864	282.431	283.271	284.541	284.656	284.859	286.492	288.469	289.307	289.592	289.945
Special indexes:															
All items less food	202.7	208.098	202.6	203.035	204.101	206.195	207.680	208.991	209.353	209.179	208.607	209.100	209.478	210.846	210.610
All items less shelter	191.9	196.639	191.1	191.328	192.272	194.482	196.062	197.783	197.913	197.408	196.803	197.708	198.171	199.998	199.734
All items less medical care	194.7	200.080	194.8	195.295	196.298	198.179	199.512	200.779	201.178	201.042	200.598	201.159	201.544	202.770	202.600
Commodities less food	148.0	149.720	144.7	143.775	144.558	148.240	150.894	153.228	151.825	150.225	148.591	149.541	150.180	153.234	152.344
Nondurables less food	178.2	184.012	172.7	170.878	172.552	180.197	185.861	191.064	188.463	185.382	182.170	184.450	185.610	191.668	189.844
Nondurables less food and apparel	213.9	223.411	205.8	204.403	205.347	215.400	224.126	233.150	231.414	228.641	223.057	223.802	224.338	234.241	233.014
Nondurables	186.7	193.468	184.5	184.284	185.751	190.212	193.570	196.916	195.749	194.326	192.869	194.616	195.646	199.253	198.422
Services less rent of shelter [3]	253.3	260.764	254.9	256.164	257.147	257.864	258.261	259.262	261.677	262.284	262.588	263.243	263.109	263.599	263.966
Services less medical care services	229.6	236.847	231.7	232.892	233.963	234.809	235.378	235.870	237.565	238.357	238.507	238.604	238.657	238.671	238.894
Energy	196.9	207.723	185.2	183.567	184.451	196.929	207.265	219.071	221.088	217.274	209.294	209.637	207.588	219.009	217.506
All items less energy	203.7	208.925	205.1	205.993	207.106	207.850	208.243	208.400	208.636	208.980	209.399	210.000	210.714	210.888	210.890
All items less food and energy	205.9	210.729	207.3	208.009	209.112	209.923	210.311	210.316	210.474	210.756	211.111	211.628	212.318	212.435	212.356
Commodities less food and energy	140.6	140.053	139.9	139.628	140.305	141.056	140.995	140.518	139.589	138.757	138.895	139.828	140.501	140.547	140.014
Energy commodities	223.0	241.018	202.4	196.983	198.617	222.620	243.957	265.562	260.739	253.696	239.885	241.120	241.642	265.420	261.976
Services less energy	244.7	253.058	247.5	248.836	250.199	251.026	251.714	252.050	252.955	253.998	254.491	254.706	255.385	255.549	255.785
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items	197.1	202.767	197.2	197.559	198.544	200.612	202.130	203.661	203.906	203.700	203.199	203.889	204.338	205.891	205.777
All items (1967 = 100)	587.2	603.982	587.3	588.467	591.403	597.561	602.083	606.643	607.374	606.759	605.267	607.324	608.662	613.287	612.948
Food and beverages	194.9	202.531	196.5	198.280	199.540	200.056	200.488	201.478	202.185	202.823	203.610	204.584	205.428	205.763	206.141
Food	194.4	202.134	196.1	197.886	199.111	199.589	200.009	201.043	201.722	202.409	203.207	204.241	205.082	205.451	205.855
Food at home	192.2	200.273	193.2	195.531	197.044	197.735	197.989	199.355	200.059	200.569	201.321	202.351	203.442	203.741	204.141
Cereals and bakery products	213.1	222.409	215.2	216.416	219.191	218.799	220.926	221.259	223.009	223.663	224.220	223.895	224.897	225.941	226.696
Meats, poultry, fish, and eggs	186.1	195.193	188.0	189.119	189.996	192.013	193.089	195.331	196.660	196.323	196.844	197.980	198.146	198.325	198.489
Dairy and related products [1]	180.9	194.474	180.3	182.711	183.185	185.095	185.326	186.948	191.235	198.027	201.598	203.464	205.100	205.850	205.149
Fruits and vegetables	251.0	260.484	254.7	260.176	266.159	261.627	260.068	262.669	256.565	252.703	251.575	257.223	261.774	265.736	269.533
Nonalcoholic beverages and beverage materials	146.7	152.786	147.8	150.620	150.968	153.329	150.995	152.173	152.501	152.829	154.152	154.501	154.873	153.610	152.883
Other foods at home	169.1	172.630	168.1	170.242	170.861	171.183	171.898	172.024	173.049	173.727	173.997	173.463	174.215	173.393	173.511
Sugar and sweets	170.5	175.323	171.3	173.929	173.081	173.248	174.459	174.084	175.073	176.736	176.664	176.458	176.248	176.845	177.051
Fats and oils	168.7	173.640	167.3	170.559	172.380	172.005	170.574	172.401	172.222	174.109	174.872	175.039	176.683	176.101	176.736
Other foods	185.2	188.405	183.7	185.681	186.473	187.026	188.165	188.049	189.456	189.667	189.941	189.110	189.987	188.657	188.646
Other miscellaneous foods [1,2]	114.2	115.356	115.3	114.759	115.151	114.402	115.432	115.035	116.366	115.355	116.348	114.584	115.378	115.803	115.658
Food away from home [1]	199.1	206.412	202.0	202.905	203.689	203.838	204.519	205.046	205.691	206.657	207.533	208.578	209.037	209.518	209.931
Other food away from home [1,2]	136.2	143.462	138.7	140.499	141.274	141.119	142.991	143.031	143.018	144.439	144.938	145.783	144.764	145.233	144.454
Alcoholic beverages	200.6	207.097	201.1	202.821	204.616	205.729	206.342	206.636	207.767	207.647	208.253	208.286	209.176	208.958	208.934
Housing	198.5	204.795	200.5	201.509	202.370	203.203	203.588	204.033	205.711	206.183	206.054	206.050	205.916	206.288	206.638
Shelter	224.8	232.998	228.3	229.359	230.472	231.315	231.957	232.181	233.040	233.848	234.169	234.275	234.812	235.069	235.480
Rent of primary residence	224.2	233.806	229.1	229.921	230.860	231.634	232.126	232.690	233.188	233.855	234.457	235.175	236.259	237.288	238.216
Lodging away from home [2]	135.3	142.339	127.1	132.607	138.083	141.335	144.370	143.880	148.948	153.107	149.919	143.727	142.666	136.244	133.179
Owners' equivalent rent of primary residence [3]	216.0	223.175	220.1	220.602	221.185	221.704	222.062	222.264	222.671	223.093	223.693	224.321	224.811	225.548	226.151
Tenants' and household insurance [1,2]	116.8	117.366	117.4	117.748	117.622	117.653	117.945	116.828	117.503	116.912	117.287	117.142	116.982	117.370	117.396
Fuels and utilities	193.1	198.863	190.9	192.895	193.330	194.963	194.974	197.052	204.396	204.272	202.397	202.304	198.796	200.151	200.831
Fuels	174.4	179.031	171.5	173.352	173.654	175.303	175.223	177.372	185.178	184.725	182.518	182.357	178.539	179.777	180.379
Fuel oil and other fuels	234.0	251.121	232.2	226.971	231.136	236.103	239.516	241.052	241.249	245.633	246.382	252.684	261.972	292.098	298.656
Gas (piped) and electricity	180.2	184.357	177.1	179.457	179.550	181.092	180.803	183.103	191.771	191.010	188.511	187.963	183.172	182.781	183.066
Household furnishings and operations	122.6	122.477	122.6	122.623	122.962	123.134	122.881	122.786	122.826	122.550	122.190	121.820	122.039	122.031	121.880
Apparel	119.1	118.518	118.6	115.315	118.211	122.021	122.475	120.931	116.389	113.157	114.146	118.986	121.536	120.920	118.126
Men's and boys' apparel	114.0	112.224	113.0	109.762	111.079	113.921	115.103	113.986	110.739	109.580	108.556	111.981	114.710	114.784	112.487
Women's and girls' apparel	110.3	110.202	110.4	105.697	110.214	116.275	116.826	114.316	107.422	101.709	103.960	110.847	113.623	112.165	109.375
Infants' and toddlers' apparel [1]	118.6	116.278	116.8	114.948	118.037	120.167	117.530	115.555	113.427	110.906	112.879	115.896	119.670	119.897	116.419
Footwear	123.1	122.062	122.6	120.506	121.679	122.870	123.339	122.983	120.367	119.278	119.831	122.846	124.372	124.649	122.029
Transportation	180.3	184.344	174.4	173.182	173.518	179.541	184.930	190.265	189.205	187.606	184.147	184.361	184.639	190.761	189.967
Private transportation	177.5	181.496	171.7	170.321	170.588	176.695	182.156	187.595	186.374	184.684	181.218	181.495	181.717	187.951	187.159
New and used motor vehicles [2]	94.7	93.300	93.7	93.709	93.459	93.365	93.234	93.000	92.917	93.042	93.229	93.118	93.268	93.529	93.733

See footnotes at end of table.

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

[1982–84 = 100, unless otherwise indicated]

Series	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
New vehicles	138.6	137.415	138.2	138.722	138.451	138.315	138.077	137.535	137.060	136.663	136.414	136.129	136.509	137.372	137.736
Used cars and trucks [1]	140.8	136.586	137.0	136.063	135.411	135.203	135.192	135.320	135.917	136.880	137.999	137.996	137.798	137.457	137.791
Motor fuel	221.6	239.900	199.8	194.278	195.934	221.011	243.574	266.737	261.679	253.893	239.097	240.271	240.040	263.248	259.032
Gasoline (all types)	220.7	238.879	198.8	193.262	194.923	220.052	242.613	265.874	260.799	252.957	238.100	239.252	238.906	262.013	257.792
Motor vehicle parts and equipment	116.9	121.356	119.2	119.464	119.897	120.170	120.367	120.709	120.666	121.350	121.584	122.144	122.830	123.302	123.786
Motor vehicle maintenance and repair	218.1	225.535	221.4	221.769	223.054	223.683	224.086	224.623	225.172	226.090	226.636	226.881	227.472	228.267	228.692
Public transportation	225.0	228.531	217.4	220.809	223.338	224.973	226.521	227.024	231.549	233.390	231.082	229.148	231.182	231.999	231.363
Medical care	335.7	350.882	340.0	343.138	346.191	346.946	348.109	348.801	349.145	351.346	352.704	353.571	355.719	357.165	357.745
Medical care commodities	279.0	282.558	279.1	281.098	280.597	279.762	281.216	281.502	280.862	282.662	283.379	283.712	284.517	285.475	285.913
Medical care services	351.1	370.111	356.7	360.251	364.519	365.827	366.870	367.696	368.384	370.696	372.261	373.306	375.899	377.498	378.119
Professional services	291.7	303.169	294.7	297.335	300.720	301.339	301.599	301.979	302.346	303.481	304.677	304.841	306.072	306.300	307.333
Hospital and related services	463.6	493.740	473.0	477.603	482.895	485.074	487.336	488.523	489.292	493.563	495.191	498.533	505.077	510.836	510.961
Recreation [2]	108.2	108.572	108.1	108.281	108.484	108.461	108.680	108.905	108.681	108.403	108.179	108.495	108.793	108.805	108.702
Video and audio [1,2]	103.9	102.559	102.4	102.334	102.653	102.363	102.690	103.137	103.001	102.358	101.923	102.427	102.833	102.465	102.523
Education and communication [2]	113.9	116.301	114.8	114.703	114.870	115.161	115.280	115.830	115.746	115.980	116.981	117.707	117.891	117.686	117.782
Education [2]	160.3	169.280	165.5	165.789	166.144	166.341	166.441	166.667	166.758	167.527	170.635	173.060	173.700	174.016	174.276
Educational books and supplies	390.7	423.730	402.0	409.068	411.130	417.027	417.583	417.791	418.705	421.529	431.089	433.670	434.800	434.979	437.391
Tuition, other school fees, and child care	453.3	477.589	468.3	468.417	469.284	469.224	469.472	470.148	470.329	472.395	480.960	488.199	490.061	491.022	491.554
Communication [1,2]	86.0	85.782	85.2	85.030	85.112	85.408	85.523	86.140	85.999	86.015	86.148	86.184	86.182	85.807	85.834
Information and information processing [1,2]	84.3	83.928	83.5	83.256	83.337	83.645	83.760	84.304	84.095	84.111	84.248	84.283	84.282	83.894	83.917
Telephone services [1,2]	95.9	98.373	96.9	97.045	97.233	97.625	97.738	98.610	98.603	98.721	98.964	99.024	99.149	98.874	98.887
Information and information processing other than telephone services [1,4]	13.0	11.062	11.6	11.321	11.272	11.292	11.322	11.243	11.062	11.001	10.965	10.958	10.877	10.710	10.722
Personal computers and peripheral equipment [1,2]	10.7	9.565	10.2	10.081	9.997	10.040	10.036	9.843	9.583	9.495	9.421	9.348	9.229	8.866	8.843
Other goods and services	330.9	344.004	335.7	339.084	340.917	341.719	342.057	343.096	343.939	344.221	344.214	345.800	346.742	347.427	348.830
Tobacco and smoking products	521.6	555.502	528.6	544.568	550.097	551.161	548.812	550.888	553.538	555.366	556.517	561.092	562.134	563.435	568.410
Personal care [1]	188.3	193.590	191.1	191.311	191.922	192.411	193.075	193.595	193.858	193.792	193.598	194.160	194.769	195.122	195.467
Personal care products [1]	155.7	158.268	158.6	157.505	157.992	158.528	158.578	158.566	158.739	158.445	157.813	157.654	158.408	158.579	158.407
Personal care services [1]	209.8	216.823	212.7	214.254	214.773	215.318	215.658	216.489	216.174	217.040	217.354	217.822	218.149	218.897	219.945
Miscellaneous personal services	314.1	326.100	318.7	319.885	321.269	322.090	324.252	325.617	326.572	326.135	327.235	329.329	329.706	330.258	330.850
Commodity and service group:															
Commodities	165.7	169.554	163.5	163.212	164.171	167.350	169.746	172.126	171.216	170.252	169.122	170.141	170.865	173.489	172.952
Food and beverages	194.9	202.531	196.5	198.280	199.540	200.056	200.488	201.478	202.185	202.823	203.610	204.584	205.428	205.763	206.141
Commodities less food and beverages	148.7	150.865	145.0	143.764	144.567	148.836	152.034	154.964	153.367	151.724	149.781	150.795	151.448	155.011	154.086
Nondurables less food and beverages	182.6	189.507	176.1	173.542	175.371	184.604	191.650	198.237	195.053	191.603	187.515	189.981	191.230	198.661	196.636
Apparel	119.1	118.518	118.6	115.315	118.211	122.021	122.475	120.931	116.389	113.157	114.146	118.986	121.536	120.920	118.126
Nondurables less food, beverages, and apparel	226.1	237.858	215.7	213.546	214.738	227.564	238.898	250.737	248.347	244.695	237.329	238.345	238.798	251.442	249.863
Durables	114.6	112.640	113.3	113.270	113.178	113.107	112.945	112.686	112.485	112.425	112.362	112.114	112.241	112.413	112.450
Services	234.1	241.696	236.6	237.761	238.783	239.586	240.106	240.672	242.241	242.901	243.118	243.436	243.572	243.906	244.275
Rent of shelter [3]	216.6	224.617	220.0	221.062	222.150	222.970	223.590	223.833	224.655	225.455	225.760	225.867	226.393	226.636	227.035
Transporatation services	230.6	233.420	231.4	231.783	232.362	232.332	232.218	231.542	232.623	233.737	233.831	233.868	234.848	235.874	236.020
Other services	268.2	275.218	270.9	271.323	271.921	272.474	273.342	274.697	274.670	274.766	276.015	277.702	278.404	278.513	278.783
Special indexes:															
All items less food	197.5	202.698	197.2	197.317	198.258	200.616	202.335	203.955	204.121	203.750	203.011	203.638	204.015	205.783	205.575
All items less shelter	189.2	193.940	188.0	188.108	189.058	191.591	193.443	195.463	195.489	194.913	194.109	195.018	195.440	197.479	197.174
All items less medical care	191.3	196.564	191.2	191.475	192.389	194.481	195.998	197.543	197.783	197.504	196.949	197.629	198.022	199.565	199.431
Commodities less food	150.6	152.875	147.0	145.822	146.653	150.856	153.999	156.872	155.339	153.730	151.846	152.837	153.499	156.977	156.073
Nondurables less food	183.8	190.698	177.7	175.341	177.171	185.979	192.687	198.945	195.988	192.714	188.873	191.210	192.442	199.471	197.551
Nondurables less food and apparel	223.0	234.201	213.5	211.702	212.940	224.712	235.083	245.886	243.806	240.471	233.817	234.745	235.233	246.726	245.286
Nondurables	189.5	196.772	186.9	186.434	187.995	193.028	196.887	200.781	199.476	198.000	196.266	198.017	199.075	203.087	202.222
Services less rent of shelter [3]	224.7	230.876	225.8	226.994	227.801	228.479	228.811	229.694	231.965	232.367	232.450	232.982	232.628	233.029	233.314
Services less medical care services	225.3	232.195	227.6	228.608	229.453	230.221	230.708	231.253	232.848	233.415	233.562	233.839	233.850	234.115	234.468
Energy	196.8	208.066	184.7	182.878	183.842	196.940	207.932	220.348	221.832	217.795	209.441	209.933	207.885	219.861	218.104
All items less energy	198.0	203.002	199.6	200.245	201.238	201.948	202.300	202.489	202.582	202.849	203.319	204.037	204.797	205.066	205.155
All items less food and energy	199.2	203.554	200.7	201.110	202.056	202.816	203.154	203.163	203.132	203.310	203.710	204.363	205.107	205.355	205.377
Commodities less food and energy	141.1	140.612	140.4	139.999	140.680	141.482	141.450	141.011	140.019	139.352	139.557	140.491	141.236	141.254	140.815
Energy commodities	223.0	241.257	202.1	196.605	198.398	222.509	244.148	266.260	261.460	254.282	240.247	241.692	241.955	265.598	261.928
Services less energy	239.9	247.888	243.0	244.080	245.211	245.923	246.539	246.894	247.606	248.434	248.977	249.398	250.127	250.546	250.925

[1] Not seasonally adjusted.

