

Industry dynamics in the Washington, DC, area: has a second job core emerged?

From 1990 to 2005, federal jobs in the District declined while private-sector jobs increased rapidly throughout the metropolitan area; professional and business services jobs spearheaded this growth, particularly in Fairfax County, VA

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Rapid job growth in several high-wage industries in the private sector, especially professional and business services, has made the Washington, DC metropolitan area,¹ and above all Fairfax County, VA, a very attractive location for jobseekers. However, the Washington metropolitan area, and the District of Columbia² in particular, have long been defined by the presence of the Federal Government. Despite the fact that Federal Government jobs have decreased and professional and business services jobs have increased over the 15-year span encompassing the first quarter of 1990 to the first quarter of 2005, these two industries have provided a foundation for high-wage jobs throughout the metropolitan area. Moreover, Fairfax County has emerged as the metropolitan area's private-sector job leader,³ joining the District, with its concentration of public-sector employment, as a second major hub for regional economic activity. (See chart 1.)

The employment and wage data examined in this article come from the Quarterly Census of Employment and Wages (QCEW) program.⁴ This article compares shifts in employment from the first quarter of 1990 to the first quarter of 2005, by a variety of industry supersectors in the Washington, DC, area, one of the 12 largest metropolitan areas in the United States. Although this article focuses on employment and wage changes in the professional and business services and government supersectors, it also looks

at industrial activity levels and commuting patterns to present a clearer picture of the industry dynamics driving the Washington economy.

Public and private-sector mix

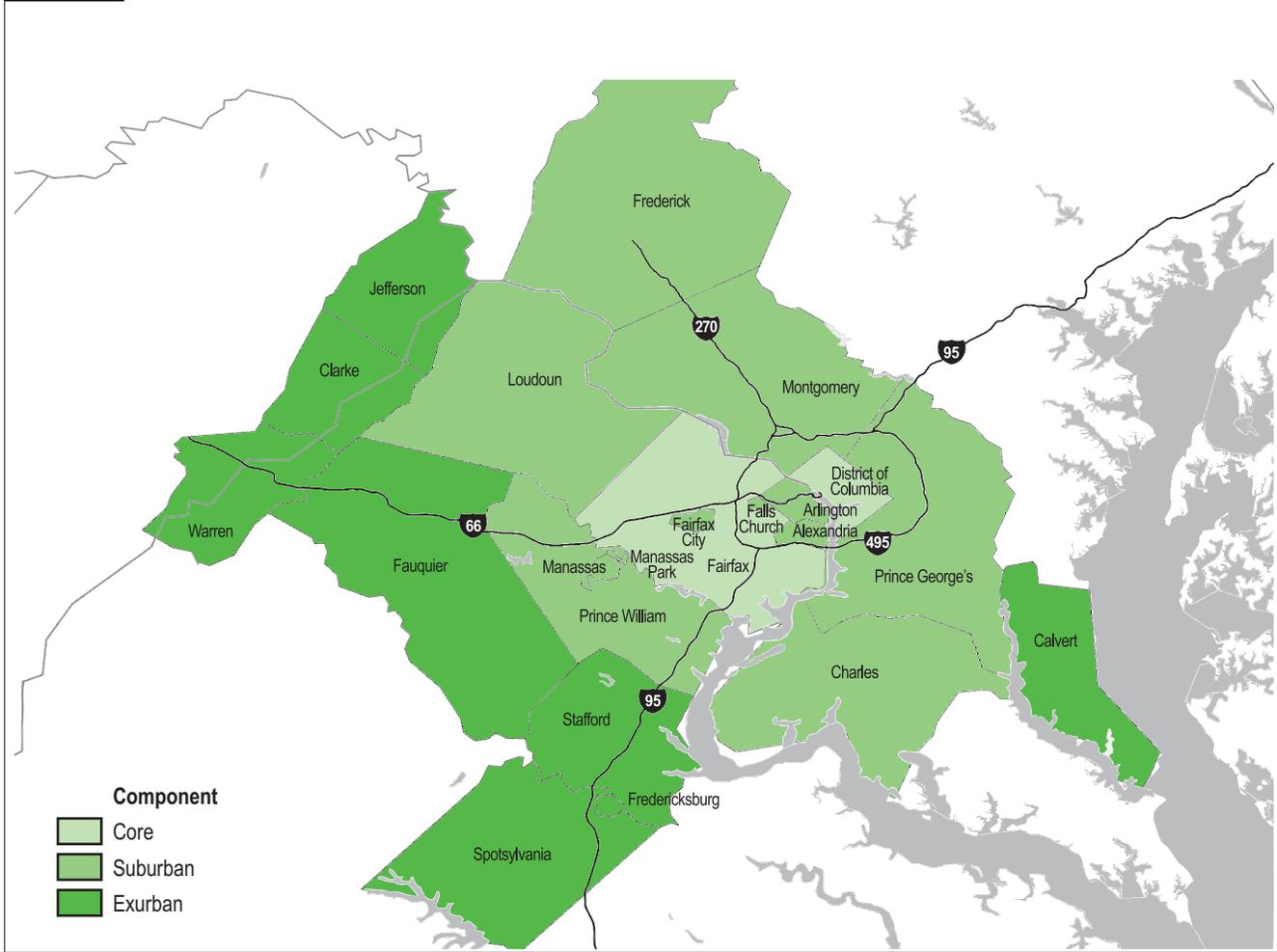
Of the approximately 2.8 million workers in the Washington metropolitan area, 337,221 were employed by the Federal Government in the first quarter of 2005. The majority of these federal jobs, 192,757, were located in the District of Columbia, with smaller concentrations in Montgomery County, MD (40,191); Arlington County, VA (32,985); and Prince George's County, MD (26,187). Though not of the same magnitude, the number of federal workers in Fairfax, 17,372, was still sizable. The other counties in the area each employed fewer than 7,000 workers.

Since 1990, metropolitan area employment has increased by 526,298, but Federal Government jobs have actually declined by 30,848, or 8.4 percent, over this same period. Not surprisingly, the District of Columbia lost the largest number of federal positions, dropping 26,785 jobs. Given the rapid job expansion in the Washington area over the last few years, it is clear that other industry sectors have come to dominate the employment scene, changing the landscape considerably.

Even a cursory look at employment data over the 1990–2005 period showed that professional and business services had become the driving

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Chart 1. Geographic designations for the 22 counties in the Washington metropolitan area



force behind the Washington metropolitan area economy—as it is in the Nation as a whole. The influx of professional and business services jobs has had a considerable impact on the composition of the area’s industry mix. In 1990, the Federal Government and professional and business services accounted for similar percentages of the employed in the metropolitan area, at 16.4 and 16.5 percent, respectively. By the first quarter of 2005, the percentage of jobs in the federal sector had shrunk to 12.2 percent of the Washington area’s workforce while professional and business services had grown to 21.6 percent.

The Washington metropolitan area added 228,920 professional and business services jobs from the first quarter of 1990 to the first quarter of 2005, an expansion of 61.6 percent. However, the District of Columbia, the traditional job core of the Washington metropolitan area and home to a significant portion of the federal workforce, was not the main benefactor of this growth. Instead, the growth in professional and

business services jobs was concentrated in the suburbs, with Fairfax County accounting for 45.4 percent of the increase.

Fairfax County’s emergence as a private-sector job core in the Washington metropolitan area was secured by the addition of 103,925 workers in professional and business services over the 15-year period ending in 2005. No other county in the Washington area came close to adding this many jobs. The District of Columbia added 31,011 professional and business services jobs to its workforce during this time span, and Montgomery County, 29,696. Prince George’s County, and Loudoun County, Va., rounded out the top five in professional and business services growth with the addition of 12,674 and 12,342 jobs, respectively. Even taken together, the growth of professional and business services jobs in the District, Montgomery, Prince George’s and Loudoun Counties still fell short of the number added in Fairfax.

Table 1. Employment by industry supersector in the District of Columbia and Fairfax, first quarter 1990 and first quarter 2005

Industry	District of Columbia		Fairfax County	
	1990	2005	1990	2005
Total	668,532	658,505	372,792	553,107
Percent of total	100.0	100.0	100.0	100.0
Private	58.8	64.9	84.3	87.1
Natural resources and mining .....	.1	.0	.1	0.0
Construction	2.0	1.9	8.5	5.6
Manufacturing	1.0	.0	4.0	2.1
Trade, transportation, and utilities	6.0	4.1	19.5	14.1
Information	3.9	3.4	6.0	5.6
Financial activities	5.1	4.1	6.2	6.1
Professional and business services	16.0	21.0	22.7	34.1
Educational and health services	11.0	12.8	6.5	8.5
Leisure and hospitality	7.0	7.8	7.1	7.4
Other Services	6.6	8.2	3.8	3.6
Government	41.2	35.1	15.7	12.9
Federal	32.8	29.3	5.0	3.1
State and local	8.4	5.9	10.7	9.8

By the first quarter of 2005, Fairfax County had 34.1 percent of its workforce in professional and business services, up from 22.7 percent in the first quarter of 1990, as shown in table 1. By contrast, 29.3 percent of the District's workforce was employed by the Federal Government in 2005, down from 32.8 percent in 1990. In fact, government jobs were on the decline not just in the District, but throughout the area with five of the nine largest counties⁵ experiencing losses, including Fairfax.

In short, the Washington metropolitan area's persona has clearly been redefined during the 15-year period ending in 2005. Although the Federal Government still maintained a commanding presence in the District of Columbia and to a lesser extent in Arlington, Montgomery and Prince George's Counties, it did not account for the new growth the area experienced. The professional and business services industry, by contrast, grew rapidly during this time span, and Fairfax County added these jobs at an astonishing pace for one of the largest counties in the metropolitan area—123 percent—establishing itself as a major job center along side the District of Columbia. In fact, as illustrated in chart 2, since 1990, the District's percentage of the metropolitan area's total employment had declined to less than one-fourth by 2005, while Fairfax County's percentage had grown to one-fifth, reducing the gap between the two considerably.

But the other counties in the Washington metropolitan area also shared in the wealth of new professional and business services jobs. In the exurban or outer ring, counties such as Spotsylvania and Stafford in Virginia recorded growth rates of 300 percent or more in this supersector; that these were lesser populated jurisdictions did contribute to the extremely high percentage increases in employment. Even counties in the inner suburban ring, Loudoun and Prince William Counties, VA for example, experienced job growth in the neighborhood of 250

percent during the 15-year time span, and Frederick County, MD's rate of growth was more than 160 percent.

Most assuredly, the federal sector's decline helped fuel the growth of professional and business services in the Washington metropolitan area, as the Federal Government modified its method of operations. With the broad range of activities that the Federal Government must oversee, a number of specialized tasks, often those requiring the latest technologies and production or management techniques, can be better supported with the input from contractors, consultants, and subject-matter experts. Particularly affected were the computer systems design and related services, and management, scientific and technical consulting services industries. These are jobs that fall under the professional and business services sector.

Although the District of Columbia is home base to most federal agencies, other counties also have strong ties to the Federal Government including Arlington County, located across the Potomac River from the District, Montgomery County to its north, and Prince George's County to its east. These three counties are home to the long-established Pentagon military complex, the National Institutes of Health (NIH), and the National Aeronautics and Space Administration (NASA), respectively. However, although federal agencies outside the District have led to a significant amount of business development centered around selected suburban locations in the past, the Federal Government's actual presence in an area need not be necessary to foster new job growth as evidenced by the widespread gains in professional and business services throughout the area.

Over the 15-year span of this study, the share of the workforce accounted for by professional and business services in the Washington metropolitan area rose in its nine largest counties. (See chart 3.) This industry posted the largest job gains of any supersector in seven of these counties while ranking second in the remaining two (Prince William and Loudoun Counties in Virginia).

Chart 2. Percent distribution of employment in the Washington metropolitan area by county, 1990 and 2005

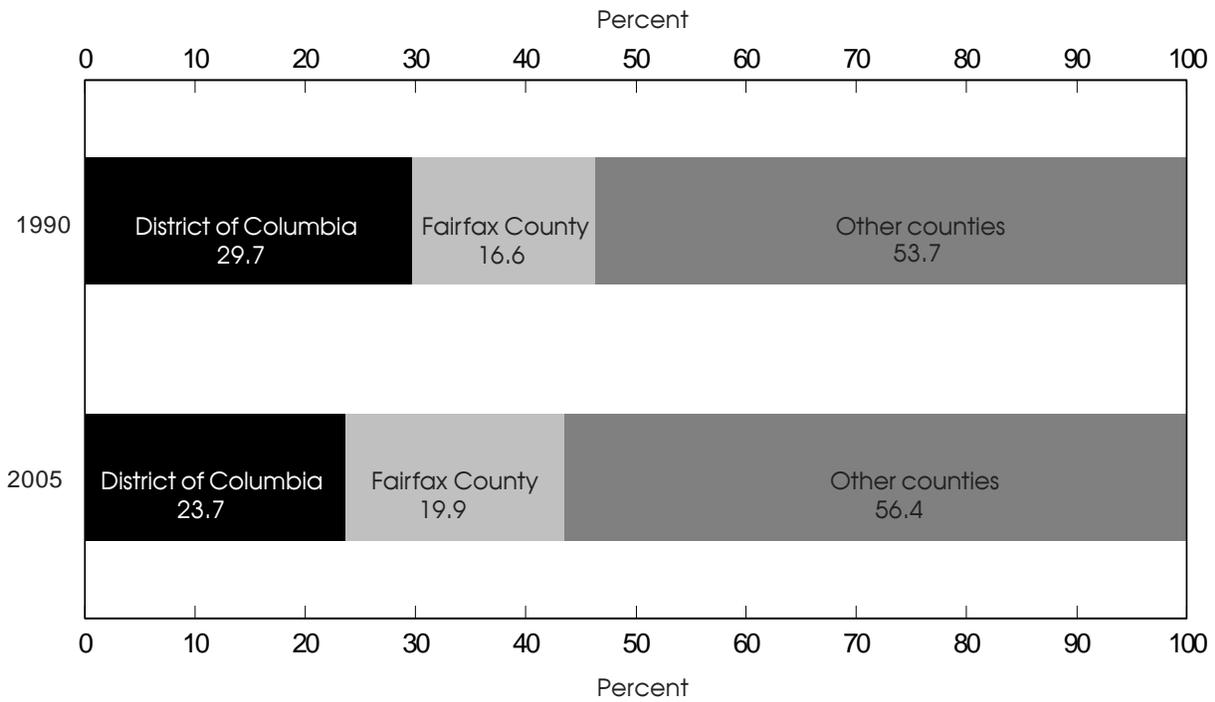
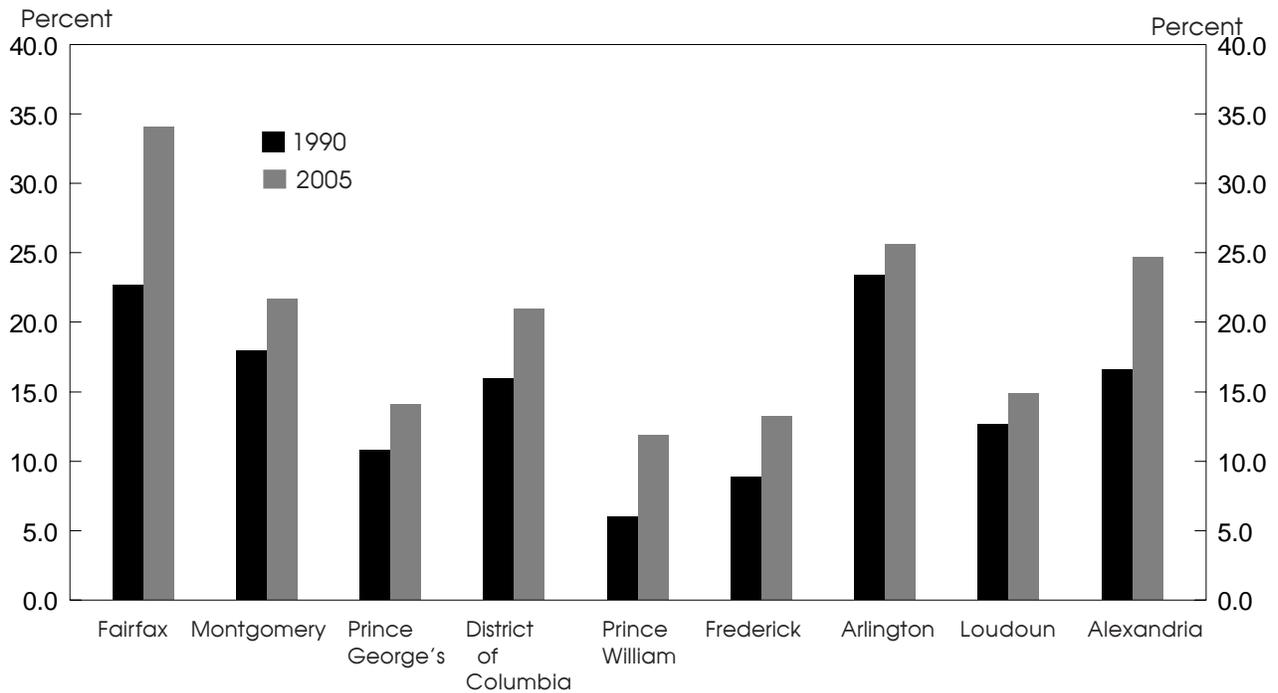


Chart 3. Percentage of professional and business services employment in the nine largest counties in the Washington metropolitan area, first quarter 1990 and first quarter 2005



Both the Federal Government and professional and business services offer a number of high-paying jobs that make the Washington area an attractive location for jobseekers, especially the well-educated. This was borne out by the fact that average weekly wages in several of the area's large counties were near the top of the national ranking in the first quarter of 2005: Arlington County (\$1,286), the District of Columbia (\$1,277), and Fairfax County (\$1,181). Average weekly wages in these three jurisdictions exceeded the national average of \$775 by more than \$400 in the first quarter of 2005. Additionally, two other large counties in the metropolitan area had wages above the \$1,000 mark—Montgomery and Loudoun.

High industry concentration

To better appreciate Fairfax County's emergence as a center for professional and business services in the Washington metropolitan area, one can view the data from a national perspective. Using location quotient analysis⁶ to compare industrial activity levels among different areas of the country, one can determine the local employment concentration of an industry sector to the average for the Nation as a whole (which, by definition, would have a quotient of 1.0). In the Washington metropolitan area, the professional and business services supersector stood out as having one of the highest location quotients, 1.83, in the

country in 2005. When Washington, one of the 12 largest metropolitan areas in the Nation, was compared with the other 11 areas, all had location quotients exceeding that for the Nation, but none came close to matching Washington's concentration of jobs in this industry. (See table 2.) The next highest in rank were Detroit (1.36), San Francisco (1.29), Atlanta (1.26), and Boston (1.22).

When the field for comparison was expanded to include selected metropolitan areas with rapid job growth that generally attracted more highly educated workers, as has occurred in the Washington area—Raleigh (1.36), San Jose (1.34), San Diego (1.27), Phoenix (1.25), and Austin (1.17)—the location quotients for professional and business services in 2005 still fell well below that for the Washington metropolitan area.

Clearly, the Washington area has become an attractive business location for the generally well-paid professional and business services supersector, some counties more than others. Fairfax led all counties in the metropolitan area with a location quotient of 2.57 in professional and business services. In addition to Fairfax, Arlington County and the District also had location quotients that were more than 2.0. Not coincidentally, these same three jurisdictions were among the 12 best paid counties in the Nation when ranked among all 322 counties with employment of 75,000 or more, with average weekly wages surpassing \$1,100 in the first quarter of 2005.

To further secure the Washington metropolitan area's status as the national growth leader in professional and business services jobs, the net change in employment for this supersector was calculated for the 1990–2005 period. Washington's addition of 228,920 professional and business services jobs during this time span was the highest among the 12 largest metropolitan areas, as well as among 5 other areas with rapid growth in this industry. (See chart 4.)

To put this job growth into perspective, the number of professional and business services jobs added in the Washington metropolitan area over the 15-year time span accounted for 43 percent of its total employment gain of 526,298 and was largely responsible for its fifth-place ranking among the 17 areas being studied, behind only Dallas (723,852), Phoenix (710,615), Atlanta (695,814), and Houston (585,973). Among the remaining 12 areas, one (Los Angeles) lost almost 7,500 jobs, and another (San Jose) had no growth.

Commuting patterns

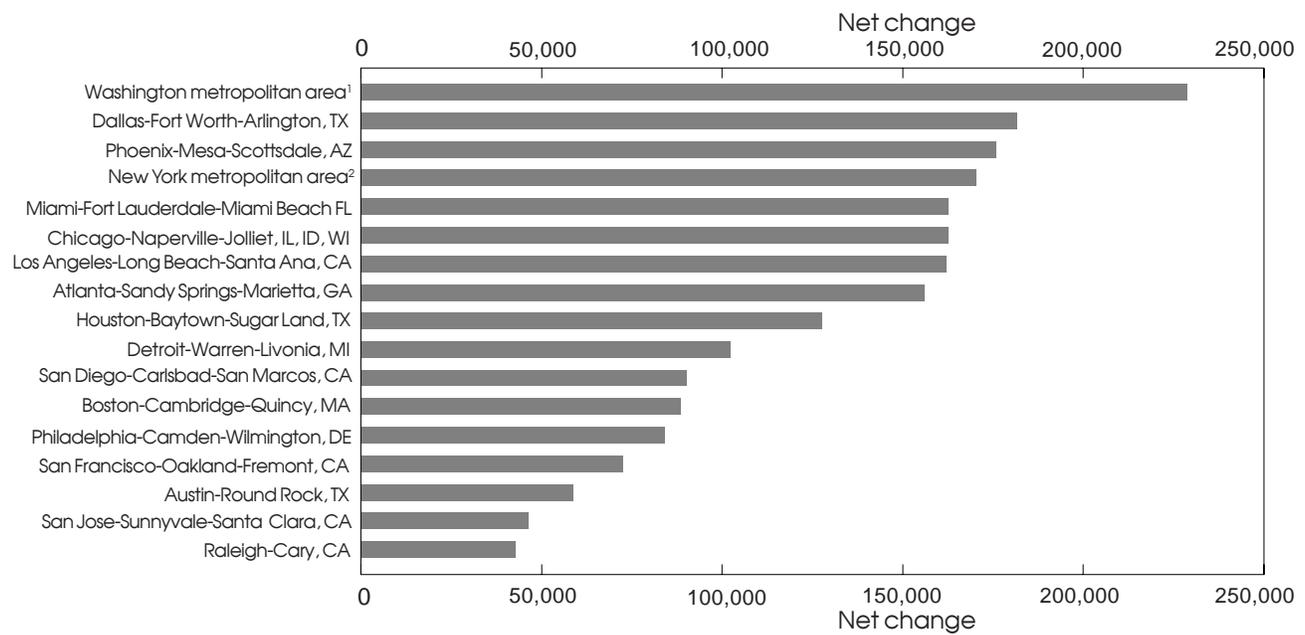
Further support of the creation of a second job core in the Washington metropolitan area can be found using county-to-county worker flow data⁷ from the U.S. Census Bureau. Though only available for 2000, the data nonetheless confirm that the three largest counties outside of the District of Columbia (Fairfax, Montgomery, and Prince George's), indeed attracted a large number of workers from other suburban and exurban counties, as well as the District.

Table 2. Location quotients for professional and business services, 2005

Metropolitan areas	Location quotient
Twelve largest	
Washington-Arlington-Alexandria, DC,VA-MD-W,VA	1.83
Fairfax County, VA	2.57
Arlington County, VA	2.34
District of Columbia	2.13
Alexandria City, VA	1.95
Montgomery County, MD	1.74
Prince George's County, MD	1.25
Loudoun County, VA	1.17
Frederick County, MD	1.03
Prince William County, VA	1.00
Detroit-Warren-Livonia, MI	1.36
San Francisco-Oakland-Fremont, CA	1.29
Atlanta-Sandy Springs-Marietta, GA	1.26
Boston-Cambridge-Quincy, MA-NH	1.22
Miami-Fort Lauderdale-Miami Beach, FL	1.19
Chicago-Naperville-Joliet, IL-ID-WI	1.18
New York-Northern New Jersey-Long Island, NY-NJ-PA	1.15
Los Angeles-Long Beach-Santa Ana, CA	1.14
Houston-Baytown-Sugar Land, TX	1.12
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	1.11
Dallas-Fort Worth-Arlington, TX	1.08
Other selected	
Raleigh-Cary, NC	1.36
San Jose-Sunnyvale-Santa Clara, CA	1.34
San Diego-Carlsbad-San Marco, CA	1.27
Phoenix-Mesa-Scottsdale, AZ	1.25
Austin-Round Rock, TX	1.17

NOTE: U.S. employment concentration of professional and business service = 1.00.

Chart 4. Net change of professional and business services employment in 17 selected metropolitan areas from first quarter 1990 to first quarter 2005



¹ The Washington metropolitan area includes: Washington-Arlington-Alexandria, DC-VA-MD-WV.

² The New York metropolitan area includes: New York-Northern New Jersey-Long Island-NY-NJ-PA.

About 30 percent of Montgomery’s workforce and 34 percent of Prince George’s County’s come from jurisdictions other than their own. In Fairfax County, the proportion jumps to 43 percent with a daily influx of 207,539 workers from other jurisdictions in 2000. The District of Columbia, which is one of the few metropolitan areas in the country where the workforce is greater than the resident population, imports 69 percent of its workers from the surrounding jurisdictions, the number one contributor being Prince George’s County (126,138).

Even though most persons reside in the county in which they work (persons working in the District being a notable exception), when they do leave their county, where do they go to work? It is clear that those living in the exurban outer counties were not traveling to the District of Columbia to work. (See table 3.) Where the residents of Virginia’s six exurban counties (Clarke, Fauquier, Fredericksburg City, Spotsylvania, Stafford, and Warren) were going was Fairfax County; Calvert County residents were heading to Prince George’s County, whereas those who resided in Jefferson County, West Virginia, were almost equally split between Montgomery County and Fairfax County as to their job location.

Those residing in the outer-most counties of the suburban ring who left their boundaries to work often chose a location other than the District of Columbia. For example, Fairfax

County was the primary destination for residents of Fauquier, Loudoun, Prince William, Manassas City, and Manassas Park City in Virginia; Montgomery County was the first choice for residents of Frederick County, and Prince George’s County was the number one destination for residents of Charles County.

It was apparent that the further one’s residence from the traditional job core of the District of Columbia, the higher the likelihood of having a job located in one of the three largest counties in the Washington metropolitan area. And with the rapid growth of professional and business services jobs in Fairfax County, it was not surprising to find that it imported a larger portion of its workforce than did Montgomery and Prince George’s Counties. Forty-three percent of Fairfax’s workforce resided outside of its boundaries in 2000 compared with 39 percent in 1990. In comparison, the percentage of Montgomery County’s workforce residing outside of its boundaries showed no change over the 10-year period, remaining at 30 percent.

Distance to the workplace is often a primary consideration in choosing a place to reside, and as a significant portion of the new job growth was located in the suburban ring, particularly Fairfax County, the exurbs became more accessible as a place of residence. As noted by Edgar M. Hoover and Raymond Vernon in *Anatomy of a Metropolis*, the distribution of jobs in a

Table 3. Residence-county-to-workplace-county flows for the four largest counties in the Washington metropolitan area, 2000

Residence county	Workplace county			
	Fairfax County, VA	Montgomery County, MD	Prince George's County, MD	District of Columbia
District of Columbia	12,244	19,509	13,655	190,566
Calvert County, MD	866	876	8,243	3,967
Charles County, MD	2,475	1,351	13,834	10,785
Frederick County, MD	1,786	22,867	1,188	3,025
Montgomery County, MD	22,148	267,128	26,825	99,672
Prince George's County, MD	18,258	40,240	155,671	126,138
Arlington County, VA	20,476	4,618	2,043	42,263
Clarke County, VA	789	39	28	156
Fairfax County, VA	278,064	16,943	9,594	88,908
Fauquier County, VA	5,499	273	135	1,139
Loudoun County, VA	35,933	2,770	595	5,843
Prince William County, VA	44,322	1,867	1,709	15,368
Spotsylvania County, VA	3,160	189	335	2,122
Stafford County, VA	7,249	357	415	3,310
Warren County, VA	2,246	134	85	376
Alexandria City, VA	14,643	2,484	1,813	23,292
Fairfax City, VA	4,964	338	145	1,631
Falls Church City, VA	1,653	186	69	1,696
Fredericksburg City, VA	478	36	40	372
Manassas City, VA	5,145	194	135	864
Manassas Park City, VA	1,964	94	78	311
Jefferson County, WV	1,241	1,348	159	592

metropolitan area influences the distribution of the population far more than the other way around.⁸

Industry specifics

Of the 22 counties in the Washington area, 9 had employment totals of 75,000 or more. Together, these nine large counties accounted for 91 percent of the area's employment in 2005. Geographically united, the counties were nonetheless independent entities that had created different economic environments to foster job growth. On the one hand, private industry, especially professional and business services, added a large number of jobs across the metropolitan area, but more so in Fairfax County. Federal Government jobs, on the other hand, were on the wane, though State and local government jobs were not, except in the District of Columbia. Overall, private-sector growth easily surpassed the small gains made in the public sector.

Professional and business services. The vast majority of employment growth in the Washington, D.C., area over the last 15 years, particularly in the nine largest counties, occurred in private firms, with professional and business services dominating the landscape. Professional and business services was not only the largest supersector, but also the fastest growing in the Washington metropolitan area, expanding by 61.6 percent

from 1990 to 2005. Growth in professional and business services jobs was especially good for the local economy because these jobs tended to be higher paying, often requiring a highly educated labor force.

Employment in professional and business services grew by 228,920 in the Washington metropolitan area during the 15-year period with 218,623 or 96 percent of these jobs located in the nine largest counties. This was not unexpected because the larger counties typically add the most new jobs. Twenty of the 22 jurisdictions that comprise the Washington, D.C., metropolitan area, added professional and business services jobs from the first quarter 1990 to first quarter 2005, the exceptions being Falls Church City, VA, and Warren County, VA. (See table 4.)

Forty-five percent of the gain in professional and business services in the Washington metropolitan area occurred in Fairfax County, which had added 103,925 of these jobs by the first quarter of 2005. Although the District of Columbia shed a large number of Federal Government jobs over the 15-year time span, it recorded the second-highest increase of professional and business services jobs, gaining 31,011, followed closely by Montgomery County, which added 29,696 jobs in this sector over this period. Growth in the remaining six largest counties ranged from 12,674 professional and business services jobs in Prince George's to 4,021 in Arlington County.

Although gains were widespread throughout the professional

Table 4. Employment in professional and business services by county for the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Employment					
	First quarter 1990	First quarter 2005	Net change 1990–2005	Percent change 1990–2005	Ranked by net change	Ranked by percent change
United States	10,167,155	16,352,710	6,185,555	60.8	...	...
Washington, DC-VA-MD-WV MSA	371,617	600,537	228,920	61.6	...	...
Alexandria City, VA	13,350	22,679	9,329	69.9	6	14
Arlington County, VA	34,993	39,014	4,021	11.5	9	20
Calvert County, MD	733	1,627	894	122.0	15	9
Charles County, MD	1,670	2,937	1,267	75.9	13	13
Clarke County, VA	235	294	59	25.1	20	18
District of Columbia	107,031	138,042	31,011	29.0	2	17
Fairfax City, VA	5,239	5,907	668	12.8	17	19
Fairfax County, VA	84,526	188,451	103,925	123.0	1	8
Falls Church City, VA	4,675	2,270	2,405	-51.4	22	22
Fauquier County, VA	1,023	1,831	808	79.0	16	12
Frederick County, MD	4,497	11,888	7,391	164.4	8	6
Fredericksburg City, VA	1,189	2,342	1,153	97.0	14	11
Jefferson County, WV	542	1,145	603	111.3	18	10
Loudoun County, VA	4,931	17,273	12,342	250.3	5	4
Manassas City, VA	2,120	4,759	2,639	124.5	10	7
Manassas Park City, VA	60	408	348	580.0	19	1
Montgomery County, MD	68,074	97,770	29,696	43.6	3	15
Prince George's County, MD	30,819	43,493	12,674	41.1	4	16
Prince William County, VA	3,296	11,530	8,234	249.8	7	5
Spotsylvania County, VA	529	2,262	1,733	327.6	12	2
Stafford County, VA	726	2,904	2,178	300.0	11	3
Warren County, VA	1,359	719	-640	-47.1	21	21

and business services supersector, the majority of the expansion occurred in one of its four sectors—professional, scientific, and technical services sector, particularly the computer systems and related services and management, scientific, and technical consulting services groups. (See table 5.) These industry groups are among the highest paid, drawing on highly educated and experienced workers to fill their ranks.

Specifically, the computer systems design and related services industry primarily provides expertise in the field of information technologies such as writing and testing computer software, designing computer systems, and managing a client's computer operations or data processing facilities. The management consulting services industry is largely involved in providing advice and assistance to businesses and other organizations on management issues, such as strategic planning; budgeting; marketing objectives; human resource policies; and production scheduling.

It is important to note that the job gains in computer systems design and management consulting in Fairfax County accounted for a large portion of the metropolitan area's growth in these industries. Fairfax added 31,771 computer systems design and related service jobs—three times the number added in the District

of Columbia, which is the jurisdiction with the second highest contribution of such jobs in the area. Likewise, Fairfax's addition of 21,134 technical consulting services positions was four times the expansion in the District. It should also be noted that none of the nine largest counties in the Washington area lost jobs in these two industry groups from 1990 to 2005.

Fairfax County also added between 5,000 and 8,500 jobs in five other industry groups: management of companies and enterprises; architectural, engineering, and related services; accounting, tax preparation, bookkeeping, and payroll services; scientific research and development services; and employment services during the 15-year time frame.

Other jurisdictions with notable gains included the District of Columbia (10,645 in computer systems design and related services and 5,261 in management, scientific, and technical consulting services) and Montgomery County (6,510 in computer systems design and related services, 5,663 in scientific research and development services and 5,553 in employment services).

In the remaining six large counties, no industry group added more than 5,000 jobs to its count over the 15-year time span.

Table 5. Net change from the first quarter 1990 to the first quarter 2005 in professional and business services by selected 4-digit industries for the nine largest counties in the Washington metropolitan area

NAICS	Industry	Jurisdiction			
		District of Columbia	Maryland		
			Frederick County	Montgomery County	Prince George's County
Professional, scientific, and technical services					
5411	Legal services	2,546	161	1,524	212
5412	Accounting, tax preparation, bookkeeping, and payroll services	-250	236	645	701
5413	Architectural, engineering, and related services	954	1,408	-3,151	303
5414	Specialized design services	-282	53	212	-154
5415	Computer system design and related services	10,645	799	6,510	3,658
5416	Management, scientific, and technical consulting services	5,261	507	2,841	640
5417	Scientific research and development services	1,624	655	5,663	361
5418	Advertising and related services	2,252	65	-361	-671
5419	Other professional, scientific, and technical services	766	500	985	-2,027
Management of companies and enterprises					
5511	Management of companies and enterprises	381	—	2,419	2,677
Administrative and support services					
5611	Office administrative support	969	601	1,092	1,443
5612	Facilities support services	942	—	-6	249
5613	Employment services	3,332	1,278	5,553	305
5614	Business support services	922	188	608	-168
5615	Travel arrangement and reservation services	-382	—	-350	-208
5616	Investigation and security services	4,921	—	2,260	2,814
5617	Services to buildings and dwellings	-1,833	702	4,174	1,634
5619	Other support services	-525	213	-1,088	1,073

NAICS	Industry	Jurisdiction				
		Virginia				
		Alexandria City	Arlington County	Fairfax County	Loudoun County	Prince William County
Professional, scientific, and technical services						
5411	Legal services	468	-484	2,987	284	97
5412	Accounting, tax preparation, bookkeeping, and payroll services	391	-369	7,216	-206	209
5413	Architectural, engineering, and related services	797	1,147	7,325	1,272	812
5414	Specialized design services	24	-67	302	39	53
5415	Computer system design and related services	1,507	375	31,771	4,463	1,260
5416	Management, scientific, and technical consulting services	1,404	1,150	21,134	1,301	423
5417	Scientific research and development services	909	1,665	7,146	—	—
5418	Advertising and related services	395	-81	414	532	231
5419	Other professional, scientific, and technical services	-566	266	1,205	474	303
Management of companies and enterprises						
5511	Management of companies and enterprises	439	1,002	8,482	745	563
Administrative and support services						
5611	Office administrative support	-79	-285	459	85	-3
5612	Facilities support services	—	1,160	1,521	—	—

Table 5. Continued—Net change from the first quarter 1990 to the first quarter 2005 in professional and business services by selected 4-digit industries for the nine largest counties in the Washington metropolitan area

NAICS	Industry	Jurisdiction				
		Virginia				
		Alexandria City	Arlington County	Fairfax County	Loudoun County	Prince William County
5613	Employment services	1,022	-596	5,117	569	-
5614	Business support services	203	-364	287	130	383
5615	Travel arrangement and reservation services	119	-368	-579	87	-
5616	Investigation and security services	272	-419	4,645	327	350
5617	Services to buildings and dwellings	1,731	533	4,288	1,938	1,630
5619	Other support services	-	-16	367	-	-

NOTE: Dash indicates data do not meet BLS or State agency disclosure standards.

Wages in professional and business services averaged \$1,342 a week in the Washington metropolitan area in the first quarter of 2005, an increase of \$723 over the 15-year period beginning in the first quarter of 1990. Of the 22 jurisdictions that comprise the Washington metropolitan area, only four—Fairfax County, Manassas City, the District of Columbia, and Arlington County—had a wage increase higher than the \$723 recorded for the metropolitan area as a whole from the 15-year period. (See table 6.) Loudoun County was also close to the average increase with a wage gain of \$711.

The four jurisdictions with the largest wage increases in professional and business services over the 15-year time span were also the highest paid in the Washington area in the first quarter of 2005, though the ranking did differ. Fairfax County was the highest paying jurisdiction with an average weekly rate of \$1,574. Arlington County recorded the second-highest average weekly wage, \$1,479, followed closely by the District of Columbia, \$1,471. Rounding out the top four was Manassas City with an average weekly wage of \$1,348, only \$6 higher than the \$1,342 reported for the metropolitan area as a whole. Four other jurisdictions also posted wages greater than \$1,000 a week—Alexandria City, Loudoun County, Montgomery County, and Fairfax City—in the Washington area in 2005.

Government. The government supersector is made up of publicly owned establishments—Federal, State, and local—that administer, oversee, and manage public programs and have executive, legislative, or judicial authority over other institutions within a given area. These agencies also set policy, create laws, adjudicate civil and criminal legal cases, provide for public safety and for national defense. Establishments such as public schools and public hospitals also are included in government. The information presented here refers to civilian employment only.

Employment in the public sector grew by nearly 25,000 in the Washington metropolitan area from the first quarter 1990 to the first quarter 2005 despite the District of Columbia shedding over 44,000 government jobs. The District was the

only jurisdiction in the Washington metropolitan area to lose both federal (-26,785) and State and local government (-17,347) jobs during this time period. In Arlington County, the addition of more than 2,500 State and local government jobs was not enough to overcome the loss of more than 6,000 federal jobs. As a result, Arlington was the only other jurisdiction in the metropolitan area to lose public sector jobs over the 15 years. (See table 7.)

With 2,715,801 civilian employees in the first quarter of 2005, the Federal Government was the Nation’s largest employer. Even though the headquarters of most federal departments and agencies are based in the Washington metropolitan area, it employed only 337,221, or one out of every eight federal workers, in 2005. The Federal Government might be the largest employer nationally, but it was just the second largest industry in the Washington metropolitan area—behind professional and business services—in the first quarter of 2005.

In 1990, employment levels for professional and business services and Federal Government were very similar, the difference being only 3,548 jobs. Fifteen years later, the gap between these two industries had widened to 263,316. While professional and business services added 228,920 jobs to its count, employment on federal payrolls fell by 30,848 in the Washington metropolitan area from 1990 to 2005, with 26,785, or 87 percent, of the loss occurring in the District of Columbia. Nationwide, 448,713 Federal Government jobs were lost over this same 15-year period. (See table 8.)

While the District shed the largest number of federal jobs, the area’s four largest counties also contributed to the declining federal workforce. Arlington County, where the Pentagon is headquartered, recorded the second-largest contraction of federal jobs, shedding 6,163 over the 15-year period. Prince George’s County dropped 2,049 federal positions, Montgomery, 1,475, and Fairfax 1,340.

These losses may be attributed, in part, to cost-cutting, the growth of private contractors, “out-sourcing,” and the devolution of some Federal Government activities.⁹

Table 6. Average weekly wages in professional and business services by county for the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Wages					
	First quarter 1990	First quarter 2005	Net change 1990-2005	Percent change 1990-2005	Ranked by net change	Ranked by percent change
United States	\$448	\$937	\$489	109.2	...	...
Washington, DC-VA-MD-WV MSA	619	1,342	723	116.8	...	...
Alexandria City, VA	636	1,205	569	89.5	6	14
Arlington County, VA	710	1,479	769	108.3	4	9
Calvert County, MD	393	688	295	75.1	19	19
Charles County, MD	494	787	293	59.3	20	21
Clarke County, VA	473	832	359	75.9	14	18
District of Columbia	659	1,471	812	123.2	3	7
Fairfax City, VA	808	1,094	286	35.4	21	22
Fairfax County, VA	655	1,574	919	140.3	1	4
Falls Church City, VA	530	991	461	87.0	11	16
Fauquier County, VA	430	965	535	124.4	9	6
Frederick County, MD	460	940	480	104.3	10	10
Fredericksburg City, VA	357	673	316	88.5	17	15
Jefferson County, WV	351	610	259	73.8	22	20
Loudoun County, VA	478	1,189	711	148.7	5	3
Manassas City, VA	464	1,348	884	190.5	2	1
Manassas Park City, VA	372	723	351	94.4	15	12
Montgomery County, MD	581	1,130	549	94.5	7	11
Prince George's County, MD	484	936	452	93.4	13	13
Prince William County, VA	397	853	456	114.9	12	8
Spotsylvania County, VA	381	693	312	81.9	18	17
Stafford County, VA	295	844	549	186.1	8	2
Warren County, VA	248	591	343	138.3	16	5

Table 7. Net change in government employment by county for the Washington metropolitan area, first quarter 1990 to first quarter 2005

County	Net change 1990-2005		
	Total Government	Federal Government	State and Local Government
Alexandria City, VA	3,267	1,413	1,854
Arlington County, VA	-3,545	-6,163	2,618
Calvert County, MD	1,972	55	1,917
Charles County, MD	867	-1,154	2,021
Clarke County, VA	283	-15	298
District of Columbia	-44,132	-26,785	-17,347
Fairfax City, VA	662	289	373
Fairfax County, VA	12,937	-1,340	14,277
Falls Church City, VA	2,627	2,466	161
Fauquier County, VA	476	-820	1,296
Frederick County, MD	5,271	825	4,446
Fredericksburg City, VA	938	69	869
Jefferson County, WV	979	161	818
Loudoun County, VA	9,913	1,954	7,959
Manassas City, VA	1,666	459	1,207
Manassas Park City, VA	246	-	-
Montgomery County, MD	4,583	-1,475	6,058
Prince George's County, MD	10,684	-2,049	12,733
Prince William County, VA	8,281	1,087	7,194
Spotsylvania County, VA	3,140	15	3,125
Stafford County, VA	2,978	90	2,888
Warren County, VA	464	28	436

NOTE: Dash indicates data do not meet BLS or State agency disclosure standards.

Table 8. Employment in the Federal Government by county for the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Employment					
	First quarter 1990	First quarter 2005	Net change 1990-2005	Percent change 1990-2005	Ranked by net change	Ranked by percent change
United States	3,164,514	2,715,801	-448,713	-14.2	...	...
Washington, D.C.-VA-MD-WV MSA	368,069	337,221	-30,848	-8.4	...	...
Alexandria City, VA	5,461	6,874	1,413	25.9	3	12
Arlington County, VA	39,148	32,985	-6,163	-15.7	20	18
Calvert County, MD	63	118	55	87.3	11	5
Charles County, MD	3,344	2,190	-1,154	-34.5	16	20
Clarke County, VA	51	36	-15	-29.4	14	19
District of Columbia	219,542	192,757	-26,785	-12.2	21	17
Fairfax City, VA	401	690	289	72.1	7	6
Fairfax County, VA	18,712	17,372	-1,340	-7.2	17	15
Falls Church City, VA	1,448	3,914	2,466	170.3	1	2
Fauquier County, VA	1,229	409	-820	-66.7	15	21
Frederick County, MD	2,358	3,183	825	35.0	5	8
Fredericksburg City, VA	229	298	69	30.1	10	10
Jefferson County, W.VA	569	730	161	28.3	8	11
Loudoun County, VA	1,839	3,793	1,954	106.3	2	4
Manassas City, VA	99	558	459	463.6	6	1
Manassas Park City, VA	(¹)	2	(¹)	(¹)	...	...
Montgomery County, MD	41,666	40,191	-1,475	-3.5	18	14
Prince George's County, MD	28,236	26,187	-2,049	-7.3	19	16
Prince William County, VA	3,429	4,516	1,087	31.7	4	9
Spotsylvania County, VA	33	48	15	45.5	13	7
Stafford County, VA	69	159	90	130.4	9	3
Warren County, VA	144	172	28	19.4	12	13

¹Data do not meet BLS or State agency disclosure standards.