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

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

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

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

[1982–84 = 100, unless otherwise indicated]

	Pricing schedule[1]	All Urban Consumers 2007						Urban Wage Earners 2007					
		July	Aug.	Sept.	Oct.	Nov.	Dec.	July	Aug.	Sept.	Oct.	Nov.	Dec.
U.S. city average	M	208.299	207.917	208.490	208.936	210.177	210.036	203.700	203.199	203.889	204.338	205.891	205.777
Region and area size[2]													
Northeast urban	M	221.945	221.559	221.436	221.951	223.356	223.425	217.879	217.379	217.486	218.151	219.871	220.146
Size A—More than 1,500,000	M	224.229	224.246	224.274	224.636	225.766	225.688	218.523	218.445	218.791	219.275	220.710	220.824
Size B/C—50,000 to 1,500,000[3]	M	131.391	130.519	130.206	130.761	132.049	132.323	131.521	130.684	130.447	131.080	132.485	132.856
Midwest urban[4]	M	198.989	198.551	199.714	199.455	200.762	200.227	194.219	193.663	194.828	194.384	196.056	195.493
Size A—More than 1,500,000	M	200.369	199.823	201.171	200.927	202.012	201.519	194.725	194.084	195.306	194.843	196.343	195.839
Size B/C—50,000 to 1,500,000[3]	M	127.111	126.886	127.504	127.349	128.392	128.040	126.738	126.435	127.139	126.879	128.129	127.740
Size D—Nonmetropolitan (less than 50,000)	M	194.815	194.716	195.483	195.054	196.569	195.819	192.804	192.437	193.586	193.074	194.907	194.099
South urban	M	201.571	201.041	201.697	202.155	203.437	203.457	198.673	198.063	198.873	199.319	200.849	200.850
Size A—More than 1,500,000	M	203.953	203.579	204.302	204.779	205.698	206.078	201.867	201.384	202.354	202.906	203.991	204.370
Size B/C—50,000 to 1,500,000[3]	M	128.226	127.833	128.263	128.600	129.556	129.368	126.878	126.445	126.953	127.265	128.407	128.206
Size D—Nonmetropolitan (less than 50,000)	M	201.576	200.771	200.898	200.712	202.550	202.878	201.809	201.006	201.250	200.942	202.913	203.333
West urban	M	212.542	212.406	212.920	213.917	214.904	214.733	206.927	206.624	207.164	208.304	209.629	209.488
Size A—More than 1,500,000	M	215.855	215.825	216.429	217.314	218.196	218.020	208.388	208.225	208.921	210.025	211.268	211.095
Size B/C—50,000 to 1,500,000[3]	M	129.067	128.939	129.064	129.866	130.581	130.481	128.840	128.546	128.642	129.419	130.356	130.309
Size classes:													
A[5]	M	190.571	190.382	190.962	191.324	192.224	192.140	188.642	188.338	189.072	189.471	190.680	190.622
B/C[3]	M	128.601	128.216	128.506	128.869	129.848	129.718	127.866	127.419	127.759	128.103	129.268	129.156
D	M	200.893	200.311	200.903	200.941	202.525	202.333	199.207	198.559	199.289	199.275	201.016	200.867
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI	M	205.561	205.813	206.454	206.696	207.821	207.155	198.700	198.630	199.419	199.558	200.887	200.217
Los Angeles–Riverside–Orange County, CA	M	217.454	217.330	217.697	218.696	219.943	219.373	209.444	209.240	209.849	211.259	212.844	212.282
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA	M	228.628	228.326	228.308	228.552	229.504	229.395	222.237	221.905	222.174	222.624	223.716	223.873
Boston–Brockton–Nashua, MA–NH–ME–CT	1	226.929	–	227.850	–	230.689	–	226.465	–	227.429	–	230.440	–
Cleveland–Akron, OH	1	197.010	–	197.000	–	197.726	–	187.344	–	187.784	–	188.488	–
Dallas–Ft Worth, TX	1	194.286	–	194.847	–	196.465	–	196.198	–	197.027	–	198.521	–
Washington–Baltimore, DC–MD–VA–WV[7]	1	134.442	–	134.678	–	135.151	–	133.766	–	134.277	–	134.844	–
Atlanta, GA	2	–	201.258	–	201.938	–	202.751	–	200.162	–	200.714	–	202.034
Detroit–Ann Arbor–Flint, MI	2	–	199.679	–	201.786	–	200.201	–	194.798	–	196.237	–	195.866
Houston–Galveston–Brazoria, TX	2	–	183.740	–	184.922	–	186.246	–	182.425	–	183.426	–	184.975
Miami–Ft. Lauderdale, FL	2	–	213.127	–	215.159	–	217.319	–	211.041	–	213.454	–	215.561
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD	2	–	218.692	–	218.929	–	219.025	–	217.331	–	218.061	–	218.791
San Francisco–Oakland–San Jose, CA	2	–	216.240	–	217.949	–	218.485	–	211.620	–	213.133	–	214.204
Seattle–Tacoma–Bremerton, WA	2	–	215.978	–	218.427	–	218.966	–	210.220	–	213.107	–	214.024

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

[2] Regions defined as the four Census regions.

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

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

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

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

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

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

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

[1982–84 = 100]

Series	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Consumer Price Index for All Urban Consumers:											
All items:											
Index	160.5	163.0	166.6	172.2	177.1	179.9	184.0	188.9	195.3	201.6	207.342
Percent change	2.3	1.6	2.2	3.4	2.8	1.6	2.3	2.7	3.4	3.2	2.8
Food and beverages:											
Index	157.7	161.1	164.6	168.4	173.6	176.8	180.5	186.6	191.2	195.7	203.300
Percent change	2.6	2.2	2.2	2.3	3.1	1.8	2.1	3.3	2.5	2.4	3.9
Housing:											
Index	156.8	160.4	163.9	169.6	176.4	180.3	184.8	189.5	195.7	203.2	209.586
Percent change	2.6	2.3	2.2	3.5	4.0	2.2	2.5	2.5	3.3	3.8	3.1
Apparel:											
Index	132.9	133.0	131.3	129.6	127.3	124.0	120.9	120.4	119.5	119.5	118.998
Percent change	.9	.1	–1.3	–1.3	–1.8	–2.6	–2.5	–.4	–.7	.0	-0.4
Transportation:											
Index	144.3	141.6	144.4	153.3	154.3	152.9	157.6	163.1	173.9	180.9	184.682
Percent change	0.9	–1.9	2.0	6.2	0.7	–.9	3.1	3.5	6.6	4.0	2.1
Medical care:											
Index	234.6	242.1	250.6	260.8	272.8	285.6	297.1	310.1	323.2	336.2	351.054
Percent change	2.8	3.2	3.5	4.1	4.6	4.7	4.0	4.4	4.2	4.0	4.4
Other goods and services:											
Index	224.8	237.7	258.3	271.1	282.6	293.2	298.7	304.7	313.4	321.7	333.328
Percent change	4.4	5.7	8.7	5.0	4.2	3.8	1.9	2.0	2.9	2.6	3.6
Consumer Price Index for Urban Wage Earners and Clerical Workers:											
All items:											
Index	157.6	159.7	163.2	168.9	173.5	175.9	179.8	184.5	191.0	197.1	202.767
Percent change	2.3	1.3	2.2	3.5	2.7	1.4	2.2	5.1	1.1	3.2	2.9

41. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2006	2007											
	2006	2007	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.[p]	Oct.[p]	Nov.[p]	Dec.[p]
Finished goods	160.4	166.6	160.5	160.1	161.8	164.1	165.9	167.5	167.2	168.5	166.1	167.4	168.6	171.3	170.6
Finished consumer goods	166.0	173.5	165.5	164.9	167.1	170.2	172.7	174.8	174.4	176.2	173.0	174.8	175.9	179.4	178.5
Finished consumer foods	156.7	166.9	160.1	161.1	163.9	166.3	166.8	166.8	166.3	166.4	166.3	168.4	169.6	169.4	172.0
Finished consumer goods excluding foods	169.2	175.6	167.2	166.0	167.9	171.2	174.5	177.6	177.2	179.7	175.3	177.0	177.9	182.9	180.6
Nondurable goods less food	182.6	191.8	178.9	177.1	180.0	185.2	190.4	195.0	194.5	198.1	191.8	194.6	194.6	201.6	198.5
Durable goods	136.9	138.2	138.5	138.3	138.4	138.2	137.7	137.7	137.7	137.6	137.2	136.7	139.5	140.1	139.5
Capital equipment	146.9	149.5	148.6	148.9	149.2	149.1	149.1	149.1	149.0	149.1	149.0	148.9	150.5	150.8	150.6
Intermediate materials, supplies, and components	164.0	170.6	164.1	163.3	164.3	166.6	169.1	171.1	172.0	173.6	171.5	172.2	172.1	176.5	175.3
Materials and components for manufacturing	155.9	162.4	157.1	157.3	157.6	158.7	160.6	162.8	163.6	164.5	163.4	163.3	163.9	166.3	166.3
Materials for food manufacturing	146.2	161.5	147.9	150.3	152.8	155.5	157.5	160.6	163.0	163.6	164.5	166.6	166.9	166.2	170.1
Materials for nondurable manufacturing	175.0	183.9	172.9	174.0	174.5	176.3	177.7	182.9	184.9	187.1	185.0	186.0	188.4	195.0	195.3
Materials for durable manufacturing	180.5	189.8	185.0	183.1	183.8	186.3	192.9	195.0	194.8	195.1	191.8	189.1	187.9	189.8	187.9
Components for manufacturing	134.5	136.3	136.2	136.5	136.0	135.8	136.0	136.0	136.2	136.4	136.5	136.5	136.5	136.6	136.8
Materials and components for construction	188.4	192.4	189.6	190.3	190.6	191.2	192.1	192.8	193.1	193.5	193.5	193.2	193.2	192.9	193.0
Processed fuels and lubricants	162.8	173.9	157.5	152.0	156.1	164.6	171.6	176.2	178.1	183.0	175.3	178.4	176.2	191.0	184.4
Containers	175.0	180.3	176.8	178.1	178.1	178.1	179.2	179.6	179.7	180.2	180.5	181.0	182.2	183.1	183.5
Supplies	157.0	161.7	159.3	159.6	160.1	160.4	160.7	160.8	161.4	161.9	162.0	162.3	162.8	163.9	164.6
Crude materials for further processing	184.8	207.3	191.2	180.0	197.0	202.1	204.2	208.0	209.7	210.3	202.8	204.6	209.9	228.4	230.5
Foodstuffs and feedstuffs	119.3	146.7	126.9	128.7	138.8	142.0	143.7	148.1	148.4	150.0	147.8	151.9	149.8	152.7	158.9
Crude nonfood materials	230.6	246.7	235.7	212.9	235.1	241.5	243.9	246.6	249.6	249.2	237.6	237.4	248.7	279.4	277.9
Special groupings:															
Finished goods, excluding foods	161.0	166.2	160.3	159.6	161.0	163.2	165.3	167.4	167.1	168.8	165.8	166.9	168.0	171.5	169.9
Finished energy goods	145.9	156.4	139.1	135.6	139.0	147.4	155.4	161.9	160.9	166.4	155.6	159.7	159.5	170.5	164.7
Finished goods less energy	157.9	162.8	159.9	160.4	161.6	162.1	162.2	162.4	162.3	162.4	162.5	163.0	164.5	164.7	165.5
Finished consumer goods less energy	162.7	168.7	164.9	165.5	167.0	167.8	168.0	168.3	168.2	168.3	168.4	169.2	170.7	170.9	172.0
Finished goods less food and energy	158.7	161.7	160.3	160.6	161.2	161.0	161.0	161.3	161.3	161.4	161.5	161.5	163.0	163.5	163.5
Finished consumer goods less food and energy	166.7	170.0	168.1	168.5	169.2	169.0	169.0	169.5	169.6	169.7	170.0	170.0	171.6	172.1	172.3
Consumer nondurable goods less food and energy	191.5	197.0	192.7	193.6	195.1	194.9	195.4	196.5	196.7	197.1	197.9	198.3	198.7	199.3	200.2
Intermediate materials less foods and feeds	165.4	171.5	165.3	164.3	165.2	167.5	170.0	172.1	172.9	174.5	172.3	172.9	172.8	177.3	175.9
Intermediate foods and feeds	135.2	154.4	140.4	142.6	147.2	149.8	151.0	151.6	154.5	155.9	156.3	158.2	159.7	161.3	164.9
Intermediate energy goods	162.8	174.6	156.8	151.8	155.7	164.0	170.5	176.7	179.2	184.2	177.0	179.5	178.0	192.3	186.0
Intermediate goods less energy	162.1	167.5	163.9	164.1	164.4	165.2	166.7	167.6	168.1	168.8	168.1	168.2	168.5	170.2	170.4
Intermediate materials less foods and energy	163.8	168.4	165.4	165.5	165.5	166.2	167.7	168.6	169.0	169.6	168.8	168.9	169.2	170.8	170.8
Crude energy materials	226.9	233.0	230.9	195.9	223.9	224.7	226.5	233.0	238.0	236.8	221.7	219.9	232.9	272.5	270.6
Crude materials less energy	152.3	182.7	159.9	162.1	172.3	179.3	181.6	183.7	183.6	185.5	183.8	188.3	187.5	190.0	195.1
Crude nonfood materials less energy	244.5	283.3	252.3	255.5	265.6	284.5	288.4	282.8	281.5	284.0	284.7	289.9	294.0	294.6	294.8

p = preliminary.

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

[December 2003 = 100, unless otherwise indicated]

NAICS	Industry	2006	2007											
		Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.[p]	Oct.[p]	Nov.[p]	Dec.[p]
	Total mining industries (December 1984=100)	212.2	188.2	207.8	210.6	214.1	221.1	222.6	222.3	212.5	214.3	225.4	253.8	251.4
211	Oil and gas extraction (December 1985=100)	256.2	217.7	248.3	252.4	257.1	268.2	270.9	269.6	254.1	256.2	273.8	320.6	317.5
212	Mining, except oil and gas	150.7	149.1	150.8	153.7	158.2	159.1	159.3	162.4	160.8	162.2	163.4	165.6	163.5
213	Mining support activities	175.3	172.4	177.9	175.5	172.1	172.8	171.2	168.9	168.6	169.7	171.2	168.8	168.4
	Total manufacturing industries (December 1984=100)	156.9	156.4	157.7	160.1	162.2	163.8	163.7	164.9	163.0	163.7	164.4	167.9	166.7
311	Food manufacturing (December 1984=100)	149.8	151.6	153.8	155.8	156.9	158.7	160.3	160.4	160.3	160.8	160.7	161.3	162.9
312	Beverage and tobacco manufacturing	106.9	107.5	109.0	108.5	109.1	109.2	109.3	109.2	109.9	110.3	111.2	111.2	111.2
313	Textile mills	106.8	107.0	107.5	107.7	107.4	107.6	107.8	108.4	108.6	108.7	108.9	109.5	109.6
315	Apparel manufacturing	100.8	101.4	101.5	101.4	101.6	101.5	101.4	101.5	101.5	101.3	101.7	101.9	101.7
316	Leather and allied product manufacturing (December 1984=100)	147.6	148.6	148.8	149.3	149.7	149.6	149.4	149.4	149.9	150.0	150.2	150.5	150.6
321	Wood products manufacturing	106.0	106.6	106.5	106.8	107.0	107.0	107.5	108.4	107.8	107.2	106.3	106.1	105.9
322	Paper manufacturing	114.3	114.7	114.7	114.5	114.7	114.8	115.2	115.4	115.6	116.1	117.4	117.8	118.1
323	Printing and related support activities	106.3	106.3	106.1	106.3	106.6	106.5	106.5	106.7	106.8	107.0	107.3	107.3	107.6
324	Petroleum and coal products manufacturing (December 1984=100)	216.6	203.2	212.3	237.2	259.3	274.3	268.2	283.1	258.0	267.4	267.4	305.1	286.9
325	Chemical manufacturing (December 1984=100)	197.0	197.3	198.1	199.4	201.1	201.9	202.8	203.6	204.9	205.0	205.9	208.8	210.6
326	Plastics and rubber products manufacturing (December 1984=100)	150.6	149.9	149.6	149.4	149.4	149.8	149.9	150.4	151.3	151.2	151.6	152.3	152.9
331	Primary metal manufacturing (December 1984=100)	186.5	183.6	184.6	187.2	194.1	197.1	196.4	196.4	192.1	188.8	187.3	189.3	188.6
332	Fabricated metal product manufacturing (December 1984=100)	159.0	160.0	160.7	161.3	161.9	162.5	162.2	162.3	162.9	162.8	162.5	163.6	164.0
333	Machinery manufacturing	110.2	111.0	111.5	111.7	112.0	112.1	112.0	112.1	112.3	112.5	112.6	112.7	113.0
334	Computer and electronic products manufacturing	96.2	96.3	95.4	95.1	95.1	94.7	94.6	94.1	93.5	93.3	93.2	92.8	92.8
335	Electrical equipment, appliance, and components manufacturing	119.2	119.2	119.3	119.7	120.5	121.8	122.1	123.0	123.6	123.7	124.4	124.2	123.9
336	Transportation equipment manufacturing	104.8	105.0	105.0	104.8	104.5	104.4	104.4	104.4	104.2	103.8	106.0	106.4	105.9
337	Furniture and related product manufacturing (December 1984=100)	163.6	164.5	165.3	165.2	165.5	165.7	165.9	165.6	165.7	165.9	166.2	166.4	166.6
339	Miscellaneous manufacturing	105.4	106.1	106.5	106.8	106.8	107.1	107.0	106.9	107.0	107.1	107.4	107.6	107.7
	Retail trade													
441	Motor vehicle and parts dealers	112.2	113.4	114.1	114.9	115.7	115.6	116.2	115.6	114.9	116.0	115.3	116.1	115.5
442	Furniture and home furnishings stores	115.6	115.4	115.2	115.8	115.7	115.2	116.2	116.5	119.6	119.0	118.6	121.2	120.7
443	Electronics and appliance stores	93.7	102.0	104.6	101.8	97.9	110.2	112.4	111.6	109.8	107.8	106.5	106.4	106.8
446	Health and personal care stores	119.5	121.8	121.6	122.1	122.2	123.0	123.1	123.6	124.3	123.9	123.6	123.9	124.1
447	Gasoline stations (June 2001=100)	52.5	73.0	60.1	66.1	71.1	86.1	86.5	81.6	71.3	73.7	80.0	72.8	102.7
454	Nonstore retailers	130.2	134.8	131.0	128.7	130.5	129.5	127.7	123.1	128.3	126.0	130.6	127.9	131.1
	Transportation and warehousing													
481	Air transportation (December 1992=100)	172.0	177.0	178.6	181.5	182.4	177.8	185.9	188.0	189.1	180.5	187.9	187.8	183.7
483	Water transportation	111.4	110.6	111.2	111.4	111.4	111.5	111.7	113.6	114.7	115.3	115.6	114.2	114.4
491	Postal service (June 1989=100)	164.7	164.7	164.7	164.7	164.7	175.4	175.4	175.5	175.5	175.5	175.5	175.5	175.5
	Utilities													
221	Utilities	122.9	122.0	125.6	124.4	124.5	125.4	129.9	131.6	130.8	129.3	128.2	127.8	127.5
	Health care and social assistance													
6211	Office of physicians (December 1996=100)	118.0	121.9	122.3	122.4	122.2	122.0	122.1	122.2	122.2	122.9	123.0	123.0	122.9
6215	Medical and diagnostic laboratories	104.6	106.7	106.7	106.7	106.7	106.4	107.2	107.0	107.7	107.6	107.6	107.5	107.8
6216	Home health care services (December 1996=100)	122.3	122.9	123.6	123.6	123.6	123.6	123.6	123.8	123.9	124.1	124.5	125.0	124.9
622	Hospitals (December 1992=100)	156.0	157.2	157.5	157.3	157.4	157.4	157.6	158.1	158.0	158.2	160.4	161.4	160.9
6231	Nursing care facilities	110.8	112.6	112.9	113.4	113.7	113.7	113.9	114.9	115.7	115.8	115.1	115.5	116.2
62321	Residential mental retardation facilities	110.0	111.1	111.3	111.5	111.5	112.2	112.5	112.9	113.2	113.5	113.5	113.4	114.3
	Other services industries													
511	Publishing industries, except Internet	107.0	107.5	107.7	107.8	108.0	108.2	108.1	108.2	108.4	108.4	108.5	108.6	108.5
515	Broadcasting, except Internet	103.8	102.7	103.1	102.5	101.1	101.6	101.8	98.7	98.7	99.6	101.1	102.1	101.2
517	Telecommunications	99.7	99.3	99.5	99.7	100.4	100.7	101.0	102.2	101.3	102.0	102.0	101.3	100.9
5182	Data processing and related services	99.9	100.1	100.1	100.2	100.1	100.4	100.3	100.4	100.4	100.4	100.5	100.4	100.4
523	Security, commodity contracts, and like activity	116.1	117.8	117.3	117.3	118.1	118.7	118.6	120.5	120.4	121.1	121.0	121.5	122.1
53112	Lessors or nonresidental buildings (except miniwarehouse)	108.0	105.7	105.7	105.8	105.9	106.0	106.8	106.2	107.9	109.0	107.4	107.7	109.8
5312	Offices of real estate agents and brokers	110.7	110.5	110.8	111.4	111.4	110.4	110.8	111.1	111.1	110.7	111.4	110.5	109.8
5313	Real estate support activities	102.9	103.1	102.7	103.4	103.6	104.0	103.7	103.8	103.2	102.9	103.5	104.4	103.5
5321	Automotive equipment rental and leasing (June 2001=100)	121.4	119.7	116.7	116.7	117.0	114.1	114.4	121.2	122.3	117.2	119.8	119.1	117.8
5411	Legal services (December 1996=100)	146.9	151.7	152.5	152.8	153.0	153.3	153.4	153.7	153.8	154.3	154.3	155.2	155.0
541211	Offices of certified public accountants	110.1	110.3	109.0	109.8	110.6	110.9	111.4	112.2	112.6	112.4	114.0	113.5	113.7
5413	Architectural, engineering, and related services (December 1996=100)	136.4	138.3	138.3	139.4	139.7	139.8	140.1	140.3	140.8	140.7	140.7	140.5	141.0
54181	Advertising agencies	104.7	104.4	104.4	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1	105.1
5613	Employment services (December 1996=100)	120.7	120.8	121.0	121.2	121.3	121.4	121.6	121.8	121.9	122.0	122.4	122.3	122.2
56151	Travel agencies	99.1	100.5	100.2	100.5	101.2	101.0	101.4	101.1	101.0	100.9	101.3	101.3	101.2
56172	Janitorial services	104.8	105.1	105.1	105.3	105.3	105.4	105.4	105.5	105.5	106.8	106.0	105.8	106.1
5621	Waste collection	106.0	106.1	106.2	106.6	107.2	107.2	107.2	107.3	107.9	108.9	108.7	109.6	107.7
721	Accommodation (December 1996=100)	136.1	138.7	138.4	139.1	140.7	141.1	143.1	147.1	147.2	145.0	143.1	144.1	143.8

p = preliminary.

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

[1982 = 100]

Index	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Finished goods											
Total	131.8	130.7	133.0	138.0	140.7	138.9	143.3	148.5	155.7	160.4	166.6
Foods	134.5	134.3	135.1	137.2	141.3	140.1	145.9	152.7	155.7	156.7	166.9
Energy	83.4	75.1	78.8	94.1	96.8	88.8	102.0	113.0	132.6	145.9	156.4
Other	142.4	143.7	146.1	148.0	150.0	150.2	150.5	152.7	156.4	158.7	161.7
Intermediate materials, supplies, and components											
Total	125.6	123.0	123.2	129.2	129.7	127.8	133.7	142.6	154.0	164.0	170.6
Foods	123.2	123.2	120.8	119.2	124.3	123.2	134.4	145.0	146.0	146.2	161.5
Energy	89.0	80.8	84.3	101.7	104.1	95.9	111.9	123.2	149.2	162.8	174.6
Other	134.2	133.5	133.1	136.6	136.4	135.8	138.5	146.5	154.6	163.8	168.4
Crude materials for further processing											
Total	111.1	96.8	98.2	120.6	121.0	108.1	135.3	159.0	182.2	184.8	207.3
Foods	112.2	103.9	98.7	100.2	106.1	99.5	113.5	127.0	122.7	119.3	146.7
Energy	87.3	68.6	78.5	122.1	122.3	102.0	147.2	174.6	234.0	226.9	233.0
Other	103.5	84.5	91.1	118.0	101.5	101.0	116.9	149.2	176.7	210.0	238.8

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

[2000 = 100]

Category	2006	2007											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
ALL COMMODITIES	112.5	113.0	113.9	114.7	115.2	115.5	116.0	116.1	116.3	116.7	117.6	118.7	119.2
Foods, feeds, and beverages	138.7	139.0	143.5	146.9	145.3	145.1	148.6	149.2	151.4	157.8	164.1	165.9	171.0
Agricultural foods, feeds, and beverages	140.5	140.8	145.6	149.2	146.8	147.0	151.0	151.5	153.7	160.8	167.6	169.8	175.4
Nonagricultural (fish, beverages) food products	123.5	123.6	125.6	128.0	133.9	129.8	128.5	130.2	132.2	133.0	134.2	133.0	133.6
Industrial supplies and materials	139.4	140.3	143.0	145.5	147.2	148.3	149.0	148.6	148.8	148.8	150.5	153.9	154.0
Agricultural industrial supplies and materials	123.9	127.2	126.8	127.3	126.9	125.1	128.7	138.6	137.4	140.0	142.7	144.9	144.8
Fuels and lubricants	183.5	173.8	182.1	188.8	198.6	199.1	201.1	202.9	197.4	200.9	204.8	224.6	222.3
Nonagricultural supplies and materials, excluding fuel and building materials	136.8	139.1	141.3	143.5	144.3	145.7	146.1	144.6	145.7	145.0	146.5	147.9	148.4
Selected building materials	111.5	111.8	112.2	112.7	112.9	113.3	113.9	114.1	114.0	114.4	114.2	113.8	113.5
Capital goods	98.8	99.1	99.2	99.2	99.3	99.5	99.6	99.7	99.8	99.9	100.1	100.3	100.4
Electric and electrical generating equipment	106.2	105.9	105.9	106.0	106.5	106.4	106.5	106.6	106.7	106.7	107.1	107.2	107.3
Nonelectrical machinery	92.6	92.7	92.7	92.8	92.7	92.9	92.9	93.1	93.1	93.1	93.2	93.3	93.5
Automotive vehicles, parts, and engines	105.5	105.7	105.8	105.9	106.0	106.0	106.1	106.2	106.2	106.3	106.5	106.5	106.7
Consumer goods, excluding automotive	104.0	104.8	104.8	104.8	105.4	105.7	105.8	106.1	106.3	106.2	106.4	106.8	107.2
Nondurables, manufactured	104.0	105.0	105.1	105.0	105.7	106.4	106.7	107.0	107.2	107.0	107.4	108.0	108.3
Durables, manufactured	102.8	103.5	103.3	103.4	103.9	104.0	103.7	104.0	104.2	104.2	104.2	104.4	105.2
Agricultural commodities	137.3	138.1	142.0	145.0	142.9	142.8	146.7	149.0	150.5	156.8	162.8	165.0	169.6
Nonagricultural commodities	110.7	111.2	111.9	112.6	113.2	113.6	113.8	113.7	113.8	113.8	114.4	115.3	115.6

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

[2000 = 100]

Category	2006	2007											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
ALL COMMODITIES	115.1	113.7	114.1	115.9	117.5	118.6	120.0	121.5	121.1	121.8	123.6	127.4	127.1
Foods, feeds, and beverages	122.6	124.5	124.8	124.6	126.3	127.4	127.8	129.4	130.1	131.8	133.2	133.2	134.0
Agricultural foods, feeds, and beverages	133.7	135.5	135.4	135.1	137.6	139.1	139.5	141.4	142.1	144.4	146.5	146.8	147.7
Nonagricultural (fish, beverages) food products	97.9	99.8	101.1	101.3	100.9	101.2	101.5	102.7	103.2	103.5	103.2	102.5	103.0
Industrial supplies and materials	166.6	160.4	162.0	169.8	176.4	180.5	185.6	190.9	188.5	190.7	197.2	212.7	211.0
Fuels and lubricants	204.3	190.1	194.0	209.6	222.1	228.2	238.2	249.8	244.0	250.0	262.4	294.6	289.6
Petroleum and petroleum products	207.1	193.5	196.8	213.6	228.2	234.3	245.6	260.3	256.4	264.4	277.7	312.1	306.1
Paper and paper base stocks	112.8	111.4	111.4	111.5	110.6	110.6	110.8	110.3	110.7	111.2	112.2	108.0	109.1
Materials associated with nondurable supplies and materials	123.0	123.5	123.8	124.0	124.5	125.1	125.4	126.6	127.3	128.2	131.4	133.6	135.3
Selected building materials	110.6	111.5	111.0	111.4	111.4	111.2	113.1	116.9	116.5	116.9	115.7	115.6	116.0
Unfinished metals associated with durable goods	195.9	197.9	197.7	202.9	209.4	217.1	219.7	215.1	215.3	209.1	211.0	214.8	217.1
Nonmetals associated with durable goods	101.7	101.9	102.0	101.8	101.6	101.7	101.6	102.1	102.2	102.5	103.0	103.4	104.1
Capital goods	91.5	91.5	91.2	91.1	90.9	91.1	91.3	91.6	91.8	91.9	92.0	92.1	92.2
Electric and electrical generating equipment	103.0	104.2	104.1	104.3	104.9	105.2	105.7	105.8	106.4	106.5	106.8	107.5	108.0
Nonelectrical machinery	87.9	87.8	87.4	87.2	86.9	87.0	87.2	87.4	87.6	87.7	87.7	87.7	87.7
Automotive vehicles, parts, and engines	104.3	104.3	104.4	104.4	104.5	104.6	104.7	104.8	105.0	105.2	105.6	105.9	106.2
Consumer goods, excluding automotive	101.0	101.2	101.2	101.3	101.3	101.3	101.4	101.7	102.0	102.1	102.2	102.3	102.5
Nondurables, manufactured	103.4	104.2	104.0	104.1	104.1	104.3	104.3	104.8	104.9	105.0	105.1	105.2	105.5
Durables, manufactured	98.2	98.0	98.1	98.3	98.2	98.1	98.2	98.3	98.8	98.8	99.0	99.2	99.3
Nonmanufactured consumer goods	101.8	102.1	102.1	102.2	102.3	102.4	102.6	103.1	103.4	103.4	103.3	103.3	103.3

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

[2000 = 100, unless indicated otherwise]

Category	2005	2006				2007			
	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.
Import air freight	128.9	129.7	135.2	133.1	131.2	130.7	132.3	134.2	142.6
Export air freight	112.0	113.6	115.9	117.9	116.7	117.0	117.0	119.8	128.3
Import air passenger fares (Dec. 2006 = 100)	116.3	114.9	136.7	130.9	125.4	122.9	144.6	140.2	135.3
Export air passenger fares (Dec. 2006 = 100)	128.3	130.8	139.3	142.4	137.3	140.2	147.3	154.6	155.7

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

[1992 = 100]

Item	2004	2005				2006				2007			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Business													
Output per hour of all persons	133.4	134.4	134.3	135.9	135.5	136.4	136.6	136.1	136.5	136.6	137.8	140.0	140.2
Compensation per hour	160.2	161.4	161.7	164.2	165.4	168.2	168.1	168.7	173.4	175.7	176.8	178.6	179.9
Real compensation per hour	120.0	120.3	119.4	119.6	119.4	120.9	119.3	118.9	122.8	123.3	122.2	122.9	122.5
Unit labor costs	120.1	120.1	120.4	120.8	122.0	123.4	123.0	124.0	127.0	128.6	128.3	127.6	128.3
Unit nonlabor payments	125.4	128.2	129.8	132.0	133.0	133.0	136.5	136.6	132.2	132.9	135.4	136.7	137.5
Implicit price deflator	122.1	123.1	123.9	125.0	126.1	127.0	128.0	128.7	128.9	130.2	130.9	131.0	131.8
Nonfarm business													
Output per hour of all persons	132.2	133.4	133.5	135.0	134.5	135.3	135.6	135.0	135.6	135.9	136.6	138.6	139.2
Compensation per hour	158.9	160.3	160.9	163.2	164.2	167.1	167.0	167.5	172.4	174.9	175.4	177.1	178.8
Real compensation per hour	119.0	119.5	118.8	118.8	118.6	120.1	118.6	118.0	122.1	122.7	121.2	121.9	121.8
Unit labor costs	120.2	120.2	120.5	120.9	122.1	123.5	123.2	124.0	127.1	128.7	128.4	127.8	128.4
Unit nonlabor payments	126.5	129.6	131.3	133.7	134.8	135.0	138.7	138.6	133.6	133.9	136.3	137.5	137.8
Implicit price deflator	122.5	123.6	124.5	125.6	126.8	127.7	128.9	129.4	129.5	130.6	131.3	131.3	131.9
Nonfinancial corporations													
Output per hour of all employees	140.2	140.3	141.1	140.5	141.4	142.4	141.8	142.9	143.3	143.6	144.3	145.6	–
Compensation per hour	156.9	158.0	158.5	160.8	161.8	163.8	163.9	164.6	169.3	171.2	172.1	173.9	–
Real compensation per hour	117.6	117.8	117.0	117.1	116.9	117.8	116.4	115.9	119.9	120.1	119.0	119.7	–
Total unit costs	111.3	112.3	112.1	114.6	114.0	114.4	115.2	114.8	117.1	118.0	118.0	118.0	–
Unit labor costs	111.9	112.6	112.3	114.4	114.5	115.0	115.6	115.2	118.1	119.2	119.3	119.4	–
Unit nonlabor costs	109.7	111.5	111.7	115.1	112.8	112.5	114.3	113.8	114.5	114.6	114.8	114.2	–
Unit profits	148.4	151.9	161.7	147.5	159.5	164.4	164.8	172.6	150.0	154.3	158.2	153.6	–
Unit nonlabor payments	120.1	122.3	125.1	123.7	125.3	126.4	127.8	129.5	124.0	125.2	126.4	124.7	–
Implicit price deflator	114.6	115.9	116.6	117.6	118.1	118.8	119.7	120.0	120.1	121.2	121.6	121.2	–
Manufacturing													
Output per hour of all persons	166.4	168.3	170.9	172.4	173.7	175.4	177.0	179.8	180.7	181.5	182.6	184.4	185.5
Compensation per hour	165.8	166.2	167.8	170.2	168.8	172.6	170.1	170.7	176.4	180.2	179.6	180.1	181.9
Real compensation per hour	124.2	123.9	123.9	124.0	121.9	124.1	120.8	120.2	125.0	126.4	124.2	123.9	123.9
Unit labor costs	99.7	98.7	98.2	98.7	97.2	98.4	96.1	94.9	97.6	99.3	98.4	97.7	98.1

NOTE: Dash indicates data not available.