However, federal employment was up in the four remaining large counties of Loudoun, Alexandria City, Prince William, and Frederick, though none of the increases exceeded 2,000 jobs during the 15-year span.

The percentage of Federal Government employment has declined in eight of the nine largest counties in the metropolitan area from 1990 to 2005; only Alexandria City saw its share of Federal Government workers increase over this period. The two counties employing the largest number of federal workers—the District of Columbia and Arlington—experienced declines of 3.5 and 4.4 percentage points, respectively, during the 15-year time span. (See chart 5.)

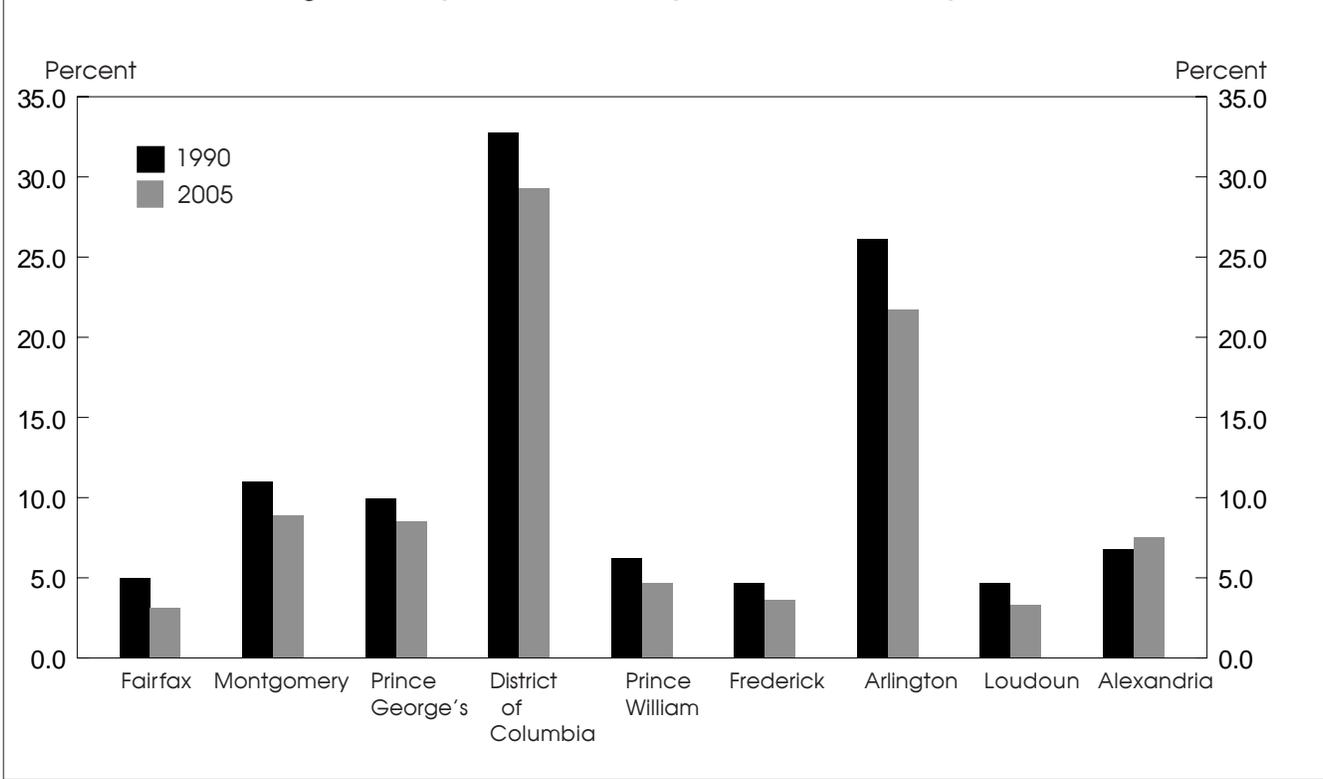
A closer examination of Federal Government employment using inner- and outer-ring analysis, similar to that used by Hoover and Vernon in their study of manufacturing employment in the New York, NY, metropolitan area, revealed an outward migration of the industry over time that was often based on such factors as the availability and cost of office space in high density areas, lower taxes, and improvements in transportation permitting easy access to alternative locations outside of the traditional central business district.¹⁰ (See chart 6.) The resulting trend over this 15-year period has been a decline in federal jobs in the District and an increase in private-sector jobs in the suburban counties. The majority of the outward shift in private-sector jobs occurred in Fairfax

County, leading to its establishment as a second job core within the Washington metropolitan area.

Wages in the Federal Government averaged \$1,550 a week in the Washington metropolitan area in the first quarter of 2005, an increase of \$864 over the 15-year period. Of the 22 counties that make up the Washington metropolitan area, only 5—Fauquier, Falls Church City, Montgomery, Prince George's, and Arlington—had wage increases higher than the metropolitan area average. (See table 8.) Fairfax City and the District of Columbia were also close to the average increase over this time span, with wage gains of \$861 and \$840, respectively.

Not only was the wage increase the largest in Fauquier, but the county had the highest wage level in Federal Government in the metropolitan area in 2005. At \$2,211, the average wage of federal employees in Fauquier surpassed second-ranked Montgomery County's by \$561. (See table 9.) The presence of the Federal Aviation Administration's Terminal Radar Approach Control (TRACON) center in Vint Hill Farms Station, VA, located approximately 35 miles southwest of the District of Columbia, accounted for the high-wage scale. This facility controls the air traffic for Andrews Air Force Base, Ronald Reagan-Washington National, Dulles International, and Baltimore/Washington International Thurgood Marshall Airports. The majority of workers at this center were air traffic controllers, which are

Chart 5. Percentage of Federal Government employment in the nine largest counties in the Washington metropolitan area, first quarter 1990 and first quarter 2005



typically among the highly skilled and highly paid in the Federal Government.

Of the nine largest counties, only two had federal wage levels exceeding the Washington metropolitan area average—Montgomery (\$1,650) and Arlington (\$1,645). As noted, these two counties are home to NIH and the Pentagon, both of which have cultivated well-paid technical workforces such as medical doctors and PhDs in a variety of fields (biology, chemistry, computer science, engineering, management, mathematics, and physics). Elsewhere among the largest counties, Federal Government wages in the District (\$1,547) were about equal to the area average, but those in Fairfax (\$1,430) fell \$120 short in 2005.

State and local government payrolls expanded by more than 55,000 workers in the Washington metropolitan area from 1990 to 2005. Growth on State and local government payrolls was dominated by the suburban counties, as these jurisdictions tried to keep pace with their increasing populations and their increased need for services. So, as the Federal Government has continued to downsize, State and local governments have stepped up their services and expanded their payrolls. The notable exception to this pattern was the District of Columbia

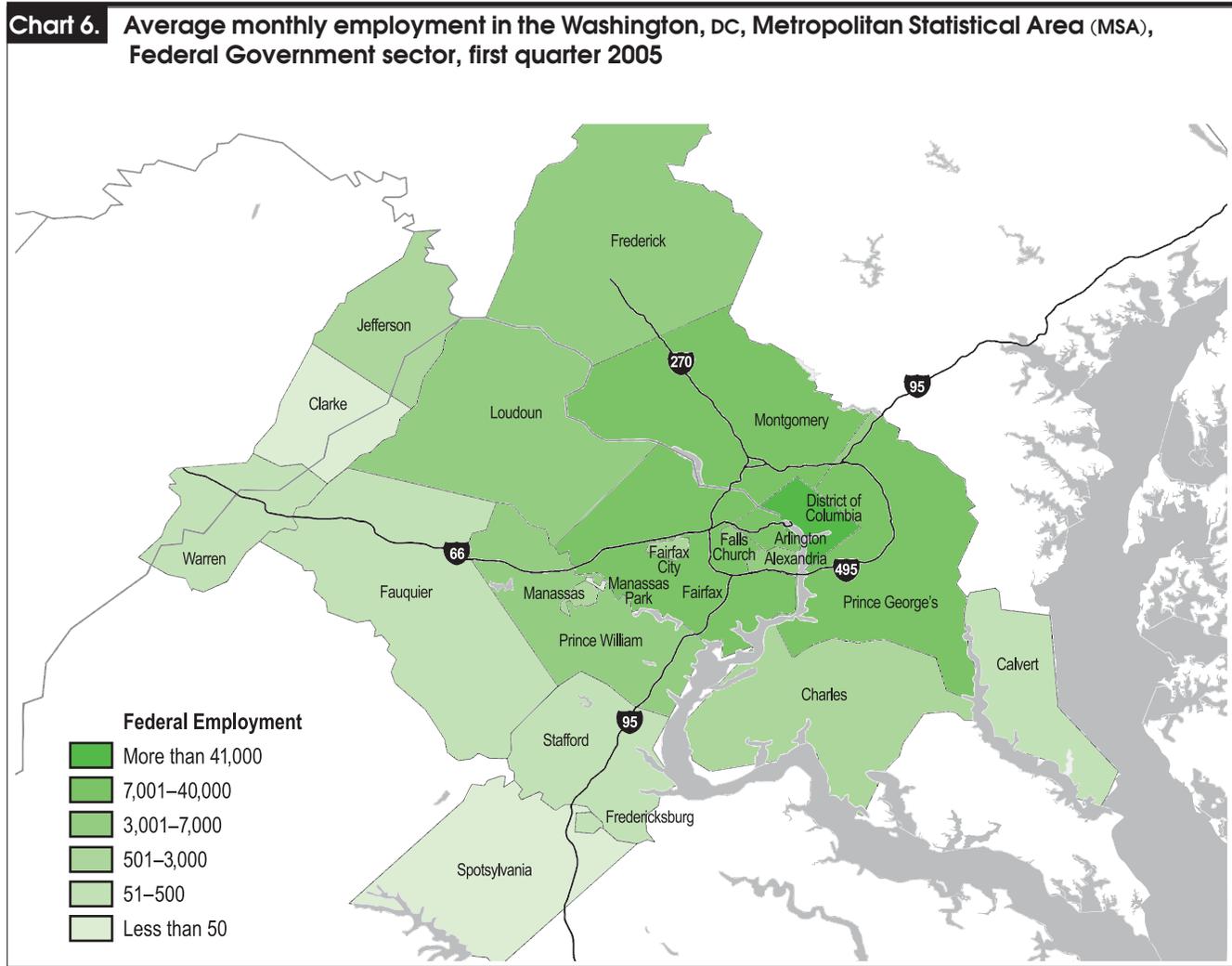
which lost 17,347 local government jobs during the period under study.

Fairfax and Prince George's Counties led the way over the 15-year time span with the addition of 14,277 and 12,733 jobs, respectively. (See table 7.) Growth in State and local government jobs was strong in other counties, though the actual number of new jobs dropped off considerably. Loudoun County added 7,959 new jobs, Prince William (7,194), Montgomery (6,058), and Frederick (4,446).

Growth was also noteworthy in some of the exurban counties of the metropolitan area as demands for community and social services, health services, and protective services, increased to accommodate the needs of individuals moving into these more rural jurisdictions. For example, Spotsylvania County added 3,125 jobs and Stafford County added 2,888 jobs over the 15-year period.

Other supersectors

In addition to professional and business services, other industry supersectors have contributed to the job growth in



the Washington metropolitan area, changing the industry distribution of the workforce over the 15-year period. The following tabulation shows the change in employment distribution by industry in the Washington metropolitan area.¹¹

	1990	2005
Construction	6.3	6.2
Trade, transportation, and utilities	16.0	14.0
Information	4.0	3.6
Financial activities	5.9	5.5
Professional and business services	16.5	21.6
Educational and health services	8.5	10.4
Leisure and hospitality	7.7	8.5
Other services	4.9	5.2
Government		
Federal	16.4	10.1
State and local	12.2	10.2
Other supersectors	3.8	2.8

Employment gains in Fairfax County were again among the largest in most of these industries.

Educational and health services. Employment in educational and health services grew by almost 97,000 in the Washington metropolitan area from the first quarter 1990 to the first quarter 2005, with more than four-fifths of these new jobs located in the nine largest counties. (See table 10.) Montgomery County and Fairfax County led the way with the addition of 23,237 and 22,515, respectively. The District of Columbia added 10,993 new educational and health services jobs. Job gains in the remaining six largest counties ranged from 7,477 in Prince George’s County to 680 in Alexandria City. Of the area’s 22 jurisdictions, only one, the exurban county of Clarke, lost jobs in educational and health services during the 15-year time span.

Leisure and hospitality. Employment in leisure and hospitality grew by 61,738 in the Washington metropolitan

Table 9. Average weekly wages in the Federal Government by county for the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Wages					
	First quarter 1990	First quarter 2005	Net change 1990–2005	Percent change 1990–2005	Ranked by net change	Ranked by percent change
United States	\$580	\$1,138	\$558	96.2	...	...
Washington, DC-VA-MD-WV MSA	686	1,550	864	125.9	...	...
Alexandria City, VA	735	1,547	812	110.5	8	15
Arlington County, VA	730	1,645	915	125.3	5	8
Calvert County, MD	678	1,031	353	52.1	21	21
Charles County, MD	593	1,297	704	118.7	12	11
Clarke County, VA	622	1,058	436	70.1	17	19
District of Columbia	707	1,547	840	118.8	7	10
Fairfax City, VA	560	1,421	861	153.8	6	5
Fairfax County, VA	640	1,430	790	123.4	9	9
Falls Church City, VA	579	1,568	989	170.8	2	2
Fauquier County, VA	678	2,211	1,533	226.1	1	1
Frederick County, MD	524	1,289	765	146.0	11	7
Fredericksburg City, VA	584	971	387	66.3	19	20
Jefferson County, WV	486	1,026	540	111.1	16	14
Loudoun County, VA	762	1,532	770	101.0	10	16
Manassas City, VA	405	1,073	668	164.9	13	3
Manassas Park City, VA	(¹)	1,258	(¹)	(¹)	...	...
Montgomery County, MD	670	1,650	980	146.3	3	6
Prince George's County, MD	566	1,486	920	162.5	4	4
Prince William County, VA	474	1,036	562	118.6	15	12
Spotsylvania County, VA	480	834	354	73.8	20	18
Stafford County, VA	480	894	414	86.3	18	17
Warren County, VA	535	1,130	595	111.2	14	13

¹ Data do not meet BLS or State agency disclosure standards.

area from 1990 to 2005, spurred on by the demands of a growing population and the income generated by the large number of dual-income families. Nearly four-fifths of these new jobs were located in the nine largest counties. (See table 10.) Fairfax led the way over this 15-year period with the addition of 14,818 jobs. Loudoun was second with 6,974 jobs, followed by Montgomery, which added 6,773. Growth in the remaining six large counties ranged from 4,898 in Prince William to 1,436 in Alexandria City.

Other services. Employment in the other services sector grew by 35,192 in the Washington metropolitan area from the first quarter 1990 to the first quarter 2005, with 60 percent of these jobs located in three of the four largest counties—the District of Columbia (9,895), Fairfax (5,820) and Montgomery (5,417). (See table 10.) The remaining county of Prince George's shed jobs over the 15-year period, though losses numbered less than 600. (The other services supersector is engaged in a wide variety of activities including equipment and machinery repairing, grantmaking, advocacy, and providing dry cleaning and laundry services, and personal care services.)

Four out of the five remaining largest counties—Alexandria City, Arlington, Loudoun, and Frederick—each added more than 1,000 but less than 3,500 jobs to their counts. Prince William County and most of the smaller jurisdictions in the Washington

metropolitan area added less than 1,000 other services jobs to their counts over this 15-year span.

Construction. The Washington metropolitan area was among the fastest growing areas in the Nation, and the construction industry contributed to this growth with the addition of nearly 30,000 jobs to its payrolls from 1990 to 2005, with most of the increase occurring in the outer suburban counties.

Loudoun and Prince William Counties led the way over this 15-year period, with the addition of 7,324 and 7,132 jobs, respectively. Prince George's County added 4,486 new construction jobs and Frederick County, 3,910. With the exception of Prince George's, the three other growth leaders were located on the outer edge of the suburban ring. The five remaining large counties—Arlington, the District, Fairfax, Alexandria City, and Montgomery—either lost jobs or were little changed from 1990 to 2005.

Trade, transportation, and utilities. Trade, transportation, and utilities was the third largest supersector in the Washington metropolitan area, composing 14 percent of the workforce in 2005. Employment in trade, transportation, and utilities grew by 28,510 in the Washington metropolitan area from 1990 to 2005, despite shedding more than 24,000 jobs in the District of Columbia and Prince George's County. (See table 11.)

Table 10. Employment in the educational and health services and leisure and hospitality supersectors for the nine largest counties in the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Educational and health services		Leisure and hospitality	
	First quarter 1990	First quarter 2005	First quarter 1990	First quarter 2005
Alexandria City, VA	7,142	7,822	7,290	8,726
Arlington County, VA	7,763	11,175	12,074	14,860
District of Columbia	73,373	84,366	47,063	51,154
Fairfax County, VA	24,330	46,845	26,358	41,176
Frederick County, MD	4,791	10,084	4,264	7,805
Loudoun County, VA	2,406	7,203	2,878	9,852
Montgomery County, MD	32,968	56,205	30,549	37,322
Prince George's County, MD	18,182	25,659	20,887	24,209
Prince William County, VA	2,741	7,074	6,026	10,924

Table 11. Employment in selected supersectors for the nine largest counties in the Washington metropolitan area, first quarter 1990 and first quarter 2005

County	Other services		Construction		Trade, transportation, and utilities		Financial activities		Information	
	First quarter 1990	First quarter 2005	First quarter 1990	First quarter 2005	First quarter 1990	First quarter 2005	First quarter 1990	First quarter 2005	First quarter 1990	First quarter 2005
Alexandria City, VA	6,929	10,182	4,133	3,898	16,674	13,246	7,423	6,420	3,208	1,931
Arlington County, VA	5,531	8,411	4,222	2,773	22,359	19,631	7,849	7,259	6,470	5,227
District of Columbia	44,360	54,255	13,611	12,339	39,781	26,737	33,863	26,865	25,783	22,712
Fairfax County, VA	14,009	19,829	31,544	31,207	72,753	77,845	23,139	33,790	22,518	30,966
Frederick County, MD	1,592	3,030	6,200	10,110	10,179	16,052	3,333	7,888	711	1,534
Loudoun County, VA	1,266	3,835	5,404	12,728	10,271	29,052	1,181	3,728	839	10,182
Montgomery County, MD	15,981	21,398	27,699	27,943	60,987	63,540	30,543	35,850	21,036	14,822
Prince George's County, MD	10,585	10,078	25,279	29,765	73,697	62,568	15,162	13,532	5,841	6,282
Prince William County, VA	2,117	3,009	6,820	13,952	14,014	21,841	2,448	3,332	1,329	1,196

Job growth in trade, transportation, and utilities was dominated by the outer suburban counties, in particular Loudoun, which added 18,781 jobs over the 15-year period. Employment gains in the trade subdivision, especially other general merchandise stores, grocery stores, clothing stores, and automobile dealers, contributed most to the increase in the trade, transportation, and utilities payrolls in Loudoun County.

Prince William (7,827), Frederick (5,873), and Fairfax (5,092) Counties also had reasonably strong growth over the 15-year time span. Growth in Prince William was led by the expansion in clothing stores and other general merchandise stores, whereas the addition to grocery stores payrolls guided the way in Frederick. Increases in employment levels for grocery stores, home furnishing stores, and building material and supplies dealers were mainly responsible for the advance in Fairfax.

The District of Columbia and Prince George's County, by contrast, experienced relatively sharp employment losses from 1990 to 2005, dropping 13,044 and 11,129 jobs, respectively. In the District of Columbia, the reductions in department stores and clothing stores contributed most to the decline, while waning payrolls in grocery stores and health and personal care stores led the way in Prince George's.

Financial activities. Employment in the financial activities supersector grew by more than 20,500 in the Washington metropolitan area from the first quarter 1990 to the first quarter 2005. Fairfax County led the way with the addition of 10,651 jobs. Three other counties—Montgomery, Frederick, and Stafford (one of which was in the exurbs), added between 4,000 and 5,500 jobs. Rounding out the top five in growth was Loudoun County with the addition of more than 2,500 financial activities jobs over this 15-year period.

Information. Four of the large jurisdictions lost jobs in the financial activities supersector, led by the District of Columbia (–6,998). Prince George's, Alexandria City, and Arlington, all had employment declines of less than 2,000.

Employment in the information supersector grew by around 8,000 in the Washington metropolitan area over the 15-year span, and most of this growth occurred during the 1990's. This industry has yet to make a full recovery from the impact of the last recession (March 2001 through November 2001¹²), as evidenced by the continuing losses or small gains that have occurred in most of the counties.

Growth in the information supersector was largely limited to the counties of Loudoun and Fairfax. Even with substantial job losses from the downturn in 2001, Loudoun county added

9,343 jobs and Fairfax added 8,448, during the 15-year period. No other jurisdiction in the Washington metropolitan area added more than 1,000 information jobs over this time span.

But there were losses. Montgomery County (-6,214) shed the largest number of information jobs, followed by the District of Columbia (-3,071). Alexandria City and Arlington County each lost more than 1,000 jobs from 1990 to 2005.

Conclusion

Along with professional and business services, seven other supersectors in private industry in the Washington metropolitan area contributed to its expanding job market from 1990 to 2005. Of the 22 jurisdictions making up the metropolitan area, Fairfax County ranked first or second in job growth in every private-industry supersector except trade, transportation, and utilities and construction. By contrast, the number of private-sector jobs

added in the District of Columbia over this time span could not offset the large losses sustained in the public sector.

Despite the loss of federal positions in the District, the seat of power for the executive, legislative, and judicial branches of the Federal Government will continue to be based in the urban core, and this will continue to have a far-reaching impact on the surrounding counties where numerous jobs have arisen in support of government operations. A strong case could be made that the explosion of jobs in the professional and business services sector in the suburban county of Fairfax has created another core area of employment apart from the traditional central business district of the District of Columbia, but it has not replaced it. As we have seen, these two jurisdictions are not independent of each other, but rather supportive of one another, providing alternative environments to foster and enhance business development throughout the metropolitan area.



Notes

ACKNOWLEDGMENTS: The authors wish to thank the Mid-Atlantic Information office staff (Ann Freely, Thomas McGettigan, Cassidy Canzani, and Michael Dickie) and Jim Rice on the national office QCEW staff for gathering data. The authors would also like to send a special thanks to the State of Missouri Economic Research and Information Center (MERIC) staff (Jeff Drake and Elizabeth Retherford) for their preparation of several charts.

¹ The Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area (MSA) is comprised of 22 counties: the District of Columbia; Arlington, Clarke, Fairfax, Fauquier, Loudoun, Prince William, Spotsylvania, Stafford, and Warren Counties, and Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas, and Manassas Park Cities in Virginia; Calvert, Charles, Frederick, Montgomery, and Prince George's Counties in Maryland; and Jefferson County in West Virginia. Though the "county" designation in the MSA applies to the District of Columbia and the cities of Alexandria, Fairfax, Falls Church, Fredericksburg, Manassas and Manassas Park, "jurisdiction" was often substituted, especially when referring to a mix of counties and cities.

² The District of Columbia is designated a county in the Quarterly Census of Employment and Wages (QCEW) program, the foundation on which this article rests. The QCEW, a cooperative program involving the Bureau of Labor Statistics (BLS) and the various State Workforce Agencies (SWAs), provides employment and wage data for workers covered by State Unemployment Insurance (UI) laws that are compiled from quarterly contribution reports submitted to the SWAs by employers. For federal civilian workers covered by the Unemployment Compensation for Federal Employees (UCFE) program, employment and wage data are compiled from quarterly reports that are sent to the appropriate SWA by the specific federal agency. The employment and wage data used in this article are derived from microdata summaries of more than 8 million employer reports of employment and wages submitted by States to BLS. These reports are based on place of employment rather than place of residence.

³ The authors have defined three geographic categories in the Washington metropolitan area based on the following criteria: population, employment, and commuting patterns. The core, though generally defined as the urban central business district of a metropolitan area, in this case,

the District of Columbia, has been expanded to include a second county—Fairfax County, VA—due to its increased population density, rapid job expansion, and influx of workers from outside the county over the 15-year time span; the suburban counties, or inner ring, contain seven large counties (Frederick County, MD; Montgomery County, MD; Prince George's County, MD; Alexandria City, VA; Arlington County, VA; Loudoun County, VA; and Prince William County, VA), four independent cities (Fairfax City, VA; Falls Church City, VA; Manassas City, VA; and Manassas Park City, VA) surrounded by these counties, and the less populous Charles County, MD; and the exurban counties, or outer ring, contain the eight jurisdictions more on the periphery of the core areas (Calvert County, MD, Clarke County, VA.; Fauquier County, VA; Fredericksburg City, VA; Spotsylvania County, VA; Stafford County, VA; Warren County, VA; and Jefferson County, WV).

⁴ Under the North American Industry Classification System (NAICS), the industrial composition and organization of industries is defined by the type of activity, or sector, they are engaged in. For purposes of analysis, the Bureau of Labor Statistics has further aggregated NAICS sectors into groupings called "supersectors" of which there are 11: natural resources and mining; construction; manufacturing; trade, transportation, and utilities; information; financial activities; professional and business services; educational and health services; leisure and hospitality; other services; and government.

⁵ There are nine large counties in the Washington-Arlington-Alexandria, DC-VA-MD-WV Metropolitan Statistical Area (MSA) with employment of 75,000 or more: the District of Columbia; Arlington, Fairfax, Loudoun, Prince William Counties and Alexandria City in Virginia; Frederick, Montgomery, and Prince George's Counties in Maryland.

⁶ The Bureau of Labor Statistics has installed a powerful tool, the Location Quotient Calculator, on its Web site which greatly aids labor market analysis by generating location quotients—the ratio of analysis-industry employment in the analysis area to base-industry employment in the analysis area divided by the ratio of analysis-industry employment in the base area to base-industry employment in the base area. To access the Location Quotient Calculator, visit the Bureau's Web site at: <http://www.bls.gov/CEW>.

⁷ Data from the U.S. Census Bureau Web site: <http://www.census.gov/population/www/cen2000/commuting.html> (visited May 2005).

⁸ Edgar M. Hoover and Raymond Vernon, *Anatomy of a Metropolis: The Changing Distribution of People and Jobs within the New York Metropolitan Region* (Cambridge, MA, Harvard University Press, 1959), ch. 6, p. 127.

⁹ *Career Guide to Industries*, 2006–07 Edition, Bulletin 2601 (Bureau of Labor Statistics, February 2006). Also available on the Internet at www.bls.gov/oco/cg/home.htm.

¹⁰ Hoover and Vernon, *Anatomy of a Metropolis*, ch. 2, pp. 25–61.

¹¹ Other industries include the manufacturing and natural resources and mining supersectors, which were not covered in this article due to lack of detailed data for a number of counties in the Washington metropolitan area.

¹² Time period established by the National Bureau of Economic Research (NBER). The NBER does not define a recession in terms of two consecutive quarters of decline in real GDP. Rather, a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

Change in employment by occupation, industry, and earnings quartile, 2000–05

An examination of employment changes in occupations and industries by earnings quartiles provides new insight into distinguishing between higher paying “good” jobs and lower paying “bad” jobs

By Randy E. Ilg

The aftermaths of the last two recessions were marked by at least two similarities—the anemic pace of job growth and dissension among data users and policy makers alike regarding the quality of jobs that were being created once the labor market began to expand. From mid- to late-2004, a number of articles on the quality of jobs surfaced. These reports usually associated a particular industry or occupational category with their respective relative earnings (either the mean or median earnings figure) as the criteria for distinguishing between “good jobs” and “bad jobs.” Many of the articles cited employment and earnings data produced by the Bureau of Labor Statistics (BLS). Most of the attempts to measure the quality of new jobs focused on changes in industry employment, as measured by the Current Employment Statistics survey (CES or establishment survey) or on occupational data from the Current Population Survey (CPS or household survey).

This article approaches the subject from the perspective of how the composition of industry or occupational employment changed across the earnings spectrum. Determining where employment growth (or decline) occurred in the earnings distribution adds another dimension to the analysis of the nature of job growth. Many industries and occupations possess extensive earnings distributions, and assessments that base the “quality of jobs” in a particular industry or occupation on a single earnings figure (either mean or median) are somewhat problematic. For example, the median weekly earnings figures for

construction and manufacturing workers have been consistently higher than the median wage for all wage and salary workers. Based on a single earnings estimate (the median earnings figure for the particular industry) and given the labor market developments over the past few years in these industries, it would not be unreasonable to assume that jobs paying more than the overall median wage were created in construction and lost in manufacturing.

An examination of CPS employment data from 2000–2005 by earnings quartiles, however, indicates that most of the employment growth in construction occurred in jobs that paid less than the median weekly wage for all wage and salary workers (\$577 in 2005). In manufacturing, where job loss from 2000 to 2005 totaled 3.3 million, factory employment declined across the entire range of earnings quartiles. Furthermore, CPS data show that women accounted for nearly all of the net employment growth above the overall median wage, whereas men accounted for most of the net growth below the median.

Methodology

In this analysis of job growth, wage and salary employment from the CPS for 2000 and 2005 were tabulated by occupation and by industry from the outgoing rotation groups in the CPS sample.¹ These data were further partitioned into four fairly equal-sized groups based on weekly earnings quartiles. Quartiles, as referred to in this study, adhere to the following properties: The upper limit of earnings for the first quartile is the

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level for which 25 percent of the population of employed wage and salary workers has lower earnings, and 75 percent have higher earnings. The cutoff value for the lowest-paid quarter of employment in 2000 was \$303. The upper limit of the second quartile (\$498), also referred to as the median, evenly divided employment.² Table 1 displays the earnings values (cutoffs) that nearly evenly divided occupational employment of wage and salary workers in 2000 into four groups of 30.5 million each. The upper limit of the third quartile (\$782) is the level for which 75 percent of the population had lower earnings, and 25 percent had higher earnings. The upper limit of the fourth quartile is the level for which 100 percent of the population had lower earnings. This figure also is the highest level of earnings reported. For reasons of confidentiality, the estimate is not available in public use microdata files, nor is it presented in this analysis because it is not needed to determine the level of employment.

Data for 2005 also were partitioned in this manner but were based on the corresponding earnings figures for that particular year, rather than the earnings figures used to divide employment in 2000. (Nominal earnings seldom remain the same year after year.) The change in occupational employment from 2000 to 2005 was calculated and recorded in the bottom third of table 1. Employment data by intermediate industry detail for 2000 and 2005 are shown in a similar format in table 2. The tabulations are structured such that they can be examined for the change in employment by occupation or by industry as well as the change for a given earnings quartile, an integral part of this analysis. Tables 3 and 4 provide the distribution of employment by occupation or industry for each earnings quartile.

It is important to note that the methodology and data set used in this analysis combine to offer a new approach in assessing the nature of job growth. Any overall conclusion or interpretation of whether most net “new” jobs were “good” jobs or “bad” jobs is constrained by the nature of quartiles and medians; that is, half of the employment growth occurred above the median and half below.

Occupational employment changes

From 2000–2005, wage and salary employment (as measured by the CPS) grew by 3.8 million. From an occupational perspective, employment in service occupations accounted for the bulk of the net increase, 2.3 million.³ Elsewhere, employment rose by about 1.9 million in professional and related occupations and by nearly 1.3 million in natural resources, construction, and maintenance occupations. In addition, employment among management, business, and financial operations occupations increased by 845,000. In contrast to the employment gains in these four broad occupational groups, wage and salary employment declined

by more than 2 million in production occupations and by nearly a million in office and administrative support occupations. (See table 1.)

Most of the employment growth in service occupations (2.3 million) took place in three intermediate occupation groups: food preparation and serving related occupations (793,000), healthcare support occupations (625,000), and personal care and service occupations (442,000). The bulk of employment growth in those three categories (over 80 percent) occurred in jobs that paid below the overall median weekly earnings figure of \$577 in 2005. As a result, the share of employment that consisted of service occupations in the lower earnings quartiles increased dramatically, by 1.7 percentage points in the second quartile and by nearly 3 percentage points in the bottom quartile. Despite substantial employment growth in service occupations over the 5-year period, a relatively small part (381,000) of that increase occurred in jobs paying above the overall median wage. (See tables 1 and 3.)

The net employment gain of 1.9 million among professional and related occupations principally occurred in education, training, and library occupations (852,000) and in healthcare practitioner and technical occupations (826,000). Three-quarters of the growth in these two intermediate occupations (1.3 million) occurred in jobs that paid more than the overall median wage of \$577. Thus, employment shares for professional and related occupations rose in the third quartile and the highest quartile by 1.1 and 1.5 percentage points, respectively. Not all professional and related occupations contributed to job growth, however. An employment decline of 281,000 in architecture and engineering occupations resulted in decreased shares of employment for those occupations primarily in earnings quartiles above the overall median weekly wage.

Nearly all of the increase in wage and salary employment among natural resources, construction, and maintenance occupations (1.3 million) occurred in construction and extraction occupations (1.1 million). However, most of that employment growth (about a million) was in jobs that paid below the median weekly wage, rather than above it. Thus, the share of employment made up of construction and extraction occupations in earnings quartiles below the median also rose, by about 1.7 percentage points in the second quartile and by 1.2 percentage points in the bottom quartile. In contrast, most of the employment growth in management, business, and financial operations occupations (845,000) occurred in jobs that paid above the overall median wage.

Over the 2000–2005 period, the large decline in wage and salary employment in production occupations (–2.1 million) occurred across all earnings quartiles and resulted in fairly equal decreases in these occupations’ shares of employment in each earnings quartile. Those declining shares ranged from

Table 1. Employed wage and salary workers by occupation and earnings quartile in 2000 and 2005 and change in employment from 2000 to 2005

[Numbers in thousands]

Occupation	Total employed, 2000	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$303	\$498	\$782	(¹)
Total employed	122,089	30,519	30,525	30,521	30,524
Management, business, and financial operations occupations	15,110	982	1,905	4,023	8,200
Management occupations	10,497	669	1,194	2,499	6,135
Business and financial operations occupations	4,613	313	712	1,524	2,065
Professional and related occupations	24,420	3,148	3,784	7,039	10,449
Computer and mathematical occupations	3,194	129	267	799	1,998
Architecture and engineering occupations	2,874	86	259	685	1,843
Life, physical, and social science occupations	1,111	100	156	326	528
Community and social services occupations	1,908	267	453	641	547
Legal occupations	1,140	81	153	288	619
Education, training, and library occupations	6,961	1,494	1,125	2,014	2,329
Arts, design, entertainment, sports, and media occupations	1,884	381	333	514	656
Healthcare practitioner and technical occupations	5,349	610	1,038	1,771	1,929
Service occupations	18,748	9,694	5,321	2,458	1,275
Healthcare support occupations	2,346	1,008	969	298	72
Protective service occupations	2,552	504	625	718	705
Food preparation and serving related occupations	6,568	4,335	1,602	485	146
Building and grounds cleaning and maintenance occupations	4,351	2,128	1,440	603	180
Personal care and service occupations	2,931	1,719	685	354	172
Sales and office occupations	33,000	10,302	9,966	8,080	4,652
Sales and related occupations	13,140	5,126	2,718	2,597	2,699
Office and administrative support occupations	19,860	5,176	7,248	5,484	1,953
Natural resources, construction, and maintenance occupations	11,621	1,734	3,098	3,829	2,961
Farming, fishing, and forestry occupations	1,021	576	297	108	40
Construction and extraction occupations	6,189	759	1,765	2,063	1,602
Installation, maintenance, and repair occupations	4,411	398	1,035	1,658	1,318
Production, transportation, and material moving occupations	19,190	4,659	6,452	5,092	2,987
Production occupations	11,062	2,365	3,914	3,046	1,739
Transportation and material moving occupations	8,128	2,294	2,538	2,046	1,249
Occupation	Total employed, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$342	\$577	\$915	(¹)
Total employed	125,889	31,470	31,473	31,473	31,474
Management, business, and financial operations occupations	15,955	995	2,060	4,343	8,557
Management occupations	10,921	659	1,249	2,664	6,349
Business and financial operations occupations	5,034	336	811	1,679	2,208
Professional and related occupations	26,271	3,462	3,963	7,607	11,239
Computer and mathematical occupations	3,067	103	242	712	2,011
Architecture and engineering occupations	2,593	83	228	623	1,659
Life, physical, and social science occupations	1,305	114	163	387	642
Community and social services occupations	2,100	325	470	721	584
Legal occupations	1,261	86	161	325	690
Education, training, and library occupations	7,813	1,653	1,304	2,351	2,505
Arts, design, entertainment, sports, and media occupations	1,957	442	325	527	663
Healthcare practitioner and technical occupations	6,175	656	1,072	1,962	2,486
Service occupations	21,074	10,930	6,030	2,735	1,379
Healthcare support occupations	2,971	1,323	1,197	359	93
Protective service occupations	2,843	526	723	783	811
Food preparation and serving related occupations	7,361	4,921	1,726	562	152
Building and grounds cleaning and maintenance occupations	4,525	2,285	1,488	583	169
Personal care and service occupations	3,373	1,875	896	448	154
Sales and office occupations	32,541	9,861	9,776	8,054	4,849
Sales and related occupations	13,630	5,110	2,840	2,677	3,002
Office and administrative support occupations	18,911	4,751	6,936	5,377	1,847
Natural resources, construction, and maintenance occupations	12,907	2,055	3,813	4,181	2,858
Farming, fishing, and forestry occupations	898	433	313	109	43
Construction and extraction occupations	7,296	1,161	2,348	2,267	1,521
Installation, maintenance, and repair occupations	4,713	462	1,152	1,806	1,294
Production, transportation, and material moving occupations	17,142	4,167	5,831	4,551	2,592
Production occupations	9,007	1,876	3,230	2,515	1,385
Transportation and material moving occupations	8,135	2,291	2,601	2,036	1,207

See footnote at end of table.

Table 1. Continued—Employed wage and salary workers by occupation and earnings quartile in 2000 and 2005 and change in employment from 2000 to 2005

[Numbers in thousands]

Occupation	Change in employment, 2000–2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Total	3,800	951	948	952	950
Management, business, and financial operations occupations	845	13	155	320	357
Management occupations	424	-10	55	165	214
Business and financial operations occupations	421	23	99	155	143
Professional and related occupations	1,851	314	179	568	790
Computer and mathematical occupations	-127	-26	-25	-87	13
Architecture and engineering occupations	-281	-3	-31	-62	-184
Life, physical, and social science occupations	194	14	7	61	114
Community and social services occupations	192	58	17	80	37
Legal occupations	121	5	8	37	71
Education, training, and library occupations	852	159	179	337	176
Arts, design, entertainment, sports, and media occupations	73	61	-8	13	7
Healthcare practitioner and technical occupations	826	46	34	191	557
Service occupations	2,326	1,236	709	277	104
Healthcare support occupations	625	315	228	61	21
Protective service occupations	291	22	98	65	106
Food preparation and serving related occupations	793	586	124	77	6
Building and grounds cleaning and maintenance occupations	174	157	48	-20	-11
Personal care and service occupations	442	156	211	94	-18
Sales and office occupations	-459	-441	-190	-26	197
Sales and related occupations	490	-16	122	80	303
Office and administrative support occupations	-949	-425	-312	-107	-106
Natural resources, construction, and maintenance occupations	1,286	321	715	352	-103
Farming, fishing, and forestry occupations	-123	-143	16	1	3
Construction and extraction occupations	1,107	402	583	204	-81
Installation, maintenance, and repair occupations	302	64	117	148	-24
Production, transportation, and material moving occupations	-2,048	-492	-621	-541	-395
Production occupations	-2,055	-489	-684	-531	-354
Transportation and material moving occupations	7	-3	63	-10	-42

¹ For reasons of confidentiality, the upper limit of earnings is not available in public use files.

NOTE: Data may not sum to totals due to rounding.

negative 2.6 percentage points in the second quartile to negative 1.3 percentage points in the highest quartile. There is a close association between production occupations and production workers in the manufacturing industry. In the industry employment discussion, similarly large employment declines in manufacturing will be noted.

From 2000 to 2005, employment also declined among office and administrative support occupations (-949,000), mostly in jobs that paid less than the overall median wage. While shares of employment declined across all earnings quartiles for that occupation group, the decreases were substantially larger in the bottom two quartiles. (See tables 1 and 3.)

Industry employment changes

From an industry standpoint, wage and salary employment in education and health services increased by 3.0 million over the 2000–2005 period. Construction employment expanded by more than 1 million, and employment in retail trade and in food services and drinking places each rose by about three-quarters of a million. Employment in financial activities

increased by about 600,000 during the 2000–05 period, and employment in public administration rose by a little more than half a million. A number of industries sustained employment decreases, some quite severe. Manufacturing employment declined by 3.3 million over the period, with slightly more than 2 million in the durable goods component. Employment in the information sector also declined, by about 660,000. (See table 2.)

Within education and health services, employment in health services, except hospitals, rose by 1.2 million, with the gain distributed fairly equally across all earnings quartiles. Employment also expanded in hospitals, primarily in the higher paying earnings quartiles. In educational services, employment increased by nearly 1 million—also mainly in jobs that paid above the overall median weekly wage.

The employment increase of more than 1 million in the construction industry was consistent with employment gains in the corresponding construction and extraction occupations. Most of the employment growth in the construction industry occurred in jobs that paid less than the overall median, and shares of construction employment in the lower

Table 2. Employed wage and salary workers by industry and earnings quartile in 2000 and 2005 and change in employment from 2000 to 2005

[Numbers in thousands]

Industry	Total employed, 2000	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$303	\$498	\$782	(¹)
Total employed	122,089	30,519	30,525	30,521	30,524
Agriculture and related industries	1,307	626	364	210	108
Mining	451	33	72	154	191
Construction	7,437	923	2,056	2,406	2,052
Manufacturing	18,940	2,542	5,304	5,340	5,754
Durable goods manufacturing	12,017	1,286	3,265	3,520	3,946
Nondurable goods manufacturing	6,923	1,255	2,039	1,820	1,809
Wholesale and retail trade	17,995	6,706	4,704	3,723	2,863
Wholesale trade	3,693	636	1,009	1,080	969
Retail trade	14,302	6,070	3,695	2,643	1,894
Transportation and utilities	6,946	937	1,509	2,223	2,278
Transportation and warehousing	5,655	855	1,287	1,856	1,657
Utilities	1,292	83	222	367	620
Information	3,782	567	732	995	1,487
Financial activities	8,243	1,293	2,108	2,262	2,580
Finance and insurance	6,121	764	1,521	1,722	2,115
Real estate and rental and leasing	2,122	529	588	539	465
Professional and business services	10,892	2,208	2,560	2,512	3,612
Professional and technical services	6,555	760	1,111	1,635	3,049
Management, administrative, and waste services	4,337	1,448	1,449	877	563
Education and health services	24,697	6,354	6,066	6,391	5,886
Educational services	10,977	2,721	2,059	2,973	3,224
Health care and social assistance	13,720	3,633	4,006	3,418	2,663
Hospitals	5,184	816	1,360	1,600	1,408
Health services, except hospitals	6,435	1,866	2,067	1,442	1,060
Social assistance	2,101	951	579	376	195
Leisure and hospitality	10,220	5,648	2,538	1,270	764
Arts, entertainment, and recreation	2,065	868	538	366	293
Accommodation and food services	8,155	4,781	1,999	904	470
Accommodations	1,501	581	518	250	151
Food services and drinking places	6,654	4,200	1,482	654	319
Other services	5,132	2,060	1,241	1,045	786
Other services, except private households	4,424	1,554	1,108	995	767
Repair and maintenance	1,403	343	390	416	254
Personal and laundry services	1,285	614	352	208	110
Membership associations and organizations	1,736	596	365	372	403
Other services, private households	708	506	133	50	19
Public administration	6,048	622	1,273	1,991	2,162
Industry	Total employed, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$342	\$577	\$915	(¹)
Total employed	125,889	31,470	31,473	31,473	31,474
Agriculture and related industries	1,076	461	331	190	94
Mining	603	29	112	186	276
Construction	8,513	1,267	2,645	2,605	1,996
Manufacturing	15,596	2,068	4,335	4,369	4,824
Durable goods manufacturing	9,900	1,069	2,675	2,842	3,314
Nondurable goods manufacturing	5,696	999	1,660	1,527	1,510
Wholesale and retail trade	19,101	6,771	5,059	4,011	3,260
Wholesale trade	4,028	535	1,070	1,191	1,232
Retail trade	15,073	6,235	3,989	2,821	2,028
Transportation and utilities	6,730	908	1,603	2,187	2,032
Transportation and warehousing	5,552	843	1,395	1,821	1,493
Utilities	1,178	64	209	366	539
Information	3,118	522	613	793	1,190
Financial activities	8,845	1,244	2,147	2,468	2,986
Finance and insurance	6,445	674	1,532	1,865	2,373
Real estate and rental and leasing	2,399	570	614	603	612
Professional and business services	11,337	2,326	2,512	2,632	3,868
Professional and technical services	6,682	754	1,039	1,672	3,217
Management, administrative, and waste services	4,656	1,572	1,473	960	651
Education and health services	27,661	6,744	6,692	7,325	6,900

See footnote at end of table.

Table 2. Continued—Employed wage and salary workers by industry and earnings quartile in 2000 and 2005 and change in employment from 2000 to 2005

[Numbers in thousands]

Industry	Total employed, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Educational services	11,958	2,814	2,237	3,408	3,499
Health care and social assistance	15,702	3,929	4,455	3,917	3,401
Hospitals	5,742	803	1,411	1,746	1,782
Health services, except hospitals	7,680	2,158	2,418	1,725	1,380
Social assistance	2,280	969	626	446	239
Leisure and hospitality	11,102	6,337	2,570	1,398	797
Arts, entertainment, and recreation	2,253	943	565	448	296
Accommodation and food services	8,849	5,393	2,005	950	501
Accommodations	1,471	612	452	261	146
Food services and drinking places	7,378	4,781	1,553	689	355
Other services	5,628	2,183	1,490	1,169	787
Other services, except private households	4,832	1,643	1,296	1,121	772
Repair and maintenance	1,502	345	495	424	238
Personal and laundry services	1,401	673	398	231	98
Membership associations and organizations	1,929	626	402	465	435
Other services, private households	797	540	194	48	15
Public administration	6,578	612	1,365	2,138	2,464
Industry	Change in employment, 2000–2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Total	3,800	951	948	952	950
Agriculture and related industries	-231	-165	-33	-20	-14
Mining	152	-4	40	32	85
Construction	1,076	344	589	199	-56
Manufacturing	-3,344	-474	-969	-971	-930
Durable goods manufacturing	-2,117	-217	-590	-678	-632
Nondurable goods manufacturing	-1,227	-256	-379	-293	-299
Wholesale and retail trade	1,106	65	355	288	397
Wholesale trade	335	-101	61	111	263
Retail trade	771	165	294	178	134
Transportation and utilities	-216	-29	94	-36	-246
Transportation and warehousing	-103	-12	108	-35	-164
Utilities	-114	-19	-13	-1	-81
Information	-664	-45	-119	-202	-297
Financial activities	602	-49	39	206	406
Finance and insurance	324	-90	11	143	258
Real estate and rental and leasing	277	41	26	64	147
Professional and business services	445	118	-48	120	256
Professional and technical services	127	-6	-72	37	168
Management, administrative, and waste services	319	124	24	83	88
Education and health services	2,964	390	626	934	1,014
Educational services	981	93	178	435	275
Health care and social assistance	1,982	296	449	499	738
Hospitals	558	-13	51	146	374
Health services, except hospitals	1,245	292	351	283	320
Social assistance	179	18	47	70	44
Leisure and hospitality	882	689	32	128	33
Arts, entertainment, and recreation	188	75	27	82	3
Accommodation and food services	694	612	6	46	31
Accommodations	-30	31	-66	11	-5
Food services and drinking places	724	581	71	35	36
Other services	496	123	249	124	1
Other services, except private households	408	89	188	126	5
Repair and maintenance	99	2	105	8	-16
Personal and laundry services	116	59	46	23	-12
Membership associations and organizations	193	30	37	93	32
Other services, private households	89	34	61	-2	-4
Public administration	530	-10	92	147	302

¹ For reasons of confidentiality, the upper limit of earnings is not available in public use files.

NOTE: Data may not sum to totals due to rounding.

earnings quartiles increased. Whether on an occupational basis (construction and extraction occupations) or on an industry basis (construction), there was no employment

growth in the highest earnings quartile. (See tables 2 and 4.)

From 2000 to 2005, employment in retail trade expanded by 771,000; this growth was spread across all earnings quartiles.

Table 3. Percent distribution of employed wage and salary workers by occupation and earnings quartile in 2000 and 2005 and change in the distribution from 2000 to 2005

Occupation	Employment distribution, 2000	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$303	\$498	\$782	(¹)
Total employed	122,089	30,519	30,525	30,521	30,524
Percent	100.00	100.00	100.00	100.00	100.00
Management, business, and financial operations occupations	12.38	3.22	6.24	13.18	26.86
Management occupations	8.60	2.19	3.91	8.19	20.10
Business and financial operations occupations	3.78	1.03	2.33	4.99	6.77
Professional and related occupations	20.00	10.32	12.40	23.06	34.23
Computer and mathematical occupations	2.62	.42	.88	2.62	6.55
Architecture and engineering occupations	2.35	.28	.85	2.25	6.04
Life, physical, and social science occupations .....	.91	.33	.51	1.07	1.73
Community and social services occupations	1.56	.88	1.48	2.10	1.79
Legal occupations .....	.93	.26	.50	.94	2.03
Education, training, and library occupations	5.70	4.89	3.68	6.60	7.63
Arts, design, entertainment, sports, and media occupations	1.54	1.25	1.09	1.68	2.15
Healthcare practitioner and technical occupations	4.38	2.00	3.40	5.80	6.32
Service occupations	15.36	31.76	17.43	8.05	4.18
Healthcare support occupations	1.92	3.30	3.17	.98	.24
Protective service occupations	2.09	1.65	2.05	2.35	2.31
Food preparation and serving related occupations	5.38	14.20	5.25	1.59	.48
Building and grounds cleaning and maintenance occupations	3.56	6.97	4.72	1.98	.59
Personal care and service occupations	2.40	5.63	2.24	1.16	.56
Sales and office occupations	27.03	33.76	32.65	26.47	15.24
Sales and related occupations	10.76	16.80	8.90	8.51	8.84
Office and administrative support occupations	16.27	16.96	23.74	17.97	6.40
Natural resources, construction, and maintenance occupations	9.52	5.68	10.15	12.55	9.70
Farming, fishing, and forestry occupations .....	.84	1.89	.97	.35	.13
Construction and extraction occupations	5.07	2.49	5.78	6.76	5.25
Installation, maintenance, and repair occupations	3.61	1.31	3.39	5.43	4.32
Production, transportation, and material moving occupations	15.72	15.27	21.14	16.68	9.79
Production occupations	9.06	7.75	12.82	9.98	5.70
Transportation and material moving occupations	6.66	7.52	8.31	6.70	4.09
Occupation	Employment distribution, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$342	\$577	\$915	(¹)
Total employed	125,889	31,470	31,473	31,473	31,474
Percent	100.00	100.00	100.00	100.00	100.00
Management, business, and financial operations occupations	12.67	3.16	6.54	13.80	27.19
Management occupations	8.67	2.09	3.97	8.47	20.17
Business and financial operations occupations	4.00	1.07	2.58	5.34	7.02
Professional and related occupations	20.87	11.00	12.59	24.17	35.71
Computer and mathematical occupations	2.44	.33	.77	2.26	6.39
Architecture and engineering occupations	2.06	.26	.73	1.98	5.27
Life, physical, and social science occupations	1.04	.36	.52	1.23	2.04
Community and social services occupations	1.67	1.03	1.49	2.29	1.86
Legal occupations	1.00	.27	.51	1.03	2.19
Education, training, and library occupations	6.21	5.25	4.14	7.47	7.96
Arts, design, entertainment, sports, and media occupations	1.55	1.40	1.03	1.68	2.11
Healthcare practitioner and technical occupations	4.91	2.08	3.41	6.23	7.90
Service occupations	16.74	34.73	19.16	8.69	4.38
Healthcare support occupations	2.36	4.20	3.80	1.14	.29
Protective service occupations	2.26	1.67	2.30	2.49	2.58
Food preparation and serving related occupations	5.85	15.64	5.48	1.79	.48
Building and grounds cleaning and maintenance occupations	3.59	7.26	4.73	1.85	.54
Personal care and service occupations	2.68	5.96	2.85	1.42	.49
Sales and office occupations	25.85	31.33	31.06	25.59	15.41
Sales and related occupations	10.83	16.24	9.02	8.51	9.54
Office and administrative support occupations	15.02	15.10	22.04	17.08	5.87
Natural resources, construction, and maintenance occupations	10.25	6.53	12.11	13.28	9.08
Farming, fishing, and forestry occupations .....	.71	1.38	1.00	.35	.14
Construction and extraction occupations	5.80	3.69	7.46	7.20	4.83
Installation, maintenance, and repair occupations	3.74	1.47	3.66	5.74	4.11
Production, transportation, and material moving occupations	13.62	13.24	18.53	14.46	8.24
Production occupations	7.15	5.96	10.26	7.99	4.40
Transportation and material moving occupations	6.46	7.28	8.26	6.47	3.84

See footnote at end of table.

Table 3. Continued—Percent distribution of employed wage and salary workers by occupation and earnings quartile in 2000 and 2005 and change in the distribution from 2000 to 2005

Occupation	Change in distribution, 2000–2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Management, business, and financial operations occupations .....	.29	-.06	.30	.62	.33
Management occupations .....	.07	-.10	.06	.28	.07
Business and financial operations occupations .....	.22	.04	.25	.35	.25
Professional and related occupations .....	.87	.68	.19	1.11	1.48
Computer and mathematical occupations	-.18	-.09	-.11	-.36	-.16
Architecture and engineering occupations	-.29	-.02	-.12	-.27	-.77
Life, physical, and social science occupations .....	.13	.03	.01	.16	.31
Community and social services occupations .....	.11	.15	.01	.19	.07
Legal occupations .....	.07	.01	.01	.09	.16
Education, training, and library occupations .....	.51	.36	.46	.87	.33
Arts, design, entertainment, sports, and media occupations .....	.01	.15	-.06	.00	-.04
Healthcare practitioner and technical occupations .....	.53	.08	.01	.43	1.58
Service occupations	1.38	2.97	1.73	.64	.20
Healthcare support occupations .....	.44	.90	.63	.16	.05
Protective service occupations .....	.17	.02	.25	.14	.27
Food preparation and serving related occupations .....	.47	1.44	.23	.20	.00
Building and grounds cleaning and maintenance occupations .....	.03	.29	.01	-.13	-.05
Personal care and service occupations .....	.28	.33	.61	.26	-.07
Sales and office occupations	-1.18	-2.43	-1.59	-.88	.17
Sales and related occupations .....	.07	-.56	.12	.00	.70
Office and administrative support occupations	-1.25	-1.86	-1.70	-.89	-.53
Natural resources, construction, and maintenance occupations .....	.73	.85	1.96	.73	-.62
Farming, fishing, and forestry occupations	-.13	-.51	.03	.00	.01
Construction and extraction occupations .....	.73	1.20	1.68	.44	-.42
Installation, maintenance, and repair occupations .....	.13	.16	.27	.31	-.21
Production, transportation, and material moving occupations	-2.10	-2.03	-2.61	-2.22	-1.55
Production occupations	-1.91	-1.79	-2.56	-1.99	-1.30
Transportation and material moving occupations	-.20	-.24	-.05	-.23	-.25

¹ For reasons of confidentiality, the upper limit of earnings is not available in public use files.

NOTE: Data may not sum to totals due to rounding.

Additionally, employment rose in both financial activities and in public administration, with most of the net job growth paying more than the median wage. In contrast, employment growth in food services and drinking places was concentrated in the bottom earnings quartile, mirroring the growth in food preparation and serving related occupations.

Manufacturing employment has trended down for several decades, but the decline has been particularly sharp over the past 5 years. The decline of 3.3 million over that time period resulted in large employment declines of nearly 1 million each in the second, third, and highest earnings quartiles. Employment also declined by nearly a half million in the bottom earnings quartile.

As employment in the information sector fell over the period, that industry’s share of employment declined in all quartiles, although disproportionately in jobs paying above the overall median. In fact, over the 5-year period, about three-quarters of the total job loss in information occurred in the two highest earnings quartiles. (See tables 2 and 4.)

Gender differences

Despite being dramatically underrepresented in job categories that pay more than the overall median weekly wage, women

contributed nearly all of the net employment growth above the median over the 5-year period from 2000 to 2005.⁴ Women actually accounted for nearly 1.7 million of the 1.9 million net increase in total employment that occurred above the overall median wage. In contrast, nearly all the net employment growth below the median occurred among men. (See tables 5 and 6.)

In the highest earnings quartile, women accounted for all of the net employment growth among management, business, and financial operations occupations and most of the net increase among professional and related occupations. On net, employment among men in the highest earnings quartile declined, primarily due to a large reduction in the number of production occupations. (See table 5.)

In the third earnings quartile, women and men each contributed roughly a half million to employment growth. Most of the increase for women occurred in professional and related occupations, while most of the increase among men occurred in natural resources, construction, and maintenance occupations. Employment declined for both men and women in production occupations.

Much of the employment increase below the median wage for men occurred in construction and extraction occupations and in low-wage food preparation and serving related occupations. Women accounted for large employment increases

Table 4. Percent distribution of employed wage and salary workers by industry and earnings quartile in 2000 and 2005 and change in the distribution from 2000 to 2005

Industry	Employment distribution, 2000	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$303	\$498	\$782	(¹)
Total employed	122,089	30,519	30,525	30,521	30,524
Percent	100.00	100.00	100.00	100.00	100.00
Agriculture and related industries	1.07	2.05	1.19	.69	.35
Mining .....	.37	.11	.24	.50	.63
Construction	6.09	3.02	6.74	7.88	6.72
Manufacturing	15.51	8.33	17.38	17.50	18.85
Durable goods manufacturing	9.84	4.22	10.70	11.53	12.93
Nondurable goods manufacturing	5.67	4.11	6.68	5.96	5.92
Wholesale and retail trade	14.74	21.97	15.41	12.20	9.38
Wholesale trade	3.02	2.08	3.30	3.54	3.17
Retail trade	11.71	19.89	12.11	8.66	6.21
Transportation and utilities	5.69	3.07	4.94	7.28	7.46
Transportation and warehousing	4.63	2.80	4.22	6.08	5.43
Utilities	1.06	.27	.73	1.20	2.03
Information	3.10	1.86	2.40	3.26	4.87
Financial activities	6.75	4.24	6.91	7.41	8.45
Finance and insurance	5.01	2.50	4.98	5.64	6.93
Real estate and rental and leasing	1.74	1.73	1.93	1.77	1.52
Professional and business services	8.92	7.23	8.39	8.23	11.83
Professional and technical services	5.37	2.49	3.64	5.36	9.99
Management, administrative, and waste services	3.55	4.74	4.75	2.87	1.84
Education and health services	20.23	20.82	19.87	20.94	19.28
Educational services	8.99	8.92	6.75	9.74	10.56
Health care and social assistance	11.24	11.90	13.12	11.20	8.72
Hospitals	4.25	2.67	4.46	5.24	4.61
Health services, except hospitals	5.27	6.12	6.77	4.72	3.47
Social assistance	1.72	3.12	1.90	1.23	.64
Leisure and hospitality	8.37	18.51	8.31	4.16	2.50
Arts, entertainment, and recreation	1.69	2.84	1.76	1.20	.96
Accommodation and food services	6.68	15.67	6.55	2.96	1.54
Accommodations	1.23	1.90	1.70	.82	.50
Food services and drinking places	5.45	13.76	4.85	2.14	1.04
Other services	4.20	6.75	4.06	3.43	2.57
Other services, except private households	3.62	5.09	3.63	3.26	2.51
Repair and maintenance	1.15	1.12	1.28	1.36	.83
Personal and laundry services	1.05	2.01	1.15	.68	.36
Membership associations and organizations	1.42	1.95	1.20	1.22	1.32
Other services, private households .....	.58	1.66	.44	.16	.06
Public administration	4.95	2.04	4.17	6.52	7.08
Industry	Employment distribution, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Upper limit of earnings .....	...	\$342	\$577	\$915	(¹)
Total employed	125,889	31,470	31,473	31,473	31,474
Percent	100.00	100.00	100.00	100.00	100.00
Agriculture and related industries .....	.85	1.46	1.05	.60	.30
Mining .....	.48	.09	.36	.59	.88
Construction	6.76	4.02	8.40	8.28	6.34
Manufacturing	12.39	6.57	13.77	13.88	15.33
Durable goods manufacturing	7.86	3.40	8.50	9.03	10.53
Nondurable goods manufacturing	4.52	3.17	5.27	4.85	4.80
Wholesale and retail trade	15.17	21.51	16.07	12.75	10.36
Wholesale trade	3.20	1.70	3.40	3.78	3.91
Retail trade	11.97	19.81	12.67	8.96	6.44
Transportation and utilities	5.35	2.88	5.09	6.95	6.46
Transportation and warehousing	4.41	2.68	4.43	5.79	4.74
Utilities .....	.94	.20	.66	1.16	1.71
Information	2.48	1.66	1.95	2.52	3.78
Financial activities	7.03	3.95	6.82	7.84	9.49
Finance and insurance	5.12	2.14	4.87	5.93	7.54
Real estate and rental and leasing	1.91	1.81	1.95	1.92	1.95

See footnote at end of table.

Table 4. Continued—Percent distribution of employed wage and salary workers by industry and earnings quartile in 2000 and 2005 and change in the distribution from 2000 to 2005

Industry	Employment distribution, 2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Professional and business services	9.01	7.39	7.98	8.36	12.29
Professional and technical services	5.31	2.40	3.30	5.31	10.22
Management, administrative, and waste services	3.70	4.99	4.68	3.05	2.07
Education and health services	21.97	21.43	21.26	23.27	21.92
Educational services	9.50	8.94	7.11	10.83	11.12
Health care and social assistance	12.47	12.49	14.15	12.45	10.81
Hospitals	4.56	2.55	4.48	5.55	5.66
Health services, except hospitals	6.10	6.86	7.68	5.48	4.39
Social assistance	1.81	3.08	1.99	1.42	.76
Leisure and hospitality	8.82	20.14	8.17	4.44	2.53
Arts, entertainment, and recreation	1.79	3.00	1.80	1.42	.94
Accommodation and food services	7.03	17.14	6.37	3.02	1.59
Accommodations	1.17	1.95	1.44	.83	.46
Food services and drinking places	5.86	15.19	4.93	2.19	1.13
Other services	4.47	6.94	4.73	3.71	2.50
Other services, except private households	3.84	5.22	4.12	3.56	2.45
Repair and maintenance	1.19	1.10	1.57	1.35	.76
Personal and laundry services	1.11	2.14	1.27	.74	.31
Membership associations and organizations	1.53	1.99	1.28	1.48	1.38
Other services, private households .....	.63	1.72	.62	.15	.05
Public administration	5.23	1.95	4.34	6.79	7.83
Industry	Change in distribution, 2000–2005	First quartile	Second quartile (median)	Third quartile	Highest quartile
Agriculture and related industries	-.22	-.59	-.14	-.09	-.05
Mining .....	.11	-.02	.12	.09	.25
Construction .....	.67	1.00	1.66	.40	-.38
Manufacturing	-3.12	-1.76	-3.61	-3.62	-3.52
Durable goods manufacturing	-1.98	-.82	-2.20	-2.50	-2.40
Nondurable goods manufacturing	-1.15	-.94	-1.41	-1.11	-1.12
Wholesale and retail trade .....	.43	-.46	.66	.55	.98
Wholesale trade .....	.18	-.38	.10	.24	.74
Retail trade .....	.26	-.08	.56	.30	.23
Transportation and utilities	-.34	-.19	.15	-.33	-1.00
Transportation and warehousing	-.22	-.12	.21	-.29	-.69
Utilities	-.12	-.07	-.07	-.04	-.32
Information	-.62	-.20	-.45	-.74	-1.09
Financial activities .....	.28	-.29	-.09	.43	1.04
Finance and insurance .....	.11	-.36	-.11	.29	.61
Real estate and rental and leasing .....	.17	.08	.02	.15	.43
Professional and business services .....	.09	.16	-.41	.13	.46
Professional and technical services	-.06	-.09	-.34	-.05	.23
Management, administrative, and waste services .....	.15	.25	-.07	.18	.23
Education and health services	1.74	.61	1.39	2.33	2.64
Educational services .....	.51	.02	.36	1.09	.56
Health care and social assistance	1.23	.59	1.03	1.25	2.09
Hospitals .....	.31	-.12	.02	.31	1.05
Health services, except hospitals .....	.83	.74	.91	.76	.92
Social assistance .....	.09	-.04	.09	.19	.12
Leisure and hospitality .....	.45	1.63	-.14	.28	.03
Arts, entertainment, and recreation .....	.10	.16	.04	.22	-.02
Accommodation and food services .....	.35	1.47	-.18	.06	.05
Accommodations	-.06	.05	-.26	.01	-.04
Food services and drinking places .....	.41	1.43	.08	.05	.09
Other services .....	.27	.19	.67	.28	-.07
Other services, except private households .....	.22	.13	.49	.30	-.06
Repair and maintenance .....	.04	-.02	.29	-.01	-.07
Personal and laundry services .....	.06	.13	.12	.06	-.05
Membership associations and organizations .....	.11	.04	.08	.26	.06
Other services, private households .....	.05	.06	.18	-.01	-.01
Public administration .....	.28	-.09	.17	.27	.75

¹ For reasons of confidentiality, the upper limit of earnings is not available in public use files.

NOTE: Data may not sum to totals due to rounding.

Table 5. Change in wage and salary employment by occupation, sex, and earnings quartile, 2000 to 2005

[Numbers in thousands]

Occupation	Change in employment	First quartile	Second quartile (median)	Third quartile	Highest quartile
Men, total change	1,806	682	903	419	-201
Management, business, and financial operations occupations	177	-16	43	189	-38
Management occupations	89	-19	12	140	-43
Business and financial operations occupations	87	3	31	51	4
Professional and related occupations	431	82	110	93	145
Computer and mathematical occupations	-7	-20	-13	-25	53
Architecture and engineering occupations	-250	0	-27	-44	-179
Life, physical, and social science occupations	75	-9	2	26	55
Community and social services occupations	61	16	22	22	2
Legal occupations	14	-1	9	-6	11
Education, training, and library occupations	281	71	78	76	55
Arts, design, entertainment, sports, and media occupations	27	17	5	8	-2
Healthcare practitioner and technical occupations	231	8	35	35	152
Service occupations	728	408	174	84	62
Healthcare support occupations	96	51	45	2	0
Protective service occupations	148	-22	42	43	85
Food preparation and serving related occupations	366	300	32	29	3
Building and grounds cleaning and maintenance occupations	14	45	-10	-7	-13
Personal care and service occupations	103	35	65	16	-13
Sales and office occupations	249	48	72	17	111
Sales and related occupations	335	20	74	44	196
Office and administrative support occupations	-86	28	-2	-27	-86
Natural resources, construction, and maintenance occupations	1,252	307	707	364	-128
Farming, fishing, and forestry occupations	-113	-129	17	-4	3
Construction and extraction occupations	1,068	379	568	204	-82
Installation, maintenance, and repair occupations	296	57	122	164	-47
Production, transportation, and material moving occupations	-1,031	-147	-203	-328	-353
Production occupations	-1,057	-128	-294	-324	-312
Transportation and material moving occupations	26	-19	91	-5	-42
Women, total change	1,995	269	43	531	1,152
Management, business, and financial operations occupations	668	30	112	131	395
Management occupations	335	9	44	26	256
Business and financial operations occupations	333	21	68	105	138
Professional and related occupations	1,419	231	69	475	645
Computer and mathematical occupations	-120	-6	-12	-62	-40
Architecture and engineering occupations	-30	-4	-4	-19	-4
Life, physical, and social science occupations	119	22	5	34	59
Community and social services occupations	130	42	-6	58	35
Legal occupations	107	7	-2	42	60
Education, training, and library occupations	571	88	101	261	121
Arts, design, entertainment, sports, and media occupations	46	43	-13	6	9
Healthcare practitioner and technical occupations	596	38	-2	155	404
Service occupations	1,599	828	535	193	42
Healthcare support occupations	528	265	184	59	20
Protective service occupations	143	44	56	22	21
Food preparation and serving related occupations	428	287	92	48	3
Building and grounds cleaning and maintenance occupations	160	113	59	-13	3
Personal care and service occupations	340	121	146	77	-5
Sales and office occupations	-707	-489	-262	-43	87
Sales and related occupations	156	-36	48	36	107
Office and administrative support occupations	-863	-453	-310	-79	-20
Natural resources, construction, and maintenance occupations	34	14	7	-12	25
Farming, fishing, and forestry occupations	-10	-15	-1	5	1
Construction and extraction occupations	38	22	15	0	0
Installation, maintenance, and repair occupations	6	7	-6	-18	23
Production, transportation, and material moving occupations	-1,018	-345	-418	-213	-42
Production occupations	-999	-361	-390	-207	-42
Transportation and material moving occupations	-19	15	-28	-6	0

NOTE: Data may not sum to totals due to rounding.

in service-related occupations that paid below the overall median wage as well; they also experienced substantial

employment declines in sales occupations and in production occupations. Overall, job declines in production occupations

Table 6. Change in wage and salary employment by industry, sex, and earnings quartile, 2000 to 2005

(Numbers in thousands)

Industry	Change in employment	First quartile	Second quartile (median)	Third quartile	Highest quartile
Men, total change	1,804	683	903	422	-201
Agriculture and related industries	-186	-148	-14	-10	-13
Mining	136	3	31	32	72
Construction	977	308	564	177	-72
Manufacturing	-1,919	-135	-373	-595	-816
Durable goods manufacturing	-1,224	-36	-231	-391	-566
Nondurable goods manufacturing	-695	-99	-141	-205	-250
Wholesale and retail trade	804	93	184	253	274
Wholesale trade	356	-48	59	121	225
Retail trade	448	141	125	132	50
Transportation and utilities	-147	17	78	-17	-224
Transportation and warehousing	-56	21	89	-20	-146
Utilities	-92	-4	-10	2	-79
Information	-384	-20	-59	-81	-224
Financial activities	397	19	61	102	216
Finance and insurance	254	-4	43	70	146
Real estate and rental and leasing	143	23	18	32	69
Professional and business services	377	57	74	91	155
Professional and technical services	78	-13	-28	12	107
Management, administrative, and waste services	300	70	101	79	48
Education and health services	815	88	203	264	261
Educational services	386	41	96	165	83
Health care and social assistance	429	47	106	98	178
Hospitals	144	-19	48	27	88
Health services, except hospitals	231	30	51	64	86
Social assistance	54	35	8	6	5
Leisure and hospitality	487	392	14	50	31
Arts, entertainment, and recreation	93	51	23	17	2
Accommodation and food services	394	341	-10	33	28
Accommodations	-9	3	-18	14	-8
Food services and drinking places	402	338	8	21	37
Other services	201	31	106	70	-7
Other services, except private households	199	46	93	69	-8
Repair and maintenance	111	22	88	13	-12
Personal and laundry services	-12	-8	-1	-7	4
Membership associations and organizations	99	31	6	62	1
Other services, private households	2	-14	13	1	0
Public administration	246	-22	35	87	145
Women, total change	1,996	271	45	532	1,150
Agriculture and related industries	-46	-18	-19	-8	-1
Mining	17	-7	10	0	13
Construction	99	36	25	22	16
Manufacturing	-1,425	-339	-597	-375	-115
Durable goods manufacturing	-893	-181	-359	-287	-65
Nondurable goods manufacturing	-532	-158	-238	-88	-49
Wholesale and retail trade	301	-27	171	36	123
Wholesale trade	-22	-52	3	-10	38
Retail trade	323	25	168	46	84
Transportation and utilities	-69	-46	17	-18	-21
Transportation and warehousing	-47	-32	20	-15	-20
Utilities	-22	-13	-3	-3	-2
Information	-279	-25	-60	-122	-73
Financial activities	205	-68	-22	105	190
Finance and insurance	70	-85	-30	73	112
Real estate and rental and leasing	135	17	8	32	78
Professional and business services	68	61	-122	29	101
Professional and technical services	48	7	-45	25	61
Management, administrative, and waste services	20	54	-77	3	40
Education and health services	2,149	301	424	672	753
Educational services	595	52	81	270	192
Health care and social assistance	1,554	250	342	401	560
Hospitals	414	6	4	118	285

See footnote at end of table.

Table 6. Continued—Change in wage and salary employment by industry, sex, and earnings quartile, 2000 to 2005

(Numbers in thousands)

Industry	Change in employment	First quartile	Second quartile (median)	Third quartile	Highest quartile
Health services, except hospitals	1,015	261	300	218	235
Social assistance	126	-17	38	65	40
Leisure and hospitality	396	297	20	78	2
Arts, entertainment, and recreation	95	26	4	65	1
Accommodation and food services	301	271	15	12	2
Accommodations	-20	28	-48	-3	3
Food services and drinking places	320	243	63	14	0
Other services	296	93	143	53	8
Other services, except private households	208	45	96	57	12
Repair and maintenance	-11	-20	16	-4	-4
Personal and laundry services	128	65	48	30	-16
Membership associations and organizations	92	-2	32	30	31
Other services, private households	87	48	47	-3	-4
Public administration	284	12	56	61	156

NOTE: Data may not sum to totals due to rounding.

across all earnings quartiles were nearly equally split among men and women (1.1 million and 1.0 million, respectively), although a larger share of men's employment losses occurred at the higher end of the pay scale. (See table 5.)

By industry, employment in jobs that paid more than the overall median wage increased substantially among women in health care, educational services, and financial activities. In contrast, employment declined among women in manufacturing jobs across all earnings quartiles. Among men, employment growth occurred above the median in wholesale trade, financial activities, and, to a lesser extent, in educational services and in health care and social assistance. However, men incurred large employment declines in both manufacturing and information industry jobs with wages that were greater than the overall median wage. At the lower end of the pay scale (less than the median), men's employment increased in both construction and in leisure and hospitality. (See table 6.)

IN SUM, THIS ANALYSIS PROVIDES another means by which to

assess the quality of job growth. Employment by occupations and industries for 2000 and 2005 was stratified by earnings quartiles. Some of the more interesting findings indicated that women disproportionately benefited from strong employment growth in higher paying professional occupations and in higher paying jobs within health care, educational services, and financial activities. Employment declines in production occupations and in the manufacturing and information sectors were a drag on the labor market and were particularly acute among men in job categories that paid more than the median wage. Additionally, employment growth among men in construction and extraction occupations, as well as in the construction industry, proved to yield mostly lower paying job opportunities. Lastly, much of the employment increase in service occupations occurred at the lower end of the pay scale. Overall, examination of employment changes in occupations and industries by earnings quartiles offers alternative and informative insights into distinguishing higher paying "good" jobs from lower paying "bad" jobs. □

Notes

¹ The CPS is a nationwide sample survey of approximately 60,000 households conducted for the Bureau of Labor Statistics by the U.S. Census Bureau. Employment and earnings data analyzed in this article are based on data collected from the outgoing rotation groups in the CPS sample. Each month, the CPS is administered to the sample households, divided into eight representative subsamples or rotation groups. A given rotation group is interviewed for a total of 8 months, divided into two equal periods. It is in the sample for 4 consecutive months, leaves the sample during the following 8 months, and then returns for another 4 consecutive months. In each monthly sample, one of the eight rotation groups is in the first month of enumeration; another rotation group is the second month, and so on.

Earnings data are collected from individuals whose households are in the 4th or 8th month of enumeration, often referred to as the

Outgoing Rotation Groups or ORG files. Self-employed workers are excluded, regardless of whether their businesses are incorporated. For more information on the CPS, see Explanatory Notes and Estimates of Error in the BLS monthly publication *Employment and Earnings*.

² Data represent earnings before taxes and other deductions and include any overtime pay, commissions, or tips usually received (at the main job in the case of multiple jobholders). Since January 1994, respondents have been asked to identify the easiest way for them to report earnings (hourly, weekly, biweekly, twice monthly, monthly, annually, other) and how much they usually earn in the reported time period. Earnings reported on a basis other than weekly are converted to a weekly equivalent. The term "usual" is as perceived by the respondent. If the respondent asks for a definition of usual, inter-

viewers are instructed to define the term as more than half the weeks worked during the past 4 or 5 months.

³ The occupational and industry classifications presented in this analysis are based on the 2002 Census Bureau classification systems and are derived from, respectively, the 2000 Standard Occupational Classification (SOC) system and the 2002 North American Industry Classification System (NAICS). The occupational classification assigns

codes to individuals according to their usual activities or duties on their job. The industry classification assigns codes to individuals according to the type of business or industry in which they are employed.

⁴ For more information on the distribution of employment by gender and earnings quartile, see “Women Still Underrepresented Among Highest Earners,” *Issues in Labor Statistics*, Summary 06-03 (Bureau of Labor Statistics, March 2006).

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Item replacement and quality change in apparel price indexes

Simulations removing commodity analyst intervention in the production of price indexes, including the application of direct hedonic quality adjustments, indicate that experimental apparel price indexes would tend to rise more or fall less than their published counterparts

Craig Brown
and
Anya Stockburger

A principal role of a Bureau of Labor Statistics (BLS) commodity analyst in the Consumer Price Index (CPI) program is that of data reviewer. In that role, commodity analysts are responsible primarily for monitoring the prices and characteristics of the goods and services tracked for the CPI market basket, verifying that the reported price movements of those goods and services meet the criteria for the collection of accurate consumer prices, and developing tools and procedures that aid in the careful collection and evaluation of the price and characteristic data used in producing the CPI.¹ More broadly, the commodity analyst's role is to ensure the accurate calculation of the CPI by eliminating the effects of inaccurate microlevel data.²

A commodity analyst's microlevel data review consists largely of examining problematic observations (or price quotes) that meet one or more of the conditions for review defined in the CPI's data-processing system. Commodity analysts must intervene and resolve the issues related to their assigned quotes before the price data from those quotes are used in computing the CPI. Two of the more common conditions prompting a review are an unusually large price change and the selection of a replacement item as a substitute for an original item that is no longer available. The latter of these conditions—the selection of replacement items—is the primary focus of this article.

The analysis to be presented assesses the impact of commodity analyst intervention on price indexes for apparel items. The definition of “com-

modity analyst intervention” is limited to “effort spent in the review and analysis of replacement items and changes in quality.” Issues inherent in the calculation of apparel price indexes are discussed in order to identify the circumstances in which commodity analyst intervention is most critical. These issues are then further developed through the decomposition of the concept of commodity analyst intervention into two stages of microlevel data review. Following that development, experimental indexes that simulate the effects of removing commodity analyst intervention are calculated and compared with official apparel indexes.³ Finally, a brief summary of the findings and a few caveats regarding the analysis are offered.

The apparel component of the CPI

The apparel component of the CPI was chosen as the subject of the research described in this article due in part to the difficulty of correctly measuring price change for apparel items and the labor-intensive nature of the microlevel review of price and characteristic data associated with apparel. The seasonal nature of apparel marketing, the large number of item replacement scenarios that occur in the collection of apparel price data, and the emphasis on maintaining a constant-quality price index all necessitate an intensive review.⁴ The remainder of this section discusses these three issues in greater detail and explains how commodity analysts address them.

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Seasonal nature. Typically, apparel retailers use a seasonal pricing scheme to accommodate the characteristically seasonal nature of apparel commodities. In September 2005, 36 percent of the apparel sample consisted of seasonal merchandise.⁵ Prices of seasonal apparel items usually are at their highest levels at the beginning of a season and gradually are reduced until they reach a very low clearance price at the end of the season. At that point, the next season's merchandise is introduced.

Under a seasonal pricing scheme, an apparel item usually is first priced by BLS data collectors at its high, beginning-of-season price. Then the item typically will be priced month after month at continually declining prices, until it is priced at its clearance level and eventually becomes unavailable for sale in the store either because it sold out or was removed from the shelves to make room for new merchandise.

When a seasonal item returns to the store after being unavailable during the months of the opposing season, the data collector verifies that the characteristics of the available item match those of the item that was last priced. If the characteristics match, a price is reported for that item—usually a high, markup price at the beginning of the season. Because the last prices collected for these seasonal items were generally low, end-of-season sale prices, a large price increase typically will occur.

Large price increases of a certain magnitude qualify as triggers for review for all apparel item categories. Commodity analysts are required to examine the quotes in question and determine whether the large price increases are due strictly to the price changes of identical items or whether other factors are contributing. Identical items with large price changes are noted and accepted for price index calculation. Though rare, when it is determined that some other factor is affecting the price change, the usual explanation is that a different item with varying characteristics was inadvertently priced. In this case, commodity analysts classify the situation as an item replacement and incorporate the price of the item into the index.

Item replacement. Along with price fluctuations, the seasonal marketing of apparel goods results in an ever-changing variety of goods that reflects the current fashions and trends. Constantly evolving product mixes mean that data collectors must often find replacements for those items which have exited the market. Apparel commodity analysts allocate a significant amount of their microlevel data review to determining whether the data on prices and characteristics are recorded correctly when item replacements are reported. In 2005, 15 percent of apparel sector quotes were reported as item replacements.

Normally, item replacements are reported correctly. However, on a rare occasion, an error will occur. The types of reporting errors that commodity analysts usually can identify and correct are those in which an item has been replaced, but was not reported as such, and those in which an item was reported as

having been replaced, but in fact was not. These infrequent errors occur primarily because of the complexity of official CPI data collection procedures and documents. When such errors are identified, it is the responsibility of the commodity analyst to edit a quote and correctly identify its replacement status before the quote is cleared for use in index calculations.

Quality change. Operationally, the CPI measures the average price change of a fixed market basket of goods and services. The aforementioned two issues surrounding the apparel component of the CPI illustrate how pricing the same apparel goods month after month is particularly difficult. The seasonal nature of apparel marketing leads to frequent item replacement scenarios. Data collectors are instructed to select a replacement item that is similar in quality to the item that is no longer available, but often there are no similar substitute items from which to choose. As a result, a less comparable item is selected, potentially introducing quality change and an associated price differential into the index. Apparel commodity analysts are responsible for reviewing item replacement scenarios and minimizing the unwanted effects of quality changes on the apparel index.

Once the commodity analyst establishes that an item has been replaced, the next step is to determine whether the new item is of similar quality to the old one. This process consists of reviewing the differences between the characteristics of both items and determining whether those differences are insignificant (exhibiting little to no quality change) and the new item is comparable to the old one, or whether the differences are significant and the new item is not comparable to the old one. When a comparable replacement is identified, the price of the new item is compared directly with the price of the old one and the measure of price change between the two items is used in calculating the CPI. When a noncomparable replacement is identified, the price of the new item is held out of the calculation of the index until the next pricing cycle, and the price change for the quote is imputed.

In the apparel component of the CPI, commodity analysts have a third price comparison option available to them when reviewing item replacements. Over the last 15 years, apparel analysts have developed and applied hedonic regression models for making direct quality adjustments to price data.⁶ The hedonic method allows analysts to remove any price differential attributed to a change in quality by adding or subtracting the estimated value of that change from the price of the old item. The three price comparison options available to apparel analysts and the hedonic method are discussed in more detail next.

Commodity analyst intervention

In this article, “commodity analyst intervention” is defined in two stages. Stage 1 occurs at the initial phase of the commodity

analyst's review of microlevel price and characteristic data and consists of determining whether a new item has been selected to replace an old one. Stage 2 intervention occurs if a new item was identified in Stage 1. In Stage 2, commodity analysts evaluate the degree of comparability between the new item and the old one and determine how to incorporate its price into the calculation of the index. The remainder of this section decomposes the two stages of commodity analyst intervention further and discusses the ramifications of that intervention on the calculation of the price index.

Stage 1 intervention. The primary function of intervention in Stage 1 of the commodity analyst's review is to determine whether an item replacement scenario has occurred. As mentioned in the previous section, item replacement scenarios are reported correctly in nearly every instance. However, as a result of their specialized knowledge about their assigned commodities, commodity analysts occasionally discover (1) instances in which an item is reported as having been replaced when, in fact, it was not (overreporting) and (2) instances in which an item was replaced, but the replacement was not reported (underreporting).

During the 36 months (September 2002 to August 2005) that data were reviewed for this article, 233,709 prices were collected for use in the calculation of the CPI for Apparel. Data collectors reported 34,788 item replacement scenarios in the apparel sector of the CPI,⁷ and apparel commodity analysts recognized and corrected 2,622 instances of overreporting and 1,253 instances of underreporting. These figures represent the lower bound of the actual number of errors incurred, because some errors will go unidentified.

Errors in the identification of item replacement scenarios result in miscalculation of the imputed price relative for noncomparable item replacements. For certain categories of items in the CPI, including all apparel items, this imputed value—the substitution relative—is calculated via a class-mean imputation method. Briefly, the imputed value is the geometric mean of the price changes of comparable and quality-adjusted item replacements in the same index cell.⁸

When an error in reporting an item replacement is identified, the commodity analyst changes the status of the price quote in order for it to be processed correctly in index calculations. If a quote is reported to have undergone item replacement when in fact it did not, changing the status of the quote removes it from the pool of other item replacement quotes used to impute the price change of noncomparable item replacements. Conversely, if it is determined that a quote has undergone item replacement, but the change was not reported, the status of the quote is modified to make it eligible for the processing of the substitution relative.

Another type of imputation methodology, the cell-relative method, is used to calculate price relatives for noncomparable

replacements in the remaining item categories of the CPI.⁹ The method differs from the class-mean method in its choice of imputation source quotes. Whereas the class-mean method uses only other item replacement quotes, the cell-relative method utilizes both replacement and nonreplacement quotes to impute the price changes of noncomparable replacements. The imputation method selected is critical for items such as apparel, for which price changes are closely associated with the periodic or seasonal introduction of new lines or models. Recall that new items are usually introduced at high prices and are discounted throughout the season. By excluding nonreplacement items from the source pool, the class-mean method estimates a price relative from quotes for replacement items that typically are registering large, positive price changes at the beginning of a season.

Stage 2 intervention. The primary function of commodity analyst intervention in Stage 2 review is to ensure that a constant-quality index is maintained by limiting the index's exposure to price differentials attributed to quality changes introduced through item replacement scenarios. To achieve this objective, apparel commodity analysts rely on their knowledge of the retail industry, apparel commodities, fashion and trends, and marketing to evaluate the comparability of item replacements. Toward that end, item replacements are reviewed and classified as comparable, comparable by means of a quality adjustment, or noncomparable.

In order to make direct quality adjustments to price data when differences in quality are observed in item replacement scenarios, apparel commodity analysts develop and apply hedonic regression models. In the hedonic sense, a product is viewed as a bundle of value-adding characteristics, and the product's price is the sum of the values of its characteristics. The coefficients produced by the hedonic regression model are estimates of these values, or *shadow prices*. When characteristics change, shadow prices are used to estimate the value of the change in quality. This value is then used to adjust the observed price change between the old and new items.

Of the 34,788 item replacements selected during the period examined in this article, 45 percent (15,533) were deemed comparable by commodity analysts. Twenty-seven percent (9,528) were deemed noncomparable. The remaining 28 percent (9,727) received direct quality adjustments.

Beginning in September 2002, apparel commodity analysts began recording alternative comparability decisions—comparable or noncomparable—for the item replacement scenarios that require direct quality adjustments. The decisions describe how commodity analysts would have treated the quality-adjusted item replacements under the hypothetical condition that they could not make hedonic quality adjustments.

Removing hedonic quality adjustments from the calculation of the index illustrates the devolution of a hedonically adjusted

price index into a class-mean price index.¹⁰ The impact of commodity analyst intervention in Stage 2 review is measured by the differences between the hedonic index series and the class-mean index series. The effects of removing the intervention from that stage are further simulated by calculating experimental indexes under the assumption that commodity analysts do not have the choice of classifying highly dissimilar item replacements as noncomparable.

If commodity analysts cannot make comparability decisions (that is, commodity analysts do not intervene), item replacements can be handled in either of two ways. Under the direct comparison method, the prices of new items are directly compared with the prices of the old ones.¹¹ This method assumes that there is no quality difference between the two items and thus does not require any intervention by commodity analysts in Stage 2.¹² Alternatively, under the matched-model method, only the price comparisons of nonreplacement items are used in calculating the index. The prices of all replacement items are held out of the index, and a price relative is imputed via the cell-relative method. The full impact of commodity analyst intervention during the Stage 2 review is measured by the differences between the hedonic price index series and the two indexes calculated without commodity analyst intervention.

Impact on calculation of index

Explanation of experimental-index simulations. After the scenarios under which commodity analysts intervene in the review of data used in calculating apparel price indexes were identified, the “fingerprints” of such intervention also were identified and were removed from the price data in varying combinations. The price data were then used to calculate five kinds of experimental price indexes, which are presented in exhibit 1 in order of decreasing complexity.¹³ The least complex indexes—the matched-model index (5) and the direct comparison index (4)—simulate the removal of all identifiable analyst intervention from the calculation. The class-mean imputation indexes (1 and 3) include the commodity analyst’s original comparability decisions, but not the use of hedonic quality adjustments. The hedonic quality adjustment indexes (0 and 2) allow comparability decisions and the use of hedonic quality adjustments. Indexes 2 and 3 do not include Stage 1 intervention. Index 0 is the official CPI for Apparel. The remainder of this section discusses the experimental indexes in the order presented in exhibit 1.

Index 1: class-mean imputation with item replacement verification. Table 1 shows the percent change in Index 1 and in the official CPI between August 2002 and August 2005, and the difference between them, for the aggregate and sub-aggregate apparel item categories. The table indicates that if apparel commodity analysts did not make hedonic quality

adjustments during the period studied, the aggregate apparel index would have exhibited an upward discrepancy of 0.6 percent by falling an average of 0.2 percent less per year than the official hedonic apparel index.¹⁴

Particularly following the 1996 report by the Senate Finance Committee’s Advisory Commission to Study the Consumer Price Index,¹⁵ much has been written about the possible presence of quality change bias in the calculation of the CPI. The Commission reported a 0.6-percent annual bias in the All-Items CPI due to quality change, as well as a large upward bias of around 1.0 percent per year for the apparel sector of the CPI. However, David Lebow and Jeremy Rudd concluded that there is no quality change bias in the apparel component of the CPI.¹⁶ The issue is further complicated by arguments put forth by Charles Hulten and Bart Hobijn concluding that perhaps quality change biases indexes *downward*.¹⁷ Another study, by Robert Gordon, found that quality change bias in apparel items may not be consistently upward or downward and even may be negligible over the long term.¹⁸ The results of this study indicate that, without the application of hedonic adjustments to control for quality differences, the apparel index would have been greater by 0.2 percent per year during the period the study examined.