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

[2000 = 100, unless otherwise indicated]

Item	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Private business													
Productivity:													
Output per hour of all persons	87.2	87.4	90.0	91.7	94.3	97.2	100.0	102.8	107.1	111.2	114.7	117.1	119.1
Output per unit of capital services	105.6	104.4	104.5	104.7	103.3	102.2	100.0	96.1	95.0	95.9	98.0	99.1	99.9
Multifactor productivity	93.9	93.7	95.3	96.2	97.4	98.7	100.0	100.2	101.9	104.6	107.3	109.2	110.4
Output	76.8	79.2	82.8	87.2	91.5	96.2	100.0	100.5	102.0	105.2	109.9	114.1	118.4
Inputs:													
Labor input	86.3	88.8	90.6	94.2	96.4	99.0	100.0	98.6	97.2	96.9	98.4	100.2	102.8
Capital services	72.8	75.8	79.2	83.3	88.5	94.2	100.0	104.5	107.4	109.7	112.2	115.1	118.6
Combined units of labor and capital input	81.8	84.5	86.9	90.7	93.9	97.5	100.0	100.3	100.2	100.6	102.4	104.5	107.3
Capital per hour of all persons	82.6	83.8	86.1	87.6	91.2	95.1	100.0	106.9	112.7	116.0	117.1	118.1	119.2
Private nonfarm business													
Productivity:													
Output per hour of all persons	87.7	88.2	90.5	92.0	94.5	97.3	100.0	102.7	107.1	111.0	114.4	116.8	118.7
Output per unit of capital services	106.5	105.5	105.3	105.1	103.7	102.4	100.0	96.1	94.9	95.7	97.7	99.1	99.8
Multifactor productivity	94.5	94.5	95.8	96.4	97.7	98.8	100.0	100.1	101.9	104.4	107.1	109.1	110.2
Output	76.7	79.3	82.8	87.2	91.5	96.3	100.0	100.5	102.1	105.2	109.9	114.1	118.4
Inputs:													
Labor input	85.7	88.2	90.2	93.9	96.2	99.0	100.0	98.7	97.2	97.1	98.6	100.4	103.0
Capital services	72.1	75.2	78.7	82.9	88.2	94.0	100.0	104.6	107.6	110.0	112.4	115.1	118.7
Combined units of labor and capital input	81.2	83.9	86.5	90.4	93.7	97.5	100.0	100.4	100.2	100.7	102.5	104.6	107.5
Capital per hour of all persons	82.4	83.6	86.0	87.5	91.1	95.0	100.0	106.9	112.8	116.1	117.0	117.9	119.0
Manufacturing [1996 = 100]													
Productivity:													
Output per hour of all persons	76.1	79.4	82.4	86.9	91.7	95.8	100.0	101.5	108.6	115.3	117.9	123.4	–
Output per unit of capital services	96.6	98.2	97.6	100.2	100.5	100.3	100.0	93.6	92.5	93.5	95.9	99.6	–
Multifactor productivity	89.0	90.6	91.0	93.6	95.8	96.5	100.0	98.7	102.4	105.3	109.2	113.0	–
Output	76.4	80.4	83.1	89.2	93.8	97.4	100.0	94.9	94.3	95.2	96.9	100.3	–
Inputs:													
Hours of all persons	100.3	101.2	100.8	102.6	102.3	101.6	100.0	93.5	86.8	82.6	82.2	81.3	–
Capital services	79.0	81.8	85.2	89.0	93.4	97.1	100.0	101.4	101.9	101.8	101.1	100.7	–
Energy	110.4	113.7	110.3	108.2	105.4	105.5	100.0	90.6	89.3	84.4	81.1	78.5	–
Nonenergy materials	74.8	78.8	86.0	92.9	97.7	102.6	100.0	93.3	88.3	87.7	85.5	86.3	–
Purchased business services	84.7	88.9	88.5	92.1	95.0	100.0	100.0	100.7	98.2	99.1	95.2	96.5	–
Combined units of all factor inputs	85.8	88.7	91.3	95.3	98.0	100.9	100.0	96.2	92.1	90.5	88.7	88.8	–

NOTE: Dash indicates data not available.

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

[1992 = 100]

Item	1962	1972	1982	1992	1999	2000	2001	2002	2003	2004	2005	2006	2007
Business													
Output per hour of all persons	52.9	71.2	80.1	100.0	112.8	116.1	119.1	123.9	128.7	132.4	135.0	136.4	138.6
Compensation per hour	15.1	26.7	63.6	100.0	125.8	134.7	140.4	145.3	151.2	156.9	163.2	169.6	177.7
Real compensation per hour	65.2	83.3	90.6	100.0	108.0	112.0	113.5	115.7	117.7	118.9	119.7	120.5	122.7
Unit labor costs	28.5	37.4	79.4	100.0	111.5	116.0	117.9	117.3	117.5	118.5	120.9	124.3	128.2
Unit nonlabor payments	26.1	35.7	70.1	100.0	109.4	107.2	110.0	114.1	118.3	124.6	130.8	134.6	135.6
Implicit price deflator	27.6	36.8	75.9	100.0	110.7	112.7	114.9	116.1	117.8	120.8	124.5	128.2	131.0
Nonfarm business													
Output per hour of all persons	55.9	73.1	80.8	100.0	112.5	115.7	118.6	123.5	128.0	131.5	134.1	135.4	137.6
Compensation per hour	15.6	26.9	63.9	100.0	125.2	134.2	139.5	144.6	150.4	155.9	162.1	168.5	176.5
Real compensation per hour	67.3	84.0	91.1	100.0	107.5	111.6	112.8	115.1	117.1	118.2	118.9	119.7	121.9
Unit labor costs	27.8	36.8	79.1	100.0	111.3	116.0	117.7	117.1	117.5	118.5	120.9	124.5	128.3
Unit nonlabor payments	25.8	34.9	69.3	100.0	110.9	108.7	111.6	116.0	119.6	125.5	132.4	136.5	136.4
Implicit price deflator	27.1	36.1	75.5	100.0	111.1	113.3	115.4	116.7	118.3	121.1	125.1	128.9	131.3
Nonfinancial corporations													
Output per hour of all employees	60.4	74.2	83.1	100.0	117.9	122.4	124.7	129.7	134.6	139.3	140.8	142.6	–
Compensation per hour	17.4	28.8	66.5	100.0	124.1	133.0	138.6	143.6	149.5	153.9	159.8	165.4	–
Real compensation per hour	75.1	90.0	94.7	100.0	106.6	110.6	112.1	114.3	116.3	116.7	117.2	117.5	–
Total unit costs	27.3	37.5	80.4	100.0	104.0	107.4	111.6	110.7	111.0	110.2	113.3	115.4	–
Unit labor costs	28.7	38.8	80.0	100.0	105.3	108.6	111.2	110.7	111.0	110.5	113.5	116.0	–
Unit nonlabor costs	23.4	33.9	81.3	100.0	100.4	104.2	112.6	110.8	111.1	109.5	112.8	113.8	–
Unit profits	54.5	54.1	75.2	100.0	129.1	108.7	82.2	98.0	109.9	145.1	155.2	162.9	–
Unit nonlabor payments	31.7	39.3	79.7	100.0	108.0	105.4	104.5	107.4	110.7	119.0	124.1	126.9	–
Implicit price deflator	29.7	39.0	79.9	100.0	106.2	107.5	108.9	109.6	110.9	113.3	117.0	119.6	–
Manufacturing													
Output per hour of all persons	–	–	–	100.0	133.5	138.9	141.1	150.8	160.1	163.5	171.3	178.2	183.5
Compensation per hour	–	–	–	100.0	123.4	134.7	137.8	147.8	158.2	161.5	168.3	172.4	180.4
Real compensation per hour	–	–	–	100.0	106.0	112.0	111.5	117.7	123.1	122.4	123.4	122.5	124.6
Unit labor costs	–	–	–	100.0	92.4	97.0	97.7	98.0	98.8	98.7	98.2	96.8	98.3
Unit nonlabor payments	–	–	–	100.0	102.9	103.5	102.0	100.2	102.8	109.5	118.0	–	–
Implicit price deflator	–	–	–	100.0	99.5	101.4	100.6	99.5	101.5	106.0	111.5	–	–

Dash indicates data not available.

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

[1997=100]

NAICS	Industry	1987	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Mining												
21	Mining	85.5	85.1	100.0	103.6	111.4	111.0	109.1	113.6	116.0	106.7	95.9	-
211	Oil and gas extraction	80.1	75.7	100.0	101.2	107.9	119.4	121.6	123.8	130.1	111.7	107.9	-
212	Mining, except oil and gas	69.8	79.3	100.0	104.5	105.8	106.3	109.0	111.0	113.6	115.7	113.5	-
2121	Coal mining	58.4	68.1	100.0	106.5	110.3	115.8	114.6	112.4	113.2	112.8	107.6	-
2122	Metal ore mining	71.2	79.9	100.0	109.3	112.3	122.0	131.9	139.0	142.8	136.1	130.2	-
2123	Nonmetallic mineral mining and quarrying	88.5	92.3	100.0	101.3	101.2	96.2	99.3	103.6	108.1	114.2	116.8	-
	Utilities												
2211	Power generation and supply	65.6	71.1	100.0	103.7	103.5	107.0	106.4	102.9	105.1	107.5	114.2	-
2212	Natural gas distribution	67.8	71.4	100.0	99.0	102.7	113.2	110.1	115.4	114.1	118.3	123.5	-
	Manufacturing												
3111	Animal food	83.6	91.5	100.0	109.0	110.9	109.7	131.4	142.7	165.8	149.5	166.0	-
3112	Grain and oilseed milling	81.1	88.6	100.0	107.5	116.1	113.1	119.5	122.4	123.9	130.3	137.7	-
3113	Sugar and confectionery products	87.6	89.5	100.0	103.5	106.5	109.9	108.6	108.0	112.5	118.2	131.3	-
3114	Fruit and vegetable preserving and specialty	92.4	87.6	100.0	107.1	109.5	111.8	121.4	126.9	123.0	126.2	132.1	-
3115	Dairy products	82.7	91.1	100.0	100.0	93.6	95.9	97.1	105.0	110.5	107.4	109.5	-
3116	Animal slaughtering and processing	97.4	94.3	100.0	100.0	101.2	102.6	103.7	107.3	106.6	108.0	117.4	-
3117	Seafood product preparation and packaging	123.1	119.7	100.0	120.2	131.6	140.5	153.0	169.8	173.2	162.2	186.2	-
3118	Bakeries and tortilla manufacturing	100.9	94.5	100.0	103.8	108.6	108.3	109.9	108.9	109.3	113.8	115.4	-
3119	Other food products	97.5	92.5	100.0	107.8	111.4	112.6	106.2	111.9	118.8	119.3	115.4	-
3121	Beverages	77.1	87.6	100.0	99.0	90.7	90.8	92.7	99.4	108.3	114.1	119.4	-
3122	Tobacco and tobacco products	71.9	79.1	100.0	98.5	91.0	95.9	98.2	67.0	78.7	82.4	93.1	-
3131	Fiber, yarn, and thread mills	66.5	74.4	100.0	102.1	103.9	101.3	109.1	133.3	148.8	154.1	150.4	-
3132	Fabric mills	68.0	75.3	100.0	104.2	110.0	110.1	110.3	125.4	137.2	138.6	150.5	-
3133	Textile and fabric finishing mills	91.3	82.0	100.0	101.2	102.2	104.4	108.5	119.8	125.1	127.7	139.9	-
3141	Textile furnishings mills	91.2	88.0	100.0	99.3	99.1	104.5	103.1	105.5	114.4	122.3	135.1	-
3149	Other textile product mills	92.2	91.4	100.0	96.7	107.6	108.9	103.1	105.1	104.2	120.4	127.9	-
3151	Apparel knitting mills	76.2	86.2	100.0	96.1	101.4	108.9	105.6	112.0	105.9	96.8	119.8	-
3152	Cut and sew apparel	69.8	70.1	100.0	102.3	114.6	119.8	119.5	103.9	117.2	108.4	113.1	-
3159	Accessories and other apparel	97.8	101.3	100.0	109.0	99.2	98.3	105.2	76.1	78.8	70.9	81.7	-
3161	Leather and hide tanning and finishing	79.8	64.6	100.0	100.0	104.8	115.1	114.9	83.2	80.8	82.2	90.7	-
3162	Footwear	76.7	78.1	100.0	102.1	117.3	122.3	130.7	102.7	104.8	100.7	107.6	-
3169	Other leather products	99.4	102.9	100.0	113.2	105.8	113.4	109.1	95.0	101.0	135.8	155.0	-
3211	Sawmills and wood preservation	77.6	79.4	100.0	100.3	104.7	105.4	108.8	114.4	121.3	118.2	127.9	-
3212	Plywood and engineered wood products	99.7	102.8	100.0	105.1	98.7	98.8	105.2	110.3	107.0	102.9	110.3	-
3219	Other wood products	103.0	105.3	100.0	101.0	104.5	103.0	104.7	113.9	113.9	119.6	125.8	-
3221	Pulp, paper, and paperboard mills	81.7	84.0	100.0	102.5	111.1	116.3	119.9	133.1	141.4	148.0	148.9	-
3222	Converted paper products	89.0	90.1	100.0	102.5	100.1	101.1	100.5	105.6	109.5	112.9	115.3	-
3231	Printing and related support activities	97.6	97.5	100.0	100.6	102.8	104.6	105.3	110.2	111.1	114.5	119.7	-
3241	Petroleum and coal products	71.1	75.4	100.0	102.2	107.1	113.5	112.1	118.0	119.2	123.4	123.8	-
3251	Basic chemicals	94.6	93.4	100.0	102.7	115.7	117.5	108.8	123.8	136.0	154.4	163.1	-
3252	Resin, rubber, and artificial fibers	77.4	76.4	100.0	106.0	109.8	109.8	106.2	123.1	122.2	121.9	127.8	-
3253	Agricultural chemicals	80.4	85.8	100.0	98.8	87.4	92.1	90.0	99.2	108.4	117.4	134.1	-
3254	Pharmaceuticals and medicines	87.3	91.3	100.0	93.8	95.7	95.6	99.5	97.4	101.5	104.1	107.8	-
3255	Paints, coatings, and adhesives	89.3	87.1	100.0	100.1	100.3	100.8	105.6	108.9	115.2	119.1	123.5	-
3256	Soap, cleaning compounds, and toiletries	84.4	84.8	100.0	98.0	93.0	102.8	106.0	124.1	118.2	135.3	152.6	-
3259	Other chemical products and preparations	75.4	77.8	100.0	99.2	109.3	119.7	110.4	120.8	123.0	121.3	123.5	-
3261	Plastics products	83.1	85.2	100.0	104.2	109.9	112.3	114.6	123.8	129.5	131.9	135.6	-
3262	Rubber products	75.5	83.5	100.0	99.4	100.2	101.7	102.3	107.1	111.0	114.4	119.3	-
3271	Clay products and refractories	86.9	89.4	100.0	101.2	102.7	102.9	98.4	99.7	103.5	109.2	116.5	-
3272	Glass and glass products	82.3	79.1	100.0	101.4	106.7	108.2	102.8	107.4	115.2	113.9	122.7	-
3273	Cement and concrete products	93.6	96.6	100.0	105.1	105.9	101.6	98.0	102.4	108.3	102.8	105.5	-
3274	Lime and gypsum products	88.2	85.4	100.0	114.9	104.4	98.5	101.8	99.0	107.1	104.2	116.9	-
3279	Other nonmetallic mineral products	83.0	79.5	100.0	99.0	95.6	96.6	98.6	106.9	113.6	110.6	118.3	-
3311	Iron and steel mills and ferroalloy production	64.8	70.2	100.0	101.3	104.8	106.0	104.4	125.1	130.4	164.9	160.5	-
3312	Steel products from purchased steel	79.7	84.4	100.0	100.6	93.8	96.4	97.9	96.8	93.9	88.6	90.4	-
3313	Alumina and aluminum production	90.5	90.7	100.0	101.5	103.5	96.6	96.2	124.5	126.8	137.3	153.8	-
3314	Other nonferrous metal production	96.8	96.3	100.0	111.3	108.4	102.3	99.5	107.6	120.5	122.9	122.2	-
3315	Foundries	81.4	86.5	100.0	101.2	104.5	103.6	107.4	116.7	116.3	123.9	128.0	-
3321	Forging and stamping	85.4	89.0	100.0	103.5	110.9	121.1	120.7	125.0	133.1	142.0	146.7	-
3322	Cutlery and hand tools	86.3	85.4	100.0	99.9	108.0	105.9	110.3	113.4	113.2	107.6	116.4	-
3323	Architectural and structural metals	88.7	87.9	100.0	101.0	102.0	100.7	101.7	106.0	108.8	105.4	108.1	-
3324	Boilers, tanks, and shipping containers	86.0	90.1	100.0	100.0	96.5	94.2	94.4	98.9	101.6	93.6	94.0	-
3325	Hardware	88.7	84.8	100.0	100.5	105.2	114.3	113.5	115.5	125.4	126.0	132.5	-
3326	Spring and wire products	82.2	85.2	100.0	110.6	111.4	112.6	111.9	125.7	135.3	133.8	146.3	-
3327	Machine shops and threaded products	76.9	79.2	100.0	99.6	104.2	108.2	108.8	114.8	115.7	114.6	115.3	-

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

[1997=100]

NAICS	Industry	1987	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
3328	Coating, engraving, and heat treating metals	75.5	81.3	100.0	100.9	101.0	105.5	107.3	116.1	118.3	125.3	136.0	-
3329	Other fabricated metal products	91.0	86.5	100.0	101.9	99.6	99.9	96.7	106.5	111.6	111.2	112.6	-
3331	Agriculture, construction, and mining machinery	74.6	83.3	100.0	103.3	94.3	100.3	100.3	103.7	116.1	125.4	130.8	-
3332	Industrial machinery	75.1	81.6	100.0	95.1	105.8	130.0	105.8	117.6	117.0	126.5	121.9	-
3333	Commercial and service industry machinery	86.9	95.6	100.0	105.9	109.8	100.9	94.3	97.6	104.4	106.4	113.4	-
3334	HVAC and commercial refrigeration equipment	84.0	90.6	100.0	106.2	110.2	107.9	110.8	118.6	130.0	132.8	137.7	-
3335	Metalworking machinery	85.1	86.5	100.0	99.1	100.3	106.1	103.3	112.7	115.2	117.1	126.6	-
3336	Turbine and power transmission equipment	80.2	85.9	100.0	105.0	110.8	114.9	126.9	130.7	143.0	126.4	131.1	-
3339	Other general purpose machinery	83.5	86.8	100.0	103.7	106.0	113.7	110.5	117.9	128.1	127.1	137.2	-
3341	Computer and peripheral equipment	11.0	14.7	100.0	140.4	195.8	234.9	252.0	297.4	373.8	416.6	576.5	-
3342	Communications equipment	39.8	48.4	100.0	107.1	135.4	164.1	152.9	128.2	143.1	148.4	144.4	-
3343	Audio and video equipment	61.7	77.0	100.0	105.4	119.6	126.3	128.4	150.1	171.0	239.3	239.2	-
3344	Semiconductors and electronic components	17.0	21.9	100.0	125.8	173.9	232.4	230.4	263.7	324.2	361.1	386.6	-
3345	Electronic instruments	70.2	78.5	100.0	102.3	106.7	116.7	119.3	118.1	125.3	145.4	139.8	-
3346	Magnetic media manufacturing and reproduction	85.7	83.7	100.0	106.4	108.9	105.8	99.8	110.4	126.1	142.6	143.6	-
3351	Electric lighting equipment	91.1	88.2	100.0	104.4	102.7	102.0	106.7	112.4	111.2	122.9	133.8	-
3352	Household appliances	73.3	76.5	100.0	105.2	104.0	117.2	124.6	132.3	146.7	159.6	165.1	-
3353	Electrical equipment	68.7	73.6	100.0	100.2	98.7	99.4	101.0	101.8	103.4	110.8	116.7	-
3359	Other electrical equipment and components	78.8	76.1	100.0	105.8	114.7	119.7	113.1	114.0	116.2	115.6	121.7	-
3361	Motor vehicles	75.4	85.6	100.0	113.4	122.6	109.7	110.0	126.0	140.7	142.1	147.0	-
3362	Motor vehicle bodies and trailers	85.0	75.9	100.0	102.9	103.1	98.8	88.7	105.4	109.8	110.7	114.2	-
3363	Motor vehicle parts	78.7	76.0	100.0	105.0	110.0	112.3	114.8	130.5	137.0	138.0	144.4	-
3364	Aerospace products and parts	87.2	89.1	100.0	119.1	120.8	103.4	115.7	118.6	119.0	113.0	125.8	-
3365	Railroad rolling stock	55.6	77.6	100.0	103.3	116.5	118.5	126.1	146.1	139.8	131.5	121.0	-
3366	Ship and boat building	95.5	99.6	100.0	99.3	112.0	121.9	121.5	131.0	133.9	138.7	133.2	-
3369	Other transportation equipment	73.7	62.9	100.0	111.5	113.8	132.4	140.2	150.9	163.0	168.3	182.8	-
3371	Household and institutional furniture	85.2	88.2	100.0	102.2	103.1	101.9	105.5	111.8	114.7	113.6	121.3	-
3372	Office furniture and fixtures	85.8	82.2	100.0	100.0	98.2	100.2	98.0	115.9	125.1	131.1	136.7	-
3379	Other furniture-related products	86.3	88.9	100.0	106.9	102.0	99.5	105.0	110.2	110.0	121.3	123.3	-
3391	Medical equipment and supplies	76.3	82.9	100.0	108.7	110.4	114.6	119.3	127.3	137.0	137.5	148.2	-
3399	Other miscellaneous manufacturing	85.4	90.5	100.0	102.1	105.0	113.6	111.8	118.0	124.7	128.6	139.0	-
	Wholesale trade												
42	Wholesale trade	73.2	79.9	100.0	103.4	111.2	116.6	117.7	123.3	127.5	134.3	135.2	141.1
423	Durable goods	62.3	67.5	100.0	107.1	119.2	125.1	129.0	140.2	146.7	161.5	167.3	175.8
4231	Motor vehicles and parts	74.5	78.6	100.0	106.4	120.4	116.7	120.0	133.4	137.6	143.5	146.7	165.7
4232	Furniture and furnishings	80.5	90.1	100.0	99.9	102.3	112.5	110.7	116.0	123.9	130.0	127.2	136.6
4233	Lumber and construction supplies	109.1	108.4	100.0	105.4	109.3	107.7	116.6	123.9	133.0	139.4	140.2	136.7
4234	Commercial equipment	28.0	34.2	100.0	125.6	162.2	182.2	218.4	265.2	299.5	353.2	401.0	441.1
4235	Metals and minerals	101.7	103.1	100.0	100.9	94.0	93.9	94.4	96.3	97.4	106.3	103.2	99.9
4236	Electric goods	42.8	50.3	100.0	105.9	127.5	152.8	147.6	159.5	165.7	194.1	204.1	225.6
4237	Hardware and plumbing	82.2	88.0	100.0	101.8	104.4	103.7	100.5	102.6	103.9	107.3	104.9	105.8
4238	Machinery and supplies	74.1	81.5	100.0	104.3	102.9	105.5	102.9	100.3	103.4	112.4	118.8	123.3
4239	Miscellaneous durable goods	89.8	90.5	100.0	100.8	113.7	114.7	116.8	124.6	119.6	135.0	133.5	119.8
424	Nondurable goods	91.0	98.9	100.0	99.1	100.8	105.1	105.1	105.8	110.5	113.6	114.3	117.4
4241	Paper and paper products	85.6	81.0	100.0	98.4	100.1	100.9	104.6	116.6	119.7	130.9	139.0	137.2
4242	Druggists' goods	70.7	80.6	100.0	94.2	93.1	85.9	84.9	89.8	100.2	105.8	112.3	119.8
4243	Apparel and piece goods	86.3	99.3	100.0	103.6	105.1	108.8	115.2	122.8	125.9	131.0	140.4	149.9
4244	Grocery and related products	87.9	96.2	100.0	101.1	101.0	102.4	101.9	98.6	104.9	104.1	104.3	105.1
4245	Farm product raw materials	81.6	79.4	100.0	94.3	101.6	105.1	102.1	98.1	98.2	109.1	108.2	120.9
4246	Chemicals	90.4	101.1	100.0	97.1	93.3	87.9	85.3	89.1	92.2	91.2	87.9	89.0
4247	Petroleum	84.4	109.8	100.0	88.5	102.9	138.1	140.6	153.6	151.1	163.2	152.5	157.7
4248	Alcoholic beverages	99.3	110.0	100.0	106.5	105.6	108.4	106.4	106.8	107.9	103.1	104.8	107.5
4249	Miscellaneous nondurable goods	111.2	109.0	100.0	105.4	106.8	115.0	111.9	106.1	109.8	120.7	124.2	126.8
425	Electronic markets and agents and brokers	64.3	74.3	100.0	102.4	112.4	120.1	110.7	109.8	104.1	97.0	87.3	93.6
	Retail trade												
44-45	Retail trade	79.1	81.4	100.0	105.7	112.7	116.1	120.1	125.6	131.6	137.9	141.5	148.5
441	Motor vehicle and parts dealers	78.3	82.7	100.0	106.4	115.1	114.3	116.0	119.9	124.3	127.3	127.0	129.8
4411	Automobile dealers	79.2	84.1	100.0	106.5	116.3	113.7	115.5	117.2	119.5	124.7	123.8	126.8
4412	Other motor vehicle dealers	70.6	69.7	100.0	109.6	114.8	115.3	124.6	133.6	133.8	143.3	135.1	136.3
4413	Auto parts, accessories, and tire stores	71.8	79.0	100.0	105.1	107.6	108.4	101.3	107.7	115.1	110.1	115.9	115.8
442	Furniture and home furnishings stores	75.1	79.0	100.0	104.1	110.8	115.9	122.4	129.3	134.6	146.7	151.4	162.6
4421	Furniture stores	77.3	84.8	100.0	104.3	107.5	112.0	119.7	125.2	128.8	139.2	143.4	155.5
4422	Home furnishings stores	71.3	71.0	100.0	104.1	115.2	121.0	126.1	134.9	142.6	156.8	161.9	172.6
443	Electronics and appliance stores	38.0	47.7	100.0	122.6	150.6	173.7	196.7	233.5	292.7	334.1	369.6	416.2
444	Building material and garden supply stores	75.8	79.5	100.0	107.4	113.8	113.3	116.8	120.8	127.1	134.5	134.9	143.6

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

[1997=100]

NAICS	Industry	1987	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
4441	Building material and supplies dealers	77.6	81.6	100.0	108.3	115.3	115.1	116.7	121.3	127.5	134.0	134.9	142.9
4442	Lawn and garden equipment and supplies stores	66.9	69.0	100.0	102.3	105.5	103.1	118.4	118.3	125.7	140.1	135.6	150.1
445	Food and beverage stores	110.8	107.4	100.0	99.9	101.9	101.0	103.8	104.7	107.2	112.9	118.3	122.1
4451	Grocery stores	111.1	106.9	100.0	99.6	102.5	101.1	103.3	104.8	106.7	112.2	117.1	119.2
4452	Specialty food stores	138.5	127.2	100.0	100.5	96.4	98.5	108.2	105.3	112.2	120.3	127.7	153.3
4453	Beer, wine and liquor stores	93.6	97.6	100.0	104.6	99.1	105.7	107.1	110.1	117.0	127.8	141.8	148.8
446	Health and personal care stores	84.0	91.0	100.0	104.0	107.1	112.2	116.2	122.9	129.5	134.3	133.2	139.7
447	Gasoline stations	83.9	84.2	100.0	106.7	110.7	107.7	112.9	125.1	119.9	122.2	124.6	121.8
448	Clothing and clothing accessories stores	66.3	69.8	100.0	106.3	114.0	123.5	126.4	131.3	138.9	139.1	147.8	163.3
4481	Clothing stores	67.1	70.0	100.0	108.7	114.2	125.0	130.3	136.0	141.8	140.9	153.1	169.9
4482	Shoe stores	65.3	70.8	100.0	94.2	104.9	110.0	111.5	125.2	132.5	124.8	132.9	149.3
4483	Jewelry, luggage, and leather goods stores	64.5	68.1	100.0	108.7	122.5	130.5	123.9	118.7	132.9	144.3	139.0	148.8
451	Sporting goods, hobby, book, and music stores	74.9	82.3	100.0	107.9	114.0	121.1	127.1	127.6	131.5	151.1	164.8	175.3
4511	Sporting goods and musical instrument stores	73.2	82.2	100.0	111.5	119.8	129.4	134.5	136.0	141.1	166.0	181.7	203.1
4512	Book, periodical, and music stores	78.9	82.3	100.0	101.0	103.2	105.8	113.0	111.6	113.7	123.6	133.7	124.9
452	General merchandise stores	73.5	75.1	100.0	105.3	113.4	120.2	124.8	129.1	136.9	140.7	145.0	152.3
4521	Department stores	87.2	83.9	100.0	100.4	104.5	106.2	103.8	102.0	106.8	109.0	109.9	113.1
4529	Other general merchandise stores	54.8	61.2	100.0	114.7	131.0	147.3	164.7	179.3	188.8	192.9	199.7	210.4
453	Miscellaneous store retailers	65.1	69.5	100.0	108.9	111.3	114.1	112.6	119.1	126.1	130.8	142.0	159.3
4531	Florists	77.6	73.3	100.0	102.3	116.2	115.2	102.7	113.8	108.9	103.4	120.6	125.3
4532	Office supplies, stationery and gift stores	61.4	66.4	100.0	111.5	119.2	127.3	132.3	141.5	153.9	172.8	187.9	215.5
4533	Used merchandise stores	64.5	70.4	100.0	119.1	113.4	116.5	121.9	142.0	149.7	152.6	159.5	166.6
4539	Other miscellaneous store retailers	68.3	75.0	100.0	105.3	103.0	104.4	96.9	94.4	99.9	96.9	103.5	118.5
454	Nonstore retailers	50.7	54.7	100.0	114.3	128.9	152.2	163.6	182.1	195.5	215.5	218.4	256.3
4541	Electronic shopping and mail-order houses	39.4	43.4	100.0	120.2	142.6	160.2	179.6	212.7	243.6	273.0	285.2	337.1
4542	Vending machine operators	95.5	95.1	100.0	106.3	105.4	111.1	95.7	91.2	102.3	110.5	105.1	110.7
4543	Direct selling establishments	70.8	74.1	100.0	101.9	104.2	122.5	127.9	135.0	127.0	130.3	121.5	135.6
	Transportation and warehousing												
481	Air transportation	81.1	77.5	100.0	97.6	98.2	98.1	91.9	102.1	112.7	126.0	135.7	-
482111	Line-haul railroads	58.9	69.8	100.0	102.1	105.5	114.3	121.9	131.9	142.0	146.4	138.5	-
48412	General freight trucking, long-distance	85.7	89.2	100.0	99.4	99.1	101.9	103.2	107.0	110.7	110.7	112.6	-
48421	Used household and office goods moving	106.7	112.6	100.0	91.0	96.1	94.8	84.0	81.6	86.2	88.7	88.5	-
491	U.S. Postal service	90.9	94.2	100.0	101.6	102.8	105.5	106.3	106.4	107.8	110.0	111.2	-
492	Couriers and messengers	148.3	138.5	100.0	112.6	117.6	121.9	123.4	131.1	134.1	126.9	124.7	-
	Information												
5111	Newspaper, book, and directory publishers	105.0	95.5	100.0	103.9	104.1	107.7	105.8	104.7	109.6	106.7	108.4	-
5112	Software publishers	10.2	28.5	100.0	134.8	129.2	119.2	117.4	122.1	138.1	160.7	171.0	-
51213	Motion picture and video exhibition	90.7	109.2	100.0	99.8	101.8	106.5	101.6	99.8	100.6	103.8	102.7	-
515	Broadcasting, except internet	99.5	98.2	100.0	100.8	102.9	103.6	99.2	104.0	107.9	112.5	117.6	-
5151	Radio and television broadcasting	98.1	97.7	100.0	91.5	92.6	92.1	89.6	95.1	94.6	96.6	101.5	-
5152	Cable and other subscription programming	105.6	100.3	100.0	136.2	139.1	141.2	128.1	129.8	145.9	158.6	162.4	-
5171	Wired telecommunications carriers	56.9	66.0	100.0	107.7	116.7	122.7	116.7	124.1	130.5	133.9	140.2	-
5172	Wireless telecommunications carriers	75.6	70.4	100.0	110.5	145.2	152.8	191.9	217.9	242.5	292.0	392.4	-
5175	Cable and other program distribution	105.2	100.0	100.0	97.1	95.8	91.6	87.7	95.0	101.2	113.7	110.4	-
	Finance and insurance												
52211	Commercial banking	72.8	80.7	100.0	97.0	99.8	102.7	99.6	102.1	103.7	108.5	108.4	-
	Real estate and rental and leasing												
532111	Passenger car rental	92.7	90.8	100.0	100.1	112.2	112.3	111.1	114.6	121.2	118.3	110.5	-
53212	Truck, trailer and RV rental and leasing	60.4	68.6	100.0	115.2	120.6	121.1	113.7	113.5	115.1	135.7	145.5	-
53223	Video tape and disc rental	77.0	97.1	100.0	113.2	129.4	134.9	133.3	130.3	148.5	154.5	155.6	-
	Professional and technical services												
541213	Tax preparation services	82.9	76.2	100.0	107.6	105.8	100.9	94.4	111.4	110.0	100.0	106.9	-
54131	Architectural services	90.0	93.8	100.0	111.4	106.8	107.6	111.0	107.6	112.6	118.3	123.9	-
54133	Engineering services	90.2	99.4	100.0	98.2	98.0	102.0	100.1	100.5	100.5	107.8	114.2	-
54181	Advertising agencies	95.9	107.9	100.0	89.2	97.9	107.5	106.9	113.1	120.8	133.0	131.2	-
541921	Photography studios, portrait	98.1	95.9	100.0	124.8	109.8	108.9	102.2	97.6	104.2	93.2	93.6	-
	Administrative and waste services												
56131	Employment placement agencies	-	-	100.0	86.8	93.2	89.8	99.6	116.8	115.4	119.8	117.9	-
56151	Travel agencies	89.3	94.6	100.0	111.4	115.5	119.4	115.2	127.6	147.3	167.4	188.2	-
56172	Janitorial services	75.1	94.3	100.0	95.3	98.6	101.0	102.1	105.6	118.8	116.6	122.0	-
	Health care and social assistance												
6215	Medical and diagnostic laboratories	-	-	100.0	118.8	124.7	131.9	135.3	137.6	140.8	140.8	138.8	-
621511	Medical laboratories	-	-	100.0	117.2	121.4	127.4	127.7	123.1	128.6	130.7	127.1	-
621512	Diagnostic imaging centers	-	-	100.0	121.4	129.7	139.9	148.3	163.3	160.0	153.5	154.8	-
	Arts, entertainment, and recreation												
71311	Amusement and theme parks	112.0	112.5	100.0	110.5	105.2	106.0	93.0	106.5	113.2	101.4	110.0	-
71395	Bowling centers	106.0	94.0	100.0	89.9	89.4	93.4	94.3	96.4	102.4	107.9	106.1	-

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

[1997=100]

NAICS	Industry	1987	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Accommodation and food services												
7211	Traveler accommodations	85.2	82.1	100.0	100.0	105.5	111.7	107.6	112.0	114.3	120.8	115.8	-
722	Food services and drinking places	96.0	102.4	100.0	101.0	100.9	103.5	103.8	104.4	106.3	107.0	108.2	110.9
7221	Full-service restaurants	92.1	99.4	100.0	100.9	100.8	103.0	103.6	104.4	104.2	104.8	105.6	108.6
7222	Limited-service eating places	96.5	103.6	100.0	101.2	100.4	102.0	102.5	102.7	105.4	106.8	107.8	111.2
7223	Special food services	89.9	99.8	100.0	100.6	105.2	115.0	115.3	114.9	117.6	118.0	119.2	116.4
7224	Drinking places, alcoholic beverages	136.7	123.3	100.0	99.7	98.8	100.6	97.6	102.9	118.6	112.2	121.1	124.2
	Other services												
8111	Automotive repair and maintenance	85.9	89.9	100.0	103.6	106.1	109.4	108.9	103.7	104.1	112.0	112.5	-
81211	Hair, nail and skin care services	83.5	82.1	100.0	108.6	108.6	108.2	114.6	110.4	119.7	125.0	130.4	-
81221	Funeral homes and funeral services	103.7	98.4	100.0	106.8	103.3	94.8	91.8	94.6	95.7	92.9	93.2	-
8123	Drycleaning and laundry services	97.1	94.8	100.0	100.1	105.0	107.6	110.9	112.5	103.8	110.6	120.8	-
81292	Photofinishing	95.8	107.7	100.0	69.3	76.3	73.8	81.2	100.5	100.5	102.0	113.2	-

NOTE: Dash indicates data are not available.