The results for the aggregate apparel index are in contrast to prior, similar experiments that attempted to measure the impact of applying hedonic quality adjustments. Paul Liegey calculated experimental nonhedonic indexes for seven sub-aggregate, specific apparel item categories and three aggregate apparel item categories for the latter half of 1991.¹⁹ During that period, the nonhedonic apparel index exhibited a downward discrepancy, rising 0.2 percent less than the official apparel index. As disparate as these results are, a categorical comparison between the results from Liegey’s study of the last half of 1991 and the results of the research presented in this article is not advised, because many differing factors contribute to those results.

Among the major factors that could contribute to dissimilar results between the nonhedonic indexes calculated by Liegey and those arrived at herein are (1) changes to the methodology for imputing the price change of noncomparable replacements, (2) an increase in the number of apparel item categories for which hedonic quality adjustments are used, and (3) the different periods for which the nonhedonic indexes are calculated. In 1992, the CPI began using the class-mean imputation method for noncomparable replacements in the apparel sector. Prior to that, a different method was employed.²⁰ As mentioned in the discussion of Stage 1 intervention, these methodologies can lead to different results. In addition, differences in nonhedonic indexes from 1991 and 2005 are to be expected, because the use of hedonic quality adjustments has expanded and hedonic models are updated periodically. Hedonic quality adjustments were used in 7 item categories in 1991, compared with 10 in 2005.

Exhibit 1. Descriptions of experimental indexes

Index number	Index name	Stage 1 intervention: item replacement verification	Stage 2 intervention	
			Comparability decisions	Quality adjustments
0	Hedonic quality adjustment with item replacement verification (official index)	Yes	Yes	Yes
1	Class-mean imputation with item replacement verification	Yes	Yes	No
2	Hedonic quality adjustment without item replacement verification	No	Yes	Yes
3	Class-mean imputation without item replacement verification	No	Yes	No
4	Direct comparison	No ¹	No	No
5	Matched model without item replacement verification	No	No	No

¹ There is no need for verification with an index calculated under the condition that all item replacements are directly compared.

Finally, in his study of the last 6 months of 1991, Liegey recalculated indexes for those months, while the current article does the same for a full 3 years of data, from September 2002 to August 2005. The choices of the duration and the beginning and ending periods of the simulation may affect the interpretation of the results, due to seasonal pricing patterns. For example, a downward discrepancy of 0.1 percent develops during the first 6 months (August 2002 to January 2003) of the study presented herein, but an upward discrepancy of 0.5 percent develops from January 2003 to July 2003.

The analysis of Index 1 is best continued by decomposing the apparel index into its component indexes. At this level, item category indexes behaved quite differently from each other during the experiment. As shown in table 1, men's apparel, women's apparel, and footwear produced the largest discrepancies between their official and experimental indexes; the reason was that a large majority of the hedonic quality adjustments occurred within those three categories. During the 36-month span of the study, the experimental men's apparel index exhibited a downward discrepancy, falling more than the official hedonic men's apparel index. Contrary to the results for men's apparel, the experimental women's apparel index showed an *upward* discrepancy, falling less than the official hedonic women's apparel index. Similarly, the experimental footwear index pro-

duced an upward discrepancy, rising more than the official hedonic footwear index.

Determining what causes these disparate effects across the apparel item categories requires a focused review of available data—a review that will offer the most valuable clues to the behavior of the experimental indexes. The data are the frequency of hedonic quality adjustments in each apparel item category, the distribution of alternative comparability decisions with regard to those quality adjustments, and the difference in the price changes of item replacements affected by the experiment.

Table 2 presents the number of item replacement scenarios in the specific men's apparel, women's apparel, and footwear item categories to which hedonic quality adjustments are applied. A total of 21,905 scenarios occurred in these categories during the 3 years covered by the study. A large majority of the scenarios (63 percent) occurred in women's apparel. The table also presents the distribution of official comparability decisions for item replacements, by specific item category, within the three apparel categories selected. During the 3 years examined, 9,284 hedonic quality adjustments were made to the prices of item replacements in these three apparel categories. Seventy-nine percent of the adjustments were made to the prices of women's apparel items.

The rightmost two columns of table 2 list the distribution of commodity analysts' alternative comparability decisions for

Table 1. Percent change in Index 1, August 2002–August 2005

Item category	Index 1	Official CPI	Difference	Average annual difference
Apparel	-3.3	-3.9	0.6	0.2
Men's apparel	-5.1	-3.8	-1.3	-.4
Boys' apparel	-10.2	-9.8	-.4	-.1
Women's apparel	-3.1	-5.1	1.9	.7
Girls' apparel	-6.7	-6.9	.2	.1
Footwear	2.7	1.7	1.0	.3
Infants	-8.3	-8.7	.4	.1
Jewelry and watches	-1.0	-1.0	.0	.0

quality-adjusted item replacements. The distribution used in the experiment varied greatly across specific apparel item categories. Quality-adjusted item replacement scenarios were deemed comparable in commodity analysts' alternative decisions in 50 percent of men's apparel scenarios, 54 percent of women's apparel scenarios, and 37 percent of footwear scenarios. The greater percentage of comparable alternative comparability decisions in men's and women's apparel compared with that in footwear indicates that, on average, item replacements are more similar in quality to the items they are replacing in the former two categories than in the latter.

The implications of the comparability ratios among quality-adjusted item replacement scenarios require further explanation. Commodity analysts found that quality change was minimal in a majority of item replacement scenarios involving item categories with high comparability ratios. Therefore, quality-adjusted item replacements that were deemed comparable in the experiment should have similar price changes in both the official and experimental indexes. By contrast, commodity analysts found that quality change was significant in a majority of item replacement scenarios involving item categories with low comparability ratios. Quality-adjusted item replacements that were deemed noncomparable in the experiment received imputed price relatives by class-mean imputation. The direction and magnitude of these price relatives are unpredictable.

Chart 1 illustrates the relationships between the distribution of percent changes in price for item replacements that were either quality adjusted or deemed noncomparable in the official index (the *y*-axis) and the corresponding percent changes in the experimental index (the *x*-axis). The top panel plots the percent changes for quality-adjusted item replacements that were deemed comparable in the experiment, and the middle panel plots the percent changes for quality-adjusted item replacements that were deemed noncomparable in the experiment. The bottom panel plots the percent changes for noncomparable item replacements in the official index that remained noncomparable in the experimental index.

The top panel of the chart exhibits a linear distribution, implying that the percent changes in price for quality-adjusted item replacements deemed comparable in the experiment differ very little from the corresponding percent changes for official quality-adjusted item replacements. The middle panel exhibits no clear distribution: item replacements that had a large percent change in price in the official index may have a small percent change in the experimental index, and conversely. Like the top panel, the bottom panel exhibits a (somewhat less) linear distribution, illustrating that the imputed substitution relatives varied only slightly after the removal of hedonic quality adjustments from the pool of item replacement quotes used to estimate the substitution relative. When item replacements are analyzed by apparel category and by specific item category, the same relationships hold. Thus, the tendency for discrepancies to develop between the experimental and official indexes can be attributed to the differences in the percent changes in price for quality-adjusted item replacements that were deemed noncomparable in the experiment. However, these data alone cannot predict, to any reasonable degree of accuracy, whether upward or downward discrepancies will develop between the experimental indexes and their official counterparts when hedonic quality adjustments are removed.

Another possible explanation for the differing effects of hedonic quality adjustments on apparel item category indexes is the greater impact of seasonal pricing behavior in women's apparel than in men's apparel and footwear. In an article examining pricing regularities, Peter Pashigian and Brian Bowen explained that seasonal fluctuations in the prices of women's apparel are greater than those in the prices of men's apparel and that prices of women's apparel start relatively higher because retailers are uncertain about what styles will be popular with consumers and eventually resort to reducing prices through sales to clear out leftover inventory.²¹ Many apparel items exhibit seasonal price fluctuations, of course, but the severity of the fluctuations is greater in women's apparel than in any other apparel category and may help to

Table 2. Number of item replacement scenarios, by official and alternative comparability decisions

Item category	Number of prices collected	Number of item replacement scenarios	Official comparability decisions			Alternative comparability decisions	
			Comparable	Non-comparable	Quality adjusted	Comparable	Non-comparable
Total	135,005	21,905	7,515	5,106	9,284	4,833	4,451
Footwear	29,072	3,447	1,966	796	685	252	433
Men's footwear	9,949	871	524	253	94	22	72
Women's footwear	9,123	2,576	1,442	543	591	230	361
Men's apparel	58,468	4,744	2,374	1,120	1,250	631	619
Pants	15,066	971	582	211	178	88	90
Suits, sportcoats, and outerwear	22,384	1,763	867	389	507	204	303
Shirts and sweaters	21,018	2,010	925	520	565	339	226
Women's apparel	47,465	13,714	3,175	3,190	7,349	3,950	3,399
Outerwear	11,380	3,393	1,020	776	1,597	643	954
Dresses	12,168	4,664	817	1,188	2,659	1,274	1,385
Separates	23,917	5,657	1,338	1,226	3,093	2,033	1,060

explain the different experimental-index values between item categories. Further investigation of this topic is left for future research.

The experiments described here offer further evidence that, although discrepancies between hedonic indexes (those with quality adjustments) and nonhedonic indexes (those without quality adjustments) do exist, no consistent differences appear across item categories or their lower level components. This finding mirrors that of Liegey:²² the experiments carried out here resulted in seven downward discrepancies and seven upward discrepancies between the experimental, nonhedonic indexes and the official indexes, while Liegey's analysis resulted in five downward discrepancies, three upward discrepancies, and two instances of no discrepancy between the two types of index.²³

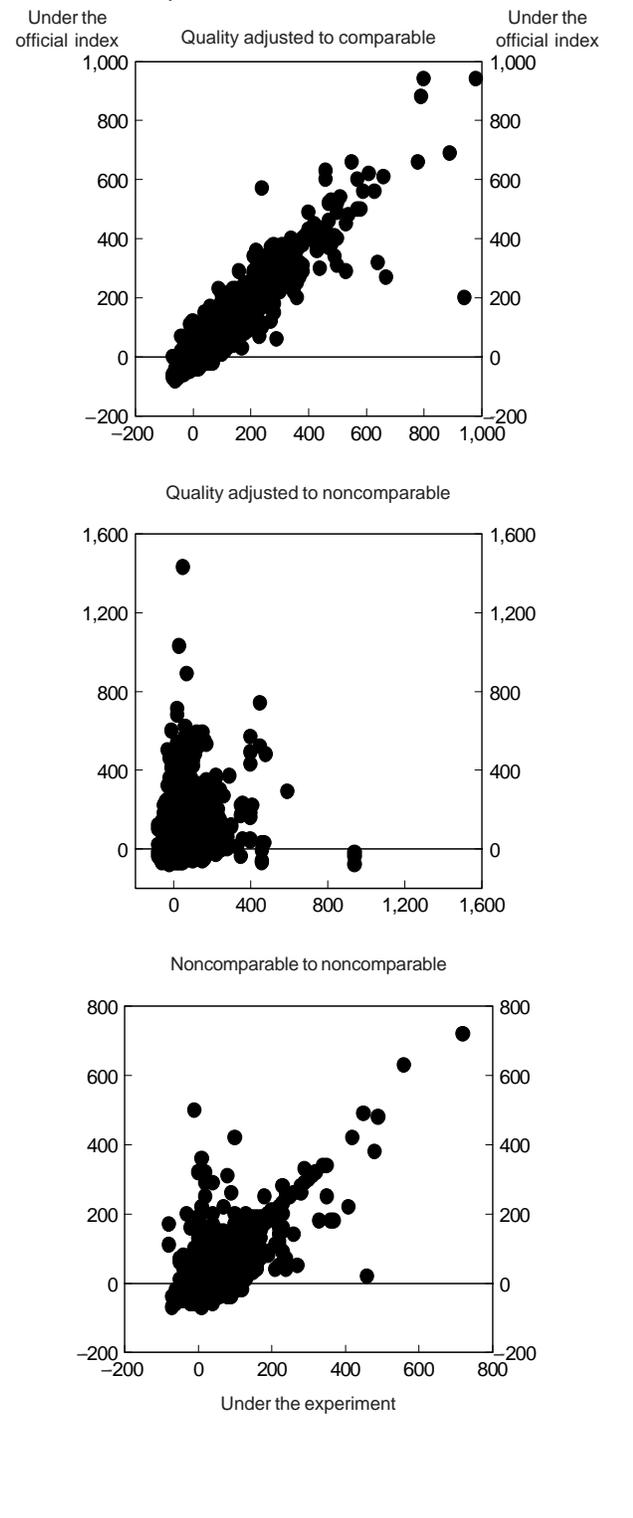
Liegey also suggested that, along with the percentage of item replacements deemed noncomparable after the removal of quality adjustments and differences in relative importance, the complexity of the apparel items in each category, the degree of knowledge of the product exhibited by the commodity analyst, and the capacity of the data collection document to capture the qualities of an item being priced account for some of the differences across item categories.²⁴ Jack Triplett concluded that discrepancies are determined, not solely by the degree of quality change in the marketplace, but also by marketing practices for different products and by the interaction between those practices and the BLS procedures that attempt to limit the amount of quality change allowed into price comparisons.²⁵ Other factors that were not researched, however, may contribute to the differences as well. Among these factors are exogenous forces such as seasonal patterns that may influence the availability and pricing of certain categories of items more so than others and endogenous factors such as peculiarities in the calculation of

the substitution relative for noncomparable item replacements, variations in the final weights used in calculating aggregate indexes, and variations in the quote weights used in calculating basic indexes. These topics fall outside the scope of this study and are left for future research.

Indexes 2 and 3: hedonic quality adjustment and class-mean imputation without item replacement verification. Experimental Indexes 2 and 3, described in exhibit 1, simulate the behavior of the apparel index had apparel commodity analysts not intervened in the Stage 1 review. This means that all item replacements reported by data collectors entered into the calculation of the index as item replacements, regardless of whether they actually were. In total, only 3,875 price quotes were directly affected by the removal of Stage 1 intervention. For Index 2, commodity analyst intervention was removed from Stage 1, but commodity analysts were allowed an unrestricted Stage 2 review of item replacements, with the full range of comparability options (comparable, noncomparable, and quality adjusted). For Index 3, Stage 1 intervention was removed and Stage 2 review was restricted by removing the option to apply hedonic quality adjustments to item replacements. Table 3 shows the percent changes in Indexes 2 and 3 and in the official CPI between August 2000 and August 2005, and the differences of those indexes from the official CPI, for the aggregate and subaggregate apparel item categories.

The results obtained for Index 2 indicate that Stage 1 intervention had small and ambiguous effects on apparel indexes during the period studied. The removal of Stage 1 intervention resulted in monthly discrepancies between -0.3 percent and 0.2 percent of the official index during the 3 years covered in the study. The average annual percent discrepancy was less than one-tenth of 1 percent of the official apparel index. Commodity analyst intervention during a Stage 1 review veri-

Chart 1. Distribution of percent changes in prices for item replacements affected by the removal of hedonic quality adjustments



ties that item replacement has occurred, thereby ensuring that the pool of quotes used to calculate the substitution relative consists only of quotes undergoing item replacement. It is difficult to formulate credible expectations of the behavior of price indexes for which the substitution relatives have been altered. Therefore, the inconsistency in the results obtained for Index 2 across item categories is not surprising.

Combining the removal of commodity analyst intervention in the Stage 1 review with the removal of hedonic quality adjustments from the Stage 2 review produces an upward discrepancy between Index 3 and the official apparel index. Index 3 fell an average of 0.2 percent per year less than the official index. Although the effect of removing commodity analyst intervention from Stage 1 is somewhat small and ambiguous, as evidenced by the results for Index 2, Index 3 reacts to the upward discrepancy that develops from the removal of hedonic quality adjustments from the Stage 2 review.

Indexes 4 and 5: direct comparison and matched model without item replacement verification. Indexes 4 and 5 simulate the CPI for Apparel under the condition that commodity analysts did not intervene at all in the review of item replacements. If there is no analyst review of quality change, then an assumption must be made about the existence of quality change in price comparisons. Index 4 is calculated under the assumption that there is no quality change, and the prices of new items are directly compared with the prices of the old items they replaced. Computationally, all item replacements are deemed comparable in the calculation of Index 4, resulting in an index calculated on the basis of direct comparisons of items. Because the only implication of Stage 1 intervention is the effect on the imputed price relative for noncomparable item replacements, removing Stage 1 intervention has no effect in this experiment, given that all item replacements are directly compared. By contrast, Index 5 is calculated under the assumption that quality is changing, and the prices of new items are not compared against the prices of the items they replaced. This matched-model index is generated by comparing prices of nonreplacement items, and the price change of replacement items is imputed via the cell-relative imputation scheme. Unlike the situation with Index 4, removing Stage 1 intervention from the calculation of Index 5 affects the source pool for the imputation of the noncomparable price relatives in a matched-model index. Table 4 shows the percent changes in Indexes 4 and 5 and in the official CPI between August 2000 and August 2005, and the differences of those indexes from the official CPI, for the aggregate and subaggregate apparel item categories.

The calculation of Index 4 results in an upward discrepancy from the official index. Given the direct-comparison nature of Index 4, proportionally more low, end-of-season prices are compared with high, beginning-of-season prices, causing the experimental index to fall less than the official index. The earlier discussions of the class-mean indexes (Indexes 1 and 3) illus-

Table 3. Percent changes in Indexes 2 and 3, August 2002–August 2005

Item category	Index 2	Index 3	Official CPI	Difference		Average annual difference	
				Index 2 minus official CPI	Index 3 minus official CPI	Index 2 minus official CPI	Index 3 minus official CPI
Apparel	-3.8	-3.2	-3.9	0.1	0.7	0.0	0.2
Men's apparel	-4.1	-5.1	-3.8	-3	-1.3	-.1	-.4
Boys' apparel	-8.7	-9.6	-9.8	1.1	.2	.4	.1
Women's apparel	-5.2	-3.3	-5.1	-.1	1.8	.0	.6
Girls' apparel	-7.1	-7.0	-6.9	-.2	-.1	-.1	.0
Footwear	1.5	2.3	1.7	-.2	.6	-.1	.2
Infants' apparel	-8.5	-8.3	-8.7	.2	.4	.1	.1
Jewelry and watches	1.2	1.2	-1.0	2.2	2.2	.7	.7

Table 4. Percent changes in Indexes 4 and 5, August 2002–August 2005

Item category	Index 4	Index 5	Official CPI	Difference		Average annual difference	
				Index 4 minus official CPI	Index 5 minus official CPI	Index 4 minus official CPI	Index 5 minus official CPI
Apparel	-1.7	-46.9	-3.9	2.2	-43.1	0.7	-14.4
Men's apparel	-3.0	-33.1	-3.8	.8	-29.3	.3	-9.8
Boys' apparel	-4.0	-49.0	-9.8	5.8	-39.2	1.9	-13.1
Women's apparel	-3.8	-65.9	-5.1	1.3	-60.8	.4	-20.3
Girls' apparel	1.6	-57.4	-6.9	8.5	-50.5	2.8	-16.8
Footwear .....	.4	-42.5	1.7	-1.3	-44.2	-.4	-14.7
Infants' apparel	-7.4	-36.7	-8.7	1.3	-28.0	.4	-9.4
Jewelry and watches	9.9	-5.3	-1.0	10.9	-4.3	3.6	-1.4

trated how the partial removal of commodity analyst intervention in the Stage 2 review tends to produce an upward discrepancy between the experimental and official apparel indexes. Under the assumption that quality change is minimal or nonexistent, and with the removal of commodity analyst intervention in Stage 2 review, Index 4 falls at an average annual rate of 0.7 percent less than the rate at which the official index falls.

The calculation of Index 5 results in a downward discrepancy from the official index. Given the matched-model nature of Index 5, no low end-of-season prices are compared with high beginning-of-season prices. Under the assumption that quality change errors are introduced with all item replacements, this matched-model index falls at the high average annual rate of 14.4 percent more than the rate at which the official index falls.

THIS ARTICLE HAS SHOWN THAT SEVERAL EXPERIMENTAL PRICE INDEXES produced without commodity analyst intervention tend to either rise more or fall less than official BLS indexes produced with commodity analyst intervention. The lone exception is a matched-model index, which falls much more rapidly than the official index. Over the 3 years of data used in the study, the experimental indexes in which all levels of

commodity analyst intervention were removed produced the largest discrepancies from the official indexes. Experimental indexes simulating the removal of hedonic quality adjustments also produced discrepancies from the official indexes, although these appeared with varying signs and magnitudes at lower levels of aggregation.

Clearly, commodity analysts have an impact on the CPI for Apparel, not only by affecting the data, but also by maintaining the sample of price quotes, used in calculating the index. In truth, it is impossible to measure the total impact of commodity analyst intervention on the calculation of price indexes simply by defining and conducting the experiments presented in this article. For instance, the impact of hedonic regression models goes beyond their application by commodity analysts in quality adjusting item replacements during the Stage 2 review. The alternative comparability decisions used to calculate the class-mean experimental indexes were made by apparel commodity analysts, whose knowledge of the existing hedonic models no doubt affected their judgment. In addition, commodity analysts are responsible for the design and functionality of the electronic data collection tools used by CPI data collectors. The unique market knowledge commodity analysts possess, as well as their

knowledge of hedonic models, is instrumental in the creation of data collection tools. As a result, commodity analysts indirectly affect the CPI by regulating the composition of the goods and services that are sampled. The tasks involved in the commodity analyst's intervention in producing the CPI

are far too complex and indivisible to extract fully from the calculation of the index. Therefore, the findings presented in this article should be regarded as an estimate of the impact of only a portion of the effect of commodity analyst intervention on apparel price indexes. □

Notes

¹ See Chapter 17 of the *BLS Handbook of Methods* (Bureau of Labor Statistics, 2006) for a complete discussion of the construction of the CPI and the role of commodity analysts.

² The Bureau took a significant step forward in improving the quality of microlevel data used to compute the CPI when it began using computer-assisted data collection in 2002. Prior to that changeover, the collection, transmission, and transcription of data were subject to a large degree of human error. Now, automatic checks and reviews help improve the completeness and accuracy of CPI data.

³ The Bureau uses the term "experimental" in contrast to "official" to denote statistics that it produces outside of its regular production systems and, consequently, with less than full production quality. For security reasons, BLS researchers cannot produce experimental statistics until after the publication of the corresponding official statistics. To obtain experimental series referred to in this article, contact either of the authors.

⁴ See Dennis Fixler, Charles Fortuna, John Greenlees, and Walter Lane, "The Use of Hedonic Regressions to Handle Quality Change: The Experience in the U.S. CPI," paper presented at the Fifth Meeting of the International Working Group of Price Indices, Reykjavik, Iceland, August 1999, pp. 6–9, for a review of the difficulties inherent in constructing accurate price indexes for apparel items.

⁵ In September 2005, the apparel sample of the CPI consisted of 6,316 priced quotes. At that time, 4,018 quotes represented unique items that were identified as being available for sale year round (nonseasonally). The remaining 2,298 seasonal quotes represented unique items that were identified as being available for sale only during certain months of the year.

⁶ Modern research on hedonic theories and methods generally starts with Zvi Griliches, "Hedonic Price Indexes for Automobiles: An Econometric Analysis of Quality Change," in *The Price Statistics of the Federal Government*, General Series No. 73 (New York, Columbia University Press, 1961). For more information on early work with hedonic regression models for apparel items in the CPI, see Efthemia V. Georges and Paul R. Liegey, Jr., *An Examination Using Hedonic Regression Techniques to Measure the Effects of Quality Adjustment on Apparel Indexes*, internal report (Bureau of Labor Statistics, 1988); Paul A. Armknecht and Donald Weyback, "Adjusting for Quality Change in the U.S. Consumer Price Index," *Journal of Official Statistics*, June 1989, pp. 107–23; Paul R. Liegey, Jr., "Adjusting Apparel Indexes in the Consumer Price Index for Quality Differences," in Murray F. Foss, Marilyn E. Manser, and Allan H. Young, *Price Measurements and Their Uses*, National Bureau of Economic Research Studies in Income and Wealth, 57 (Chicago, University of Chicago Press, 1993), pp. 209–26; Paul R. Liegey, Jr., "Apparel price indexes: effects of hedonic adjustment," *Monthly Labor Review*, May 1994, pp. 38–45; and Nicole Shepler, *Analysis of Hedonic Regression: Applied to Women's Apparel in the Consumer Price Index*, internal manuscript (Bureau of Labor Statistics, 1994).

⁷ The number of apparel item replacement scenarios reported during the 3 years of research for this article (34,788) includes 948 scenarios (2.7 percent) that are not technically item replacements.

These scenarios are referred to as *reinitiations* and are the result of resampling the price quotes and selecting replacement items through the initiation procedures determined by the Bureau. Reinitiations differ from item replacements in that data collectors are not directed to select the next-most-similar item to sample when reinitiating a price quote. Data collectors are directed to reinitiate quotes for a number of reasons, most notably when an item is ineligible in the specific category being sampled or when a category is selected for item rotation (a method of keeping the sample current by periodically reinitiating the quotes). Commodity analysts are required to review reinitiations in the same manner that they review item replacements. Reinitiations are included in this analysis because they share many characteristics with item replacements in terms of how they are reviewed.

⁸ Class-mean imputation is explained in greater detail in the *BLS Handbook of Methods*, Chapter 17, p. 23.

⁹ Cell-relative imputation for noncomparable item replacements is used primarily in the foods and services sectors of the CPI. The method also is used to impute a price relative for nonreplacement items for which prices are unavailable during a collection period. Cell-relative imputation is explained further in the *BLS Handbook of Methods*, Chapter 17, p. 23.

¹⁰ A "hedonic price index" is often defined as an index that uses prices imputed directly from a hedonic regression, either as a time dummy coefficient or by using the coefficients of the characteristics variables to impute a value for the dependent variable. The hedonic adjustment method used by the Bureau is what Mick Silver and Saeed Heravi call "patching" and simply means that adjustments for quality differences are made to noncomparable models and the adjusted, "patched" price is used for price comparisons. (See Mick Silver and Saeed Heravi, "Scanner Data and the Measurement of Inflation," *Economic Journal*, June 2001, pp. 384–405.)

¹¹ A complete academic description of quality adjustment and conventional price index methodologies can be found in Jack Triplett, *Handbook on Hedonic Indexes and Quality Adjustments in Price Indexes: Special Application to Information Technology Products*, OECD Science, Technology and Industry Working Papers, No. 9 (Geneva, OECD Publishing, 2004).

¹² Triplett, *Handbook on Hedonic Indexes*, notes that the direct comparison method may be the appropriate way of handling changes in quality under the "most similar item" replacement rule employed by the Bureau. The rule instructs its data collectors to choose item replacements with characteristics similar to those of the item that "disappeared."

¹³ The experimental indexes were calculated with an in-house program that mimics the functions of the official CPI algorithm. This approach represents a noteworthy improvement over previous BLS experimental indexes used for research purposes, which were limited in their ability to replicate the official algorithm.

¹⁴ The distinction between upward and downward discrepancies is made in Jack Triplett, "Determining the effects of quality change on the CPI," *Monthly Labor Review*, May 1971, pp. 27–32 (see especially note to table 4, p. 30), and in Liegey, "Apparel price indexes," p. 41. Borrowing from Liegey, an "upward discrepancy" means that the experimental index rises more than the official price index if prices are rising or falls less than the official index if prices are falling. Conversely, a "downward discrepancy" means that the experimental index rises less than the official price index if prices are rising or falls more than the official index if prices are falling.

¹⁵ Michael J. Boskin, Ellen R. Dulberger, Robert J. Gordon, Zvi Griliches, and Dale W. Jorgenson, *Final Report of the Advisory Commission to Study the Consumer Price Index* (Washington, DC, U.S. Government Printing Office, 1996).

¹⁶ David E. Lebow and Jeremy B. Rudd, "Measurement Error in the Consumer Price Index: Where Do We Stand?" *Journal of Economic Literature*, March 2003, pp. 159–201.

¹⁷ Charles R. Hulten, "Quality Change in the CPI," *Federal Reserve Bank of St. Louis Review*, May/June 1997, pp. 87–111; and Bart Hobijn, "On Both Sides of the Quality Bias in Price Indexes," *Federal Reserve Bank of New York Staff Reports*, no. 157, December 2002, pp. 1–40. Neither of these articles offers an estimate of quality change bias specifically for the apparel item sector of the CPI.

¹⁸ Robert J. Gordon, "Apparel Prices 1914–93 and the Hulten/Brueghel Paradox," paper presented at the CRIW Conference on Price Index Concepts and Measurement, Vancouver, British Columbia, Canada, June 28–29, 2004.

¹⁹ Liegey, "Apparel price indexes."

²⁰ Before the substitution relative procedure began in 1992, the

apparel section used a linking method to ensure that apparel items did not exit the sample while on sale. Instead of using cell-relative imputation, analysts compared an overlap price estimated from the old item's last collected regular price with the new item's price.

²¹ B. Peter Pashigian and Brian Bowen, "Why Are Products Sold on Sale?: Explanations of Pricing Regularities," *Quarterly Journal of Economics*, November 1991, pp. 1015–38.

²² Liegey, "Apparel price indexes."

²³ Liegey recalculated indexes for 7 item categories (3 men's apparel items and 4 women's apparel items), 2 aggregate indexes (men's and women's apparel), and an aggregate apparel index, for a total of 10 experimental, nonhedonic indexes. The analysis presented herein calculates experimental indexes for 10 item categories (3 men's apparel items, 3 women's apparel items, 1 boys' apparel item, 1 girls' apparel item, and 2 footwear items), 3 aggregate indexes (men's apparel, women's apparel, and footwear), and an aggregate apparel index, for a total of 14 experimental, nonhedonic indexes.

²⁴ Liegey, "Apparel price indexes."

²⁵ Triplett, "Determining the effects of quality change."

Price transmission: from crude petroleum to plastics products

A structural vector autoregression model is used to analyze the effects of crude-petroleum supply shocks on the market for organic chemicals and plastics products; the analysis demonstrates that changes in crude-petroleum prices are passed on to prices and quantities of organic chemicals and plastics products

Jonathan C.
Weinhagen

Crude petroleum is an important input used in the production of organic chemicals, which are in turn used as inputs into the production of more-processed goods, such as plastics products. Prices for plastics products compose a substantial portion of several aggregate producer price indexes (PPI's), and these indexes are often looked to as early indicators of consumer inflation. Price changes in crude petroleum, which are transmitted to prices for plastics products, would affect these aggregate PPI's. A thorough knowledge of the relationship between prices for crude petroleum and prices for plastics products, therefore, would help economists understand and explain movements of aggregate PPI's.

The main aggregate PPI's that include prices for plastics products are the indexes for All Commodities, Finished Goods, Finished Goods Excluding Foods and Energy, Intermediate Goods, and Intermediate Goods Excluding Foods and Energy. In December 2005, plastics products accounted for 2.5 percent of the All Commodities PPI. (PPI commodity weights are derived from the 1997 Census of Manufactures and are updated by changes in PPI commodity indexes.) In addition, plastics products accounted for 1.2 percent of the Finished Goods PPI, 2.0 percent of the PPI for Finished Goods Excluding Foods and Energy, 4.6 percent of the Intermediate Goods PPI, and 6.1 percent of the PPI for Intermediate

Goods Excluding Foods and Energy. Two of these main aggregate PPI's exclude prices for energy, insulating them somewhat from energy price inflation; however, price changes in crude petroleum that are transmitted forward to organic chemicals and then to plastics products represent one way in which aggregate PPI's, which exclude energy prices, may still be affected by energy price shocks. In 2005, crude petroleum accounted for 16.8 percent of the Crude Goods PPI and organic chemicals accounted for 4.2 percent of the Intermediate Goods PPI.

The relationship between prices for crude petroleum and prices for plastics products has not been thoroughly examined, but price transmission within the gasoline market is well documented. Using January 1987–August 1996 weekly data on the spot price for West Texas intermediate crude oil, the New York Harbor spot price for unleaded regular motor gasoline, and the self-service pump price for unleaded regular motor gasoline, with and without taxes, Nathan Balke, Stephen Brown, and Mine Yucel estimated a series of bivariate vector autoregression and vector error correction models.¹ Their study indicates that crude petroleum price changes are passed forward to consumer gasoline prices, but that the response of gasoline prices to positive and negative crude petroleum price shocks may be asymmetric. In another study, Michael Burdette and John Zyren used Department of Energy spot

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and retail gasoline price data to estimate regression models.² Their results show that most of the movement in retail prices is determined by previous movements in spot prices. In an earlier *Monthly Labor Review* article, Jonathan Weinhagen used the PPI's for Crude Petroleum and Gasoline, the CPI for Gasoline, the quantity of domestically consumed gasoline, and the Federal Reserve's index of industrial production to estimate a structural vector autoregression model of the gasoline market.³ His study reveals that crude petroleum supply shocks significantly affect prices for producer and consumer gasoline. Because the relationship between prices for crude petroleum and prices for plastics products is an area that has seen little research, the analysis that follows attempts to fill the gap by empirically examining price transmission from crude petroleum to plastics products. Toward that end, a structural vector autoregression (VAR) approach is used to examine the effects of crude petroleum price shocks on the market for plastics products from 1974 through 2003.

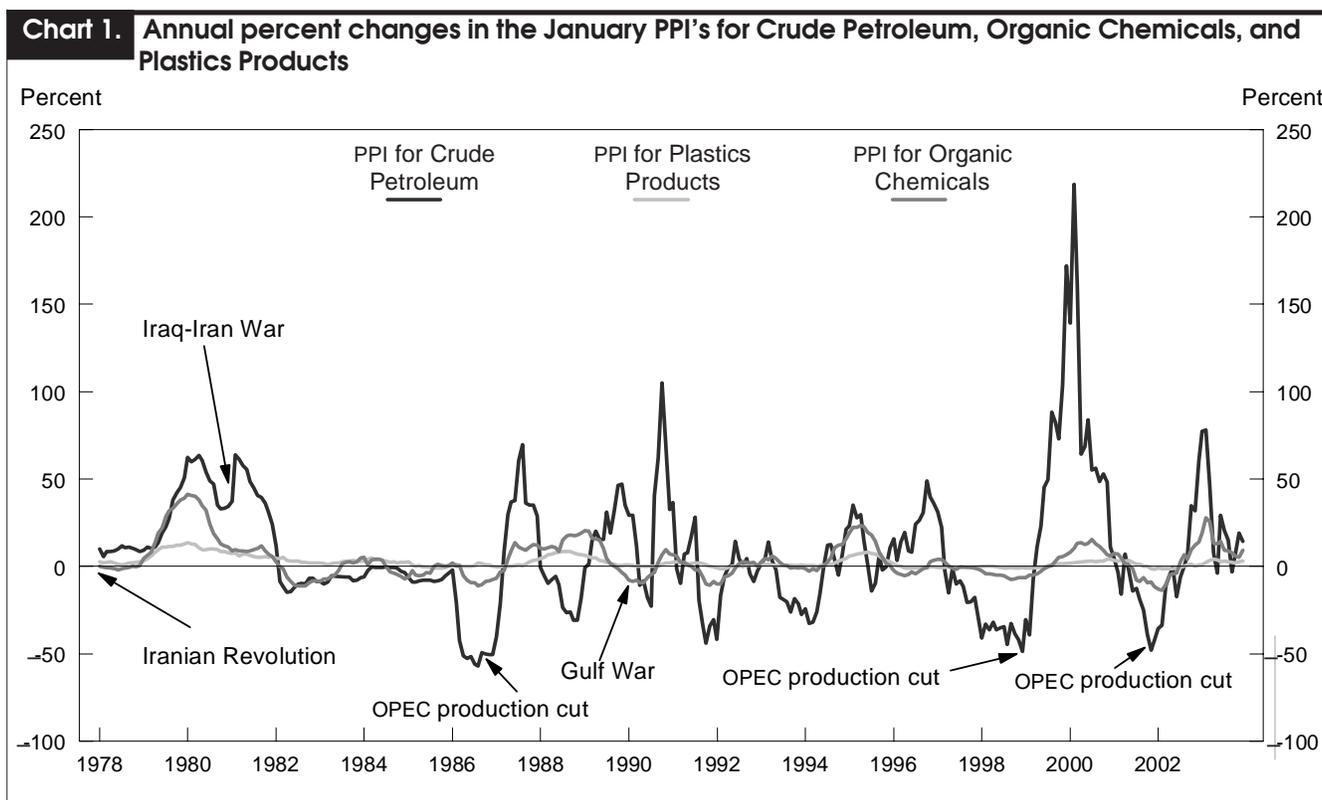
Price movements of three commodities

The analysis begins with an examination of historical price movements of the PPI's for Crude Petroleum, Organic Chemicals, and Plastics Products. In determining whether crude petroleum price changes are transmitted to prices for organic

chemicals and plastics products, the relative timing of price changes for those three commodities in response to five crude-petroleum supply shocks is examined visually in the form of a chart. For each supply shock, the beginning of the acceleration, the peak, and the trough for the three time series presented are analyzed.

Chart 1 shows annual percentage changes in the PPI's for Crude Petroleum, Organic Chemicals, and Plastics Products on a monthly basis from 1978 through 2003. The mean annual percent changes in the PPI's for those commodities over the sample period are, respectively, 8.5, 3.7, and 2.5. The respective standard deviations are 36.2, 10.6, and 3.2 percent, indicating that both the standard deviations and the means of these three series decline as the degree of processing of the product increases.

The first crude-petroleum supply shock in the sample period occurred as a result of the Iranian Revolution in conjunction with the Iran-Iraq War.⁴ In January 1978, Iranian students began protesting against the shah of Iran, and on January 16, 1979, the shah left Iran permanently. Then, on September 23, 1980, Iraq invaded Iran. By 1981, the Organization of Petroleum Exporting Countries' (OPEC's) production of oil decreased by 7 million barrels per day, reducing the world oil supply 11.6 percent from its 1978 average.



The second crude-petroleum supply shock occurred in 1986 and can be traced to an OPEC agreement to reduce production. On August 4, 1986, reports surfaced of a probable decrease in OPEC production, and on December 19, 1986, OPEC agreed to reduce petroleum production by 7 percent in the first half of 1987.

The third supply interruption occurred when Iraq invaded Kuwait on August 2, 1990. In response to the Iraqi attack, the United States invaded Iraq on January 16, 1991. The Gulf War resulted in a production decline of approximately 4.3 million barrels of petroleum per day from Iraq and Kuwait combined, reducing world oil production approximately 7.2 percent from its 1989 average level.

The fourth supply shock followed on the heels of a March 1999 OPEC agreement to cut production by 1.7 million barrels per day, an amount that represented a 2.5-percent decline in world oil production from the 1998 average.

The final major petroleum supply shock during the period examined began at the end of 2001, when OPEC reduced production and fears of a greater reduction due to probable conflict in the Middle East drove prices higher. Average daily OPEC production of crude oil fell by approximately 2.2 percent from 2000 to 2001 and an additional 6.1 percent from 2001 to 2002.

For the three time series, the initial acceleration, the peak, and the trough resulting from each of the five supply shocks were examined. The lone exception was the trough in the last supply shock, which had not yet occurred at the end of 2003. Exhibit 1 indicates the month in which each series began accelerating, peaked, and reached a trough in response to the five supply shocks.

In 9 out of 14 instances, the initial acceleration, the peak, or the trough in the PPI for Crude Petroleum occurred prior to the same event in the PPI for Organic Chemicals. In only 2 instances did the initial acceleration, peak, or trough in the PPI for Organic Chemicals precede the same event in the PPI for Crude Petroleum, and in 3 instances the initial accelerations, peaks, or troughs of the two series coincided. In 12 out of 14 instances, the initial acceleration, the peak, or the trough in crude-petroleum prices preceded that of plastics products prices. In only 1 instance did the initial acceleration, peak, or trough in the PPI for Plastics Products occur prior to the same event in the PPI for Crude Petroleum, and only once over the entire period studied did the initial accelerations, peaks, or troughs in the PPI's for Plastics Products and Crude Petroleum coincide.

In the majority of the cases examined in exhibit 1, price changes for crude petroleum *preceded* price changes for organic chemicals and plastics products. A visual analysis, therefore, suggests that petroleum price shocks are passed forward to prices for organic chemicals and plastics. In fewer cases, movements in the indexes for organic chemicals and plastics products *coincided* with or *preceded* changes in

crude petroleum prices. The anticipation of crude-petroleum price changes may explain instances in which price changes for plastics or chemicals *preceded* changes in petroleum prices. For example, firms manufacturing organic chemicals may contract with plastics firms to sell chemicals at a fixed price over a given period. If petroleum prices are expected to increase, the contract may stipulate a higher price for chemicals currently, which in turn could lead to a current increase in plastics prices.

Empirical model of the plastics market

To examine price transmission from crude petroleum to organic chemicals and plastics more rigorously, a structural vector autoregression model of supply and demand within the plastics market is estimated. The model examines only cases in which price changes are passed forward through the stages of production. However, a vector autoregression model also can be used to examine the effect of expectations on variables in the model. For example, Takatoshi Ito used a VAR model to test the uncovered interest parity hypothesis, a hypothesis which asserts that the interest rate spread between two substitutable assets is equal to the difference between the expected future exchange rate and the current exchange rate.⁵ Ito expresses the null hypothesis of the uncovered interest parity hypothesis in the form of nonlinear cross-equational restrictions on a VAR system and uses Wald tests to test these restrictions.

A VAR is a system of equations in which each variable is expressed as a linear function of lagged values of itself and all other variables in the system.⁶ Sufficiently identifying restrictions on the covariances of the error terms of an unrestricted VAR allows the structural model to be estimated from the reduced-form model.⁷

Unrestricted vector autoregression

The unrestricted VAR was estimated with historical monthly data on the PPI's for Crude Petroleum, Organic Chemicals, and Plastics Products, and the Federal Reserve's indexes for Plastics Production and overall Industrial Production, for the period from January 1974 through December 2003. All time series were expressed in percentage growth form by taking first differences of the natural logarithms of the data. In addition, seasonally adjusted data were used when available. Seasonally adjusted data were not available for the PPI's for Crude Petroleum and Organic Chemicals, which the Bureau of Labor Statistics has determined exhibit no statistically significant seasonal patterns. To avoid redundancy between time series, the plastics components of the index for Overall Industrial Production was removed through the use of monthly relative importance values provided by the Federal Reserve.

Exhibit 1. Accelerations, peaks, and troughs, crude petroleum, organic chemicals, and plastics products, 1978–2003

Supply shock	Acceleration	Peak	Trough
Crude petroleum			
Iranian Revolution/ Iran-Iraq War	December 1978	January 1980	April 1982
OPEC production cut, 1986	September 1986	August 1987	October 1988
Gulf War	August 1990	October 1990	October 1991
OPEC production cut, 1999	March 1999	February 2000	November 2001
OPEC production cut, 2001	December 2001	February 2003	—
Organic chemicals			
Iranian Revolution/ Iran-Iraq War	July 1978	January 1980	September 1982
OPEC production cut, 1986	September 1986	January 1989	April 1990
Gulf War	June 1990	November 1990	November 1991
OPEC production cut, 1999	April 1999	July 2000	February 2002
OPEC production cut, 2001	March 2002	February 2003	—
Plastics products			
Iranian Revolution/ Iran-Iraq War	August 1978	January 1980	March 1983
OPEC production cut, 1986	March 1987	August 1988	April 1990
Gulf War	October 1990	February 1991	February 1992
OPEC production cut, 1999	April 1999	November 2000	March 2002
OPEC production cut, 2001	April 2002	April 2003	—

NOTE: Dash indicates trough not yet discernible.

A time series is considered stationary if the mean, variance, and covariance of the series exist and are independent of time. Estimation of a VAR with nonstationary data invalidates the tests used to determine the statistical significance of the model's coefficients and can indicate statistically significant correlations between unrelated variables within the model. These correlations are only the result of the underlying trends in the variables, not the result of a related generating mechanism.⁸ To test for stationarity, augmented Dickey-Fuller tests were implemented.⁹ The tests included a trend and an intercept, and the Schwarz criterion was used to select the optimal lag length.¹⁰ The augmented Dickey-Fuller tests indicated that all of the time series are stationary in percentage growth form.

Information criteria can be used to select the appropriate lag length for a VAR. These criteria weigh the costs and benefits of including additional lags in a model by rewarding the increase in fit resulting from the additional lags, but penalizing the loss of degrees of freedom. The three most common information criteria used in econometric modeling are the Akaike, Schwarz, and Hannan-Quinn criteria. Of these, the Akaike criterion is the least strict in terms of penalizing loss of degrees of freedom, whereas the Schwarz criterion is

strictest. The Hannan-Quinn information criterion was chosen to select the optimal length of the VAR, because it falls between the Akaike and Schwarz criteria in terms of strictness. Moreover, the Akaike criterion was not chosen, because it tends to asymptotically overstate the optimal lag length for models.¹¹ The Hannan-Quinn criterion suggested that a VAR whose equations have one lag is optimal; therefore, the one-lag specification was chosen, and the unrestricted VAR was estimated with ordinary least squares.

In addition to Dickey-Fuller tests, which determine whether individual time series are stationary, a VAR can be tested for stationarity by calculating the absolute eigenvalues from the matrix of the VAR's coefficients. A VAR is stationary when each of its absolute eigenvalues is less than unity.¹² The absolute eigenvalues from the one-lag VAR estimated here fall between 0.67 and 0.11, indicating that the VAR is stationary and reinforcing the earlier results from the Dickey-Fuller tests.