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

[Percent]

Country	2005	2006	2005				2006				2007		
			I	II	III	IV	I	II	III	IV	I	II	III
United States	5.1	4.6	5.3	5.1	5.0	5.0	4.7	4.7	4.7	4.5	4.5	4.5	4.7
Canada	6.0	5.5	6.2	6.0	6.0	5.8	5.7	5.5	5.6	5.4	5.4	5.2	5.2
Australia	5.1	4.8	5.1	5.1	5.0	5.0	5.0	4.9	4.7	4.6	4.5	4.3	4.3
Japan	4.5	4.2	4.6	4.4	4.4	4.5	4.3	4.2	4.2	4.1	4.0	3.8	-
France	9.9	9.7	9.8	9.9	9.9	10.0	10.0	9.8	9.6	9.4	9.1	9.0	-
Germany	11.2	10.4	11.5	11.4	11.1	10.9	11.0	10.6	10.1	9.7	9.2	9.0	-
Italy	7.8	6.9	7.9	7.8	7.7	7.6	7.3	6.9	6.7	6.5	6.2	6.1	-
Netherlands	5.2	4.4	5.6	5.3	5.0	5.0	4.8	4.3	4.2	4.2	4.0	3.6	-
Sweden	7.7	7.0	6.3	7.7	7.6	7.6	7.3	7.3	6.7	6.5	6.3	5.9	5.8
United Kingdom	4.8	5.5	4.7	4.8	4.8	5.1	5.3	5.5	5.6	5.5	5.5	5.4	-

NOTE: Dash indicates data not available.

Quarterly figures for Italy and quarterly and monthly figures for France, Germany, and the Netherlands are calculated by applying annual adjustment factors to current published data and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. Quarterly and monthly figures for Sweden are BLS seasonally adjusted estimates derived from Swedish not seasonally adjusted data.

There are breaks in series for Germany (2005) and Sweden (2005). For details on breaks in series, see the technical notes of the report *Comparative Civilian Labor Force Statistics, Ten Countries, 1960-2006* (Bureau of Labor Statistics, October 12, 2007), available on the Internet at **http://www.bls.gov/fls/flscomparelf.htm**.

For further qualifications and historical annual data, see the full report, also available at this site. For monthly unemployment rates, as well as the quarterly and annual rates published in this table, see the report *Unemployment rates in ten countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted, 1995-2007,* (Bureau of Labor Statistics), available on the Internet at **ftp://ftp.bls.gov/pub/special.requests/ForeignLabor/flsjec.txt**.

Unemployment rates may differ between the two reports mentioned, because the former is updated on a bi-annual basis, whereas the latter is updated monthly and reflects the most recent revisions in source data.

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

[Numbers in thousands]

Employment status and country	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Civilian labor force											
United States	133,943	136,297	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320	151,428
Canada	14,623	14,884	15,135	15,403	15,637	15,891	16,366	16,733	16,955	17,108	17,351
Australia	9,115	9,204	9,339	9,414	9,590	9,744	9,893	10,079	10,221	10,506	10,699
Japan	66,450	67,200	67,240	67,090	66,990	66,860	66,240	66,010	65,770	65,850	65,960
France	24,982	25,116	25,434	25,791	26,099	26,393	26,645	26,922	26,961	27,074	27,247
Germany	39,142	39,415	39,752	39,375	39,302	39,459	39,413	39,276	39,711	40,760	41,250
Italy	22,679	22,753	23,004	23,176	23,361	23,524	23,728	24,020	24,084	24,179	24,395
Netherlands	7,455	7,612	7,744	7,881	8,011	8,098	8,186	8,255	8,279	8,291	8,372
Sweden	4,454	4,414	4,401	4,423	4,482	4,522	4,537	4,557	4,571	4,694	4,748
United Kingdom	28,239	28,401	28,474	28,777	28,952	29,085	29,335	29,557	29,775	30,087	30,525
Participation rate[1]											
United States	66.8	67.1	67.1	67.1	67.1	66.8	66.6	66.2	66.0	66.0	66.2
Canada	64.8	65.1	65.4	65.9	66.0	66.1	67.1	67.7	67.7	67.4	67.4
Australia	64.6	64.3	64.3	64.0	64.4	64.4	64.3	64.6	64.6	65.3	65.6
Japan	63.0	63.2	62.8	62.4	62.0	61.6	60.8	60.3	60.0	60.0	60.0
France	55.7	55.6	56.0	56.4	56.6	56.8	56.9	57.0	56.7	56.6	56.4
Germany	57.1	57.3	57.7	56.9	56.7	56.7	56.4	56.0	56.4	57.6	58.2
Italy	47.3	47.3	47.7	47.9	48.1	48.3	48.5	49.1	49.1	48.7	48.9
Netherlands	60.2	61.1	61.8	62.5	63.0	63.3	63.5	63.7	63.6	63.4	63.8
Sweden	63.9	63.2	62.8	62.7	63.7	63.6	63.9	63.8	63.6	64.8	64.9
United Kingdom	62.4	62.5	62.5	62.8	62.9	62.7	62.9	63.0	63.0	63.1	63.5
Employed											
United States	126,708	129,558	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730	144,427
Canada	13,338	13,637	13,973	14,331	14,681	14,866	15,223	15,586	15,861	16,080	16,393
Australia	8,364	8,444	8,618	8,762	8,989	9,086	9,264	9,480	9,668	9,975	10,186
Japan	64,200	64,900	64,450	63,920	63,790	63,460	62,650	62,510	62,640	62,910	63,210
France	22,036	22,176	22,597	23,080	23,714	24,167	24,311	24,337	24,330	24,392	24,600
Germany	35,637	35,508	36,059	36,042	36,236	36,350	36,018	35,615	35,604	36,185	36,978
Italy	20,124	20,169	20,370	20,617	20,973	21,359	21,666	21,972	22,124	22,290	22,721
Netherlands	6,966	7,189	7,408	7,605	7,781	7,875	7,925	7,895	7,847	7,860	8,005
Sweden	4,014	3,969	4,033	4,110	4,222	4,295	4,303	4,293	4,271	4,334	4,415
United Kingdom	25,941	26,413	26,686	27,051	27,368	27,599	27,812	28,073	28,358	28,628	28,859
Employment-population ratio[2]											
United States	63.2	63.8	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7	63.1
Canada	59.1	59.6	60.4	61.3	62.0	61.9	62.4	63.1	63.3	63.4	63.6
Australia	59.3	59.0	59.3	59.6	60.3	60.0	60.2	60.7	61.1	62.0	62.5
Japan	60.9	61.0	60.2	59.4	59.0	58.4	57.5	57.1	57.1	57.3	57.5
France	49.1	49.1	49.7	50.4	51.4	52.0	51.9	51.6	51.2	51.0	50.9
Germany	52.0	51.6	52.3	52.1	52.2	52.2	51.5	50.8	50.6	51.2	52.2
Italy	42.0	41.9	42.2	42.6	43.2	43.8	44.3	44.9	45.1	44.9	45.5
Netherlands	56.2	57.7	59.1	60.3	61.2	61.5	61.5	60.9	60.3	60.1	61.0
Sweden	57.6	56.8	57.6	58.3	60.0	60.4	60.6	60.1	59.4	59.9	60.4
United Kingdom	57.3	58.2	58.5	59.1	59.4	59.5	59.6	59.8	60.0	60.0	60.0
Unemployed											
United States	7,236	6,739	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591	7,001
Canada	1,285	1,248	1,162	1,072	956	1,026	1,143	1,147	1,093	1,028	958
Australia	751	759	721	652	602	658	629	599	553	531	512
Japan	2,250	2,300	2,790	3,170	3,200	3,400	3,590	3,500	3,130	2,940	2,750
France	2,946	2,940	2,837	2,711	2,385	2,226	2,334	2,585	2,631	2,682	2,647
Germany	3,505	3,907	3,693	3,333	3,065	3,110	3,396	3,661	4,107	4,575	4,272
Italy	2,555	2,584	2,634	2,559	2,388	2,164	2,062	2,048	1,960	1,889	1,673
Netherlands	489	423	337	277	231	223	261	360	422	432	367
Sweden	440	445	368	313	260	227	234	264	300	361	332
United Kingdom	2,298	1,987	1,788	1,726	1,584	1,486	1,524	1,484	1,417	1,459	1,666
Unemployment rate											
United States	5.4	4.9	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.6
Canada	8.8	8.4	7.7	7.0	6.1	6.5	7.0	6.9	6.4	6.0	5.5
Australia	8.2	8.3	7.7	6.9	6.3	6.8	6.4	5.9	5.4	5.1	4.8
Japan	3.4	3.4	4.1	4.7	4.8	5.1	5.4	5.3	4.8	4.5	4.2
France	11.8	11.7	11.2	10.5	9.1	8.4	8.8	9.6	9.8	9.9	9.7
Germany	9.0	9.9	9.3	8.5	7.8	7.9	8.6	9.3	10.3	11.2	10.4
Italy	11.3	11.4	11.5	11.0	10.2	9.2	8.7	8.5	8.1	7.8	6.9
Netherlands	6.6	5.6	4.4	3.5	2.9	2.8	3.2	4.4	5.1	5.2	4.4
Sweden	9.9	10.1	8.4	7.1	5.8	5.0	5.2	5.8	6.6	7.7	7.0
United Kingdom	8.1	7.0	6.3	6.0	5.5	5.1	5.2	5.0	4.8	4.8	5.5

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

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

NOTE: There are breaks in series for the United States (1997, 1998, 1999, 2000, 2003, 2004), Australia (2001), Germany (1999, 2005), and Sweden (2005). For details on breaks in series, see the technical notes of the report *Comparative Civilian Labor Force Statistics, Ten Countries, 1960-2006* (Bureau of Labor Statistics, October 12, 2007), available on the Internet at **http://www.bls.gov/fls/flscomparelf.htm**. For further qualifications and historical annual data, see the full report, also available at this site. Data in this report may not be consistent with data in *Unemployment rates in ten countries, civilian labor force basis, approximating U.S. concepts, seasonally adjusted, 1995-2007,* (Bureau of Labor Statistics), because the former is updated on a bi-annual basis, whereas the latter is updated monthly and reflects the most recent revisions in source data.

53. Annual indexes of manufacturing productivity and related measures, 16 economies

[1992 = 100]

Measure and economy	1980	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Output per hour																
United States	68.4	93.5	102.8	108.2	112.3	116.7	121.7	130.1	136.7	147.1	148.6	164.4	174.8	186.8	193.2	197.9
Canada	74.0	94.7	104.5	110.4	111.7	111.2	116.3	121.8	127.0	134.7	132.2	134.8	134.0	134.1	139.1	139.1
Australia	68.5	92.4	104.5	107.0	106.4	112.3	115.4	118.5	119.7	128.1	131.4	137.1	140.1	142.3	143.7	144.1
Japan	63.6	94.4	101.7	103.3	111.0	116.1	120.2	121.4	124.7	131.4	128.6	133.3	142.4	152.2	158.2	161.9
Korea	–	82.7	108.3	118.1	129.7	142.6	160.8	179.3	199.4	216.4	214.8	235.8	252.2	281.2	300.4	332.7
Taiwan	49.1	89.8	101.3	105.2	112.9	121.5	126.5	132.7	140.9	148.4	155.1	169.0	174.5	183.2	196.5	209.9
Belgium	65.4	96.8	102.5	107.9	112.7	114.3	121.5	122.9	121.5	125.7	126.9	131.1	134.5	141.0	144.9	147.9
Denmark	82.0	98.5	100.3	112.7	112.7	109.0	117.7	117.1	119.0	123.2	123.4	124.2	129.3	138.8	141.6	147.2
France	66.0	95.3	101.8	109.5	114.9	115.5	122.3	128.7	134.4	143.7	146.0	152.0	158.7	162.3	169.2	175.4
Germany	77.2	99.0	101.0	108.5	110.2	113.3	119.9	120.4	123.4	132.0	135.4	136.7	141.6	146.6	154.8	165.1
Italy	75.3	97.3	102.8	107.6	111.1	112.5	113.3	112.5	112.5	116.1	116.6	114.8	112.1	110.4	110.3	111.8
Netherlands	69.5	98.0	103.7	113.3	117.7	120.3	120.7	124.2	129.3	138.6	139.2	143.5	146.5	156.3	161.7	166.8
Norway	78.5	98.3	99.9	99.9	98.7	101.6	101.8	99.2	102.7	105.9	108.9	111.9	121.6	128.8	132.0	136.3
Spain	67.3	93.1	101.8	104.9	108.6	107.2	108.3	110.2	112.1	113.2	115.8	116.3	118.8	120.6	121.5	126.1
Sweden	73.1	94.6	107.3	118.2	125.1	130.2	142.0	150.7	164.1	176.8	172.6	190.7	204.5	227.9	241.9	257.7
United Kingdom	57.3	90.1	104.1	106.7	105.0	104.1	105.1	106.4	111.6	117.2	122.2	125.7	132.1	140.0	145.0	151.5
Output																
United States	73.6	98.2	104.2	112.2	117.3	121.6	129.0	137.7	143.7	152.7	144.2	148.2	149.9	159.6	163.0	168.5
Canada	85.6	106.7	105.4	113.5	118.7	120.3	127.8	134.3	145.5	160.1	153.9	155.2	154.2	157.1	158.3	156.2
Australia	89.8	104.2	103.8	109.1	108.5	111.9	114.5	117.8	117.5	123.1	121.9	127.8	130.1	130.1	130.3	128.7
Japan	60.8	97.1	96.3	94.9	98.9	103.0	105.6	100.1	99.7	104.9	99.1	97.6	102.8	108.8	111.7	117.1
Korea	28.6	88.1	105.1	117.1	130.8	139.2	146.0	134.5	163.7	191.5	195.7	210.5	222.2	246.8	264.3	286.5
Taiwan	45.4	91.0	100.9	106.9	112.7	118.7	125.5	129.5	139.0	149.2	138.1	150.4	158.4	173.8	185.3	198.7
Belgium	78.2	101.0	97.0	101.4	104.2	104.6	109.5	111.3	111.2	115.7	115.7	114.8	113.4	117.9	117.3	120.2
Denmark	92.0	101.7	97.0	107.5	112.7	107.5	116.3	117.2	118.2	122.5	122.5	119.0	115.7	119.6	121.6	127.7
France	88.3	100.5	96.6	100.7	105.2	105.2	110.1	115.4	119.3	124.8	126.0	125.9	128.3	129.4	131.2	133.2
Germany	85.3	99.1	92.0	94.9	94.0	92.0	96.1	97.2	98.2	104.8	106.6	104.4	105.2	108.8	112.3	118.5
Italy	81.0	100.5	97.6	104.1	109.1	107.8	109.6	109.9	109.6	112.9	111.8	110.4	107.8	106.4	103.7	107.6
Netherlands	77.3	98.3	99.4	104.7	108.6	110.2	111.7	115.5	119.8	127.8	127.6	127.7	126.2	130.6	130.6	133.7
Norway	105.7	101.7	102.0	104.7	105.2	109.4	114.1	113.3	113.2	112.6	111.8	111.2	114.9	121.4	125.8	131.4
Spain	78.6	98.4	96.1	97.8	101.5	104.0	110.7	117.4	124.1	129.6	133.7	133.5	134.7	135.2	135.6	140.0
Sweden	90.7	110.1	101.9	117.5	132.5	137.1	147.6	159.5	173.9	189.7	185.6	196.4	203.6	224.4	233.5	246.8
United Kingdom	87.3	105.3	101.4	106.2	107.9	108.6	110.6	111.3	112.3	115.0	113.5	110.5	110.7	113.0	111.6	113.1
Total hours																
United States	107.6	104.9	101.3	103.7	104.4	104.2	106.0	105.8	105.1	103.8	97.0	90.1	85.7	85.4	84.4	85.1
Canada	115.8	112.6	100.9	102.8	106.3	108.1	109.9	110.2	114.5	118.9	116.4	115.1	115.0	117.2	113.8	112.3
Australia	131.1	112.7	99.3	102.0	101.9	99.7	99.2	99.4	98.2	96.0	92.8	93.2	92.8	91.4	90.7	89.3
Japan	95.5	102.9	94.7	91.9	89.1	88.8	87.9	82.4	79.9	79.8	77.1	73.3	72.2	71.5	70.6	72.3
Korea	–	106.4	97.1	99.2	100.9	97.6	90.8	75.0	82.1	88.5	91.1	89.3	88.1	87.8	88.0	86.1
Taiwan	92.4	101.4	99.6	101.7	99.8	97.7	99.2	97.6	98.7	100.5	89.0	89.0	90.8	94.9	94.3	94.6
Belgium	119.7	104.3	94.7	94.0	92.4	91.5	90.2	90.5	91.5	92.1	91.2	87.5	84.3	83.6	80.9	81.3
Denmark	112.1	103.3	96.8	95.4	100.0	98.6	98.8	100.1	99.4	99.4	99.3	95.8	89.5	86.2	85.9	86.8
France	133.8	105.5	94.8	91.9	91.6	91.0	90.1	89.7	88.7	86.8	86.3	82.8	80.8	79.7	77.5	75.9
Germany	110.5	100.1	91.1	87.5	85.3	81.3	80.1	80.8	79.6	79.4	78.7	76.4	74.3	74.2	72.6	71.8
Italy	107.6	103.3	95.0	96.8	98.2	95.8	96.7	97.7	97.4	97.2	95.9	96.2	96.1	96.4	94.1	96.2
Netherlands	111.2	100.4	95.9	92.5	92.3	91.6	92.6	93.0	92.7	92.2	91.7	89.0	86.2	83.5	80.8	80.2
Norway	134.7	103.4	102.1	104.8	106.6	107.7	112.1	114.2	110.3	106.4	102.7	99.3	94.5	94.2	95.3	96.4
Spain	116.7	105.7	94.4	93.2	93.5	97.0	102.2	106.5	110.7	114.4	115.4	114.8	113.4	112.2	111.6	111.0
Sweden	124.0	116.4	94.9	99.4	105.9	105.3	103.9	105.9	106.0	107.3	107.5	103.0	99.6	98.5	96.5	95.8
United Kingdom	152.3	116.9	97.4	99.5	102.7	104.4	105.2	104.6	100.6	98.1	92.9	88.0	83.8	80.7	77.0	74.6
Hourly compensation (national currency basis)																
United States	55.9	90.5	102.0	105.3	107.3	109.3	112.2	118.7	123.4	134.7	137.8	147.8	158.2	161.5	168.3	172.4
Canada	47.4	89.2	101.2	104.1	106.6	108.2	110.8	116.5	119.0	123.0	126.7	131.2	135.2	136.9	142.1	145.9
Australia	–	87.5	105.2	106.1	113.5	121.7	126.0	128.4	132.9	140.2	149.2	156.0	161.4	169.1	177.6	189.2
Japan	58.6	90.6	102.7	104.7	108.3	109.1	112.8	115.6	115.5	114.9	116.4	117.2	114.6	115.7	117.0	117.6
Korea	–	68.0	115.9	133.1	161.6	188.1	204.5	222.7	223.9	239.1	246.7	271.6	285.0	325.5	351.5	375.5
Taiwan	29.6	85.2	105.9	111.1	120.2	128.2	132.1	137.1	139.6	142.3	151.4	146.7	149.1	151.6	158.2	161.5
Belgium	52.5	90.1	104.8	105.6	108.6	110.6	114.7	116.5	118.0	120.1	126.4	131.9	135.8	138.8	144.6	147.7
Denmark	44.5	93.6	102.4	106.0	108.2	112.6	116.5	119.6	122.6	125.0	130.9	136.5	145.7	150.6	153.7	157.6
France	36.7	88.5	104.3	108.0	110.7	112.5	116.3	117.2	121.0	127.0	130.6	136.9	141.0	144.6	143.7	147.5
Germany	53.6	89.4	106.2	111.0	117.0	122.5	124.9	126.7	129.6	136.3	140.6	144.0	147.2	148.0	149.7	153.2
Italy	30.6	87.7	105.7	107.3	112.0	120.0	124.1	123.3	125.6	128.7	134.0	137.5	141.6	145.7	150.2	152.9
Netherlands	60.6	89.8	104.4	108.9	111.8	113.8	116.4	121.4	125.7	132.1	138.1	146.1	151.9	158.1	161.3	165.8
Norway	39.0	92.3	101.5	104.5	109.2	113.8	118.8	125.8	133.0	140.5	149.0	157.9	164.3	169.7	176.2	184.3
Spain	28.0	79.9	109.4	113.4	118.3	121.1	124.0	124.9	124.7	126.6	131.6	135.4	142.2	147.0	153.0	158.3
Sweden	37.3	87.8	97.4	99.8	106.8	115.2	121.0	125.5	130.1	136.7	143.8	151.6	159.2	163.4	167.2	172.1
United Kingdom	35.8	88.7	104.5	107.0	108.9	108.7	112.3	121.2	128.3	133.8	140.7	149.0	156.9	165.1	172.2	184.2