Structural vector autoregression

The residuals of a VAR are mutually contemporaneously correlated, so a random innovation to one variable is likely to occur simultaneously with innovations to other variables.

Therefore, to determine meaningful economic conclusions from the residuals, it is necessary to orthogonalize them.¹³

Orthogonalization is customarily achieved by a Cholesky decomposition.¹⁴ This approach has been criticized because it is often not supported by economic theory, leading to a set of orthogonalized residuals that have no particular meaning.¹⁵ Alternatively, orthogonalization of the residuals can be achieved by placing theoretically plausible contemporaneous restrictions on an unrestricted VAR's residuals, thereby allowing the structural disturbances to be estimated from the reduced-form VAR and meaningful economic conclusions to be drawn from the model.¹⁶ This is the approach used here.

The estimated variance-covariance matrix of the unrestricted VAR's residuals contains $n(n + 1)/2$ distinct elements (where n is the number of variables included in the VAR). To obtain the structural disturbances from the reduced-form VAR requires estimating an $n \times n$ matrix of coefficients that relates the residuals to the orthogonal disturbances. Therefore, at least $n^2 - n(n + 1)/2 = n(n - 1)/2$ additional restrictions are required to estimate the structural disturbances. Imposing $n(n - 1)/2$ restrictions results in an exactly identified model, while imposing more than $n(n - 1)/2$ yields an overidentified model.

The following equations describe the system of contemporaneous interactions among the VAR's innovations that was estimated:

$$\begin{aligned} (1) \quad PCP &= (\hat{\alpha}_1 \times QIP) + u_{pcp}; \\ (2) \quad POC &= (\hat{\alpha}_2 \times PCP) + u_{poc}; \\ (3) \quad PPP &= (\hat{\alpha}_3 \times QPP) + (\hat{\alpha}_4 \times POC) + u_{ppp}; \\ (4) \quad QPP &= (-\hat{\alpha}_5 \times PPP) + (\hat{\alpha}_6 \times QIP) + u_{qpp}; \\ (5) \quad QIP &= u_{qip}. \end{aligned}$$

The estimated reduced-form VAR includes 5 variables, yielding a variance-covariance matrix with 15 distinct elements. As discussed earlier, at least $5^2 - 5(5 + 1)/2 = 10$ additional restrictions are required to estimate the 5-variable structural model. The model described in equations (1)–(5) provides 14 restrictions and thus is overidentified.

All of the $\hat{\alpha}$ coefficients of the five equations are presumed to be positive, and PCP, POC, PPP, QPP, and QIP refer, respectively, to innovations in the PPI's for Crude Petroleum, Organic Chemicals, and Plastics Products and the Federal Reserve indexes of plastics production and industrial production. The u 's are mutually and serially uncorrelated error terms.

The 14 restrictions in the system given by the model are derived by assuming an upward-sloping supply curve and a

downward-sloping demand curve in the market for plastics products. Equation (1) imposes 3 restrictions, allowing only the quantity of industrial production to contemporaneously affect the price of crude petroleum. Equation (2) provides an additional 3 restrictions by assuming that the price of organic chemicals is affected in the current period by only the price of crude petroleum. Equation (3) imposes 2 more restrictions, permitting the price of plastics products to be contemporaneously affected by only the quantity of plastics and the price of organic chemicals. The positive sign of the coefficient $\hat{\alpha}_3$ indicates an upward-sloping supply curve. Equation (4) allows the quantity of plastics to be affected in the current period by only the price of plastics products and the quantity of industrial production, resulting in 2 restrictions. The negative sign in $-\hat{\alpha}_5$ indicates a downward-sloping demand curve. Finally, equation (5) imposes 4 additional restrictions by assuming that industrial production is contemporaneously exogenous. In this system of equations, u_{pcp} , u_{poc} , and u_{ppp} are supply shocks, u_{qpp} is a demand shock, and u_{qip} is a simultaneous shock to supply and demand.

The estimation results for the system of structural coefficients is shown in the following equations, where ⁽¹⁾ indicates statistical significance at the level of $p = .0001$ and ⁽²⁾ indicates statistical significance at the level of $p = .05$:

$$\begin{aligned} (6) \quad PCP &= (.23 \times QIP) + u_{pcp} \\ (7) \quad POC &= (.05 \times PCP^{(1)}) + u_{poc} \\ (8) \quad PPP &= (.10 \times QPP^{(2)}) + (.11 \times POC^{(1)}) + u_{ppp} \\ (9) \quad QPP &= (-.29 \times PPP) + (.97 \times QIP^{(1)}) + u_{qpp} \\ (10) \quad QIP &= u_{qip} \end{aligned}$$

All of the signs of the structural coefficients are as anticipated. Equation (6) indicates that shocks to the quantity of industrial production affect crude petroleum price innovations positively. Equation (7) shows a weaker positive correlation between unanticipated changes in the price of crude petroleum and unanticipated changes in the price of organic chemicals. Equation (8) reflects the upward slope of the plastics supply curve and indicates that shocks to the price of organic chemicals also are positively related to innovations in plastics prices. Equation (9) shows the downward slope of the plastics demand curve and indicates that unanticipated changes in the quantity of industrial production are positively correlated with plastics quantity innovations.

The overidentification of the system allowed the likelihood ratio test for overidentification to be applied. This test is a

test of the validity of the system's restrictions, where the null hypothesis asserts that the identifying restrictions are valid.¹⁷ A *p*-value of less than 0.05 is required to reject the null hypothesis. The test's chi-square statistic and *p*-value were 3.8 and 0.43, respectively. The null hypothesis of the 14 overidentifying restrictions, therefore, was not rejected.

In addition to the system estimated, two alternative specifications were attempted. The first omitted the insignificant QIP variable from equation (6); however, this exclusion did not yield any changes to the structural coefficients as originally estimated, nor did it affect any of the subsequent analyses (the impulse response functions or variance decompositions). Because allowing a contemporaneous relationship between the price of crude petroleum and the quantity of industrial production seems more theoretically plausible than not allowing the relationship, and because both specifications yield identical estimates of equations (6) through (10), QIP was included in equation (6) of the final specification.

The second alternative specification excluded the insignificant PPP variable from equation (9). This specification only minimally altered the remaining structural coefficients, leading to no large change in the sign or significance of any structural coefficient. In the end, the PPP variable in equation (9) was included in the final model, for two reasons. First, assuming that the demand curve for plastics is downward sloping, as opposed to completely inelastic, seems theoretically more plausible. Second, the *p*-value of the coefficient for PPP in equation (9) is 0.12, indicating that the coefficient is close to being significant at the 10-percent level.

Impulse response functions

The orthogonalized set of residuals estimated in equations (6) through (10) and the coefficients from the unrestricted VAR were used to construct accumulated impulse response functions. Impulse response functions measure the dynamic effects of a one-standard-deviation shock to a variable in a system on the current and future values of all variables in the system.¹⁸ In addition, standard error bands were constructed around the impulse response functions. An impulse response function is considered significant when its upper band and lower band are both above zero or both below zero. Chart 2 (pages 40 and 41) presents these impulse response functions.

Chart 2 illustrates the dynamic responses of all of the variables in the VAR to the structural disturbances. Recall that u_{pcp} , u_{poc} , and u_{ppp} are supply shocks, u_{qip} is a demand shock, and u_{qip} is a simultaneous shock to supply and demand. The first column in the chart demonstrates that a shock to u_{pcp} , the price of crude petroleum, leads to increases in the prices of crude petroleum, organic chemicals, and plastics products; leads to a decrease in the quantity of plastics products; and

does not affect the quantity of industrial production. The second column shows that a shock to u_{poc} , the price of organic chemicals, does not affect the price of crude petroleum, increases the prices of organic chemicals and plastics products, and decreases the quantities of plastics products and industrial production. The third column indicates that a shock to u_{ppp} , the price of plastic, does not affect the price of crude petroleum, increases the prices of organic chemicals and plastics products, and decreases the quantities of plastics products and industrial production. The fourth column demonstrates that a shock to u_{qip} , the quantity of plastics, does not affect the prices of crude petroleum or organic chemicals and leads to increases in the price of plastics products, the quantity of plastics products, and the quantity of industrial production. Finally, the last column of the chart indicates that a shock to u_{qip} , industrial production, tends to increase the prices of crude petroleum, organic chemicals, and plastics products and to increase the quantities of plastics products and industrial production.

Variance decompositions

The orthogonalized set of residuals also was used to decompose variances. Variance decompositions show the percentage of variance in the forecast error in one variable of the vector autoregression caused by innovations in the other variables.¹⁹ The variance decompositions after 24 months are presented in the following tabulation:

Decomposition variable	Percent of forecast error due to—				
	u_{pcp}	u_{poc}	u_{ppp}	u_{qip}	u_{qip}
Price of crude petroleum	98.52	0.09	0.05	0.35	0.99
Price of organic chemicals	16.91	73.75	7.32	.18	1.84
Price of plastics	6.17	36.44	51.78	2.34	3.27
Quantity of plastics ...	.31	2.88	2.90	65.26	28.65
Quantity of industrial production .....	.57	1.67	1.71	9.28	86.77

The first row of the tabulation indicates that only shocks to crude-petroleum prices explain a significant portion of the variance in the forecast error for crude-petroleum prices. The second row shows that, although innovations to prices for organic chemicals are the most important factor in explaining the variance in the forecast error for prices of organic chemicals, shocks to the price of crude petroleum and to plastics prices account for approximately 17 percent and 7 percent, respectively, of the variance. The third row demonstrates that unanticipated changes in the price of crude petroleum, in the price of organic chemicals, and in plastics prices all explain a substantial amount of the variance in the

Chart 2. Impulse response functions

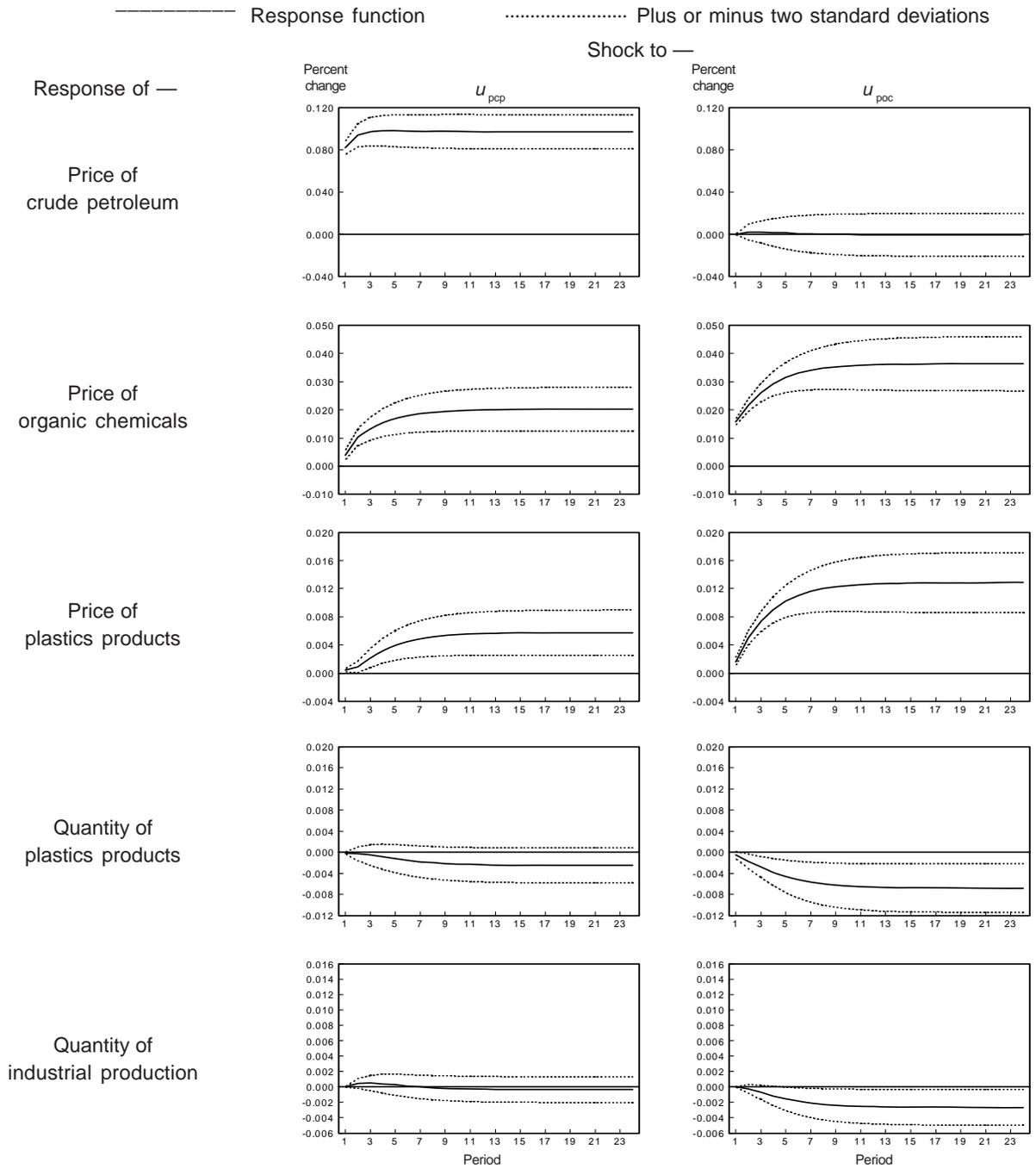
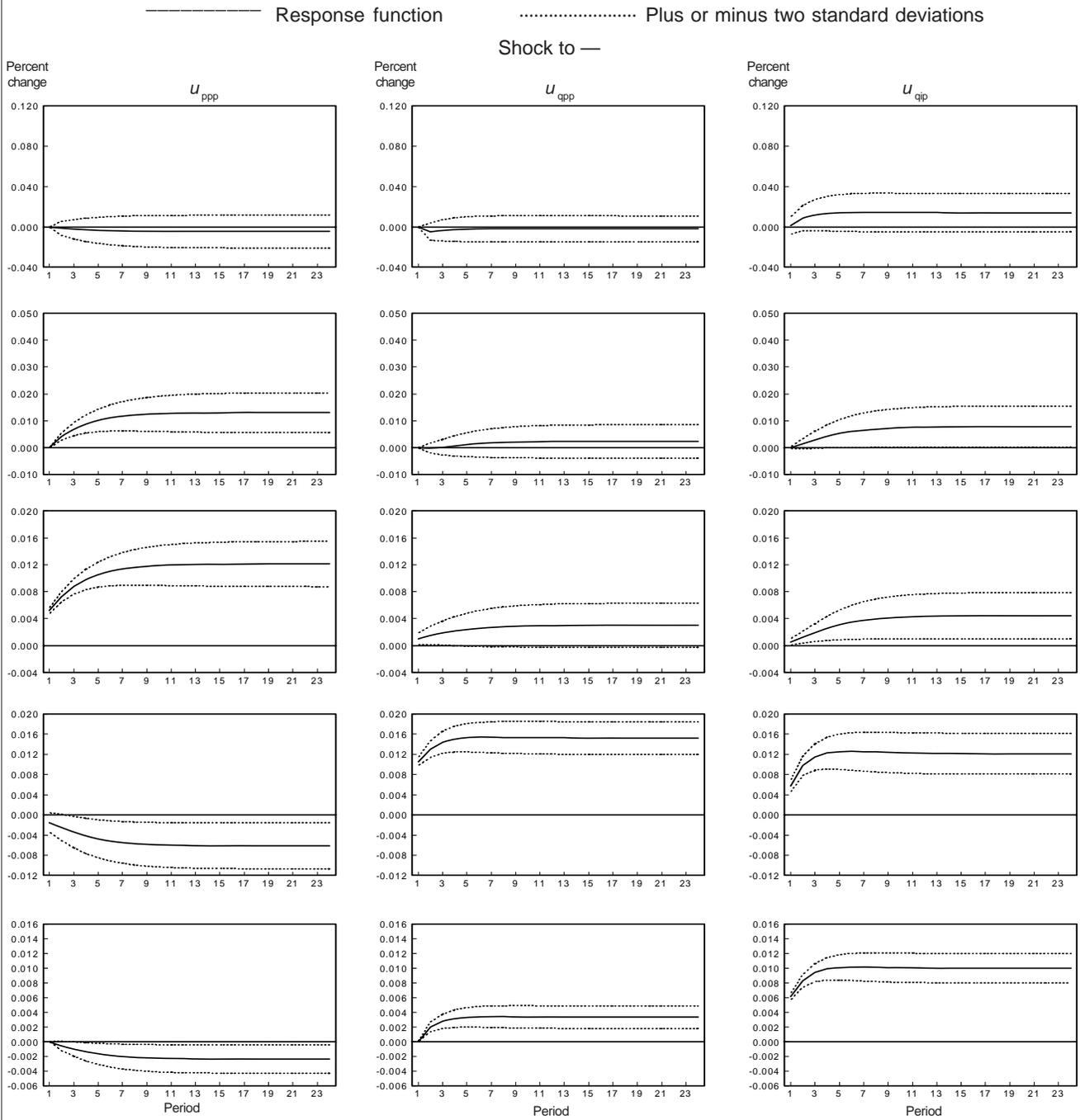


Chart 2. Continued—Impulse response functions



NOTE: See text, p. 38, for definitions of u_{pcp} , u_{poc} , u_{ppp} , u_{qpp} , and u_{qip} .

forecast error for plastics prices, accounting for 6 percent, 36 percent, and 52 percent, respectively. Innovations to the quantity of plastics account for only 2 percent of the variance in the forecast error for plastics prices, while industrial production shocks explain only 3 percent of the variance. The fourth row shows that unanticipated changes in the quantity of plastics and in industrial production are the most important factors in explaining the variance in the forecast error for the quantity of plastics products. The former accounts for about 65 percent, the latter for approximately 29 percent, of the variance. Price innovations in plastics also explain a much smaller amount of the variance of the forecast error for the quantity of plastics.

Two scenarios

Crude-petroleum prices are often extremely volatile and can significantly affect the plastics market. Industrial production also deviates substantially from its trend during periods of economic downturn and upturn, and in these periods the plastics market can be affected. Given the importance of crude-petroleum prices and industrial production to the plastics market, the analysis next considers two scenarios in substantial detail.

Scenario 1: An unanticipated change in the price of crude petroleum. A one-standard-deviation shock to crude-petroleum prices is approximately 8.2 percent. A monthly percent change in crude petroleum prices of this magnitude is common, especially during periods of acceleration or deceleration in the price of crude petroleum. The Iranian Revolution, for example, caused oil prices to rise substantially from January 1978 through February 1979. During this period, monthly price increases ranged from 0.3 percent to 19.6 percent, and the average price increase was 4.4 percent.

A positive price shock to crude petroleum originates through the error term in equation (6). The crude-petroleum price shocks then lead to higher input costs for firms producing organic chemicals, causing the organic-chemicals market supply curve to shift upwards. This shift in the supply curve results in higher prices for organic chemicals, as is captured in equation (7). Increased prices for organic chemicals then cause plastics firms' input costs to rise and the plastics market supply curve, described in equation (8), to shift upwards. This upward shift in the plastics supply curve in turn leads to increased plastics prices and decreased quantities of plastics.

According to the estimated model, in the month of its occurrence a one-standard-deviation, 8.2 percent, positive crude-petroleum price shock increases the prices of organic chemicals and plastics products 0.4 percent and 0.04 percent, respectively, and decreases the quantity of plastics 0.01 per-

cent. The effects of the crude-petroleum price shock, however, continue beyond that initial month, because, in the model, each variable is a function of lagged values of all variables in the system. The petroleum price shock affects organic-chemicals prices for approximately 14 months, eventually leading to a 2.02-percent price increase. The petroleum price shock increases plastics prices approximately 0.6 percent after 14 months and decreases the quantity of plastics products by about 0.2 percent after 11 months.

Scenario 2: An unanticipated change in industrial production. A one-standard-deviation shock to industrial production is approximately 0.6 percent. A monthly change of this magnitude is common during periods of considerable acceleration or deceleration in industrial production. From December 2000 to December 2001, for example, the index for industrial production fell significantly. Over this period, 1-month percent declines ranged from 0.2 percent to 0.9 percent, and the average price decline was 0.4 percent.

A positive shock to industrial production originates through the error term in equation (10). Equation (6) shows that the industrial production shock contemporaneously increases crude-petroleum prices, which rise as a result of increased demand. The rise in crude-petroleum prices leads to higher input costs for organic-chemicals firms, causing the organic-chemicals market supply curve to shift upwards, thereby increasing prices for organic chemicals, as indicated in equation (7). Equation (8) shows that the increase in organic-chemicals prices shifts the supply curve for plastics products upwards, causing plastics prices to rise and quantities to fall. Finally, equation (9) demonstrates that the rise in industrial production increases demand for plastics products, causing both prices and quantities of plastics to increase. Note that although the industrial production shock unambiguously increases plastics prices, its effect on the quantity of plastics is uncertain, because the outward shift in the demand curve increases quantity, but the upward shift in the supply curve decreases quantity.

A positive one-standard-deviation, 0.6-percent shock to industrial production contemporaneously increases plastics prices and quantities approximately 0.06 percent and 0.6 percent, respectively. However, the VAR model implies that shocks to industrial production can affect variables beyond the current period. Indeed, the industrial production shock continues to change the prices of plastics products for approximately 12 months and eventually leads to a 0.44-percent increase in the PPI for Plastics Products. The industrial production shock results in an approximate 1.3-percent increase in the quantity of plastics after 6 months.

THIS ARTICLE HAS CONDUCTED AN EMPIRICAL INVESTIGATION OF PRICE TRANSMISSION FROM CRUDE PETROLEUM TO ORGANIC CHEMICALS

and plastics products. The analysis began with a visual examination of price index data. The examination suggests that in 21 out of 28 cases the initial acceleration, peak, or trough in crude-petroleum prices, resulting from 5 crude petroleum supply shocks, *preceded* the similar event in prices for organic chemicals or plastics products. Thus, the visual evidence supports the hypothesis that crude-petroleum price changes are passed forward to prices for organic chemicals and plastics products.

In order to analyze price transmission from crude petroleum to organic chemicals and plastics products more rigorously, a structural VAR model of supply and demand in the plastics market was developed and estimated. The model included the PPI's for Crude Petroleum, Organic Chemicals, and Plastics Products, as well as the Federal Reserve indexes for plastics production and industrial production. Impulse response functions and variance decompositions, calculated from the structural VAR, showed that crude-petroleum price shocks are transmitted forward to prices for organic chemicals and plastics products.

Impulse response functions indicate that an unanticipated change in the price of crude petroleum results in significant positive changes in the prices for both organic chemicals and plastics products and also tends to negatively affect the quantity of plastics products. In particular, a one-standard-deviation, 8.2-percent, positive crude-petroleum price shock even-

tually increases the prices for organic chemicals and plastics products by 2.02 percent and 0.6 percent, respectively. The crude petroleum price shock begins affecting prices for both organic chemicals and plastics products in the same period in which the shock occurred, and the effects continue for 14 months in each case. The crude-petroleum price shock causes the quantity of plastics products to fall 0.24 percent after 11 months.

The impulse response functions also demonstrate that organic-chemicals price shocks significantly affect both the price and quantity of plastics. A one-standard-deviation, 1.6-percent, positive shock to organic-chemicals prices begins affecting plastics prices in the current period, and the effects of the shock continue for 12 months, after which the shock leads to a 1.3-percent increase in plastics prices. The organic-chemicals price shock begins affecting the quantity of plastics products in the current period and results in a 0.7-percent decrease in the quantity of plastics after 12 months.

The variance decompositions also confirm that prices for crude petroleum and organic chemicals have important effects on the market for plastics. The variance decompositions show that 6.2 percent and 36.4 percent of the variance in the forecast error for plastics prices can be explained by price shocks to crude petroleum and organic chemicals, respectively. In addition, the variance decompositions indicate that crude petroleum price shocks explain approximately 17 percent of the forecast error variance in prices for organic chemicals. □

Notes

¹ Nathan Balke, Stephen Brown, and Mine Yucel, "Crude Oil and Gasoline Prices: An Asymmetric Relationship," *Federal Reserve Bank of Dallas Economic Review*, first quarter 1998, pp. 1–11.

² Michael Burdette and John Zyren, *Gasoline Price Pass-through* (U.S. Department of Energy, January 2003), on the Internet at www.eia.doe.gov/pub/oil_gas/petroleum/feature_articles/2003/gasolinepass/gasolinepass.htm.

³ Jonathan C. Weinhalten, "Consumer gasoline: an empirical investigation," *Monthly Labor Review*, July 2003, pp. 3–10.

⁴ Historical explanations of all but the final crude-petroleum supply shock are from *Petroleum Chronology of Events 1970–2000* (Energy Information Administration, May 2002), on the Internet at www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/chronology/petroleumchronology2000.htm.

⁵ Takatoshi Ito, "Use of (Time-Domain) Vector Autoregression to Test Uncovered Interest Parity," *Review of Economics and Statistics* (May 1988), pp. 206–305.

⁶ William Greene, *Econometric Analysis* (Upper Saddle River, NJ, Prentice Hall, 1997), esp. pp. 815–16.

⁷ See Ben Bernanke, "Alternative Explanations of the Money-Income Correlation," in Karl Brunner and Allan Meltzer, eds., *Real Business Cycles, Real Exchange Rates, and Actual Policies*, Carnegie-Rochester Conference Series on Public Policy, vol. 25, autumn 1986 (Amsterdam, North-Holland, 1986), pp. 49–99; and Christopher Sims, "Are Forecasting Models Usable for Policy Analysis?" *Federal Reserve*

Bank of Minnesota Quarterly Review, winter 1986, pp. 2–16.

⁸ Greene, *Econometric Analysis*, p. 846.

⁹ For a detailed explanation of augmented Dickey-Fuller testing, see Green, *Econometric Analysis*, pp. 848–51.

¹⁰ For a discussion of the Schwarz criterion, see Jack Johnston and John Dinardo, *Econometric Methods* (New York, McGraw Hill College Division, 1996), p. 74.

¹¹ *Ibid.*, p. 787.

¹² Johnston and Dinardo, p. 288.

¹³ *Ibid.*, p. 299.

¹⁴ Christopher Sims, "Macroeconomics and Reality," *Econometrica*, January 1980, pp. 1–48.

¹⁵ Sims, "Are Forecasting Models Usable?"; Bernanke, "Money-Income Correlation."

¹⁶ *Ibid.*

¹⁷ See Quantitative Micro Software's *EViews 5.0 Users Guide*, p. 723.

¹⁸ Johnston and Dinardo, *Econometric Methods*, pp. 299–300.

¹⁹ *Ibid.*, p. 301.

Price and expenditure measures of petroleum products: a comparison

Price changes in petroleum products are closely correlated among the three price programs of the Bureau of Labor Statistics; changes in the BLS petroleum-product CPI also correlate with changes in consumer spending on those products, as measured by the Consumer Expenditure Survey

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Political events in oil-producing countries, hurricanes in the Gulf of Mexico, and increasing global demand for petroleum products have all contributed to sharp increases in recent years in prices of crude oil and of petroleum products derived from crude oil. From January 2000 to July 2006, the average price for a gallon of unleaded regular gasoline in the United States increased 130.5 percent.¹ Personal consumption expenditures on gasoline rose from \$175.7 billion to \$287.3 billion from 2000 to 2005.² Rising prices and increasing expenditures are a concern for consumers, business leaders, and Federal policymakers. As a result, reliable information on the prices and costs of crude oil and petroleum products is more vital than ever in making decisions at all levels of the economy.

The Bureau of Labor Statistics (BLS, the Bureau) conducts price and consumer expenditure surveys that measure both changes in prices of, and expenditures for, petroleum products throughout the various levels of the economy. This article introduces the programs that carry out these surveys, describes the petroleum data compiled by those programs, explains the methodology underlying the various crude-oil and gasoline surveys, and provides historical comparisons of price data across the BLS programs.

Price and expenditure programs

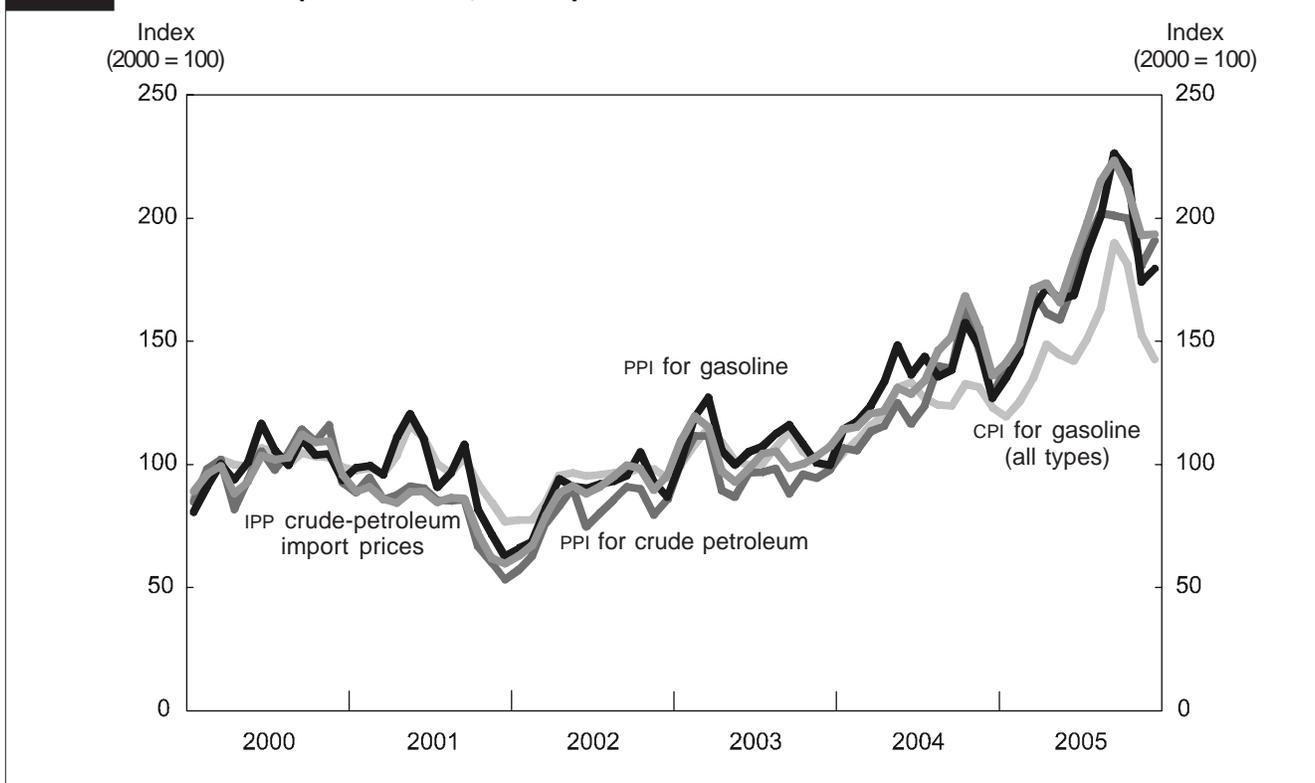
The Bureau conducts three price surveys and a survey of consumer expenditures: the Interna-

tional Price Program (IPP), which measures import and export prices; the Producer Price Index (PPI), which measures prices received by domestic producers; the Consumer Price Index (CPI), which measures consumer prices paid out of pocket; and the Consumer Expenditure Survey (CE), which measures out-of-pocket consumer expenditures. Chart 1 illustrates the high correlation among the three price indexes. (Two different PPI's are shown.) Each program has a different scope, measurement goal, and methodology for collecting and compiling data related to crude oil and petroleum products, and the differences among the programs must be understood in order to properly interpret and compare the movements among the respective indexes. A description of each program's measures of petroleum product prices and expenditures follows. The appendix presents an exhibit summarizing the program methodologies.

Measurement of traded-goods inflation: the IPP's import and export price indexes. The IPP produces indexes for import and export goods and services. These indexes measure price changes on the basis of the actual transaction prices of specifically defined items and services coming into and leaving the country. Published IPP indexes for crude oil and refined petroleum products reflect three classification systems: the Harmonized Tariff System of the United States, the Bureau of Economic Analysis End Use classification system, and the North American Industry Classification System (NAICS.) These indexes are used, among other things, to deflate

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Chart 1. Selected BLS price indexes, January 2000–December 2005



various foreign trade statistics produced by the U.S. Census Bureau and the Bureau of Economic Analysis.

Although the IPP calculates indexes for all petroleum products, only some of these products meet the program's dollar-value-of-trade threshold for public release. The IPP publishes indexes solely for products with an annual dollar value of trade for exports of at least \$3.0 billion or a dollar value of trade for imports of at least \$3.0 billion. Because U.S. crude-oil exports no longer exceed \$3.0 billion per year, the IPP does not publish export indexes for crude oil. By contrast, crude-oil imports have a trade dollar value that greatly exceeds the IPP threshold. Indeed, on the basis of a dollar value of more than \$131 billion in 2004, imported crude oil accounts for 9.35 percent of the overall IPP import index, with all other imported petroleum products together accounting for 3.45 percent of the weight of the import index. Among the import and export price indexes the IPP produces for other petroleum products are indexes for gasoline and distillates.

Unlike most of the product indexes in the IPP, which reflect price data collected directly from importers and exporters, the import crude-oil index is based primarily on monthly transaction data obtained from the Department of Energy's Energy Information Administration (EIA) Form-856 survey.³ This survey collects data on prices and quantities of virtually all crude oil

imported into the United States. Because of its broad scope, EIA-856 data are more comprehensive than data that can be obtained from a sample of importers. EIA-856 data also encompass transactions for the entire calendar month, so that, in contrast to price indexes for goods and services, for which the reference period is the first week of each month, the IPP crude-oil index is composed of transaction data received over the entire month.

One limitation of using the EIA-856 survey, however, is that most of the transaction data are not available from the Department of Energy in time for the first published estimate of the crude-oil import index. Instead, the complete set of EIA-856 data for a given month is available on a delayed basis. For example, most of the June 2006 prices were not available until July or August 2006. To correct for this limitation, the IPP employs two different estimation procedures to calculate its crude-oil import index: a procedure for calculating the preliminary and first revised index and a procedure for calculating two subsequent revisions of the index.

To calculate the preliminary and first revised index when the EIA-856 data are incomplete, the IPP uses a regression model based on the incomplete EIA-856 data to estimate the percent change in the price for crude oil. This regression model's estimates are much closer to the final estimate of the

monthly percent change in the crude-oil import index than are the estimates derived from merely aggregating the incomplete EIA-856 data.

The two subsequent revisions are calculated directly from the EIA-856 data with the use of a modified Laspeyres index formula based upon fixed item and index weights calculated each year by the IPP.⁴ The weights are lagged 2 years. For example, in 2006, the weights were calculated from 2004 trade values. In January 2007, the IPP will start using 2005 weights. At the item level, the IPP calculates the weight for each type of imported crude oil, or “crude stream,” in the EIA-856 survey.⁵ Each observation in the monthly index then represents a tanker load of a particular crude stream that arrives in the United States.

For each revision, a more complete set of EIA-856 data becomes available for use in the monthly index calculation. Therefore, for the two subsequent revisions, these data are simply aggregated by the IPP into the crude-oil import index. To achieve this aggregation, the IPP calculates the weighted average price for each crude stream by summing products of prices and quantities for all transactions for a crude stream and then dividing the result by the sum of the quantities. These weighted average prices are then combined into the overall index, which, as mentioned, is weighted by the annual trade value from 2 years earlier. As with all IPP indexes, the final crude-oil index number is released 3 months after the preliminary index is first published.

The IPP also uses EIA data to calculate a portion of its refined-petroleum import and export indexes. Although the IPP indexes include directly collected price data from importers and exporters for refined products such as jet fuel, naphthas, kerosene, and petroleum gases, prices and weights (at the lowest level) for imported and exported gasoline, diesel fuel, and heating oil are derived from EIA data. In 1999, the IPP stopped collecting prices for these refined products from petroleum importers and exporters because of their insufficient participation in the IPP survey and the existence of an alternative source of prices. The IPP uses the EIA publication *Petroleum Supply Annual* to update annual weights for the items that currently represent such products in the indexes.⁶ This publication contains information on import and export volumes for gasoline, diesel fuel, and heating oil, by Petroleum Administration for Defense district.⁷ Spot price data for the first 5 business days of each month are then obtained on a monthly basis from the EIA Web site for 16 Petroleum Administration for Defense products that enter into the calculation of the import and export indexes.⁸ These products are import and export gasolines and diesel fuels from New York Harbor, the Gulf Coast, and Los Angeles and import and export heating oils from New York Harbor and the Gulf Coast. Unlike the PPI and the CPI, the IPP does not seasonally adjust its refined products indexes.

Measurement of production inflation: the Producer Price Index. The PPI publishes various monthly price indexes for crude oil and refined petroleum products, including gasoline, diesel fuel, and home heating oil. The indexes are based on prices collected directly from domestic producers and are calculated with the use of a modified Laspeyres index formula. The prices for crude oil are generally location-specific net transaction prices,⁹ whereas the prices provided for refined petroleum products are primarily national averages of net transaction prices for the particular commodity. Crude-oil prices are received from domestic producers at various wells within the United States, including offshore operations. Prices for refined petroleum products are not received from a specific location, but rather are taken as national averages.

Before prices are collected, however, and in a manner similar to the IPP process for direct collection, a sample of establishments is randomly drawn, and each establishment selected is visited by a BLS representative, who attempts to persuade the establishment to participate in the PPI survey. If the establishment agrees to participate, a certain number of its products are selected to be priced for the survey. Any particular product that an establishment produces has a probability of selection proportional to the share of the establishment’s revenue from sales of the product. Once specific products are selected, establishments send monthly price updates on those products to the PPI. The updates reflect prices on the Tuesday of the week containing the 13th of the month.¹⁰

The PPI publishes three types of indexes from the pricing data that it collects: industry indexes, commodity indexes, and stage-of-processing indexes. All three are subject to revision for up to 4 months after their initial publication. Revisions account for late prices and corrections by respondents.

The PPI for an industry measures price changes received by domestic establishments for the industry’s output sold outside the industry. Industry indexes are structured according to NAICS. Currently, the PPI publishes indexes for the crude-petroleum and natural-gas extraction industries and for petroleum refineries. Within these industries, the PPI also publishes indexes for specific products manufactured by the industries. The product indexes are aggregated into industry indexes with the use of weights derived primarily from the Census Bureau’s industry-level (value-of-shipments) data. The PPI does not test industry indexes for seasonality or calculate any seasonally adjusted industry indexes.

PPI commodity indexes reflect price changes for specific commodities, regardless of the commodities’ industries of origin. Commodity indexes are classified according to a system unique to the PPI. Currently, the PPI publishes detailed commodity indexes for crude petroleum, as well as for refined petroleum products, including gasoline, diesel fuel, and home heating oil. In addition, an aggregate commodity index for all fuels and related products and power is published. As with industry-level PPI’s, weights for aggregating commodity-based

PPI's are derived from the Census Bureau's commodity-level (value-of-shipments) data. Commodity indexes are tested for seasonality, and if seasonal patterns are found, seasonally adjusted indexes are calculated. The commodity indexes for gasoline, home heating oil, and diesel fuel all show seasonal patterns, so seasonally adjusted indexes are produced for all three of these commodities.

Stage-of-processing indexes are built from commodity-based PPI's. Commodities are allocated to one or more stages of processing on the basis of the class of buyer and the amount of physical processing or assembling the commodity has undergone. The three main stage-of-processing categories are finished goods, intermediate goods, and crude goods. Energy goods are included in all three categories. Gasoline, diesel fuel, and home heating oil respectively account for 4.95 percent, 0.28 percent, and 0.96 percent of the stage-of-processing index for finished goods and 2.37 percent, 1.42 percent, and 0.49 percent of the index for intermediate goods.¹¹ Crude petroleum accounts for 16.77 percent of the crude-goods index.¹² In addition to the highest-level stage-of-processing indexes, indexes for crude, intermediate, and finished energy goods are produced by the PPI. Stage-of-processing indexes are available on both an unadjusted and a seasonally adjusted basis.

As indicated in the previous paragraph, the PPI for Gasoline is an important component of both the stage-of-processing index for finished goods and that for intermediate goods. The PPI for Gasoline is composed of three separate grades of octane: regular, mid-premium, and premium. Regular gasoline has an octane rating of 85 through 87, mid-premium 88 through 90, and premium greater than 90. Within each of these grades, there are summer and winter seasonal blends, the products of a two-phase program implemented by the Environmental Protection Agency (EPA) and aimed at reducing the volatility of summertime gasoline. The volatility in gasoline is measured as Reid vapor pressure (RVP).¹³ The PPI collects prices for the lower RVP summer blend from April through August and the higher RVP winter blend from September through March. Then the gasoline indexes are quality adjusted to remove any changes in them that are due to shifts in seasonal blend.

While less important than gasoline to the stage-of-processing indexes, diesel fuel and home heating oil also are notable components of those indexes. Both diesel fuel and home heating oil are classified as light fuel oils and at one time were compatible. In 1993, however, the EPA mandated that all highway diesel fuel meet reduced sulfur content requirements. This new standard of 0.05 percent sulfur by weight, or 500 parts per million (PPM), was significantly lower than the previous maximum sulfur allowance. Then, in June 2006, the EPA implemented an even stricter standard of 15 PPM for diesel fuel.¹⁴ The PPI's separation of diesel fuel and home heating oil, therefore, has become increasingly important.

Measurement of consumer inflation: the Consumer Price Index (CPI). As a measure of the average change of prices for consumer goods over time, the Consumer Price Index (CPI) is perhaps the most widely recognized BLS price program. While the IPP and PPI track the movement of both crude-oil prices and refined petroleum products prices, the CPI tracks only the price movement of refined petroleum products purchased by consumers. The CPI publishes a monthly motor fuel index that measures the average change in price over time of gasoline and other motor fuels.¹⁵ The motor fuel index had a relative importance of 4.191 out of the U.S. city average of the CPI for All Urban Consumers (CPI-U) as of December 2005.¹⁶ The gasoline (all types) index accounts for the majority of the motor fuel index's weight and reflects the prices of three grades of gasoline based on octane rating: unleaded regular, midgrade, and premium gasoline.¹⁷ Other motor fuels, including diesel fuel and alternative motor fuels, account for a very small percentage of the weight in the overall CPI for Motor Fuel. Both the biennially updated weights and the relative importance values are derived from Consumer Expenditure Survey (CE) data.

BLS data collectors collect monthly price information from a sample of national retail outlets drawn from the Telephone Point-of-Purchase Survey conducted by the Census Bureau for the Bureau of Labor Statistics. The CPI outlet sample for all grades of gasoline currently consists of approximately 630 outlets. Each such outlet selected for gasoline pricing is assigned a price quote for each grade of gasoline, as well as for diesel and alternative fuels. The current CPI sample has 1,892 price quotes for gasoline products and 238 quotes for other motor fuels. Price information is collected for each category of product, provided that the product is available for sale when the BLS data collector visits the outlet. Unleaded regular, midgrade, and premium grades are available for sampling nearly every month, although diesel fuel sometimes is not available. Alternative motor fuels, such as E85 and propane, are rarely available. The prices collected are per-gallon unit prices and include excise, sales, and other taxes paid by consumers. Prices are collected continuously throughout the month and are reviewed for accuracy by CPI analysts in the BLS national office. Unlike the PPI, the CPI does not make adjustments for changes in the formulation of vehicle or motor fuels stemming from air-pollution mandates.¹⁸

Once prices are collected and analyzed for the reference month, the CPI basic indexes for motor fuels are calculated with a geometric mean formula, aggregated across items and geographic areas with a modified Laspeyres index formula, and published along with national, regional, and selected city average prices for motor fuels. Because price data for the survey are directly collected by the Bureau, no late or lagged prices are included in the CPI. Therefore, revisions to published data are rare, in contrast to the situation with the IPP and PPI programs,

which revise their indexes 3 and 4 months, respectively, after their initial publication.

Measurement of consumer spending: the Consumer Expenditure Surveys (CE). The Consumer Expenditure Surveys (CE) program is composed of two separate surveys: a quarterly Interview survey and a weekly self-administered Diary survey. Each of these components has a unique sample and methodology. As the primary source of published data on petroleum-related products, the Interview survey is the only one discussed any further in this article.

The CE Interview survey is administered through home visits by representatives of the Census Bureau and is processed and published by the Bureau of Labor Statistics. A national probability sample of households designed to represent the total U.S. civilian noninstitutional population is drawn from the decennial census address file, supplemented with new-housing permits. Each sample unit is interviewed every 3 months over five calendar quarters and is then dropped from the survey and replaced with a new sample unit. In 2004, approximately 7,500 consumer units were interviewed each quarter.¹⁹

All CE data are collected and published at the consumer unit level. Just as the prices collected by the CPI include all sales and excise taxes, so, too, do the expenditure amounts collected by the CE. These expenditure amounts may be for items purchased by the consumer unit for personal consumption or as gifts to others. Business-related expenses and expenses for which the consumer unit is reimbursed are not included.

The CE publishes tabulated information on average annual expenditures, characteristics, and income, integrated from the Interview and Diary surveys, by a variety of demographic characteristics, such as region of residence, income level, and age. Published data are weighted to the U.S. population and are aggregated to meet statistical reliability criteria. Standard errors are computed by the balanced repeated replication method of variance estimation and are available to the public.²⁰ Data are published annually, subject to a 1-year lag due to collection and processing schedules.

The CE Interview survey collects information on expenditures for gasoline, diesel fuel, and fuel oil for home heating use. For this article, only the aggregated data for the CE published item “gasoline and motor oil” are used, in order to ensure the integrity of the data and allow for meaningful comparison with the gasoline figures produced by the CPI.²¹

In the CE Interview survey questionnaire, respondents are asked for information about their average monthly expense for gasoline and other fuels used in the operation of automobiles, trucks, and other vehicles. Subsequent questions attempt to determine how much of that expense goes for diesel fuel and how much is counted as a business expense. Then the nonbusiness expenditure amounts of the monthly esti-

mates, with appropriate sales taxes applied, are annualized for publication.

The following tabulation, published by the CE, shows the average amount spent annually by a consumer unit on gasoline and motor oil, as well as the consumer unit’s share of transportation expenses, from 2000 to 2004:

<i>Expenditure category</i>	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>
Transportation	\$7,417	\$7,633	\$7,459	\$7,781	\$7,801
Gasoline and motor oil	1,291	1,279	1,235	1,333	1,598
Share of transportation (percent)	17.4	16.8	15.9	17.1	20.5

As the figures demonstrate, mean expenditures varied rather substantially in all three categories from one year to the next over the 2000–04 period.

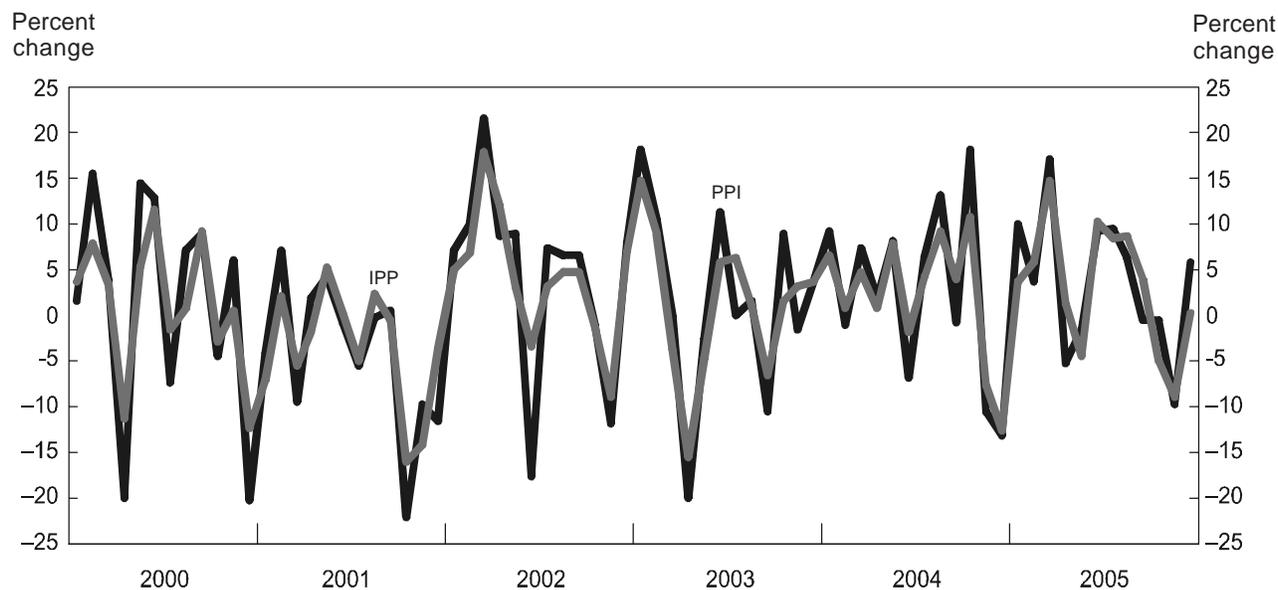
Spending on gasoline and motor oil is a component of overall transportation expenditures in the CE. As the preceding tabulation shows, like mean expenditures, the proportion of transportation spending allocated to gasoline and motor oil has varied. In 2004, approximately \$1 out of every \$5 spent on transportation was used to purchase gasoline and motor oil. (This expenditure category also accounted for approximately 3.7 percent of *total* annual spending.)

Price program comparison

The IPP, PPI, and CPI measure price changes for petroleum products over time, whereas the CE measures changes in consumer expenditures on gasoline. In the case of the price surveys, methodological differences among BLS programs can result in varying measures of price change for similar petroleum products. To determine how significantly these methodological differences affect index movements, this section compares price changes for comparable petroleum products across BLS price programs. Similarities between index movements are analyzed both visually and through basic statistical analyses, including correlations and means tests. Also compared is the relationship between the CPI for Gasoline and CE mean expenditures on gasoline, because expenditures on gasoline are likely to change as the price of gasoline changes.

Comparison of IPP crude-oil index and PPI for Crude Petroleum. The IPP measures monthly changes in the price for crude petroleum imports to the United States. Prices used in calculating the IPP index for crude petroleum are for multiple days throughout the reference month. In contrast, the PPI measures monthly changes in price for domestically produced crude petroleum. Prices used in calculating the PPI typically reflect the Tuesday of the week containing the 13th of the reference month. Chart 2 shows 1-month percent changes in

Chart 2. One-month percent changes in the PPI for Crude Petroleum and the IPP index for Crude Petroleum, January 2000–December 2005



the IPP index and the PPI for Crude Petroleum from January 2000 through December 2005. The sample means for IPP and PPI crude petroleum were 1.4 percent and 1.6 percent, respectively, and the sample standard deviations were 7.3 percent and 9.8 percent. These summary statistics indicate that the PPI tended to be slightly more volatile than the IPP index from 2000 through 2005.

A visual examination of chart 2 indicates that, in spite of methodological differences in the calculation of the index between the IPP and the PPI, movements in the two crude-petroleum indexes have been similar. In the vast majority of cases, the 1-month percent changes in the indexes are in the same direction and similar in magnitude. In some cases, the magnitude of the change in the PPI appears to be slightly higher than that in the IPP index. This finding is in line with the summary statistics, which show the PPI to have a slightly higher mean and standard deviation than the IPP index. To examine more rigorously the difference between the means of the two indexes for crude petroleum, a paired t-test was conducted. The test's null hypothesis was that the means of the two series are equal. The test failed to reject the null hypothesis at the $\alpha = .05$ significance level, indicating that the means are not significantly different from each other.

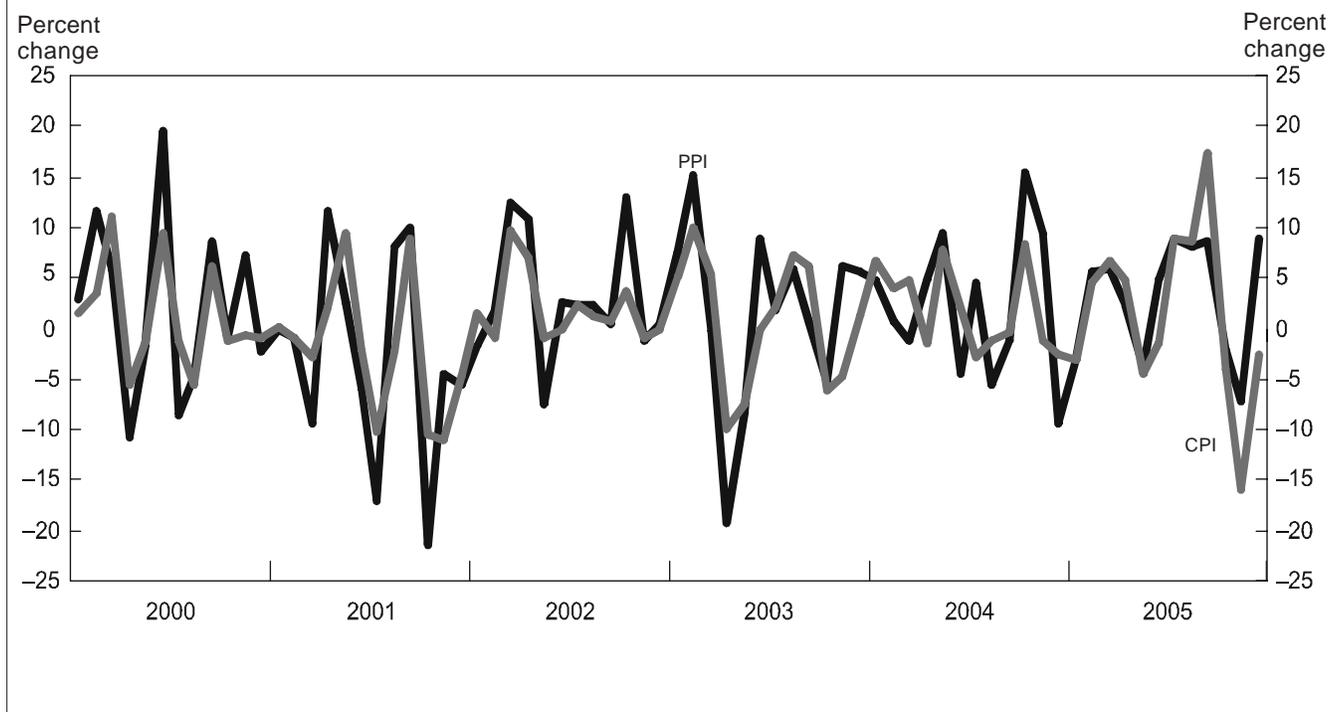
Finally, the correlation between the PPI for Crude Petroleum and the IPP crude-petroleum index is 0.91, indicating a strong

relationship between them. Therefore, regardless of the aforementioned methodological differences, the visual examination of chart 2, the means test, and correlation analysis all indicate that the two crude-petroleum indexes have behaved similarly over time. This parallel behavior is likely explained by the nature of the crude-oil market. Crude oil is traded openly in global commodity markets; hence, prices for domestic and imported crude petroleum should tend to converge, lest there be unrealized opportunities for arbitrage.

Comparison of PPI for Gasoline and CPI for Gasoline. The PPI measures monthly price changes in gasoline from the perspective of the seller. In contrast, the CPI measures price change from the purchaser's perspective. Sellers' and purchasers' prices may differ due to government subsidies, sales and excise taxes, and distribution and marketing costs. Chart 3 presents the 1-month percent changes in the seasonally adjusted PPI for Gasoline and CPI for Gasoline from 2000 through 2005. Over the sample period, the mean and standard deviation for the PPI for Gasoline were 1.6 percent and 8.0 percent, respectively, whereas the mean and standard deviation for the CPI for Gasoline were 0.9 percent and 6.0 percent, respectively.

A visual examination of chart 3 indicates that price movements for gasoline, as measured by the PPI and CPI, were similar from 2000 through 2005, although changes in the PPI appear to have

Chart 3. One-month percent changes in the PPI for Gasoline and the CPI for Gasoline, January 2000–December 2005



been more volatile and often greater in magnitude than changes in the CPI. The relatively greater volatility of the PPI for Gasoline, compared with the CPI for Gasoline, is in part due to the two programs' different treatment of consumer taxes: the CPI includes them, and the PPI does not. Hence, an identical change in the price of gasoline would have a larger effect on the PPI than the CPI.²² An equality-of-means test, however, shows that, the means are not significantly different from each other at the $\alpha = .05$ level of significance. The correlation coefficient between the two series is 0.72, also showing a relatively strong relationship between PPI and CPI gasoline. Thus, the visual examination of chart 3, the means test, and correlation analysis all suggest a substantial relationship between the CPI for Gasoline and the PPI for Gasoline in spite of methodological differences.

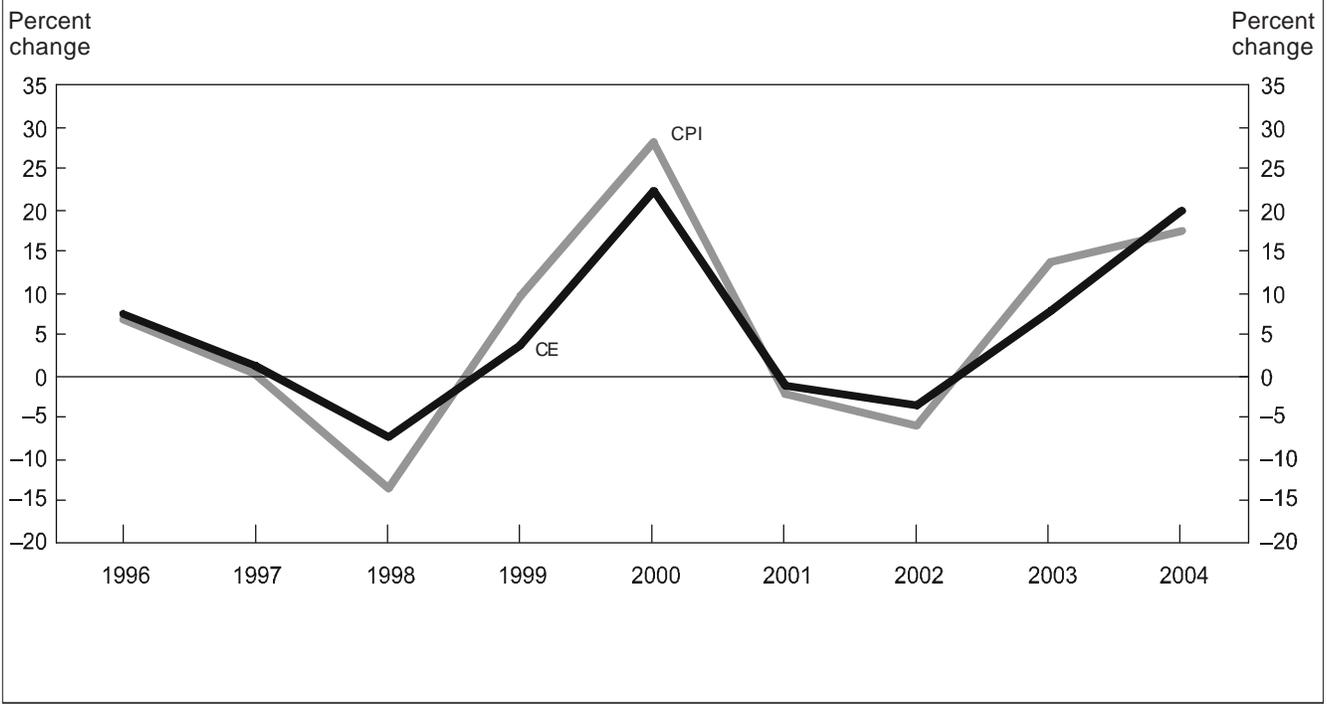
The relationship between the PPI for Gasoline and the CPI for Gasoline, however, does not appear to be as strong as that between the IPP index for crude petroleum and the PPI for Crude Petroleum. The correlation coefficient for PPI and CPI gasoline is lower than that for IPP and PPI crude petroleum. In addition, the difference between the means of PPI and CPI gasoline is greater than the difference between the means of IPP and PPI petroleum. These findings suggest that the methodological differences between BLS programs measuring gasoline prices may be greater than those between BLS programs measuring crude-petroleum

prices, especially because crude petroleum is, on average, more volatile than gasoline.

Comparison of CPI average gasoline prices and CE mean expenditures on gasoline and motor oil. CPI price data and CE expenditure data on gasoline are expected to be related, because the average amount spent by consumers on gasoline is likely to be affected by gasoline prices. Chart 4 displays over-the-year percent changes in the CPI average price for gasoline and average yearly expenditures on gasoline from 1995 through 2004.²³ Over the sample period, the mean and standard deviation of the annual change in the CPI average price for gasoline were 6.0 percent and 12.8 percent, respectively, whereas the mean and standard deviation of the annual change in CE average expenditures on gasoline and motor oil were, respectively, 5.7 percent and 10.0 percent.

A visual examination of chart 4 indicates a strong relationship between the CPI for Gasoline and the CE average expenditures on gasoline and motor oil. The correlation coefficient between the two series is 0.96, also demonstrating a strong relationship. This correlation shows the relative inelasticity of consumers' response to changes in the price of gasoline. In general, chart 4 indicates that expenditures fall less than prices during periods of declining prices and rise more slowly than prices during periods of increasing prices.

Chart 4. Percent changes in the annual averages of the CPI for Gasoline and in CE expenditures for gasoline and motor oil, 1996–2004



THE BLS PRICE PROGRAMS—THE IPP, THE PPI, AND THE CPI—provide information on the changes in prices of various petroleum products. In addition, the CE provides information on consumer spending on petroleum products. Price changes for these products generally show a close correlation among the

price programs, and CPI changes also correlate closely with consumer expenditure changes for such products. However, data users should consider the differences in scope, measurement, and survey methods among the four programs in comparing changes across them. □

Notes

¹ Bureau of Labor Statistics, Consumer Price Index, average price data, on the Internet at the BLS Website, www.bls.gov/cpi/home.htm.

² National Income and Product Accounts, Table 2.3.5, “Personal Consumption Expenditures by Major Type of Product” (U.S. Department of Commerce, Bureau of Economic Analysis), on the Internet at www.bea.gov/bea/dn/nipaweb.

³ As of October 2006, a decision is pending about whether this program will continue to be funded. For further information on the program’s methodology, contact Ara Khatchadourian at khatchadourian.ara@bls.gov.

⁴ A pure Laspeyres index has fixed weights that reflect the base period. The three BLS price indexes detailed in this article are described as modified Laspeyres indexes because the Bureau regularly updates the weights used in each index when new data are available.

⁵ For a list of crude streams by country, see Appendix A of the “EIA-856 Monthly Foreign Crude Oil Acquisition Report Instructions,” on the Internet at www.eia.doe.gov/pub/oil_gas/petroleum/survey_forms/eia856ip4.pdf.

⁶ See *Petroleum Supply Annual 2005*, vol. 1 (Energy Information Administration, Oct. 23, 2006), on the Internet at www.eia.doe.gov/oil_gas/petroleum/data_publications/petroleum_supply_annual/psa_volume1/psa_volume1.html.

⁷ These districts were created by the Federal Government during the Second World War. Their original purpose was to administer oil allocations. The EIA continues to use these regions for data collection purposes. For an example of such information pertaining to one particular district, see “U.S. Refining Crude Oil Distillation Capacity, Valero and Huntway PAD District Detail,” on the Internet at www.eia.doe.gov/emeu/finance/mergers/vhpad.html.

⁸ The EIA defines a spot price as the price for a one-time open-market transaction for the immediate delivery of a specific quantity of a product at a specific location where the commodity is purchased “on the spot” at current market rates.

⁹ The net transaction price (the price after deductions for discounts or other allowances have been made) for a given crude-oil item reflects either the price of the item on the PPI pricing date or a monthly aver-

age of net transactions for the item. For comparability, the timing of the price for a given item will remain unchanged. Thus, an item will *not* be priced on the pricing date one month and then as a monthly average the next month.

¹⁰ Although the PPI is aimed at collecting prices for the pricing day, if respondents are unable to provide such prices, the PPI will accept either prices that reflect a day close to the pricing day or average prices for a period that contains the pricing day.

¹¹ The figures listed are the December 2005 relative importances of component series in the PPI by stage of processing. Note that regular, mid-premium, and premium grades of gasoline account for 3.55 percent, 0.53 percent, and 0.87 percent, respectively, of the relative importance to the Finished Goods Index.

¹² The figure is the December 2005 relative importance of the crude-goods series in the PPI by stage of processing.

¹³ RVP is the standard measure of the volatility of gasoline. The higher the RVP, the more volatile the fuel is and the easier it evaporates. The first RVP reduction phase began in June 1989, while the second phase began in May 1992 and lasted throughout 1994. In December 1994, the EPA enacted Phase 1 of the reformulated gasoline provisions of the Clean Air Act of 1990. The provisions required reductions in automobile emissions of ozone-forming volatile organic compounds during the summer, high-ozone season, and of toxic air pollutants and nitrogen oxides during the entire year, in certain areas of the United States. Phase 2 of the program, which required additional reductions in volatile organic compounds and nitrogen oxides (NO_x) during the summer months, began on January 1, 2000.

¹⁴ This requirement was accounted for in the PPI through a quality adjustment of the diesel fuel index that same June.

¹⁵ The CPI also publishes indexes for home fuel oil and other home fuels; this article, however, focuses on motor fuels alone.

¹⁶ CPI relative importance tables are found on the Internet at www.bls.gov/cpi/cpi_riar.htm.

¹⁷ High-altitude areas of the country have ranges of gasoline ratings that may be different from the ranges just given.

¹⁸ See "The Treatment of Mandated Pollution Control Measures in the CPI," on the Internet at www.bls.gov/cpi/cpitreat.pdf, for more information about the BLS policy not to make quality adjustments to the prices of vehicle and motor fuels in the CPI.

¹⁹ A consumer unit is defined as (1) all members of a particular household who are related by blood, marriage, adoption, or other legal arrangements; (2) a person living alone or sharing a household with others or living as a roomer in a private home or lodging house or in permanent living quarters in a hotel or motel, but who is financially independent; or (3) two or more persons living together who use their income to make joint expenditure decisions. Financial independence is determined by the three major expense categories: housing, food, and other living expenses. To be considered financially independent, the respondent must pay, at least in part, expenses for at least two of the three categories. For example, a household occupied by two unrelated roommates is considered to contain two separate consumer units if each roommate pays his or her own expenses.

²⁰ More detailed information on estimation methodology is found in the *BLS Handbook of Methods*; see Chapter 16, "Consumer Expenditures and Income."

²¹ Note that in 2004 the unpublished average annual expenditure for gasoline constituted approximately 92 percent of the published category.

²² As a hypothetical example, assume that the producer price of a gallon of gasoline increases \$.50, from \$2.00 to \$2.50. This rise in price would produce a 25-percent increase in the PPI. However, the CPI price would include a consumer tax (for this example, assume \$.20 per gallon). For the given \$.50 increase in the producer price of a gallon of gasoline, the consumer price would then increase from \$2.20 to \$2.70, causing the CPI to rise only 22.7 percent. This simplified example illustrates one explanation as to why the CPI for Gasoline tends to be less volatile than the PPI for Gasoline.

²³ The CPI average price for gasoline for a specific year is the mean of the CPI average gasoline prices for each month of that year.

APPENDIX exhibit A-1. Summary of program methodologies

Category	International Price Program (IPP)	Producer Price Index (PPI)	Consumer Price Index (CPI)	Consumer expenditure Survey (CE)
Program objective	Measure changes in import and export prices.	Measure changes in producer selling prices.	Measure changes in consumer prices.	Measure average consumer expenditures.
Product coverage	Crude oil and refined petroleum products	Crude oil and refined petroleum products	Refined petroleum products	Refined petroleum products
Classification system(s)	Samples are based on the Harmonized System (HS). Indexes are published on the basis of HS, Bureau of Economic Analysis (BEA) End Use, and North American Industry Classification System (NAICS) classification systems.	Industry-based indexes are classified according to the North American Industry Classification System (NAICS). Commodity-based indexes are classified according to an internal BLS system.	Internal BLS system	Internal BLS system
Data collection timeframe	Entire month for crude oil. First week of the month for refined petroleum products: gasoline, diesel oil, and heating oil. Directly collected spot and contract prices for the reference month for other types of petroleum products, such as naphtha, jet fuel, kerosene, and petroleum gases).	Tuesday of the week containing the 13th of the month. However, if respondents are unable to provide prices for that day, the PPI will accept prices that reflect a day close to the pricing day or average prices for a period that contains the pricing day.	Throughout the entire month	Quarterly
Source of data	Prices for crude oil and refined petroleum products are provided by the Energy Information Agency of the Department of Energy.	Domestic producers submit prices voluntarily.	Collected by Bureau of Labor Statistics at retail outlets across the Nation.	Household interviews on a quarterly basis for five consecutive quarters.
Type of data	Crude oil: net transaction prices for virtually all crude oil imported into the United States. Refined petroleum products: spot prices for gasoline, diesel oil, and heating oil from the first week of the month are combined with directly collected prices for other types of petroleum products, such as naphtha, jet fuel, kerosene, and petroleum gases, to calculate indexes for refined petroleum products. The locations of the gasoline, diesel oil, and heating oil spot prices are New York Harbor, the U.S. Gulf Coast, and Los Angeles.	Crude-oil prices typically are manufacturer selling prices on the pricing date, but in some cases may be average prices for the entire calendar month. Refined-petroleum prices are manufacturers' national average prices for the pricing date.	Directly collected retail prices	Average annual expenditures and expenditure shares
Quality adjust petroleum products for environmental mandates	No	Yes	No	No
Frequency of publication	Monthly	Monthly	Monthly	Annually
Revision policy	Final index number is published 3 months after the preliminary index number.	Final index number is published 4 months after the preliminary index number.	Indexes are final upon publication.	Survey estimates are final upon publication.
Seasonally adjusted data	No	Yes	Yes	No

Proportion of workers in selected pay ranges by region and State, 2005

Jim Campbell

State differences in the distribution of workers earning hourly rates above or below the Federal minimum wage of \$5.15 are a function not only of the occupational distribution and prevailing wages in each State, but also of the widely ranging State minimum wage provisions above the current Federal minimum.¹ Since the last

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regional report on State pay ranges was issued with 2002 data,² some States that previously did not have minimum wage provisions have added them, while others have begun indexing existing State minimum wage requirements to provide annual increases. Several States that have not had minimum wage laws held referendums in 2006, allowing voters to determine whether their State should have provisions beyond the Federal minimum wage.

In 2005, 2.5 percent of the 75.6 million U.S. wage and salary workers who were paid hourly rates earned the Federal minimum wage of \$5.15 or less, down from 2.7 percent of such workers in 2004, 2.9 percent in 2003, and 3.0 percent in 2002. Among the census regions, the South recorded the highest proportion of work-

ers with earnings in this range, 3.1 percent, and the West registered the lowest share, 1.5 percent. Among the nine census geographic divisions, the West South Central reported the largest percentage at or below \$5.15, 3.4 percent, while the Pacific had the smallest, 0.9 percent. (See table 1.)

Twenty-nine States—including all of those in the South except Delaware and Maryland—recorded higher percentages of workers paid \$5.15 or less in 2005 than did the United States as a whole. In contrast, 21 States—including all of those in the Pacific and two-thirds of those in New England—and the District of Columbia had shares of workers earning at or below the Federal minimum wage that were smaller than the U.S. share. (See chart 1.) The largest proportions of hourly

Table 1. Wage and salary workers paid hourly rates with earnings at or below the prevailing Federal minimum wage of \$5.15 per hour and at or above \$7.15 per hour, by geographical region, division, and State, annual averages, 2005

Region, division, and State	Number of workers paid hourly rates (in thousands)			Percent paid hourly rates	
	Total	At or below \$5.15 per hour	At or above \$7.15 per hour	At or below \$5.15 per hour	At or above \$7.15 per hour
United States	75,609	1,882	64,356	2.5	85.1
Northeast	13,284	302	11,512	2.3	86.7
New England	3,836	71	3,459	1.9	90.2
Connecticut	892	9	825	1.0	92.5
Maine	409	8	365	2.0	89.1
Massachusetts	1,666	31	1,496	1.9	89.8
New Hampshire	377	11	340	2.9	90.2
Rhode Island	309	8	268	2.6	86.8
Vermont	182	3	165	1.6	91.0
Middle Atlantic	9,448	232	8,053	2.5	85.2
New Jersey	1,922	40	1,677	2.1	87.2
New York	4,186	95	3,532	2.3	84.4
Pennsylvania	3,340	97	2,844	2.9	85.2
Midwest	18,879	502	16,168	2.7	85.6
East North Central	13,015	341	11,174	2.6	85.9
Illinois	3,207	77	2,726	2.4	85.0
Indiana	1,794	37	1,571	2.1	87.6
Michigan	2,869	88	2,443	3.1	85.2
Ohio	3,403	111	2,890	3.3	84.9
Wisconsin	1,743	27	1,544	1.5	88.6
West North Central	5,864	160	4,994	2.7	85.2
Iowa	922	20	786	2.2	85.2
Kansas	770	27	636	3.5	82.6
Minnesota	1,593	29	1,415	1.8	88.8
Missouri	1,613	56	1,333	3.5	82.7
Nebraska	544	17	469	3.1	86.2
North Dakota	183	4	150	2.2	82.2
South Dakota	240	9	205	3.8	85.2
South	26,138	813	21,591	3.1	82.6
South Atlantic	13,578	388	11,531	2.9	84.9
Delaware	219	4	193	1.8	88.0
District of Columbia	110	2	99	1.8	90.6
Florida	4,404	117	3,714	2.7	84.3
Georgia	2,060	66	1,767	3.2	85.8
Maryland	1,318	28	1,162	2.1	88.2

Table 1. Continued—Wage and salary workers paid hourly rates with earnings at or below the prevailing Federal minimum wage of \$5.15 per hour and at or above \$7.15 per hour, by geographical region, division, and State, annual averages, 2005

Region, division, and State	Number of workers paid hourly rates (in thousands)			Percent paid hourly rates	
	Total	At or below \$5.15 per hour	At or above \$7.15 per hour	At or below \$5.15 per hour	At or above \$7.15 per hour
North Carolina	2,176	58	1,856	2.7	85.3
South Carolina	1,073	34	884	3.2	82.4
Virginia	1,753	60	1,487	3.4	84.8
West Virginia	466	20	369	4.3	79.3
East South Central	4,442	145	3,666	3.3	82.5
Alabama	1,152	36	926	3.1	80.4
Kentucky	1,120	35	946	3.1	84.5
Mississippi	664	23	534	3.5	80.4
Tennessee	1,506	51	1,260	3.4	83.6
West South Central	8,118	279	6,394	3.4	78.8
Arkansas	700	25	561	3.6	80.1
Louisiana	1,109	42	857	3.8	77.2
Oklahoma	841	36	676	4.3	80.3
Texas	5,467	176	4,300	3.2	78.7
West	17,309	266	15,087	1.5	87.2
Mountain	5,237	158	4,437	3.0	84.7
Arizona	1,396	47	1,183	3.4	84.8
Colorado	1,131	34	1,007	3.0	89.0
Idaho	415	12	340	2.9	81.8
Montana	278	6	224	2.2	80.5
Nevada	684	19	587	2.8	85.7
New Mexico	505	18	406	3.6	80.4
Utah	677	16	565	2.4	83.4
Wyoming	150	4	125	2.7	82.9
Pacific	12,071	108	10,650	.9	88.2
Alaska	192	1	185	.5	96.1
California	8,846	82	7,620	.9	86.1
Hawaii	341	4	297	1.2	87.0
Oregon	959	10	910	1.0	94.9
Washington	1,733	10	1,638	.6	94.5

NOTE: The source of the data in this table is the Current Population Survey (CPS). Earnings data are collected from the outgoing rotation groups only (one-quarter of the CPS sample). Data exclude the incorporated self-employed. Users are reminded that these data are based on a sample and are therefore subject to sampling error; the degree of error may be quite large for less populous States. The number and percent distribution of workers paid hourly rates at or above \$7.15 for regions and divisions were

derived from State totals and therefore may include slight rounding error. It is not possible to determine definitely whether workers surveyed in the CPS are actually covered by the Fair Labor Standards Act or by individual State minimum wage laws. Thus, the presence of workers with wages below the prevailing Federal minimum wage does not necessarily indicate violations of the Act or of applicable State laws because numerous exclusions and exemptions pertain to the minimum wage statutes.

workers earning \$5.15 or less were reported in Oklahoma and West Virginia, 4.3 percent each, followed by Louisiana and South Dakota, 3.8 percent each; Arkansas and New Mexico, 3.6 percent each; and Kansas, Mississippi, and Missouri, 3.5 percent each. The largest numbers of workers earning the Federal minimum wage or less lived in Texas (176,000), Florida (117,000), Ohio (111,000), Pennsylvania (97,000), New York (95,000), Michigan (88,000), and California (82,000).

Pacific division States generally had

the lowest proportions of workers earning \$5.15 or less—Alaska, 0.5 percent; Washington, 0.6 percent; California, 0.9 percent; and Oregon, which tied with Connecticut at 1.0 percent. All 14 of the States and the District with minimum wage provisions above the Federal minimum had lower shares of workers earning \$5.15 or less than did the United States, with the exception of Rhode Island, which was slightly above the U.S. share at 2.6 percent.

In a higher wage group, 85.1 percent of U.S. workers paid by the hour earned

at least \$7.15 in 2005. Among regions, the West had the highest share of workers, 87.2 percent, paid in this range, while the South registered the lowest share, 82.6 percent. Among the nine divisions, New England reported the largest proportion of workers, 90.2 percent, earning at or above \$7.15 per hour, with all six States recording shares above the national average. The West South Central division had the lowest proportion of workers in this range, 78.8 percent, with all four States below the U.S. average.

Among the States, Alaska had the

Chart 1. Shares of workers paid \$5.15 per hour or less by State compared with the United States, 2005 annual averages

(U.S. average = 2.5 percent)



NOTE: "Workers" refers to those paid hourly rates.

Chart 2. Shares of workers paid at least \$7.15 per hour by State compared with the United States, 2005 annual averages

(U.S. average = 85.1 percent)



NOTE: "Workers" refers to those paid hourly rates.

highest percentage, 96.1 percent, of hourly workers earning \$7.15 or more in 2005, followed by Oregon, 94.9 percent; Washington, 94.5 percent; and Connecticut, 92.5 percent. Twenty-six States and the District of Columbia reported higher shares in this pay range than did the United States, including 12 of the 14 places with minimum wage provisions in effect in 2005 that were higher than the Federal minimum wage.³ (See chart 2.)

Louisiana reported the lowest proportion, 77.2 percent, of hourly workers earning at least \$7.15. Six additional States in the South, along with New

Mexico, reported the next lowest proportions—Texas, 78.7 percent; West Virginia, 79.3 percent; Arkansas, 80.1 percent; Oklahoma, 80.3 percent; and New Mexico, Mississippi, and Alabama, 80.4 percent each. As noted earlier, these States were also among those with the highest shares of workers earning \$5.15 per hour or less. □

Notes

¹ State minimum wage provisions vary from the Federal provisions not only in hourly wage rates, but in size of establishment covered (number employed or

annual revenue), youth provisions, and other factors.

² See “Proportions of workers in selected pay ranges, by region and State,” Marie-Claire Guillard, *Monthly Labor Review*, September 2003, pp. 41–3.

³ The States and the District with minimum wage laws in effect in 2005 with provisions higher than \$5.15 per hour were Alaska, California, Connecticut, Delaware, Hawaii, Illinois, Maine, Massachusetts, New York, Oregon, Rhode Island, Vermont, Washington, and the District of Columbia. Florida enacted minimum wage legislation beginning in 2006, while a number of States increased existing minimum wage levels effective in 2006. Florida, Oregon, and Washington now have laws stipulating automatic annual increases in the minimum wage.

Self-employment duration over the business cycle

Economists and policymakers tend to hold one of two prevailing views on self-employment. The first view argues that small businesses—in which the entrepreneurs are self-employed—stimulate job growth and innovation. Policies aimed at encouraging small businesses (and thus, presumably, job growth) are guided by this view. The second view, however, is less sanguine. It argues that self-employment tends to be driven by the lack of opportunities in the wage market. In other words, rather than choose self-employment for its inherent opportunities, persons are compelled to seek self-employment due to limited options elsewhere in the labor market. If the second view is more accurate, one would expect self-employment to *increase* during economic downturns and *decrease* during economic expansions. In a recent study published in the Federal Reserve Bank of Chicago's *Economic Perspectives* (third quarter, 2006), economist Ellen R. Rissman examines data from the BLS *National Longitudinal Survey of Youth 1979* and finds evidence supporting the second view.

Unlike the Current Population Survey (CPS), which provides data on self-employment but tracks respondents only over a short period of time, the National Longitudinal Survey of Youth (NLSY) follows individuals over time. Thus, Rissman was able to look at the frequency and duration of self-employment among a large group of persons over a period of many years (1979–2002). She focuses on the rate of turnover among the self-employed and the factors determining it, especially the role played by aggregate and local economic conditions. On the grounds that women's self-employment decisions are complicated by child-

bearing issues and persons younger than 21 years of age tend to be enrolled in school, Rissman limits her study to men who were aged 21 years and older when the NLSY began in 1979.

Rissman finds that self-employment is quite transitory, with movement from self-employment to wage work common among the respondents. Once employed in the wage sector, however, persons are less likely to return to self-employment. The data show, for example, that from one observation to the next, only 3.4 percent of male respondents moved from wage work to self-employment. At the same time, nearly 36 percent moved from self-employment to wage work between interviews. Rissman also finds that self-employment is a relatively common phenomenon. Although self-employment occurred in only about 7.5 percent of the observations on men, more than a quarter of the respondents indicated they had experienced self-employment at some point during their working lives. The data also show that male respondents are more likely to become self-employed as they get older. But Rissman points out that it would be misleading to think that self-employment is growing over time—the upward trend is driven largely by the aging of the sample population.

One of the more intriguing findings of Rissman's study is that the duration of self-employment tends to be short, with many respondents returning to the wage sector within a year. Still, the longer a person has been self-employed, the more likely he is to stay that way. In addition, after controlling for aggregate and local economic conditions, the length of time that a person is self-employed does not appear to be influenced by educational attainment, marital status, or race. Finally, Rissman concludes that persons are more likely to seek self-employment opportunities during periods of economic contraction and less likely to leave the wage sector during economic expansions.

Services and trade

Although the Federal statistical community has initiatives underway to improve data on service-providing industries, analysts still are challenged to make ingenious use of the data available and make adjustments on the fly to data that do not quite meet their needs. A recent example is an analysis of services trade and employment that appeared in *NBR Analysis* from the National Bureau of Asian Research.

Among the challenges the authors faced was developing a crosswalk between the “service type” categories used to compile trade statistics and the North American Industry Classification System (NAICS) used in employment statistics. Only after finishing that chore could they calculate the export and import penetration rates needed to designate the most trade-sensitive industries.

In the service-providing sector, this exercise revealed 15 export-sensitive industries in which 10 percent or more of revenue came from exports or the export penetration rate was rising by at least 0.4 percentage point per year. The study also listed 11 import-sensitive service industries in which imports of the service accounted for at least 10 percent of total supply or in which the import penetration rate was rising by 0.4 percentage point or more.

Nine industries appeared on both lists, mostly in transportation-related activities. Also in common were software publishers and lessors of intangible assets such as patents, trademarks, and other intellectual property (except copyrights). The noncommon import-sensitive industries were related to insurance, while those on the export sensitive list included investment activities, arts and entertainment, and industrial equipment repair. □

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 were revised in the February 2005 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14, and 17 were revised in the March 2005 *Review*. A brief explanation of the seasonal adjustment methodology appears in “Notes on the data.”

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

Adjustments for price changes. Some data—such as the “real” earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of \$3 and a current price

index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is \$2 ($\$3/150 \times 100 = \2). The \$2 (or any other resulting values) are described as “real,” “constant,” or “1982” dollars.

Sources of information

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

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

www.bls.gov/cps/

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 interna-

tional 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 ill-

ness 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 pub-

lished as preliminary in January and February and as final in March.

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

Unemployment data by State

Description of the series

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

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

Notes on the data

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

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

Quarterly Census of Employment and Wages

Description of the series

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

The Quarterly Census of Employment and Wages (QCEW) data, also referred as ES-

202 data, are the most complete enumeration of employment and wage information by industry at the national, State, metropolitan area, and county levels. They have broad economic significance in evaluating labor market trends and major industry developments.

Definitions

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

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

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

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

ties 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 week-end 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 design-

ated 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 separa-

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

Jobs to be filled only by internal transfers, promotions, demotions, or recall from layoffs are excluded. Also excluded are jobs with start dates more than 30 days in the future, jobs for which employees have been hired but have not yet reported for work, and jobs

to be filled by employees of temporary help agencies, employee leasing companies, outside contractors, or consultants. The job openings rate is computed by dividing the number of job openings by the sum of employment and job openings, and multiplying that quotient by 100.

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

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

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

Notes on the data

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

mental panels of establishments needed to create NAICS estimates were not completely enrolled until May 2003. The data collected up until those points are from less than a full sample. Therefore, estimates from earlier months should be used with caution, as fewer sampled units were reporting data at that time.

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

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

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

JOLTS hires and separations estimates cannot be used to exactly explain net changes in payroll employment. Some reasons why it is problematic to compare changes in payroll employment with JOLTS hires and separations, especially on a monthly basis, are: (1) the reference period for payroll employment is the pay period including the 12th of the

month, while the reference period for hires and separations is the calendar month; and (2) payroll employment can vary from month to month simply because part-time and on-call workers may not always work during the pay period that includes the 12th of the month. Additionally, research has found that some reporters systematically underreport separations relative to hires due to a number of factors, including the nature of their payroll systems and practices. The shortfall appears to be about 2 percent or less over a 12-month period.

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

Compensation and Wage Data

(Tables 1–3; 30–36)

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

The ECI for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and sala-

ries 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 noncon-

tributory 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

(Table 37)

Description of the series

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

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

Definitions

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

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

Number of days idle: The aggregate

number of workdays lost by workers involved in the stoppages.

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

Notes on the data

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

ADDITIONAL INFORMATION on work stoppages data is available at <http://www.bls.gov/cba/home.htm> or by telephone at (202) 691-6199.

Price Data

(Tables 2; 38-48)

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, cloth-

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

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

Notes on the data

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

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

Producer Price Indexes

Description of the series

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

American Industry Classification System and product codes developed by the U.S. Census Bureau.

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

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

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

International Price Indexes

Description of the series

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

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

To the extent possible, the data gathered refer to prices at the U.S. border for ex-

ports 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; 49–52)

Business and major sectors

Description of the series

The productivity measures relate real out-

put 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 ad-

justed 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 49–52 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 Website at: www.bls.gov/lpc/home.htm

International Comparisons

(Tables 53-55)

Labor force and unemployment

Description of the series

Tables 53 and 54 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 55 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, Korea, Taiwan, and nine 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 all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) with the exception of Belgium and Taiwan, where only employees (wage and salary earners), are counted.

Definitions

Output, for most economies, is real value added in manufacturing taken from national accounts. However, output for Japan prior to 1970 and for the Netherlands prior to 1960 is from an index of industrial production. Manufacturing value added for the United Kingdom is essentially identical to its indexes of industrial production.

Real output for manufacturing in the United States is the chain-weighted index of real gross product originating (deflated value added), produced by the Bureau of Economic Analysis (BEA) 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 for 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 49 and 51 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. The series used for Canada, Denmark, France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. For the United Kingdom from 1992, an official annual index of total manufacturing hours is used. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual 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 other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed persons measures by assuming that their compensation is equal to the average for wage and salary employees.

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

Notes on the data

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 in-

dexes), 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> and <http://www.bls.gov/fls/prodsupptabletoc.htm> or contact the Division of Foreign Labor Statistics: (202) 691-5654.