See notes at end of table.

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

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

See footnotes at end of table.

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

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

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

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

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

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

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

NOTE: Dash indicates data not available.

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

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

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

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

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

A Look at Wages in Transportation-Related Occupations in the Memphis Area and in the United States

by Eli R. Stoltzfus
Bureau of Labor Statistics

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The Memphis metropolitan area[1] boasts a concentration of transportation industries. This is not surprising, due to its central location in the United States and its well-developed transportation infrastructure. Two of the busiest trucking corridors in the United States--Interstate 40 and Interstate 55--intersect in Memphis, and large cities such as Atlanta, Chicago, and Dallas are only a day's drive away. In addition, Memphis has one of the world's largest air cargo hubs and several major railroad operations. The ports on the Mississippi River add to the transportation infrastructure in the area.[2] These natural features and man-made corridors provide incentive for transportation industry establishments to locate in Memphis.

The proportion of private industry workers who are in trade, transportation, and utilities industries is higher for Memphis than it is for the United States overall. (All figures in this article are for private industry workers only.) In 2006, 32 percent of all workers in the Memphis area were employed in trade, transportation, and utilities industries, compared with 23 percent of all U.S. workers.[3] Moreover, the latest available BLS data indicate that, in February 2007, 14 percent of private industry workers in the Memphis area were employed in transportation and material moving occupations and 20 percent were employed in office and administrative support occupations; for the United States as a whole, the comparable figures are 9 percent and 17 percent, respectively, in June 2006.[4]

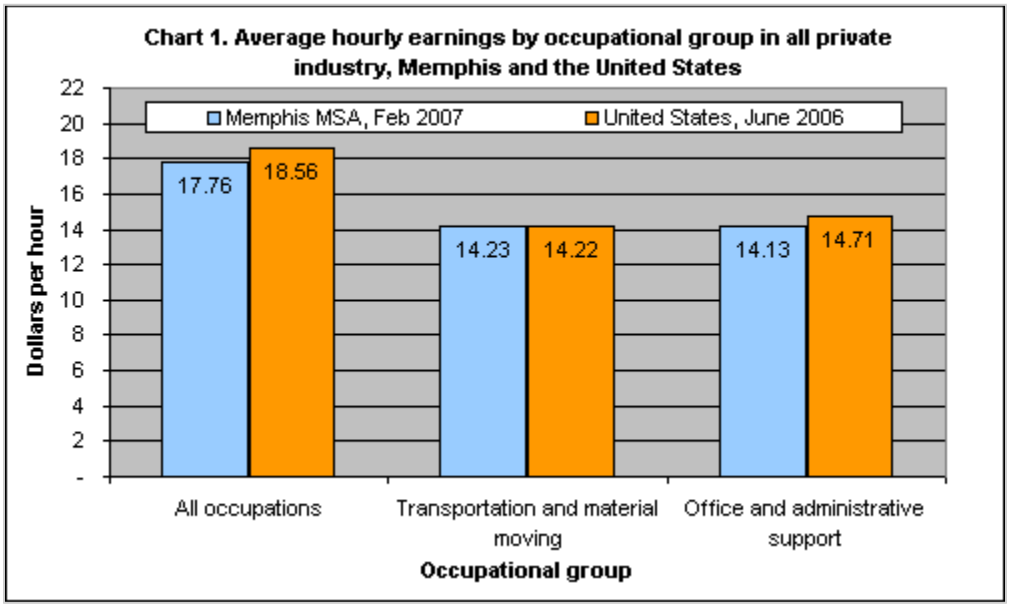
An industry's concentration in an area, measured by the percentage of all workers in the area who are employed in the industry, may be higher than average due to factors such as central location and the availability of infrastructure. Such factors may give firms in the industry in that area an advantage compared with similar firms elsewhere. Other things being equal, firms will be attracted to an area if the capital and labor costs of producing products or services are lower in that area relative to another area. Over time, as more firms in a specific industry locate to a particular area, one consequence may be relatively higher wages for the jobs crucial to the mission of those firms.[5]

Given the relatively high percentage of workers in transportation and material moving occupations and office and administrative support occupations in the Memphis area, do workers in these occupational groups receive higher wages than their counterparts across the Nation? In particular, how do they fare in the trade, transportation, and utilities industries compared with those in all private industry? One might expect that wage rates in the Memphis area for occupations that the transportation industry relies upon heavily would be significantly greater than in the United States as a whole and that wage rates for occupations not specific to the transportation industry would be statistically the same as for the United States. This article examines these questions using data from the National Compensation Survey (NCS).

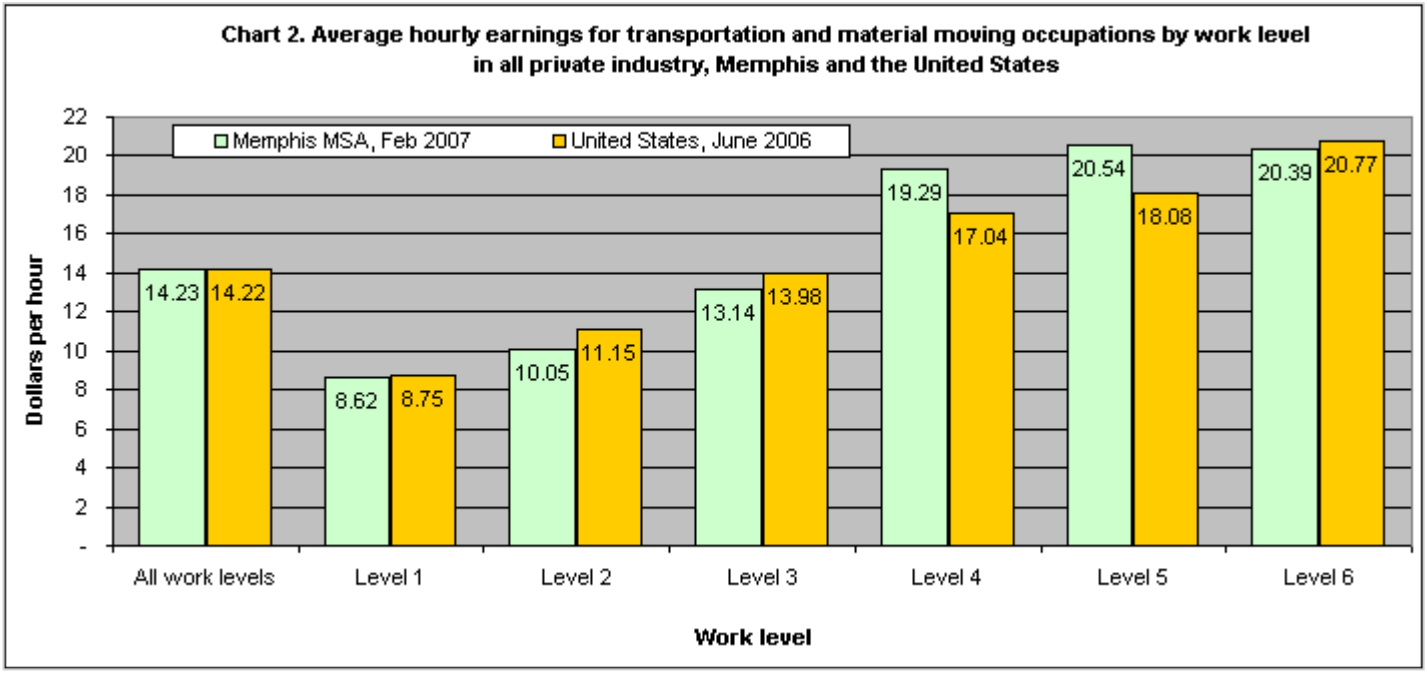
Within a given occupation or occupational group, hourly earnings vary by work level; there are different rates of pay for different levels of skills and responsibilities required to do a job. (See Exhibit 1 for an explanation of work levels.) Usually, the higher the work level, the higher the hourly rate of pay. Earnings by work level are an indication of the impact that specific knowledge, such as how to operate a tractor-trailer truck, can have on a worker's rate of pay. (In the rating system used by the NCS, tractor-trailer drivers generally are evaluated at a minimum of work level 4.) Competition among firms for jobs at certain work levels can also have an impact on pay at those work levels.

The charts that follow compare average wage rates for occupations in the Memphis area with those in the United States as a whole; they show comparisons for jobs that require skills that the transportation industry relies upon to get its work done, as well as for jobs that are not specific to the transportation industry. The charts also show hourly earnings by selected occupational work levels and occupational subgroups. The last chart in the presentation shows hourly earnings estimates for transportation and material moving occupations and for office and administrative support occupations in trade, transportation,

and utilities industries in the Memphis area and in the United States. The estimates for the Memphis area have a reference month of February 2007, and the estimates for the United States have a reference month of June 2006.[6]

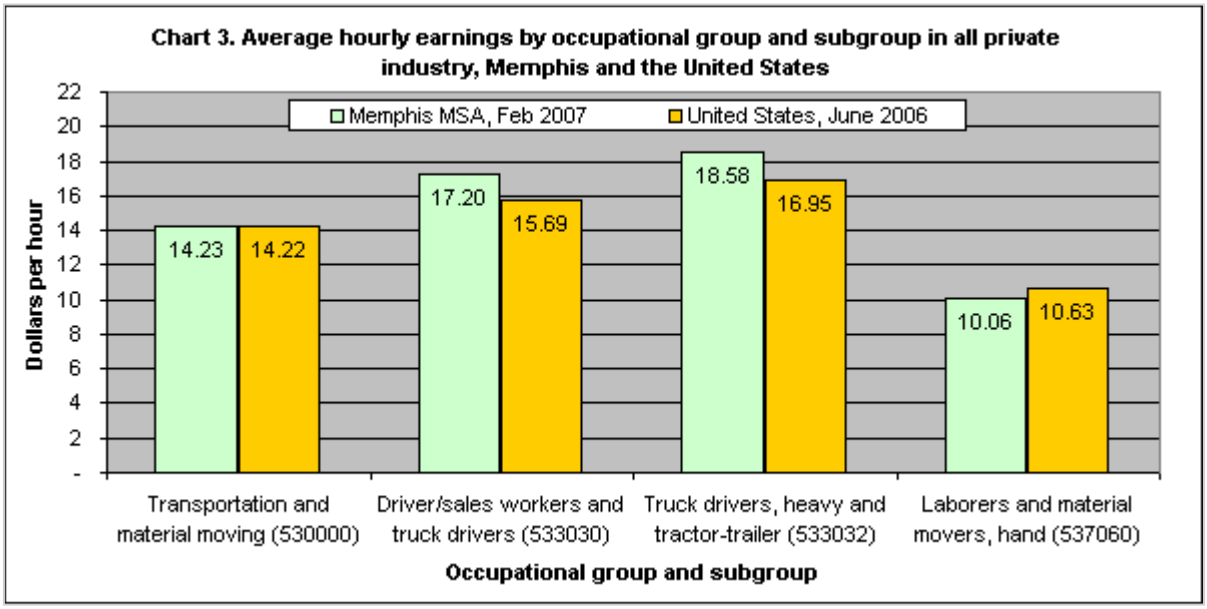


- Chart 1 shows that in the Memphis area, the average hourly earnings for all occupations ($17.76), for transportation and material moving occupations ($14.23), and for office and administrative support occupations ($14.13) were close to the average hourly earnings for the same occupational groups in the United States.