Occupational Injury and Illness Data

(Tables 56–57)

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, con-

tact 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	2004	2005	2004		2005				2006		
			III	IV	I	II	III	IV	I	II	III
Employment data											
Employment status of the civilian noninstitutional population (household survey): ¹											
Labor force participation rate.....	66.0	66.0	66.0	66.0	65.8	66.1	66.2	66.1	66.0	66.1	66.2
Employment-population ratio.....	62.3	62.7	62.4	62.4	62.4	62.7	62.9	62.8	62.9	63.0	63.1
Unemployment rate.....	5.5	5.1	5.5	5.4	5.2	5.1	5.0	5.0	4.7	4.7	4.7
Men.....	5.6	5.1	5.6	5.6	5.4	5.0	5.0	4.9	4.7	4.7	4.6
16 to 24 years.....	12.6	12.4	12.5	12.6	13.2	12.5	12.1	11.7	11.2	11.1	11.4
25 years and older.....	4.4	3.8	4.4	4.3	4.1	3.8	3.8	3.7	3.6	3.6	3.5
Women.....	5.4	5.1	5.3	5.2	5.1	5.1	5.1	5.1	4.8	4.6	4.7
16 to 24 years.....	11.0	10.1	10.9	10.9	10.4	10.4	9.8	10.0	9.6	9.2	10.1
25 years and older.....	4.4	4.2	4.3	4.2	4.1	4.2	4.2	4.2	3.9	3.8	3.8
Employment, nonfarm (payroll data), in thousands: ¹											
Total nonfarm.....	131,435	133,463	131,602	132,244	132,694	133,230	133,750	134,161	134,722	135,125	135,577
Total private.....	109,814	111,660	109,981	110,533	110,960	111,454	111,907	112,291	112,849	113,198	113,564
Goods-producing.....	21,882	22,133	21,932	22,001	22,039	22,126	22,140	22,242	22,363	22,419	22,423
Manufacturing.....	14,315	14,232	14,336	14,307	14,271	14,247	14,208	14,211	14,226	14,245	14,229
Service-providing.....	109,553	111,330	109,670	110,243	110,655	111,104	111,610	111,920	112,359	112,706	113,154
Average hours:											
Total private.....	33.7	33.8	33.7	33.7	33.7	33.7	33.8	33.8	33.8	33.9	33.8
Manufacturing.....	40.8	40.7	40.8	40.5	40.6	40.4	40.6	40.9	41.0	41.2	41.3
Overtime.....	4.6	4.6	4.6	4.5	4.5	4.4	4.5	4.6	4.5	4.6	4.4
Employment Cost Index^{1, 2, 3}											
Total compensation:											
Civilian nonfarm ⁴	3.7	3.1	1.0	.5	1.0	.6	.8	.6	.7	.9	1.1
Private nonfarm.....	3.8	2.9	.8	.5	1.0	.7	.6	.5	.8	.9	.8
Goods-producing ⁵	4.6	3.2	1.2	.4	1.1	1.0	.8	.2	.3	1.0	.7
Service-providing ⁵	3.5	2.8	.7	.5	1.0	.6	.6	.5	1.0	.8	.9
State and local government.....	3.6	4.1	1.6	.7	.8	.3	2.0	.9	.5	.4	2.3
Workers by bargaining status (private nonfarm):											
Union.....	5.4	2.8	.8	.6	.6	.9	.8	.4	.5	1.3	.6
Nonunion.....	3.5	2.9	.8	.5	1.1	.6	.6	.5	.9	.8	.9

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	2004	2005	2004		2005				2006		
			III	IV	I	II	III	IV	I	II	III
Compensation data ^{1, 2, 3}											
Employment Cost Index—compensation:											
Civilian nonfarm.....	3.7	3.1	1.0	0.5	1.0	0.6	0.8	0.6	0.7	0.9	1.1
Private nonfarm.....	3.8	2.9	.8	.5	1.0	.7	.6	.5	.8	.9	.8
Employment Cost Index—wages and salaries:											
Civilian nonfarm.....	2.5	2.6	.9	.3	.6	.6	.7	.6	.7	.8	1.1
Private nonfarm.....	2.6	2.5	.8	.3	.7	.6	.6	.5	.7	1.0	.8
Price data ¹											
Consumer Price Index (All Urban Consumers): All Items.....											
	3.3	3.4	.2	.2	1.0	.5	2.2	-1.0	1.5	1.6	.0
Producer Price Index:											
Finished goods.....	4.1	5.4	.0	1.1	2.0	.3	3.2	.0	.1	1.7	.9
Finished consumer goods.....	4.6	6.8	-1.7	.9	-2.6	1.4	4.1	-4	.1	2.1	1.1
Capital equipment.....	2.4	1.3	.4	1.6	2.1	-2	.3	.7	.5	.3	.1
Intermediate materials, supplies, and components.....	9.1	8.4	1.9	.9	3.5	.8	3.9	1.1	1.1	3.0	.2
Crude materials.....	18.0	22.1	-5.1	8.3	9.7	-2.5	-1.4	2.0	-11.7	1.5	.6
Productivity data ⁴											
Output per hour of all persons:											
Business sector.....	3.5	2.6	.5	1.6	3.1	1.2	5.0	.2	4.5	1.1	.1
Nonfarm business sector.....	3.4	2.7	.2	.4	3.6	2.3	4.4	-1	4.3	1.1	.0
Nonfinancial corporations ⁵	4.0	5.0	5.5	1.6	5.0	4.9	3.0	3.2	7.2	.2	-

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—				
	2005		2006			2005		2006		
	III	IV	I	II	III	III	IV	I	II	III
Average hourly compensation: ¹										
All persons, business sector.....	8.3	3.1	13.6	6.4	4.0	4.9	4.0	6.4	7.8	6.7
All persons, nonfarm business sector.....	7.8	2.9	13.7	6.6	3.7	4.8	4.1	6.4	7.7	6.7
Employment Cost Index—compensation: ²										
Civilian nonfarm ³.....	.8	.6	.7	.9	1.1	3.0	3.1	2.8	3.0	3.3
Private nonfarm.....	.6	.5	.8	.9	.8	2.9	2.9	2.6	2.8	3.0
Union.....	.8	.4	.5	1.3	.6	3.0	2.8	2.7	3.0	2.8
Nonunion.....	.6	.5	.9	.8	.9	2.9	2.9	2.6	2.8	3.1
State and local government.....	2.0	.9	.5	.4	2.3	3.9	4.1	3.7	3.8	4.1
Employment Cost Index—wages and salaries: ²										
Civilian nonfarm ³.....	.7	.6	.7	.8	1.1	2.3	2.6	2.7	2.8	3.2
Private nonfarm.....	.6	.5	.7	1.0	.8	2.3	2.5	2.4	2.8	3.0
Union.....	.8	.5	.3	.9	.5	2.5	2.5	2.5	2.5	2.2
Nonunion.....	.6	.5	.8	1.0	.9	2.3	2.5	2.5	2.9	3.2
State and local government.....	1.3	.9	.3	.5	2.0	2.6	3.1	2.8	3.1	3.7

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		2005			2006										
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	
TOTAL																
Civilian noninstitutional																
population ¹	223,357	226,082	226,959	227,204	227,425	227,553	227,763	227,975	228,199	228,428	228,671	228,912	229,167	229,420	229,675	
Civilian labor force.....	147,401	149,320	150,043	150,183	150,153	150,114	150,449	150,652	150,811	150,991	151,321	151,534	151,698	151,799	151,998	
Participation rate.....	66.0	66.0	66.1	66.1	66.0	66.0	66.1	66.1	66.1	66.1	66.2	66.2	66.2	66.2	66.2	
Employed.....	139,252	141,730	142,625	142,611	142,779	143,074	143,257	143,641	143,688	143,976	144,363	144,329	144,579	144,850	145,287	
Employment-population ratio ²	62.3	62.7	62.8	62.8	62.8	62.9	62.9	63.0	63.0	63.0	63.1	63.0	63.1	63.1	63.3	
Unemployed.....	8,149	7,591	7,418	7,572	7,375	7,040	7,193	7,011	7,123	7,015	6,957	7,205	7,119	6,949	6,711	
Unemployment rate.....	5.5	5.1	4.9	5.0	4.9	4.7	4.8	4.7	4.7	4.6	4.6	4.8	4.7	4.6	4.4	
Not in the labor force.....	75,956	76,762	76,916	77,021	77,271	77,439	77,314	77,323	77,388	77,437	77,350	77,379	77,469	77,621	77,677	
Men, 20 years and over																
Civilian noninstitutional																
population ¹	99,476	100,835	101,265	101,383	101,489	101,560	101,657	101,754	101,857	101,963	102,075	102,187	102,308	102,428	102,549	
Civilian labor force.....	75,364	76,443	76,780	76,722	76,786	76,928	77,115	77,335	77,415	77,477	77,296	77,308	77,550	77,831	77,897	
Participation rate.....	75.8	75.8	75.8	75.7	75.7	75.7	75.9	76.0	76.0	75.7	75.7	75.8	75.8	76.0	76.0	
Employed.....	71,572	73,050	73,500	73,441	73,468	73,844	73,857	74,197	74,169	74,202	74,215	74,082	74,358	74,864	74,904	
Employment-population ratio ²	71.9	72.4	72.6	72.4	72.4	72.7	72.7	72.9	72.8	72.8	72.7	72.5	72.7	73.1	73.0	
Unemployed.....	3,791	3,392	3,281	3,282	3,318	3,084	3,258	3,137	3,246	3,275	3,082	3,226	3,192	2,966	2,994	
Unemployment rate.....	5.0	4.4	4.3	4.3	4.3	4.0	4.2	4.1	4.2	4.2	4.0	4.2	4.1	3.8	3.8	
Not in the labor force.....	24,113	24,392	24,485	24,660	24,703	24,631	24,542	24,419	24,442	24,486	24,779	24,878	24,758	24,597	24,652	
Women, 20 years and over																
Civilian noninstitutional																
population ¹	107,658	108,850	109,228	109,332	109,425	109,478	109,562	109,646	109,736	109,829	109,927	110,026	110,134	110,241	110,349	
Civilian labor force.....	64,923	65,714	66,175	66,223	66,215	66,022	66,081	66,038	66,187	66,280	66,609	66,872	66,878	66,718	66,830	
Participation rate.....	60.3	60.4	60.6	60.6	60.5	60.3	60.3	60.2	60.3	60.6	60.8	60.7	60.7	60.5	60.6	
Employed.....	61,773	62,702	63,162	63,170	63,249	63,163	63,262	63,305	63,362	63,555	63,878	64,035	64,131	63,927	64,230	
Employment-population ratio ²	57.4	57.6	57.8	57.8	57.8	57.7	57.7	57.7	57.7	57.9	58.1	58.2	58.2	58.0	58.2	
Unemployed.....	3,150	3,013	3,013	3,053	2,966	2,859	2,819	2,733	2,825	2,725	2,730	2,837	2,747	2,791	2,600	
Unemployment rate.....	4.9	4.6	4.6	4.6	4.5	4.3	4.3	4.1	4.3	4.1	4.1	4.2	4.1	4.2	3.9	
Not in the labor force.....	42,735	43,136	43,053	43,109	43,209	43,456	43,481	43,608	43,550	43,549	43,319	43,154	43,256	43,523	43,519	
Both sexes, 16 to 19 years																
Civilian noninstitutional																
population ¹	16,222	16,398	16,465	16,489	16,511	16,515	16,545	16,575	16,606	16,637	16,668	16,700	16,725	16,751	16,776	
Civilian labor force.....	7,114	7,164	7,088	7,238	7,152	7,164	7,253	7,279	7,210	7,234	7,416	7,353	7,269	7,250	7,270	
Participation rate.....	43.9	43.7	43.0	43.9	43.3	43.4	43.8	43.9	43.4	43.5	44.5	44.0	43.5	43.3	43.3	
Employed.....	5,907	5,978	5,964	6,000	6,061	6,067	6,138	6,139	6,157	6,220	6,270	6,211	6,089	6,058	6,152	
Employment-population ratio ²	36.4	36.5	36.2	36.4	36.7	36.7	37.1	37.0	37.1	37.4	37.6	37.2	36.4	36.2	36.7	
Unemployed.....	1,208	1,186	1,124	1,238	1,091	1,097	1,115	1,140	1,053	1,015	1,145	1,142	1,180	1,192	1,118	
Unemployment rate.....	17.0	16.6	15.9	17.1	15.2	15.3	15.4	15.7	14.6	14.0	15.4	15.5	16.2	16.4	15.4	
Not in the labor force.....	9,108	9,234	9,377	9,251	9,359	9,352	9,292	9,296	9,396	9,402	9,253	9,347	9,456	9,501	9,507	
White³																
Civilian noninstitutional																
population ¹	182,643	184,446	185,028	185,187	185,327	185,436	185,570	185,704	185,849	186,002	186,166	186,329	186,500	186,669	186,840	
Civilian labor force.....	121,086	122,299	122,810	122,813	122,994	123,168	123,022	123,103	123,357	123,449	123,747	123,946	124,070	124,032	124,334	
Participation rate.....	66.3	66.3	66.4	66.3	66.4	66.4	66.3	66.3	66.4	66.4	66.5	66.5	66.5	66.4	66.5	
Employed.....	115,239	116,949	117,396	117,598	117,729	118,071	117,926	118,193	118,357	118,429	118,720	118,846	118,956	119,125	119,498	
Employment-population ratio ²	63.1	63.4	63.4	63.5	63.5	63.7	63.5	63.6	63.7	63.7	63.8	63.8	63.8	63.8	64.0	
Unemployed.....	5,847	5,350	5,415	5,215	5,264	5,097	5,096	4,910	5,001	5,020	5,027	5,100	5,114	4,907	4,836	
Unemployment rate.....	4.8	4.4	4.4	4.2	4.3	4.1	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.0	3.9	
Not in the labor force.....	61,558	62,148	62,218	62,374	62,333	62,268	62,548	62,601	62,492	62,552	62,418	62,383	62,430	62,636	62,506	
Black or African American³																
Civilian noninstitutional																
population ¹	26,065	26,517	26,663	26,705	26,744	26,788	26,826	26,865	26,905	26,943	26,982	27,021	27,065	27,109	27,153	
Civilian labor force.....	16,638	17,013	17,150	17,118	16,979	16,982	17,273	17,334	17,326	17,312	17,231	17,369	17,344	17,191	17,368	
Participation rate.....	63.8	64.2	64.3	64.1	63.5	63.4	64.4	64.5	64.4	64.3	63.9	64.3	64.1	63.4	64.0	
Employed.....	14,909	15,313	15,591	15,299	15,397	15,476	15,660	15,726	15,698	15,767	15,685	15,714	15,822	15,617	15,872	
Employment-population ratio ²	57.2	57.7	58.5	57.3	57.6	57.8	58.4	58.5	58.3	58.5	58.1	58.2	58.5	57.6	58.5	
Unemployed.....	1,729	1,700	1,559	1,819	1,582	1,506	1,614	1,608	1,628	1,545	1,547	1,655	1,521	1,574	1,496	
Unemployment rate.....	10.4	10.0	9.1	10.6	9.3	8.9	9.3	9.3	9.4	8.9	9.0	9.5	8.8	9.2	8.6	
Not in the labor force.....	9,428	9,504	9,513	9,587	9,766	9,806	9,553	9,531	9,580	9,631	9,751	9,652	9,722	9,918	9,785	

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Hispanic or Latino ethnicity															
Civilian noninstitutional population ¹	28,109	29,133	29,456	29,552	29,645	29,622	29,707	29,793	29,880	29,966	30,053	30,140	30,232	30,324	30,416
Civilian labor force.....	19,272	19,824	20,047	20,214	20,292	20,528	20,485	20,489	20,583	20,574	20,753	20,663	20,628	20,669	20,824
Participation rate.....	68.6	68.0	68.1	68.4	68.4	69.3	69.0	68.8	68.9	68.7	69.1	68.6	68.2	68.2	68.5
Employed.....	17,930	18,632	18,871	18,991	19,066	19,344	19,356	19,385	19,476	19,541	19,649	19,578	19,528	19,556	19,848
Employment-population ratio ²	63.8	64.0	64.1	64.3	64.3	65.3	65.2	65.1	65.2	65.2	65.4	65.0	64.6	64.5	65.3
Unemployed.....	1,342	1,191	1,176	1,223	1,226	1,184	1,129	1,104	1,107	1,033	1,104	1,085	1,100	1,113	976
Unemployment rate.....	7.0	6.0	5.9	6.1	6.0	5.8	5.5	5.4	5.4	5.0	5.3	5.3	5.3	5.4	4.7
Not in the labor force.....	8,837	9,310	9,409	9,338	9,353	9,094	9,222	9,304	9,297	9,392	9,300	9,477	9,604	9,655	9,592

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Characteristic															
Employed, 16 years and older.....	139,252	141,730	142,625	142,611	142,779	143,074	143,257	143,641	143,688	143,976	144,363	144,329	144,579	144,850	145,287
Men.....	74,524	75,973	76,396	76,410	76,529	76,857	76,888	77,273	77,237	77,313	77,357	77,162	77,423	77,911	77,968
Women.....	64,728	65,757	66,229	66,200	66,250	66,217	66,369	66,368	66,451	66,663	67,006	67,168	67,156	66,939	67,318
Married men, spouse present.....	45,084	45,483	45,634	45,480	45,469	45,790	45,679	45,806	45,837	45,843	45,809	45,558	45,484	45,613	45,477
Married women, spouse present.....	34,600	34,773	34,868	34,910	34,948	35,167	35,039	35,074	35,300	35,171	35,394	35,309	35,295	35,436	35,257
Persons at work part time¹															
All industries:															
Part time for economic reasons.....	4,567	4,350	4,240	4,175	4,138	4,133	4,204	3,989	3,978	4,137	4,266	4,261	4,147	4,056	4,278
Slack work or business conditions.....	2,841	2,684	2,643	2,595	2,541	2,649	2,655	2,494	2,474	2,703	2,729	2,658	2,683	2,614	2,775
Could only find part-time work.....	1,409	1,341	1,299	1,246	1,246	1,226	1,238	1,191	1,179	1,152	1,190	1,202	1,161	1,137	1,198
Part time for noneconomic reasons.....	19,380	19,491	19,696	19,612	19,582	19,708	19,564	19,373	19,460	19,701	19,684	19,501	19,624	19,622	19,422
Nonagricultural industries:															
Part time for economic reasons.....	4,469	4,271	4,161	4,105	4,051	4,064	4,107	3,884	3,900	4,037	4,158	4,143	4,071	3,946	4,208
Slack work or business conditions.....	2,773	2,636	2,592	2,567	2,508	2,606	2,590	2,382	2,422	2,612	2,656	2,578	2,635	2,547	2,714
Could only find part-time work.....	1,399	1,330	1,284	1,230	1,230	1,198	1,225	1,177	1,169	1,150	1,189	1,197	1,158	1,133	1,195
Part time for noneconomic reasons.....	19,026	19,134	19,255	19,235	19,214	19,368	19,199	19,044	19,112	19,292	19,310	19,170	19,220	19,269	19,101

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Characteristic															
Total, 16 years and older.....	5.5	5.1	4.9	5.0	4.9	4.7	4.8	4.7	4.7	4.6	4.6	4.8	4.7	4.6	4.4
Both sexes, 16 to 19 years.....	17.0	16.6	15.9	17.1	15.2	15.3	15.4	15.7	14.6	14.0	15.4	15.5	16.2	16.4	15.4
Men, 20 years and older.....	5.0	4.4	4.3	4.3	4.3	4.0	4.2	4.1	4.2	4.2	4.0	4.2	4.1	3.8	3.8
Women, 20 years and older.....	4.9	4.6	4.6	4.6	4.5	4.3	4.3	4.1	4.3	4.1	4.1	4.2	4.1	4.2	3.9
White, total ¹	4.8	4.4	4.4	4.2	4.3	4.1	4.1	4.0	4.1	4.1	4.1	4.1	4.1	4.0	3.9
Both sexes, 16 to 19 years.....	15.0	14.2	14.2	13.9	13.4	13.3	12.7	12.7	12.3	12.7	13.6	12.9	14.1	13.8	13.5
Men, 16 to 19 years.....	16.3	16.1	15.1	15.1	13.8	14.4	14.6	14.0	14.2	15.0	14.9	14.2	15.1	14.8	14.4
Women, 16 to 19 years.....	13.6	12.3	13.3	12.6	12.9	12.1	10.7	11.4	10.4	10.3	12.4	11.6	13.1	12.6	12.5
Men, 20 years and older.....	4.4	3.8	3.8	3.6	3.8	3.6	3.7	3.5	3.6	3.7	3.5	3.6	3.6	3.3	3.3
Women, 20 years and older.....	4.2	3.9	4.0	3.9	3.8	3.7	3.8	3.6	3.7	3.6	3.6	3.7	3.6	3.7	3.5
Black or African American, total ¹	10.4	10.0	9.1	10.6	9.3	8.9	9.3	9.3	9.4	8.9	9.0	9.5	8.8	9.2	8.6
Both sexes, 16 to 19 years.....	31.7	33.3	32.4	38.4	24.4	31.4	30.8	33.1	29.5	25.0	27.8	31.6	28.8	32.2	26.8
Men, 16 to 19 years.....	35.6	36.3	35.0	44.9	23.6	30.9	31.8	32.6	31.9	29.4	32.1	35.6	31.6	39.1	35.1
Women, 16 to 19 years.....	28.2	30.3	30.3	31.5	25.2	31.8	29.9	33.4	27.0	20.5	23.7	28.0	26.2	27.0	19.7
Men, 20 years and older.....	9.9	9.2	8.5	9.4	8.6	7.5	8.5	8.3	8.9	9.0	8.5	9.0	8.4	8.3	8.3
Women, 20 years and older.....	8.9	8.5	7.5	9.0	8.5	8.1	7.8	7.6	7.8	7.2	7.5	7.8	7.2	7.7	7.0
Hispanic or Latino ethnicity.....	7.0	6.0	5.9	6.1	6.0	5.8	5.5	5.4	5.4	5.0	5.3	5.3	5.3	5.4	4.7
Married men, spouse present.....	3.1	2.8	2.6	2.6	2.6	2.4	2.4	2.4	2.6	2.5	2.5	2.5	2.5	2.3	2.2
Married women, spouse present.....	3.5	3.3	3.3	3.3	3.2	3.0	2.9	2.7	2.9	3.0	2.9	3.1	2.9	2.9	2.8
Full-time workers.....	5.6	5.0	4.9	4.9	4.8	4.7	4.7	4.6	4.7	4.5	4.5	4.6	4.6	4.5	4.3
Part-time workers.....	5.3	5.4	5.4	5.7	5.5	4.8	5.2	5.1	5.1	5.1	5.2	5.4	5.2	5.1	5.1
Educational attainment²															
Less than a high school diploma.....	8.5	7.6	7.1	7.4	7.5	7.0	7.2	7.0	7.0	6.9	7.0	7.1	6.9	6.4	5.8
High school graduates, no college ³	5.0	4.7	4.8	4.8	4.6	4.4	4.4	4.2	4.4	4.4	4.1	4.5	4.5	4.2	4.1
Some college or associate degree.....	4.2	3.9	3.8	3.8	3.9	3.5	3.6	3.7	3.8	3.8	3.5	3.6	3.7	3.6	3.4
Bachelor's degree and higher ⁴	2.7	2.3	2.3	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.1	2.1	1.8	2.0	1.9

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.

3 Includes high school diploma or equivalent.

4 Includes persons with bachelor's, master's, professional, and doctoral degrees.

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

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Less than 5 weeks.....	2,696	2,667	2,708	2,779	2,764	2,556	2,595	2,676	2,635	2,516	2,673	2,704	2,617	2,581	2,585
5 to 14 weeks.....	2,382	2,304	2,263	2,268	2,240	2,263	2,074	2,011	2,115	2,242	2,052	2,175	2,215	2,080	2,062
15 weeks and over.....	3,072	2,619	2,477	2,492	2,417	2,241	2,482	2,333	2,373	2,297	2,133	2,338	2,394	2,294	2,073
15 to 26 weeks.....	1,293	1,130	1,045	1,108	1,068	1,090	1,126	1,044	1,046	968	1,020	998	1,066	1,027	996
27 weeks and over.....	1,779	1,490	1,432	1,383	1,350	1,151	1,356	1,288	1,327	1,329	1,112	1,340	1,328	1,267	1,077
Mean duration, in weeks.....	19.6	18.4	18.0	17.6	17.3	16.8	17.6	16.9	16.8	17.1	16.2	17.3	17.4	17.4	16.5
Median duration, in weeks.....	9.8	8.9	8.6	8.5	8.5	8.4	8.9	8.5	8.5	8.5	7.5	8.2	8.5	8.2	8.1

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Job losers ¹	4,197	3,667	3,508	3,455	3,486	3,336	3,361	3,412	3,531	3,524	3,409	3,370	3,305	3,179	3,062
On temporary layoff.....	998	933	944	899	935	873	885	918	907	949	981	933	886	873	952
Not on temporary layoff.....	3,199	2,734	2,564	2,556	2,552	2,462	2,477	2,494	2,624	2,575	2,428	2,437	2,420	2,306	2,110
Job leavers.....	858	872	889	900	841	839	849	817	846	878	818	857	861	810	793
Reentrants.....	2,408	2,386	2,349	2,538	2,430	2,314	2,313	2,158	2,180	2,119	2,091	2,358	2,277	2,299	2,251
New entrants.....	686	666	654	679	644	622	680	634	579	525	650	629	650	641	597
Percent of unemployed															
Job losers ¹	51.5	48.3	47.4	45.6	47.1	46.9	46.7	48.6	49.5	50.0	48.9	46.7	46.6	45.9	45.7
On temporary layoff.....	12.2	12.3	12.8	11.9	12.6	12.3	12.3	13.1	12.7	13.5	14.1	12.9	12.5	12.6	14.2
Not on temporary layoff.....	39.3	36.0	34.7	33.8	34.5	34.6	34.4	35.5	36.8	36.5	34.8	33.8	34.1	33.3	31.5
Job leavers.....	10.5	11.5	12.0	11.9	11.4	11.8	11.8	11.6	11.9	12.5	11.7	11.9	12.1	11.7	11.8
Reentrants.....	29.5	31.4	31.7	33.5	32.8	32.5	32.1	30.7	30.5	30.1	30.0	32.7	32.1	33.2	33.6
New entrants.....	8.4	8.8	8.8	9.0	8.7	8.7	9.4	9.0	8.1	7.4	9.3	8.7	9.2	9.3	8.9
Percent of civilian labor force															
Job losers ¹	2.8	2.5	2.3	2.3	2.3	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.0
Job leavers.....	.6	.6	.6	.6	.6	.6	.6	.5	.6	.6	.5	.6	.6	.5	.5
Reentrants.....	1.6	1.6	1.6	1.7	1.6	1.5	1.5	1.4	1.4	1.4	1.4	1.6	1.5	1.5	1.5
New entrants.....	.5	.4	.4	.5	.4	.4	.5	.4	.4	.3	.4	.4	.4	.4	.4

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total, 16 years and older.....	5.5	5.1	4.9	5.0	4.9	4.7	4.8	4.7	4.7	4.6	4.6	4.8	4.7	4.6	4.4
16 to 24 years.....	11.8	11.3	10.8	11.2	10.7	10.5	10.7	10.2	10.3	10.0	10.4	10.8	10.8	10.7	10.7
16 to 19 years.....	17.0	16.6	15.9	17.1	15.2	15.3	15.4	15.7	14.6	14.0	15.4	15.5	16.2	16.4	15.4
16 to 17 years.....	20.2	19.1	18.7	21.4	17.8	16.5	17.9	18.6	15.9	15.1	17.0	16.7	19.2	18.0	17.6
18 to 19 years.....	15.0	14.9	14.2	14.2	13.5	14.4	13.9	13.7	14.1	13.4	14.3	14.7	14.5	15.4	13.2
20 to 24 years.....	9.4	8.8	8.5	8.4	8.5	8.2	8.5	7.6	8.2	8.1	7.9	8.5	8.2	8.0	8.5
25 years and older.....	4.4	4.0	3.9	3.9	3.9	3.7	3.8	3.7	3.7	3.7	3.6	3.7	3.6	3.5	3.3
25 to 54 years.....	4.6	4.1	4.1	4.1	4.1	3.8	4.0	3.9	3.9	3.9	3.7	3.9	3.8	3.7	3.4
55 years and older.....	3.7	3.4	3.2	3.1	3.3	3.2	2.9	2.7	3.0	3.0	2.9	3.1	2.9	2.9	3.0
Men, 16 years and older.....	5.6	5.1	4.8	5.0	4.9	4.6	4.8	4.6	4.7	4.8	4.6	4.8	4.7	4.5	4.4
16 to 24 years.....	12.6	12.4	11.5	12.3	11.3	11.2	11.6	11.0	11.1	11.3	11.0	11.3	11.5	11.3	11.4
16 to 19 years.....	18.4	18.6	16.5	19.1	16.0	16.2	17.1	16.8	16.2	16.2	17.0	17.1	17.2	17.9	16.9
16 to 17 years.....	22.0	22.0	18.1	23.6	19.8	17.0	21.3	20.5	17.9	17.6	18.0	16.9	18.4	19.3	19.9
18 to 19 years.....	16.3	16.5	15.5	15.6	13.8	15.4	14.6	14.4	15.8	15.3	16.6	17.6	16.7	17.2	13.8
20 to 24 years.....	10.1	9.6	9.4	9.1	9.2	8.9	9.1	8.3	8.7	9.1	8.2	8.7	9.0	8.3	8.9
25 years and older.....	4.4	3.8	3.7	3.7	3.8	3.5	3.7	3.6	3.6	3.7	3.5	3.6	3.5	3.3	3.2
25 to 54 years.....	4.6	3.9	3.8	3.8	3.9	3.5	3.9	3.8	3.8	3.8	3.6	3.8	3.7	3.4	3.3
55 years and older.....	3.9	3.3	3.2	3.1	3.3	3.2	2.8	2.7	3.1	3.0	3.1	3.2	2.9	2.6	2.9
Women, 16 years and older.....	5.4	5.1	5.1	5.1	5.0	4.8	4.7	4.7	4.7	4.5	4.6	4.7	4.7	4.7	4.4
16 to 24 years.....	11.0	10.1	10.1	10.0	9.9	9.8	9.7	9.4	9.4	8.6	9.7	10.2	10.0	10.1	9.9
16 to 19 years.....	15.5	14.5	15.2	15.0	14.4	14.4	13.6	14.5	13.0	11.7	13.8	13.9	15.3	14.9	13.8
16 to 17 years.....	18.5	16.5	19.1	19.5	16.1	16.1	14.7	16.7	14.0	12.5	15.9	16.5	20.1	16.8	15.6
18 to 19 years.....	13.5	13.1	12.8	12.7	13.2	13.2	13.1	13.0	12.3	11.3	11.9	11.7	12.2	13.4	12.5
20 to 24 years.....	8.7	7.9	7.5	7.5	7.7	7.4	7.7	6.7	7.5	7.0	7.5	8.3	7.3	7.6	8.0
25 years and older.....	4.4	4.2	4.2	4.3	4.1	4.0	3.9	3.8	3.9	3.8	3.7	3.8	3.7	3.8	3.4
25 to 54 years.....	4.6	4.4	4.4	4.5	4.4	4.1	4.1	4.1	4.1	4.0	3.9	4.0	4.0	4.0	3.6
55 years and older ¹	3.6	3.4	3.1	3.1	2.9	3.3	3.1	2.5	2.6	2.6	3.0	3.5	3.2	3.3	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	Sept. 2005	Aug. 2006 ^P	Sept. 2006 ^P	State	Sept. 2005	Aug. 2006 ^P	Sept. 2006 ^P
Alabama.....	4.0	3.5	3.3	Missouri.....	5.1	5.1	5.0
Alaska.....	6.8	6.5	6.6	Montana.....	3.9	3.5	3.6
Arizona.....	4.8	3.6	3.7	Nebraska.....	3.7	3.3	3.1
Arkansas.....	4.9	5.3	5.2	Nevada.....	4.0	4.2	4.0
California.....	5.2	4.9	4.8	New Hampshire.....	3.6	3.5	3.2
Colorado.....	5.0	4.8	4.4	New Jersey.....	4.4	5.3	5.2
Connecticut.....	4.9	4.5	4.7	New Mexico.....	5.1	4.3	4.2
Delaware.....	4.3	3.7	3.7	New York.....	5.1	4.7	4.4
District of Columbia.....	6.2	5.8	5.9	North Carolina.....	5.3	4.8	4.9
Florida.....	3.5	3.3	3.2	North Dakota.....	3.5	3.5	3.1
Georgia.....	5.5	4.6	4.5	Ohio.....	5.9	5.7	5.3
Hawaii.....	2.8	2.8	2.5	Oklahoma.....	4.4	4.2	4.0
Idaho.....	3.7	3.3	3.3	Oregon.....	6.0	5.5	5.4
Illinois.....	5.6	4.7	4.4	Pennsylvania.....	4.8	4.9	4.6
Indiana.....	5.4	5.3	5.1	Rhode Island.....	5.1	5.6	5.2
Iowa.....	4.5	3.6	3.4	South Carolina.....	7.0	6.5	6.4
Kansas.....	5.0	4.8	4.3	South Dakota.....	3.8	3.2	3.2
Kentucky.....	6.4	5.8	5.3	Tennessee.....	5.5	5.7	4.6
Louisiana.....	12.1	3.4	3.7	Texas.....	5.4	5.1	4.8
Maine.....	5.0	4.7	4.7	Utah.....	4.3	3.2	2.8
Maryland.....	4.1	4.1	4.0	Vermont.....	3.5	3.7	3.7
Massachusetts.....	4.8	4.9	5.1	Virginia.....	3.6	3.2	3.2
Michigan.....	6.5	7.1	7.1	Washington.....	5.6	5.2	5.3
Minnesota.....	3.9	3.7	3.8	West Virginia.....	5.2	5.9	5.4
Mississippi.....	10.4	7.1	7.2	Wisconsin.....	4.7	4.6	4.7
				Wyoming.....	3.9	3.3	3.6

^P = preliminary

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

State	Sept. 2005	Aug. 2006 ^p	Sept. 2006 ^p	State	Sept. 2005	Aug. 2006 ^p	Sept. 2006 ^p
Alabama.....	2,165,215	2,180,822	2,203,527	Missouri.....	3,022,864	3,052,444	3,068,637
Alaska.....	340,489	346,072	348,263	Montana.....	495,615	501,925	504,068
Arizona.....	2,867,278	2,948,643	2,968,682	Nebraska.....	985,395	982,165	989,963
Arkansas.....	1,371,741	1,383,696	1,383,226	Nevada.....	1,223,662	1,285,170	1,300,985
California.....	17,751,072	17,651,615	17,800,903	New Hampshire.....	733,977	739,476	741,268
Colorado.....	2,556,338	2,643,681	2,647,149	New Jersey.....	4,448,773	4,493,792	4,476,816
Connecticut.....	1,819,528	1,846,842	1,851,783	New Mexico.....	940,667	951,156	954,344
Delaware.....	440,078	445,989	446,915	New York.....	9,445,311	9,476,490	9,446,650
District of Columbia.....	295,096	290,189	289,002	North Carolina.....	4,362,237	4,443,773	4,466,723
Florida.....	8,709,554	8,963,351	9,043,199	North Dakota.....	360,060	362,360	364,888
Georgia.....	4,623,795	4,690,024	4,707,669	Ohio.....	5,908,008	5,936,191	5,971,001
Hawaii.....	640,725	650,390	658,982	Oklahoma.....	1,749,834	1,758,390	1,766,587
Idaho.....	743,304	759,777	762,793	Oregon.....	1,863,652	1,887,139	1,892,250
Illinois.....	6,485,987	6,577,129	6,636,591	Pennsylvania.....	6,295,232	6,285,235	6,289,972
Indiana.....	3,220,945	3,240,982	3,261,831	Rhode Island.....	572,174	576,847	579,039
Iowa.....	1,664,614	1,684,186	1,701,990	South Carolina.....	2,092,226	2,118,573	2,124,711
Kansas.....	1,477,507	1,478,514	1,481,052	South Dakota.....	433,200	434,129	435,820
Kentucky.....	2,009,101	2,026,001	2,035,007	Tennessee.....	2,911,598	2,994,735	2,991,263
Louisiana.....	2,024,435	1,847,185	1,859,347	Texas.....	11,280,960	11,503,537	11,541,605
Maine.....	716,051	718,319	718,871	Utah.....	1,277,524	1,314,692	1,315,916
Maryland.....	2,950,839	3,001,647	3,010,551	Vermont.....	357,053	364,165	366,157
Massachusetts.....	3,365,113	3,370,947	3,387,378	Virginia.....	3,955,653	4,001,084	4,022,472
Michigan.....	5,096,362	5,085,980	5,111,881	Washington.....	3,307,229	3,328,101	3,336,749
Minnesota.....	2,941,312	2,944,465	2,955,748	West Virginia.....	805,097	821,577	823,365
Mississippi.....	1,340,094	1,311,321	1,323,455	Wisconsin.....	3,040,935	3,074,188	3,090,009
				Wyoming.....	286,782	291,202	292,625

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL NONFARM	131,435	133,463	133,877	134,231	134,376	134,530	134,730	134,905	135,017	135,117	135,251	135,374	135,604	135,752	135,844
TOTAL PRIVATE	109,814	111,660	112,025	112,351	112,498	112,686	112,854	113,006	113,099	113,193	113,300	113,404	113,584	113,704	113,762
GOODS-PRODUCING	21,882	22,133	22,179	22,264	22,282	22,335	22,373	22,381	22,419	22,407	22,435	22,420	22,427	22,421	22,361
Natural resources and															
mining	591	625	636	641	644	648	653	661	670	672	677	680	683	684	689
Logging.....	67.6	64.2	62.1	62.1	62.0	62.1	62.3	63.0	63.8	63.7	63.0	62.3	61.6	60.8	61.4
Mining.....	523.0	560.7	573.8	579.3	582.1	585.6	590.8	597.7	606.2	608.5	613.5	617.7	621.0	623.3	627.9
Oil and gas extraction.....	123.4	125.9	127.4	128.9	128.7	129.9	130.9	131.9	133.5	134.6	136.7	137.2	139.1	139.3	140.1
Mining, except oil and gas ¹	205.1	212.1	214.5	215.0	214.3	214.4	216.0	217.6	218.2	218.5	219.2	220.1	218.9	219.4	220.8
Coal mining.....	70.6	73.8	75.1	75.1	75.4	76.0	77.2	78.3	78.7	78.4	78.3	78.2	78.5	78.4	79.2
Support activities for mining.....	194.6	222.7	231.9	235.4	239.1	241.3	243.9	248.2	254.5	255.4	257.6	260.4	263.0	264.6	267.0
Construction	6,976	7,277	7,347	7,409	7,416	7,460	7,494	7,495	7,505	7,501	7,499	7,504	7,512	7,517	7,491
Construction of buildings.....	1,630.0	1,694.6	1,702.4	1,722.4	1,727.2	1,742.5	1,745.1	1,749.2	1,756.0	1,756.1	1,752.6	1,756.9	1,755.8	1,757.0	1,750.9
Heavy and civil engineering.....	907.4	952.8	965.3	977.1	974.8	987.0	992.4	990.5	987.5	985.4	981.5	983.0	985.0	992.8	995.1
Specialty trade contractors.....	4,438.6	4,629.1	4,679.2	4,709.4	4,714.3	4,730.8	4,756.3	4,755.7	4,761.5	4,759.7	4,765.0	4,764.1	4,771.4	4,767.0	4,745.0
Manufacturing	14,315	14,232	14,196	14,214	14,222	14,227	14,226	14,225	14,244	14,234	14,259	14,236	14,232	14,220	14,181
Production workers.....	10,072	10,062	10,069	10,103	10,123	10,155	10,164	10,170	10,192	10,198	10,221	10,212	10,212	10,191	10,158
Durable goods	8,924	8,953	8,952	8,960	8,970	8,977	8,981	8,992	9,017	9,014	9,033	9,011	9,014	9,011	8,992
Production workers.....	6,139	6,217	6,249	6,274	6,299	6,323	6,331	6,347	6,370	6,380	6,400	6,394	6,397	6,386	6,372
Wood products.....	549.6	554.9	550.7	556.7	558.9	560.7	557.5	558.3	554.5	555.5	551.6	550.8	546.0	542.4	537.6
Nonmetallic mineral products	505.5	503.2	500.8	502.0	500.7	505.1	506.5	507.2	506.6	502.7	502.3	501.4	500.7	496.4	497.4
Primary metals.....	466.8	468.7	470.5	471.5	469.4	472.9	470.9	473.1	472.9	473.7	475.6	474.6	473.4	470.7	469.2
Fabricated metal products.....	1,497.1	1,519.0	1,520.8	1,524.1	1,526.7	1,527.7	1,531.8	1,534.1	1,538.0	1,540.5	1,544.4	1,551.0	1,551.8	1,554.4	1,550.7
Machinery.....	1,143.0	1,161.8	1,174.5	1,164.4	1,166.9	1,163.4	1,168.7	1,171.5	1,174.9	1,179.6	1,184.3	1,191.4	1,194.8	1,196.8	1,198.9
Computer and electronic															
products ¹	1,322.8	1,320.4	1,323.5	1,322.0	1,322.2	1,317.3	1,321.9	1,322.0	1,329.0	1,327.5	1,334.5	1,327.6	1,329.4	1,328.8	1,327.5
Computer and peripheral															
equipment.....	210.0	206.5	207.9	206.3	205.7	201.7	201.8	202.7	203.1	202.7	203.3	203.1	203.2	202.6	203.2
Communications equipment.....	148.4	148.1	148.2	148.0	149.2	147.3	148.8	149.3	149.6	149.6	149.7	147.1	147.4	147.5	147.0
Semiconductors and															
electronic components.....	454.1	451.1	450.7	450.6	451.0	451.2	453.1	453.1	457.8	458.5	461.4	462.7	463.0	463.7	464.1
Electronic instruments.....	431.4	438.1	441.6	442.0	441.7	443.1	445.0	444.3	446.4	445.6	448.7	445.4	446.4	446.4	445.3
Electrical equipment and															
appliances.....	445.1	435.6	431.1	434.3	434.4	436.5	437.6	439.3	441.4	442.4	445.1	444.0	445.1	445.3	445.4
Transportation equipment.....	1,765.7	1,772.3	1,765.5	1,771.8	1,776.7	1,781.6	1,771.7	1,772.6	1,785.2	1,779.8	1,786.7	1,765.1	1,766.9	1,771.3	1,760.9
Furniture and related															
products.....	573.3	563.3	560.5	558.4	558.0	557.4	557.5	557.6	558.5	556.8	555.1	550.4	547.3	544.1	540.8
Miscellaneous manufacturing	655.5	654.0	653.6	654.7	655.8	654.1	656.5	656.7	655.5	655.0	653.6	655.0	658.5	660.8	663.5
Nondurable goods	5,391	5,278	5,244	5,254	5,252	5,250	5,245	5,233	5,227	5,220	5,226	5,225	5,218	5,209	5,189
Production workers.....	3,933	3,846	3,820	3,829	3,824	3,832	3,833	3,823	3,822	3,818	3,821	3,818	3,815	3,805	3,786
Food manufacturing.....	1,493.7	1,472.0	1,458.5	1,465.0	1,466.0	1,463.4	1,462.6	1,460.7	1,462.4	1,461.7	1,466.2	1,468.8	1,468.0	1,472.3	1,469.5
Beverages and tobacco															
products.....	194.6	191.9	192.4	193.4	192.3	194.4	194.3	194.4	195.0	194.9	195.6	196.5	197.1	197.5	198.0
Textile mills.....	236.9	217.9	213.2	210.9	209.0	208.6	206.3	203.7	201.7	199.9	197.2	195.8	193.4	189.7	188.0
Textile product mills.....	175.7	172.3	173.8	174.5	173.9	175.4	173.9	170.5	168.1	168.2	168.3	169.1	168.4	167.6	166.4
Apparel.....	285.5	260.2	251.8	253.7	253.5	253.7	253.1	252.8	252.3	250.8	249.6	249.0	243.6	242.7	240.9
Leather and allied products.....	41.8	39.5	39.6	39.5	39.7	38.9	38.4	37.5	37.7	37.5	37.2	37.1	36.8	37.1	37.0
Paper and paper products.....	495.5	484.4	478.5	478.5	478.1	477.7	477.3	475.2	472.8	472.9	471.0	470.2	467.2	465.4	463.8
Printing and related support															
activities.....	662.6	648.1	645.1	644.8	644.0	643.4	644.1	644.1	643.0	640.9	641.8	639.0	640.3	638.4	638.8
Petroleum and coal products.....	111.7	112.7	113.1	112.3	112.3	111.5	112.9	113.3	114.0	114.6	115.7	116.6	116.8	117.3	117.4
Chemicals.....	887.0	879.2	879.3	881.5	884.0	886.4	885.8	887.0	887.1	887.7	891.1	893.0	897.5	895.8	897.8
Plastics and rubber products.....	805.7	800.3	799.1	799.4	798.9	796.2	796.4	793.6	792.5	791.1	791.9	790.1	788.9	785.6	771.8
SERVICE-PROVIDING	109,553	111,330	111,698	111,967	112,094	112,195	112,357	112,524	112,598	112,710	112,816	112,954	113,177	113,331	113,483
PRIVATE SERVICE-PROVIDING	87,932	89,527	89,846	90,087	90,216	90,351	90,481	90,625	90,680	90,786	90,865	90,984	91,157	91,283	91,401
Trade, transportation, and utilities	25,533	25,909	25,945	26,006	26,015	26,042	26,048	26,075	26,053	26,039	26,040	26,052	26,052	26,063	26,062
Wholesale trade	5,662.9	5,749.5	5,767.8	5,782.7	5,783.8	5,801.8	5,810.6	5,824.0	5,833.5	5,842.1	5,848.1	5,847.0	5,854.6	5,865.3	5,862.4
Durable goods.....	2,950.5	2,992.0	3,002.3	3,010.5	3,017.6	3,028.5	3,032.2	3,039.7	3,044.7	3,047.0	3,050.7	3,051.0	3,058.0	3,068.4	3,067.4
Nondurable goods.....	2,010.0	2,022.3	2,021.7	2,028.9	2,023.9	2,025.6	2,030.4	2,032.9	2,034.4	2,039.8	2,040.2	2,039.6	2,039.5	2,038.7	2,035.7
Electronic markets and															
agents and brokers.....	702.4	735.2	743.8	743.3	742.3	747.7	748.0	751.4	754.4	755.3	757.2	756.4	757.1	758.2	759.3
Retail trade	15,058.2	15,254.9	15,259.6	15,292.9	15,300.3	15,300.4	15,289.4	15,306.6	15,260.4	15,225.7	15,221.2	15,222.2	15,212.3	15,200.3	15,196.8
Motor vehicles and parts															
dealers ¹	1,902.3	1,918.9	1,921.5	1,914.3	1,914.7	1,910.2	1,911.6	1,911.8	1,911.0	1,909.6	1,909.7	1,907.3	1,906.7	1,908.4	1,907.5
Automobile dealers.....	1,257.3	1,260.6	1,260.5	1,254.5	1,252.4	1,248.0	1,247.6	1,244.6	1,245.6	1,245.3	1,245.6	1,245.7	1,243.6	1,243.5	1,242.4
Furniture and home															
furnishings stores.....	563.4	577.8	581.5	583.3	583.0	589.6	590.7	591.3	595.3	595.2	595.3	594.8	594.3	593.5	594.9
Electronics and appliance															
stores.....	516.2	532.8													