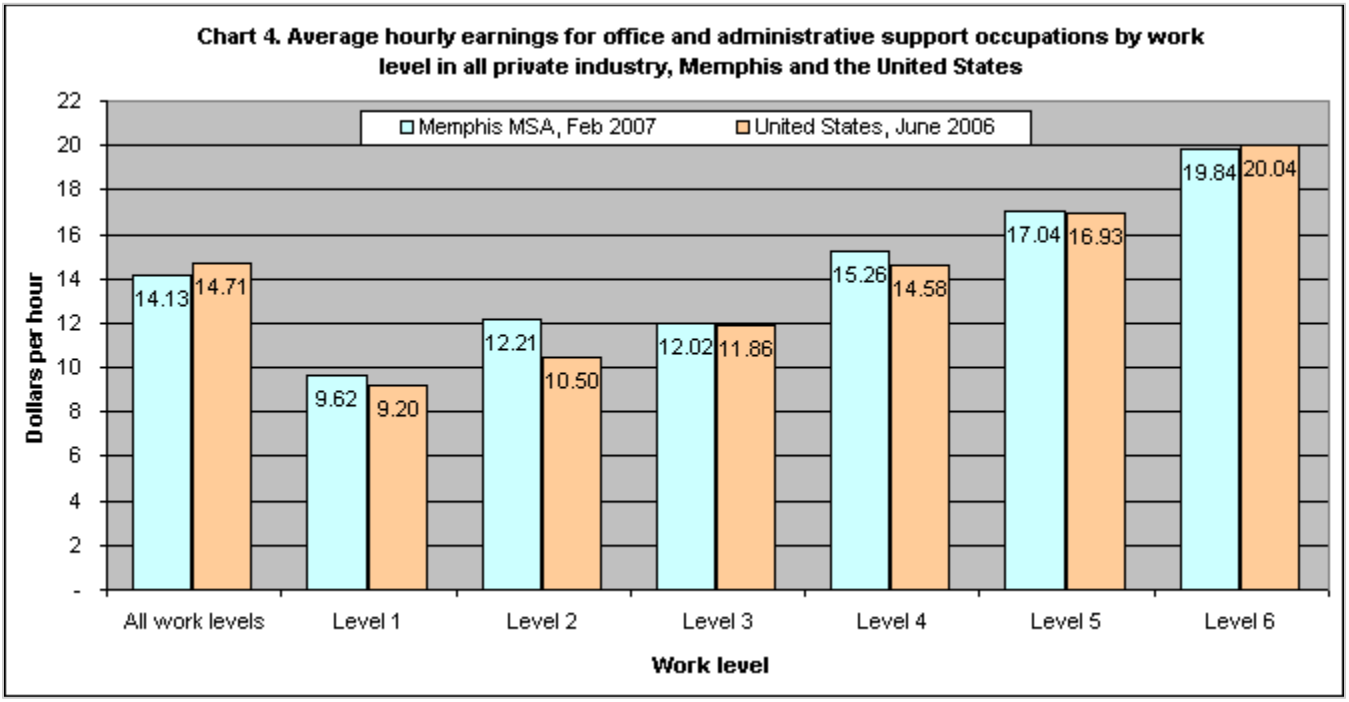


- Chart 2 shows average hourly earnings by occupational work level. For transportation and material moving occupations in the Memphis area, the average hourly wage ranged from $8.62 for work level 1 (entry level) to $20.54 for work level 5 and $20.39 for work level 6.
- Chart 2 also shows that for transportation and material moving occupations in the Memphis area, average hourly wages for work level 4 ($19.29) and work level 5 ($20.54) were significantly higher than the average for these workers

in the United States as a whole.[7] A large portion of workers in level 4 and level 5 are in occupational subgroup driver/ sales workers and truck drivers, jobs that require higher levels of skill and responsibility and often require special certification, such as a commercial driver's license. These are relatively high paying jobs, as shown in chart 3.

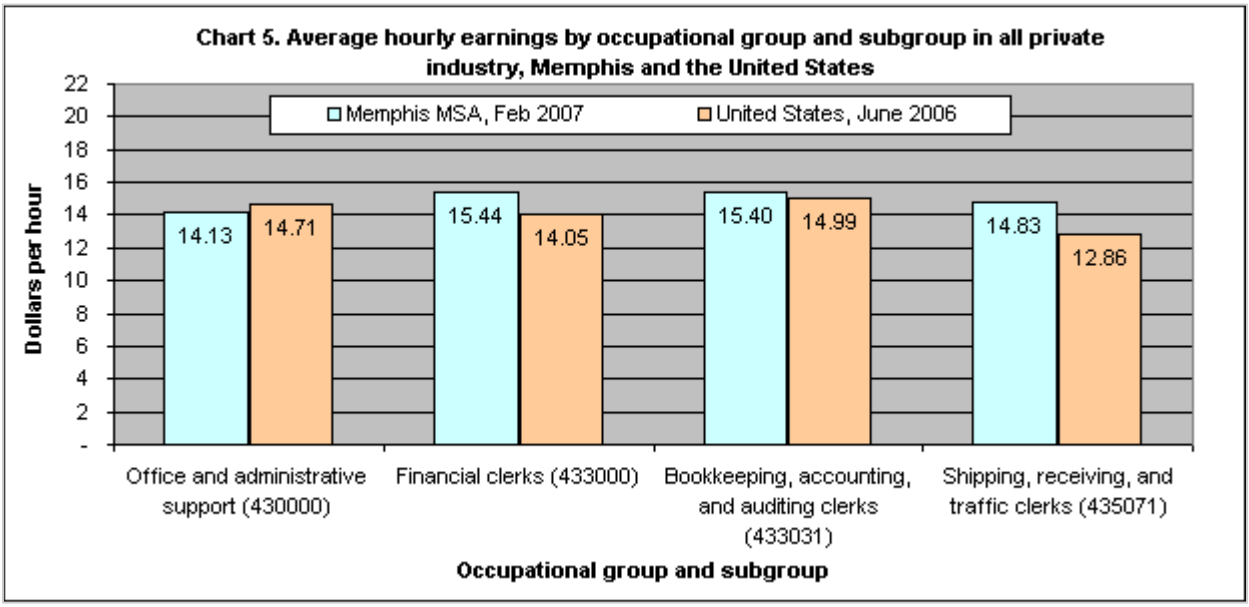


- Chart 3 shows that the average hourly wage rate for driver/sales workers and truck drivers was $17.20 in the Memphis area, compared with $15.69 in the United States as a whole.
- Chart 3 also shows that the average hourly wage for truck drivers, heavy and tractor-trailer, was $18.58 in the Memphis area, compared with $16.95 in the United States as a whole.

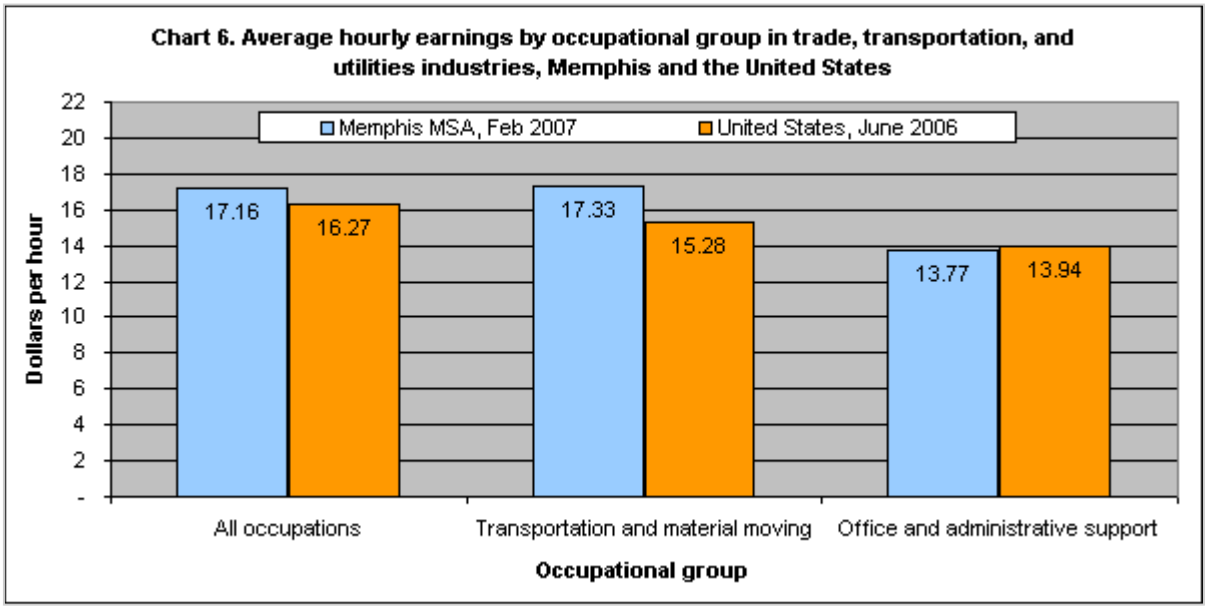


- Chart 4 shows average hourly earnings by occupational work level. For office and administrative support occupations in the Memphis area, the average hourly wage ranged from $9.62 for work level 1 (entry level) to $19.84 for work level 6.

- Chart 4 also shows that for office and administrative support occupations in the Memphis area, average hourly earnings for work levels 1 through 6 generally were close to the average hourly earnings for work levels 1 through 6 in the United States.



- Chart 5 shows that the average hourly wage for financial clerks was $15.44 in the Memphis area, which is significantly higher than the rate of $14.05 received by similar workers in the United States as a whole; and the average hourly wage for bookkeeping, accounting, and auditing clerks was $15.40 in the Memphis area and $14.99 the United States.
- Chart 5 also shows that the average hourly wage for shipping, receiving, and traffic clerks was significantly higher in the Memphis area ($14.83) than in the United States as a whole ($12.86).



- Chart 6 shows that in trade, transportation, and utilities industries, the average hourly wage for all occupations was $17.16 in the Memphis area and $16.27 in the United States as a whole.
- Chart 6 also shows that in the trade, transportation, and utilities industries, the average hourly wage for transportation and material moving occupations was $17.33 in the Memphis area, compared with $15.28 in the United States as a whole.

In sum, National Compensation Survey data show that, in most cases, workers in the Memphis area in the occupational groups studied earned close to the national average in private industry overall and in trade, transportation, and utilities industries. As noted in the charts, there are work levels at which workers in the Memphis area earned significantly more than their counterparts in the Nation as a whole: workers in transportation and material moving occupations, work level 4 and work level 5; and two groups of office and administrative support occupations--financial clerks and shipping, receiving, and traffic clerks. (See charts 2 and 5.)

Exhibit 1

National Compensation Survey Methodology

The data presented in this article make distinctions between workers in different occupations and industries, and at different work levels. This information is collected by a field economist in an interview with employers, who provide data for the survey. Wage rates are collected in a variety of forms, depending on the method of pay used by the establishment, such as weekly or monthly rates, or base pay and incentive pay. Wage rates collected are straight-time earnings and do not include overtime. The field economist also collects information on employee work schedules. Work schedule information is needed to calculate the straight-time average hourly wage rate for an occupational group.[8]

To determine the work level, each occupation is evaluated using a point-factor leveling process, which evaluates four aspects of a job: knowledge, job controls and complexity, contacts, and physical environment. The knowledge factor is tailored to 24 families of closely related jobs. Points are assigned based on the occupation's rank within each factor. The points are summed to determine the overall level of the occupation; the levels range from level 1 to level 15.[9]

It is important to distinguish between *industries* and *occupations within industries*. An industry provides products or services. For example, the construction industry builds roads and houses; the transportation industry provides freight shipping services to shippers and receivers of goods. An occupation, on the other hand, is a set of activities or tasks that employees are paid to perform, and a given occupation could be found in many different industries. For example, truck drivers operate trucks and clerks perform office tasks, whether employed by the construction industry or by the transportation industry.

Occupational Pay Relatives

Throughout the United States wage rates differ across local areas, or localities. While overall wage rates in the Memphis area are close to those in the United States as a whole, generally they are lower relative to wage rates in New York, NY, and higher relative to Brownsville, TX, for example.

For 2005 and 2006, the National Compensation Survey published estimates on occupational pay relatives for 9 major occupational groups in 78 metropolitan areas and for the United States as a whole. Pay relatives provide a means of comparing relative pay differences across occupations and areas. The pay relatives for occupational groups in a metropolitan area express average pay as a percent of pay for comparable occupational groups in the United States; pay relatives for the United States as a whole are always equal to 100. The methodology used in computing pay relatives takes into account factors such as occupational composition, work levels, work schedules, and reference dates. In 2006, for all civilian workers, the occupational pay relative for all occupations in the Memphis area was 95, which means that, on average, workers in the Memphis area earned approximately 5 percent less than workers in the United States as a whole.[10]

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Notes

1 The Memphis Metropolitan Statistical Area (MSA), referred to in this article as the "Memphis area," includes the counties of Fayette, Shelby, and Tipton, in Tennessee, as well as Crittenden County, Arkansas, and Desoto County, Mississippi.

2 David Biederman, "Logistics Long Roots," *Traffic World*, November 20, 2006.

3 Employment data are from the BLS Quarterly Census of Employment and Wages (QCEW), 2006 annual averages, private industry. For more information, see Location Quotient Calculator, available on the Internet at http://data.bls.gov/LOCATION_QUOTIENT/servlet/lqc.ControllerServlet.

4 The following table shows the number of workers represented in the National Compensation Survey (NCS):

Number of Workers Represented by NCS, Private Industry

Occupational Group	Memphis MSA, Feb 2007	United States, June 2006	Memphis MSA, Feb 2007	United States, June 2006
Transportation and Material Moving	14%	9%	70,900	10,065,100
Office and Administrative Support	20%	17%	100,400	18,564,200
All Workers			491,900	109,520,000

The numbers of workers represented by the survey are rounded to the nearest 100. Estimates of the number of workers provide a description of size and composition of the labor force included in the survey. Estimates are not intended, however, for comparison to other statistical series to measure employment trends or levels. For more information on the data for Memphis, see *Memphis, TN-AR-MS, National Compensation Survey, February 2007*, Bulletin 3135-61 (Bureau of Labor Statistics, June 2007), appendix A, table 1; available on the Internet at http://www.bls.gov/ncs/ocs/sp/ncbl0914.pdf. For more information on the data for the United States as a whole, see *National Compensation Survey: Occupational Earnings in the United States, 2006*, Bulletin 2590 (Bureau of Labor Statistics, September 2007), appendix A, table 1; available on the Internet at http://www.bls.gov/ncs/ncswage.htm.

Occupations are classified using the Standard Occupational Classification (SOC) system (available on the Internet at http://www.bls.gov/soc/home.htm). The SOC uses a six-digit hierarchical classification system that categorizes more than 800 individual occupations into 23 major groups. The occupational groups analyzed in this study are coded as follows:

- Transportation and material moving (53-0000)
  - Driver/sales workers and truck drivers (53-3030)
    - Truck drivers, heavy and tractor-trailer (53-3032)
  - Laborers and material movers, hand (53-7060)
- Office and Administrative Support (43-0000)
  - Financial clerks (43-3000)
    - Bookkeeping, accounting, and auditing clerks (43-3031)
  - Shipping, receiving, and traffic clerks (43-5071)

Industries are classified using the North American Industry Classification System (NAICS). NAICS is an industry classification system that groups establishments into industries based on the products or services produced by the establishments. Industries are classified into 20 two-digit sectors. Trade, Transportation, and Utilities Industries include sectors 22, 42, 44, 45, 48, and 49. See North American Industry Classification System--United States, 2002, (Executive Office of the President, Office of Management and Budget, 2002). The BLS NAICS page can be accessed at http://www.bls.gov/bls/naics.htm.

5 See Maury B. Gittleman, "Pay relatives for metropolitan areas in the NCS," *Monthly Labor Review*, March 2005, pp. 46-53; available on the Internet at http://www.bls.gov/opub/mlr/2005/03/art4full.pdf.

6 For the Memphis MSA, data were collected between December 2006 and April 2007; the average reference month is February 2007. For the United States, data were collected between December 2005 and January 2007; the average reference month is June 2006. The collection reference date can affect outcomes: due to certain economic factors, such as inflation, wage rates with a reference date at the beginning of a year tend to be lower than wage rates with a reference date at the end of the same year.

7 "Statistical significance" describes a mathematical measure of difference between estimates. In this article, values are described as "significantly higher" than other values if they pass a test of statistical significance.

8 William J. Wiatrowski, "A Formidable New Compensation Tool: Bureau of Labor Statistics' New National Compensation Survey," *Compensation and Benefits Review*, September 1, 1998, pp. 29-41.

9 See "National Compensation Survey: A Guide for Evaluating Your Firm's Jobs and Pay" (Bureau of Labor Statistics, October 2003); available on the Internet at http://www.bls.gov/ncs/ocs/sp/ncbr0004.pdf.

10 See NCS Published Pay Relatives by Areas, on the Internet at http://www.bls.gov/ncs/ocs/payrel.htm.

Data for Chart 1. Average hourly earnings by occupational group in all private industry, Memphis and the United States

Occupational Group	Memphis MSA, Feb 2007	United States, June 2006
All occupations	$ 17.76	$ 18.56
Transportation and material moving	$ 14.23	$ 14.22
Office and administrative support	$ 14.13	$ 14.71

Data for Chart 2. Average hourly earnings for transportation and material moving occupations by work level in all private industry, Memphis and the United States

Occupation and level	Memphis MSA, Feb 2007	United States, June 2006
All work levels	$ 14.23	$ 14.22
Level 1	$ 8.62	$ 8.75
Level 2	$ 10.05	$ 11.15
Level 3	$ 13.14	$ 13.98
Level 4	$ 19.29	$ 17.04
Level 5	$ 20.54	$ 18.08
Level 6	$ 20.39	$ 20.77

Data for Chart 3. Average hourly earnings by occupational group and subgroup in all private industry, Memphis and the United States

Occupational group	Memphis MSA, Feb 2007	United States, June 2006
Transportation and material moving (530000)	$ 14.23	$ 14.22
Driver/sales workers and truck drivers (533030)	$ 17.20	$ 15.69
Truck drivers, heavy and tractor-trailer (533032)	$ 18.58	$ 16.95
Laborers and material movers, hand (537060)	$ 10.06	$ 10.63

Data for Chart 4. Average hourly earnings for office and administrative support occupations by work level in all private industry, Memphis and the United States

Occupation and level	Memphis MSA, Feb 2007	United States, June 2006
All work levels	$ 14.13	$ 14.71
Level 1	$ 9.62	$ 9.20
Level 2	$ 12.21	$ 10.50
Level 3	$ 12.02	$ 11.86
Level 4	$ 15.26	$ 14.58
Level 5	$ 17.04	$ 16.93
Level 6	$ 19.84	$ 20.04

Data for Chart 5. Average hourly earnings by occupational group and subgroup in all private industry, Memphis and the United States

Occupational group	Memphis MSA, Feb 2007	United States, June 2006
Office and administrative support (430000)	$ 14.13	$ 14.71
Financial clerks (433000)	$ 15.44	$ 14.05

Occupational group	Memphis MSA, Feb 2007	United States, June 2006
Bookkeeping, accounting, and auditing clerks (433031)	$ 15.40	$ 14.99
Shipping, receiving, and traffic clerks (435071)	$ 14.83	$ 12.86

Data for Chart 6. Average hourly earnings by occupational group in trade, transportation, and utilities industries, Memphis and the United States

Occupational Group	Memphis MSA, Feb 2007	United States, June 2006
All occupations	$ 17.16	$ 16.27
Transportation and material moving	$ 17.33	$ 15.28
Office and administrative support	$ 13.77	$ 13.94