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

Industry	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
Building material and garden supply stores.....	1,227.1	1,272.3	1,273.1	1,281.6	1,290.9	1,300.1	1,309.1	1,312.4	1,313.9	1,317.2	1,315.5	1,316.5	1,313.2	1,315.8	1,317.6
Food and beverage stores.....	2,821.6	2,813.6	2,809.5	2,806.6	2,805.9	2,805.9	2,807.4	2,809.6	2,808.8	2,803.4	2,804.2	2,808.8	2,813.5	2,811.7	2,814.9
Health and personal care stores.....	941.1	955.2	959.3	964.7	966.1	959.4	955.9	960.3	956.8	959.8	958.4	959.3	960.0	960.3	959.3
Gasoline stations.....	875.6	871.3	874.6	869.1	869.6	869.4	870.2	866.0	867.0	859.5	863.2	863.3	858.5	858.2	856.1
Clothing and clothing accessories stores.....	1,364.3	1,414.1	1,413.5	1,434.5	1,448.1	1,434.3	1,432.2	1,423.1	1,418.6	1,412.3	1,423.3	1,434.0	1,437.5	1,438.7	1,444.7
Sporting goods, hobby, book, and music stores.....	641.3	642.1	638.7	641.5	640.0	641.3	637.8	634.5	632.8	628.7	628.1	624.2	628.1	620.8	621.4
General merchandise stores ¹	2,863.1	2,919.1	2,910.6	2,920.4	2,906.9	2,919.1	2,907.0	2,929.4	2,892.0	2,880.0	2,866.0	2,859.8	2,850.8	2,841.7	2,831.2
Department stores.....	1,605.3	1,602.8	1,590.6	1,595.2	1,595.6	1,597.5	1,596.7	1,607.4	1,591.4	1,584.1	1,574.4	1,571.4	1,565.0	1,558.2	1,550.3
Miscellaneous store retailers.....	913.5	902.9	899.1	897.3	899.0	901.5	900.7	902.5	899.5	896.3	892.2	892.7	889.9	889.9	887.5
Nonstore retailers.....	428.8	434.9	437.7	438.4	435.6	435.4	430.3	430.6	429.9	430.6	431.3	431.0	432.7	435.5	438.4
Transportation and warehousing.....	4,248.6	4,346.7	4,358.4	4,370.2	4,371.6	4,380.0	4,387.4	4,384.4	4,398.1	4,410.8	4,411.0	4,423.2	4,425.3	4,436.6	4,443.4
Air transportation.....	514.5	501.3	493.7	488.9	486.9	489.0	489.1	487.6	489.0	486.7	486.7	487.7	488.1	488.6	488.1
Rail transportation.....	225.7	228.3	228.1	227.8	227.3	227.4	227.4	227.5	227.4	227.8	227.5	227.3	226.7	226.9	225.9
Water transportation.....	56.4	60.6	62.6	63.6	63.7	63.4	63.0	62.5	62.8	62.9	62.8	64.2	64.6	65.9	66.2
Truck transportation.....	1,351.7	1,393.0	1,402.0	1,403.7	1,404.0	1,406.0	1,407.5	1,409.2	1,417.4	1,417.5	1,419.3	1,427.1	1,427.4	1,430.9	1,432.4
Transit and ground passenger transportation.....	384.9	388.5	388.5	394.9	392.2	394.1	394.6	394.5	391.0	394.8	393.5	391.6	388.7	390.8	390.0
Pipeline transportation.....	38.4	37.6	37.2	37.2	37.0	37.4	37.5	37.7	37.8	38.1	38.1	38.4	38.6	38.3	39.2
Scenic and sightseeing transportation.....	27.2	29.9	31.5	31.4	31.1	30.3	31.5	32.4	31.8	31.9	31.3	30.5	31.5	31.4	31.7
Support activities for transportation.....	535.1	550.6	549.8	553.9	556.2	560.7	564.7	562.2	564.2	566.4	567.7	564.9	565.4	566.0	567.1
Couriers and messengers.....	556.6	571.7	576.3	576.8	579.7	576.8	576.5	575.2	577.6	581.2	580.5	583.6	584.4	586.9	589.8
Warehousing and storage.....	558.1	585.2	588.7	592.0	593.5	594.9	595.6	595.6	599.1	603.5	603.6	607.9	609.9	610.9	613.0
Utilities.....	563.8	557.6	559.4	560.1	559.7	559.3	560.4	559.5	560.5	560.3	560.3	559.8	559.8	560.3	559.8
Information.....	3,118	3,066	3,058	3,064	3,066	3,065	3,073	3,072	3,070	3,061	3,062	3,052	3,062	3,059	3,061
Publishing industries, except Internet.....	909.1	903.7	903.7	902.8	902.5	901.5	903.9	903.5	904.4	902.9	901.4	900.8	901.2	898.5	902.2
Motion picture and sound recording industries.....	385.0	379.3	379.3	383.5	387.7	391.2	389.7	389.5	384.4	377.3	380.3	375.7	379.8	376.3	376.7
Broadcasting, except Internet.....	325.0	326.6	327.6	325.7	325.1	323.4	325.3	325.5	327.1	327.0	327.6	328.0	328.2	327.6	326.3
Internet publishing and broadcasting.....	29.9	30.4	30.1	30.1	30.4	29.6	30.7	30.3	30.4	30.5	30.3	29.5	30.6	31.0	31.2
Telecommunications.....	1,034.6	998.7	991.2	995.1	993.3	991.3	994.6	993.2	993.5	993.1	989.2	986.3	990.1	992.5	993.8
ISPs, search portals, and data processing.....	383.7	376.8	376.9	376.7	377.8	377.4	378.7	380.7	380.0	380.4	383.8	381.8	382.8	383.0	380.7
Other information services.....	50.8	50.1	49.4	49.9	49.6	50.4	49.6	49.4	49.7	50.1	49.8	50.0	49.4	49.8	50.2
Financial activities.....	8,031	8,141	8,201	8,217	8,223	8,244	8,268	8,282	8,308	8,315	8,315	8,321	8,333	8,360	8,361
Finance and insurance.....	5,949.0	6,012.0	6,053.3	6,066.7	6,068.2	6,081.8	6,103.8	6,120.1	6,134.5	6,139.0	6,130.5	6,142.3	6,150.9	6,172.1	6,178.5
Monetary authorities—central bank.....	21.8	20.8	20.7	20.9	21.0	21.2	21.2	21.3	21.4	21.5	21.7	21.7	21.7	21.8	21.9
Credit intermediation and related activities ¹	2,817.0	2,865.8	2,892.9	2,895.8	2,894.2	2,896.7	2,906.7	2,914.7	2,921.3	2,924.3	2,920.0	2,925.7	2,927.2	2,942.2	2,944.7
Depository credit intermediation ¹	1,751.5	1,774.4	1,790.8	1,793.3	1,793.2	1,793.0	1,803.3	1,810.6	1,813.6	1,816.8	1,816.1	1,818.3	1,821.4	1,827.9	1,832.1
Commercial banking.....	1,280.8	1,297.9	1,306.9	1,309.0	1,306.0	1,303.3	1,311.4	1,318.3	1,320.1	1,321.7	1,322.7	1,322.9	1,325.7	1,332.7	1,337.3
Securities, commodity contracts, investments.....	766.1	783.2	790.5	790.7	790.4	792.9	795.9	798.8	800.7	800.8	797.6	798.7	799.4	800.6	802.8
Insurance carriers and related activities.....	2,258.6	2,255.4	2,262.1	2,271.8	2,274.8	2,283.5	2,292.2	2,297.1	2,302.5	2,302.9	2,301.0	2,304.9	2,310.9	2,315.3	2,317.1
Funds, trusts, and other financial vehicles.....	85.4	86.8	87.1	87.5	87.8	87.5	87.8	88.2	88.6	89.5	90.2	91.3	91.7	92.2	92.0
Real estate and rental and leasing.....	2,081.9	2,129.3	2,147.5	2,150.2	2,154.5	2,161.7	2,164.2	2,162.3	2,173.8	2,176.4	2,184.0	2,178.6	2,182.0	2,187.6	2,182.8
Real estate.....	1,415.1	1,455.8	1,474.7	1,478.4	1,481.6	1,490.5	1,492.3	1,489.2	1,499.3	1,498.0	1,503.2	1,499.7	1,500.3	1,501.4	1,497.4
Rental and leasing services.....	641.1	646.4	645.1	643.9	645.0	643.3	643.9	644.9	646.1	650.2	651.9	649.3	651.9	656.4	655.6
Lessors of nonfinancial intangible assets.....	25.7	27.1	27.7	27.9	27.9	27.9	28.0	28.2	28.4	28.2	28.9	29.6	29.8	29.8	29.8
Professional and business services.....	16,395	16,882	16,991	17,061	17,121	17,127	17,156	17,199	17,211	17,276	17,319	17,364	17,402	17,416	17,459
Professional and technical services ¹	6,774.0	7,013.0	7,074.8	7,087.2	7,118.9	7,133.8	7,147.1	7,170.3	7,192.0	7,220.6	7,240.9	7,281.1	7,295.5	7,307.3	7,324.6
Legal services.....	1,163.1	1,164.1	1,159.2	1,160.0	1,160.8	1,161.8	1,161.0	1,162.5	1,162.5	1,159.6	1,157.7	1,158.5	1,160.5	1,161.6	1,163.6
Accounting and bookkeeping services.....	805.9	840.0	851.0	847.5	859.0	847.0	846.2	849.9	852.7	860.4	867.2	870.8	869.4	877.4	878.2
Architectural and engineering services.....	1,258.2	1,307.2	1,326.1	1,335.3	1,335.6	1,340.5	1,348.3	1,356.5	1,360.6	1,369.3	1,372.9	1,382.2	1,386.6	1,389.3	1,389.8

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
Computer systems design and related services.....	1,148.6	1,189.3	1,204.4	1,204.9	1,212.1	1,226.0	1,230.5	1,235.2	1,243.1	1,255.5	1,258.8	1,267.8	1,274.6	1,278.5	1,279.6
Management and technical consulting services.....	789.9	843.6	855.5	861.4	865.4	867.8	871.7	875.4	878.0	879.4	880.0	886.5	892.0	895.9	907.6
Management of companies and enterprises.....	1,724.4	1,751.6	1,749.9	1,743.2	1,756.7	1,772.6	1,771.0	1,774.9	1,775.4	1,779.7	1,783.0	1,789.1	1,790.7	1,794.5	1,795.8
Administrative and waste services.....	7,896.0	8,117.0	8,165.8	8,230.5	8,245.1	8,220.1	8,237.5	8,253.7	8,244.0	8,276.1	8,294.9	8,294.2	8,315.4	8,314.5	8,338.8
Administrative and support services ¹	7,567.4	7,782.8	7,835.6	7,897.8	7,911.0	7,884.9	7,903.1	7,917.9	7,908.5	7,941.1	7,960.8	7,959.1	7,983.4	7,979.4	8,000.1
Employment services ¹	3,428.5	3,575.3	3,617.2	3,663.7	3,671.0	3,638.3	3,636.8	3,644.0	3,633.9	3,653.8	3,659.2	3,648.1	3,663.8	3,650.6	3,657.1
Temporary help services.....	2,387.2	2,538.9	2,576.2	2,616.2	2,628.1	2,605.6	2,602.0	2,604.6	2,596.8	2,613.4	2,602.7	2,596.6	2,600.5	2,588.6	2,603.6
Business support services.....	757.8	759.8	752.7	754.7	751.8	760.7	760.6	761.3	761.6	765.8	766.5	766.8	770.5	770.6	777.0
Services to buildings and dwellings.....	1,693.7	1,729.8	1,741.1	1,755.4	1,751.1	1,750.0	1,761.6	1,765.8	1,766.0	1,767.4	1,773.4	1,777.9	1,775.9	1,775.2	1,779.4
Waste management and remediation services.....	328.6	334.2	330.2	332.7	334.1	335.2	334.4	335.8	335.5	335.0	334.1	335.1	332.0	335.1	338.7
Educational and health services.....	16,953	17,342	17,440	17,481	17,507	17,544	17,585	17,622	17,650	17,676	17,704	17,735	17,805	17,842	17,870
Educational services.....	2,762.5	2,818.9	2,815.9	2,820.2	2,827.5	2,828.5	2,840.1	2,845.4	2,849.2	2,853.1	2,852.2	2,856.9	2,889.1	2,889.6	2,890.3
Health care and social assistance.....	14,190.2	14,522.9	14,624.5	14,661.2	14,679.6	14,715.6	14,744.9	14,776.5	14,800.4	14,823.3	14,852.1	14,877.6	14,915.7	14,952.5	14,980.1
Ambulatory health care services ¹	4,952.3	5,110.0	5,152.9	5,172.7	5,181.4	5,202.1	5,216.1	5,232.5	5,240.1	5,249.1	5,257.1	5,271.7	5,287.0	5,308.6	5,316.2
Offices of physicians.....	2,047.8	2,101.1	2,119.8	2,128.4	2,135.8	2,143.3	2,148.2	2,154.8	2,162.1	2,168.6	2,173.7	2,180.3	2,182.8	2,196.8	2,198.0
Outpatient care centers.....	450.5	473.5	480.6	482.4	484.1	485.9	486.9	488.6	488.8	488.8	490.3	489.2	491.5	492.6	493.6
Home health care services.....	776.6	814.1	820.8	824.3	822.1	829.1	831.9	835.8	835.5	839.9	839.4	845.6	850.9	855.7	859.1
Hospitals.....	4,284.7	4,346.9	4,371.7	4,379.2	4,382.5	4,387.3	4,393.0	4,402.5	4,409.6	4,417.6	4,427.4	4,434.0	4,445.1	4,453.6	4,459.9
Nursing and residential care facilities ¹	2,818.4	2,856.2	2,868.1	2,871.9	2,871.9	2,876.5	2,881.2	2,881.3	2,888.4	2,894.8	2,900.9	2,909.9	2,910.6	2,910.4	2,919.0
Nursing care facilities.....	1,576.9	1,579.3	1,578.9	1,582.5	1,582.5	1,583.5	1,583.4	1,582.6	1,585.4	1,590.1	1,588.6	1,593.0	1,590.3	1,591.4	1,595.5
Social assistance ¹	2,134.8	2,209.8	2,231.8	2,237.4	2,243.8	2,249.7	2,254.6	2,262.2	2,262.3	2,261.8	2,266.7	2,262.0	2,273.0	2,279.9	2,285.0
Child day care services.....	764.7	784.5	793.2	792.9	793.3	795.1	795.8	795.6	797.0	793.7	790.6	781.9	789.7	787.6	788.5
Leisure and hospitality.....	12,493	12,802	12,840	12,881	12,898	12,932	12,955	12,976	12,989	13,014	13,023	13,062	13,099	13,127	13,162
Arts, entertainment, and recreation.....	1,849.6	1,890.7	1,897.8	1,907.5	1,905.9	1,903.5	1,906.5	1,903.1	1,911.5	1,910.2	1,911.8	1,913.7	1,916.1	1,914.3	1,924.6
Performing arts and spectator sports.....	367.5	369.1	365.0	362.8	362.1	356.3	364.9	364.4	369.2	374.3	374.3	376.5	375.1	373.7	377.2
Museums, historical sites, zoos, and parks.....	118.3	120.7	121.6	121.0	121.6	121.4	121.9	121.5	122.8	124.1	123.8	123.9	124.4	124.5	124.5
Amusements, gambling, and recreation.....	1,363.8	1,400.9	1,411.2	1,423.7	1,422.2	1,425.8	1,419.7	1,417.2	1,419.5	1,411.8	1,413.7	1,413.3	1,416.6	1,416.1	1,422.9
Accommodations and food services.....	10,643.2	10,911.4	10,942.4	10,973.9	10,992.3	11,028.0	11,048.9	11,072.8	11,077.7	11,104.0	11,110.8	11,148.0	11,182.6	11,212.4	11,237.8
Accommodations.....	1,789.5	1,812.0	1,812.9	1,811.1	1,809.2	1,808.0	1,804.2	1,803.1	1,795.4	1,799.3	1,798.0	1,806.5	1,809.9	1,817.5	1,816.2
Food services and drinking places.....	8,853.7	9,099.4	9,129.5	9,162.8	9,183.1	9,220.0	9,244.7	9,269.7	9,282.3	9,304.7	9,312.8	9,341.5	9,372.7	9,394.9	9,421.6
Other services.....	5,409	5,386	5,371	5,377	5,386	5,397	5,396	5,399	5,399	5,405	5,402	5,398	5,404	5,416	5,426
Repair and maintenance.....	1,228.8	1,236.2	1,227.1	1,232.0	1,241.4	1,240.7	1,242.8	1,245.8	1,249.8	1,251.5	1,251.8	1,245.9	1,252.5	1,256.3	1,258.5
Personal and laundry services.....	1,272.9	1,272.9	1,270.3	1,271.1	1,270.3	1,278.4	1,275.5	1,270.7	1,269.7	1,269.8	1,267.9	1,271.2	1,268.2	1,272.6	1,273.5
Membership associations and organizations.....	2,907.5	2,877.1	2,873.2	2,873.6	2,874.5	2,877.7	2,877.6	2,882.4	2,879.3	2,883.8	2,882.5	2,880.9	2,883.0	2,887.0	2,893.5
Government.....	21,621	21,803	21,852	21,880	21,878	21,844	21,876	21,899	21,918	21,924	21,951	21,970	22,020	22,048	22,082
Federal.....	2,730	2,724	2,724	2,728	2,713	2,705	2,707	2,706	2,704	2,708	2,708	2,716	2,708	2,706	2,699
Federal, except U.S. Postal Service.....	1,947.5	1,950.8	1,949.5	1,953.1	1,941.2	1,935.6	1,938.8	1,937.0	1,937.9	1,938.1	1,942.7	1,943.2	1,940.3	1,938.8	1,931.7
U.S. Postal Service.....	782.1	773.4	774.1	774.9	772.1	769.1	767.9	769.3	766.2	769.7	764.9	772.9	767.5	767.2	767.4
State.....	4,982	5,021	5,022	5,032	5,036	5,007	5,024	5,024	5,032	5,032	5,038	5,039	5,055	5,061	5,063
Education.....	2,238.1	2,249.7	2,248.1	2,256.6	2,258.1	2,232.4	2,248.1	2,248.0	2,255.0	2,254.7	2,258.3	2,256.1	2,268.6	2,275.0	2,276.9
Other State government.....	2,743.9	2,770.9	2,773.5	2,775.8	2,777.4	2,774.9	2,775.7	2,776.2	2,777.3	2,776.9	2,779.8	2,783.0	2,786.1	2,786.3	2,785.9
Local.....	13,909	14,058	14,106	14,120	14,129	14,132	14,145	14,169	14,182	14,184	14,205	14,215	14,257	14,281	14,320
Education.....	7,765.2	7,864.1	7,894.9	7,899.3	7,906.9	7,902.6	7,911.9	7,922.1	7,927.3	7,922.9	7,934.1	7,940.2	7,973.2	7,990.1	8,020.2
Other local government.....	6,144.1	6,193.7	6,211.5	6,220.6	6,222.2	6,228.9	6,233.2	6,246.7	6,254.3	6,260.9	6,270.7	6,274.7	6,284.0	6,291.0	6,299.3

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 workers¹ on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE	33.7	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.9	33.8	33.9	33.9	33.8	33.8	33.9
GOODS-PRODUCING	40.0	40.1	40.3	40.4	40.2	40.4	40.4	40.4	40.6	40.4	40.6	40.7	40.6	40.3	40.7
Natural resources and mining	44.5	45.6	46.0	45.0	45.6	46.1	45.2	45.2	45.5	44.9	46.0	46.0	45.3	45.1	45.8
Construction	38.3	38.6	38.5	39.2	38.7	39.1	38.9	38.9	39.1	38.5	39.0	38.8	39.0	38.5	39.3
Manufacturing	40.8	40.7	41.0	40.8	40.8	40.9	41.0	41.1	41.2	41.2	41.3	41.4	41.3	41.1	41.2
Overtime hours.....	4.6	4.6	4.6	4.6	4.5	4.5	4.6	4.5	4.6	4.6	4.6	4.5	4.4	4.4	4.3
Durable goods.....	41.3	41.1	41.6	41.3	41.2	41.3	41.4	41.4	41.6	41.5	41.6	41.8	41.6	41.3	41.5
Overtime hours.....	4.7	4.6	4.8	4.7	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.4	4.3	4.3
Wood products.....	40.7	40.0	40.8	40.5	40.1	40.1	40.3	40.4	40.4	40.1	39.6	40.1	39.9	39.6	39.8
Nonmetallic mineral products.....	42.3	42.2	42.6	43.5	42.7	43.1	42.9	43.0	43.3	43.1	43.6	43.6	43.3	43.2	43.2
Primary metals.....	43.1	43.1	43.5	43.5	43.5	43.7	43.6	43.4	43.4	43.7	43.8	44.0	43.7	43.6	43.7
Fabricated metal products.....	41.1	41.0	41.6	41.2	41.1	41.2	41.3	41.5	41.7	41.4	41.5	41.6	41.7	41.4	41.5
Machinery.....	41.9	42.1	42.2	42.0	41.9	41.8	42.1	42.1	42.6	42.5	42.5	42.9	42.7	42.4	42.8
Computer and electronic products.....	40.4	40.0	40.5	40.3	40.3	40.5	40.4	40.5	40.7	40.5	40.8	40.6	40.5	40.4	40.6
Electrical equipment and appliances.....	40.7	40.6	41.4	41.0	40.9	41.2	41.4	41.3	41.4	41.2	41.3	41.5	41.0	40.7	40.8
Transportation equipment.....	42.5	42.5	43.0	42.7	42.6	42.6	42.7	42.8	43.0	43.0	42.9	43.5	42.9	42.5	42.6
Furniture and related products.....	39.5	39.2	39.2	38.5	38.3	38.2	38.5	38.5	38.5	38.7	38.7	38.6	39.0	38.7	39.5
Miscellaneous manufacturing.....	38.5	38.7	39.0	38.6	38.5	38.5	38.6	38.5	38.7	38.7	38.9	38.7	38.7	38.5	38.5
Nondurable goods.....	40.0	39.9	40.1	40.0	40.2	40.3	40.4	40.4	40.5	40.6	40.7	40.8	40.7	40.7	40.7
Overtime hours.....	4.4	4.4	4.4	4.4	4.6	4.4	4.5	4.4	4.5	4.5	4.5	4.4	4.3	4.2	4.3
Food manufacturing.....	39.3	39.0	38.9	39.0	39.3	39.6	39.7	39.8	39.7	39.9	39.9	40.1	39.8	40.2	40.2
Beverage and tobacco products.....	39.2	40.0	40.8	40.1	40.0	39.9	39.9	40.2	40.1	40.9	41.2	41.7	41.1	40.8	40.9
Textile mills.....	40.1	40.3	40.2	40.6	41.0	40.6	40.5	40.3	40.4	40.8	40.8	40.8	41.1	40.7	40.7
Textile product mills.....	38.9	39.0	38.8	39.6	40.0	40.1	40.4	39.6	40.2	40.2	40.2	40.3	40.4	39.6	39.2
Apparel.....	36.0	35.7	36.1	35.9	35.6	36.0	35.8	36.0	36.5	36.7	36.8	36.7	36.6	36.6	37.0
Leather and allied products.....	38.4	38.4	38.7	39.5	39.4	39.4	39.3	39.5	38.8	39.3	39.1	39.2	39.6	38.8	38.7
Paper and paper products.....	42.1	42.5	42.9	42.5	42.6	42.4	42.5	42.4	42.9	43.1	43.3	43.5	43.4	42.9	43.0
Printing and related support activities.....	38.4	38.4	38.5	38.3	38.4	38.8	39.0	39.0	39.3	39.2	39.3	39.1	39.1	39.2	39.3
Petroleum and coal products.....	44.9	45.6	47.3	45.8	44.5	45.0	44.6	45.0	45.1	45.4	45.6	45.6	45.4	45.1	45.2
Chemicals.....	42.8	42.3	42.9	42.3	42.5	42.6	42.8	42.7	42.7	42.4	42.6	42.8	42.7	43.1	42.6
Plastics and rubber products.....	40.4	40.0	40.0	40.1	40.5	40.5	40.5	40.8	40.8	40.7	40.8	41.0	40.9	40.5	40.7
PRIVATE SERVICE-PROVIDING	32.3	32.4	32.4	32.4	32.4	32.4	32.4	32.3	32.4	32.4	32.4	32.4	32.4	32.4	32.5
Trade, transportation, and utilities	33.5	33.4	33.3	33.4	33.4	33.3	33.3	33.3	33.4	33.3	33.4	33.4	33.4	33.4	33.4
Wholesale trade.....	37.8	37.7	37.8	37.8	37.9	37.8	37.9	37.8	38.1	37.9	38.0	38.0	38.0	38.0	38.1
Retail trade.....	30.7	30.6	30.4	30.6	30.5	30.5	30.4	30.4	30.5	30.4	30.4	30.4	30.3	30.4	30.4
Transportation and warehousing.....	37.2	37.0	36.7	36.8	36.7	36.6	36.7	36.7	36.6	36.7	36.9	36.9	37.0	36.7	37.0
Utilities.....	40.9	41.1	41.3	41.2	41.4	41.0	41.1	41.0	41.2	41.3	41.3	41.6	41.7	41.4	41.9
Information	36.3	36.5	36.7	36.5	36.6	36.6	36.5	36.6	36.6	36.5	36.6	36.8	36.8	36.9	36.8
Financial activities	35.5	35.9	36.1	35.9	35.9	36.0	35.7	35.6	35.7	35.5	35.6	35.7	35.5	35.7	35.9
Professional and business services	34.2	34.2	34.3	34.3	34.3	34.6	34.5	34.4	34.7	34.4	34.6	34.6	34.7	34.7	34.8
Education and health services	32.4	32.6	32.7	32.5	32.5	32.5	32.5	32.5	32.5	32.6	32.6	32.5	32.4	32.5	32.5
Leisure and hospitality	25.7	25.7	25.7	25.7	25.6	25.7	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.8	25.7
Other services	31.0	30.9	30.9	30.9	30.9	30.9	30.9	30.9	31.0	30.9	30.9	30.8	30.9	30.8	30.9

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 workers¹ on private nonfarm payrolls, by industry, monthly data seasonally adjusted

Industry	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p	Oct. ^p
TOTAL PRIVATE															
Current dollars.....	\$16.67	\$16.11	\$16.28	\$16.28	\$16.35	\$16.40	\$16.47	\$16.51	\$16.61	\$16.62	\$16.69	\$16.76	\$16.81	\$16.85	\$16.91
Constant (1982) dollars.....	8.23	8.17	8.09	8.15	8.20	8.17	8.20	8.19	8.18	8.15	8.17	8.16	8.16	8.24	8.32
GOODS-PRODUCING.....	17.19	17.60	17.74	17.74	17.77	17.79	17.80	17.82	17.87	17.92	17.99	18.00	18.06	18.08	18.15
Natural resources and mining.....	18.07	18.73	19.04	18.95	19.12	19.33	19.40	19.52	19.71	19.79	19.85	19.89	20.06	20.17	20.30
Construction.....	19.23	19.46	19.58	19.59	19.65	19.63	19.66	19.65	19.70	19.86	20.02	20.06	20.11	20.17	20.20
Manufacturing.....	16.15	16.56	16.71	16.68	16.70	16.71	16.72	16.74	16.78	16.79	16.80	16.80	16.85	16.86	16.92
Excluding overtime.....	15.29	15.69	15.82	15.79	15.83	15.84	15.83	15.87	15.89	15.90	15.91	15.93	16.00	16.02	16.08
Durable goods.....	16.82	17.34	17.51	17.50	17.52	17.53	17.54	17.57	17.60	17.65	17.68	17.69	17.74	17.77	17.83
Nondurable goods.....	15.05	15.27	15.35	15.29	15.31	15.33	15.33	15.33	15.37	15.33	15.30	15.28	15.32	15.30	15.36
PRIVATE SERVICE-PROVIDING.....	15.26	15.71	15.89	15.89	15.97	16.03	16.11	16.16	16.27	16.27	16.34	16.43	16.47	16.52	16.58
Trade, transportation, and utilities.....	14.58	14.93	15.05	15.04	15.10	15.13	15.19	15.20	15.30	15.30	15.38	15.48	15.49	15.53	15.57
Wholesale trade.....	17.65	18.16	18.32	18.45	18.56	18.53	18.61	18.66	18.69	18.79	18.84	18.94	19.00	19.10	19.08
Retail trade.....	12.08	12.36	12.43	12.35	12.39	12.44	12.46	12.47	12.58	12.54	12.60	12.66	12.65	12.67	12.72
Transportation and warehousing.....	16.52	16.71	16.82	16.85	16.87	16.91	16.99	16.98	17.10	17.04	17.19	17.36	17.34	17.40	17.45
Utilities.....	25.61	26.70	27.17	27.15	27.34	27.48	27.54	27.53	27.44	27.34	27.47	27.57	27.47	27.33	27.62
Information.....	21.40	22.07	22.65	22.40	22.60	22.98	22.82	23.00	23.13	23.16	23.24	23.34	23.40	23.45	23.50
Financial activities.....	17.52	17.94	18.09	18.20	18.27	18.33	18.45	18.49	18.64	18.64	18.69	18.79	18.86	19.03	19.12
Professional and business services.....	17.48	18.07	18.30	18.29	18.42	18.54	18.66	18.80	18.98	18.93	18.98	19.15	19.17	19.29	19.40
Education and health services.....	16.15	16.72	16.90	16.95	17.00	17.04	17.13	17.16	17.22	17.26	17.33	17.36	17.44	17.45	17.49
Leisure and hospitality.....	8.91	9.14	9.22	9.24	9.27	9.27	9.36	9.42	9.49	9.54	9.57	9.61	9.67	9.69	9.71
Other services.....	13.98	14.33	14.46	14.46	14.47	14.48	14.50	14.48	14.49	14.52	14.56	14.60	14.61	14.67	14.69

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 workers¹ on private nonfarm payrolls, by industry

Industry	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE	\$15.67	\$16.11	\$16.35	\$16.30	\$16.37	\$16.52	\$16.51	\$16.51	\$16.68	\$16.58	\$16.60	\$16.71	\$16.70	\$16.88	\$16.99
Seasonally adjusted.....	—	—	16.28	16.28	16.35	16.40	16.47	16.51	16.61	16.62	16.69	16.76	16.81	16.85	16.91
GOODS-PRODUCING	17.19	17.60	17.82	17.76	17.82	17.73	17.72	17.72	17.82	17.89	17.99	18.02	18.12	18.19	18.25
Natural resources and mining	18.07	18.73	19.01	18.90	19.23	19.47	19.41	19.61	19.82	19.79	19.77	19.83	19.93	20.05	20.30
Construction	19.23	19.46	19.75	19.61	19.68	19.50	19.57	19.53	19.61	19.78	19.99	20.13	20.23	20.35	20.43
Manufacturing	16.15	16.56	16.70	16.70	16.81	16.76	16.71	16.71	16.76	16.76	16.78	16.72	16.81	16.90	16.91
Durable goods.....	16.82	17.34	17.52	17.54	17.67	17.56	17.54	17.54	17.56	17.60	17.64	17.54	17.71	17.82	17.82
Wood products.....	13.03	13.16	13.28	13.32	13.23	13.17	13.16	13.17	13.27	13.35	13.49	13.46	13.48	13.56	13.57
Nonmetallic mineral products.....	16.25	16.61	16.71	16.55	16.53	16.51	16.55	16.61	16.72	16.60	16.56	16.58	16.73	16.52	16.63
Primary metals.....	18.57	18.94	19.08	19.21	19.16	19.37	19.22	19.18	19.34	19.10	19.12	19.14	19.32	19.64	19.42
Fabricated metal products.....	15.31	15.80	15.93	16.01	16.18	16.12	16.06	16.09	16.04	16.09	16.13	16.18	16.10	16.21	16.27
Machinery.....	16.68	17.03	17.06	17.01	17.07	17.07	17.01	16.99	16.95	17.03	17.03	17.13	17.14	17.26	17.44
Computer and electronic products.....	17.27	18.40	18.61	18.60	18.72	18.71	18.75	18.61	18.76	18.71	18.81	19.06	19.12	19.22	19.25
Electrical equipment and appliances.....	14.90	15.25	15.39	15.42	15.56	15.47	15.48	15.42	15.37	15.42	15.47	15.55	15.65	15.61	15.66
Transportation equipment.....	21.49	22.10	22.54	22.55	22.71	22.33	22.30	22.32	22.28	22.40	22.50	21.92	22.45	22.59	22.48
Furniture and related products.....	13.16	13.44	13.45	13.45	13.52	13.53	13.48	13.50	13.70	13.66	13.65	13.74	13.82	13.96	14.01
Miscellaneous manufacturing.....	13.84	14.08	14.08	14.12	14.20	14.08	14.08	14.30	14.37	14.40	14.29	14.53	14.52	14.48	14.49
Nondurable goods.....	15.05	15.27	15.31	15.28	15.35	15.39	15.31	15.29	15.38	15.31	15.29	15.33	15.27	15.33	15.37
Food manufacturing.....	12.98	13.04	13.00	13.06	13.13	13.08	13.01	13.02	13.08	13.11	13.13	13.09	13.14	13.15	13.14
Beverages and tobacco products.....	19.14	18.79	18.57	18.76	18.59	18.41	18.24	18.19	18.39	18.24	17.99	18.19	17.96	18.23	18.46
Textile mills.....	12.13	12.38	12.31	12.48	12.45	12.50	12.38	12.41	12.42	12.42	12.55	12.54	12.65	12.59	12.82
Textile product mills.....	11.39	11.66	11.71	11.78	11.89	11.75	11.74	11.74	11.90	11.97	11.98	12.07	11.90	11.97	11.80
Apparel.....	9.75	10.24	10.28	10.41	10.47	10.62	10.59	10.61	10.61	10.58	10.63	10.68	10.56	10.60	10.60
Leather and allied products.....	11.63	11.50	11.49	11.57	11.33	11.25	11.00	11.11	11.25	11.45	11.72	11.58	11.66	11.44	11.64
Paper and paper products.....	17.91	17.98	17.94	17.87	17.91	17.87	17.74	17.78	17.98	17.88	17.93	18.24	17.91	18.12	18.17
Printing and related support activities.....	15.71	15.75	15.89	15.73	15.92	15.90	15.69	15.77	15.72	15.77	15.65	15.76	15.81	15.81	15.88
Petroleum and coal products.....	24.39	24.54	24.59	24.64	24.62	24.74	24.78	24.81	24.74	24.32	23.91	23.66	23.53	24.12	24.45
Chemicals.....	19.17	19.67	19.88	19.68	19.85	19.95	19.92	19.63	19.76	19.51	19.34	19.25	19.18	19.41	19.55
Plastics and rubber products.....	14.59	14.82	14.80	14.78	14.84	15.00	14.89	14.90	14.93	14.93	15.00	15.05	15.08	15.09	15.05
PRIVATE SERVICE-PROVIDING	15.26	15.71	15.95	15.90	15.98	16.20	16.19	16.19	16.38	16.23	16.21	16.36	16.31	16.52	16.64
Trade, transportation, and utilities	14.58	14.93	15.09	15.00	14.96	15.20	15.23	15.23	15.44	15.29	15.35	15.52	15.44	15.56	15.57
Wholesale trade.....	17.65	18.16	18.42	18.46	18.58	18.64	18.65	18.60	18.86	18.71	18.73	19.06	18.92	19.08	19.12
Retail trade.....	12.08	12.36	12.42	12.28	12.25	12.47	12.47	12.50	12.70	12.57	12.61	12.69	12.63	12.71	12.71
Transportation and warehousing.....	16.52	16.71	16.83	16.88	16.86	16.92	16.95	16.96	17.11	16.97	17.17	17.42	17.36	17.42	17.38
Utilities.....	25.61	26.70	27.26	27.37	27.44	27.53	27.60	27.60	27.69	27.33	27.19	27.48	27.19	27.52	27.60
Information	21.40	22.07	22.80	22.45	22.61	23.08	22.84	22.89	23.19	23.10	23.00	23.20	23.32	23.65	23.68
Financial activities	17.52	17.94	18.22	18.17	18.23	18.45	18.45	18.46	18.76	18.59	18.57	18.80	18.78	19.02	19.23
Professional and business services	17.48	18.07	18.38	18.25	18.44	18.85	18.77	18.82	19.20	18.86	18.84	19.22	18.94	19.16	19.49
Education and health services	16.15	16.72	16.90	16.94	17.04	17.10	17.14	17.16	17.23	17.21	17.27	17.38	17.41	17.48	17.50
Leisure and hospitality	8.91	9.14	9.26	9.29	9.39	9.33	9.41	9.43	9.48	9.55	9.49	9.49	9.58	9.73	9.80
Other services	13.98	14.33	14.45	14.46	14.52	14.55	14.54	14.49	14.58	14.55	14.51	14.48	14.51	14.70	14.71

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.

16. Average weekly earnings of production or nonsupervisory workers¹ on private nonfarm payrolls, by industry

Industry	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p	Oct. ^p
TOTAL PRIVATE	528.36	543.65	557.54	550.94	551.67	558.38	553.09	554.74	565.45	558.75	564.40	571.48	569.47	572.23	581.06
Seasonally adjusted.....			550.26	550.26	552.63	554.32	556.69	558.04	563.08	561.76	565.79	568.16	568.18	569.53	573.25
GOODS-PRODUCING	688.17	705.28	723.49	721.06	719.93	710.97	708.80	712.34	711.02	724.55	735.79	729.81	741.11	742.15	746.43
Natural resources and mining	803.82	853.89	882.06	854.28	876.89	887.83	869.57	876.57	901.81	892.53	915.35	908.21	912.79	914.28	941.92
CONSTRUCTION	735.55	750.63	772.23	768.71	749.81	744.90	747.57	749.95	753.02	769.44	791.60	793.12	807.18	799.76	813.11
Manufacturing	658.59	673.61	688.04	688.04	695.93	685.48	680.10	685.11	677.10	690.51	693.01	683.85	694.25	699.66	698.38
Durable goods.....	694.13	713.05	730.58	731.42	738.61	723.47	720.89	726.16	714.69	730.40	735.59	722.65	736.74	741.31	741.31
Wood products.....	530.15	526.91	545.81	544.79	533.17	521.53	517.19	526.80	530.80	539.34	540.95	539.75	543.24	536.98	538.73
Nonmetallic mineral products.....	688.20	700.62	728.56	731.51	699.22	698.37	695.10	704.26	717.29	718.78	728.64	719.57	732.77	718.62	718.42
Primary metals.....	799.78	815.52	828.07	839.48	843.04	854.22	839.91	834.33	823.88	832.76	833.63	830.68	838.49	858.27	844.77
Fabricated metal products.....	628.80	647.32	665.87	664.42	674.71	665.76	660.07	666.13	649.62	666.13	669.40	665.00	669.76	674.34	680.09
Machinery.....	699.59	716.48	718.23	719.52	728.89	716.94	712.72	716.98	705.12	723.78	723.78	729.74	725.02	733.55	744.69
Computer and electronic products.....	697.83	735.82	757.43	760.74	763.78	754.01	753.75	753.71	752.28	755.88	765.57	768.12	768.62	780.33	783.48
Electrical equipment and appliances.....	606.97	619.19	643.30	641.47	645.74	638.91	631.58	633.76	613.26	630.68	634.27	636.00	641.65	644.69	649.89
Transportation equipment.....	912.98	938.37	973.73	967.40	990.16	949.03	949.98	957.53	926.85	965.44	969.75	916.26	963.11	973.63	959.90
Furniture and related products.....	519.62	527.11	521.86	520.52	529.98	514.14	516.28	518.40	520.60	524.54	533.72	530.36	545.89	548.63	549.19
Miscellaneous manufacturing.....	533.07	545.19	550.53	547.86	552.38	542.08	544.90	554.84	547.50	557.28	558.74	555.05	563.38	560.38	562.21
Nondurable goods.....	602.53	609.13	616.99	617.31	624.75	620.22	613.93	616.19	613.66	620.06	622.30	620.87	621.49	630.06	627.10
Food manufacturing.....	509.55	508.03	510.90	515.87	522.57	515.35	507.39	511.69	506.20	521.78	525.20	522.29	525.60	536.52	533.48
Beverages and tobacco products.....	751.20	752.39	752.09	757.90	738.02	721.67	720.48	729.42	733.76	755.14	751.98	765.80	747.14	743.78	745.78
Textile mills.....	486.68	498.47	491.17	511.68	515.43	510.00	498.91	503.85	498.04	501.77	509.53	504.11	519.92	514.93	517.93
Textile product mills.....	443.12	455.19	456.69	470.02	483.92	473.53	473.12	466.08	468.86	478.80	482.79	479.18	478.38	477.60	461.38
Apparel.....	351.56	366.11	372.14	375.80	376.92	379.13	380.18	385.14	379.84	388.29	391.18	387.68	387.55	386.90	395.38
Leather and allied products.....	446.66	442.16	448.11	460.49	449.80	438.75	430.10	443.29	429.75	451.13	459.42	449.30	460.57	441.58	451.63
Paper and paper products.....	754.14	763.36	773.21	766.62	779.09	761.26	745.08	746.76	758.76	770.63	778.16	789.79	775.50	784.60	781.31
Printing and related support activities.....	603.97	604.80	616.53	608.75	617.70	618.51	611.91	616.61	609.94	613.45	610.35	609.91	615.01	627.66	630.44
Petroleum and coal products.....	1,095.00	1,117.94	1,170.48	1,148.22	1,095.59	1,100.93	1,087.84	1,104.05	1,125.67	1,101.70	1,090.30	1,083.63	1,056.50	1,107.11	1,112.48
Chemicals.....	819.73	831.40	848.88	838.37	853.55	855.86	854.57	840.16	843.75	823.32	821.95	816.20	815.15	832.69	826.97
Plastics and rubber products.....	589.84	592.50	593.48	597.11	611.41	609.00	601.56	607.92	597.20	607.65	613.50	606.52	615.26	618.69	612.54
PRIVATE SERVICE-PROVIDING	493.30	508.66	519.97	513.57	516.15	526.50	521.32	519.70	533.99	522.61	526.83	538.24	531.71	535.25	544.13
Trade, transportation, and utilities	488.42	498.59	505.52	498.00	499.66	501.60	501.07	502.59	517.24	509.16	514.23	526.13	518.78	521.26	523.15
Wholesale trade.....	667.09	684.91	703.64	697.79	702.32	706.46	701.24	699.36	722.34	707.24	711.74	731.90	718.96	723.13	734.21
Retail trade.....	371.13	377.68	377.57	372.08	376.08	375.35	372.85	375.00	388.62	382.13	385.87	393.39	387.74	388.93	386.38
Transportation and warehousing.....	614.82	618.64	624.39	624.56	623.82	615.89	611.90	615.65	624.52	619.41	633.57	651.51	645.79	644.54	644.80
Utilities.....	1,048.44	1,097.16	1,134.02	1,141.33	1,133.27	1,120.47	1,128.84	1,123.32	1,146.37	1,131.46	1,122.95	1,143.17	1,133.82	1,147.58	1,164.72
Information	777.05	805.89	843.60	821.67	827.53	849.34	831.38	830.91	855.71	836.22	841.80	865.36	860.51	870.32	880.90
Financial activities	622.87	644.71	665.03	648.67	650.81	673.43	654.98	651.64	680.99	654.37	657.38	682.44	664.81	673.31	699.97
Professional and business services	597.56	618.46	635.95	625.98	632.49	652.21	645.69	645.53	666.24	646.90	653.75	670.78	659.11	662.94	684.10
Education and health services	523.78	544.80	554.32	550.55	553.80	560.88	555.34	554.27	561.70	557.60	561.28	570.06	565.83	568.10	572.25
Leisure and hospitality	228.65	235.29	239.83	235.97	236.63	236.05	238.07	238.58	243.64	242.57	245.79	253.38	251.95	249.09	254.80
Other services	433.04	443.06	447.95	445.37	447.22	451.05	447.83	444.84	451.98	448.14	449.81	451.78	451.26	452.76	456.01

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.....	40.8	36.5	38.3	38.7	40.1	46.0	43.7	43.3	41.7	41.9	41.5	36.0
2003.....	44.1	37.9	34.9	38.3	42.8	38.8	37.6	39.7	50.7	49.8	52.0	51.3
2004.....	51.6	49.5	62.4	65.5	62.4	57.7	52.7	52.0	57.0	54.3	55.0	54.1
2005.....	50.7	57.7	56.7	54.7	54.5	56.7	59.2	54.1	51.4	53.4	61.7	58.6
2006.....	61.0	59.9	58.5	64.4	55.8	56.8	53.8	53.1	55.9	54.9		
Over 3-month span:												
2002.....	34.5	36.2	35.6	35.8	34.9	38.8	38.5	44.8	37.6	39.7	37.2	39.6
2003.....	40.6	34.2	34.7	32.7	35.3	41.7	38.5	33.8	42.6	47.8	49.8	50.5
2004.....	54.3	53.4	57.6	63.1	69.4	68.3	58.8	55.6	57.4	56.5	59.9	55.2
2005.....	52.9	56.7	59.2	60.4	56.8	60.8	60.4	59.7	57.9	52.2	57.0	63.7
2006.....	66.2	65.5	63.3	63.7	63.8	59.7	56.7	58.8	56.1	55.6		
Over 6-month span:												
2002.....	30.2	30.6	31.5	30.9	32.0	36.3	35.8	37.6	34.5	36.0	36.7	35.3
2003.....	34.4	31.8	31.8	34.0	32.7	36.2	33.3	32.4	40.5	45.3	46.4	47.7
2004.....	49.8	52.3	54.7	60.8	63.3	63.8	63.1	63.5	59.0	61.3	55.9	55.6
2005.....	55.4	57.7	57.4	58.8	55.2	58.6	60.8	59.5	60.6	57.7	58.5	60.6
2006.....	61.2	61.5	63.1	67.6	65.5	65.8	62.9	59.9	59.7	58.1		
Over 12-month span:												
2002.....	33.6	31.7	30.2	30.4	30.2	29.1	32.0	31.3	30.0	29.5	32.9	34.7
2003.....	34.5	31.5	32.9	33.5	34.2	35.1	32.7	33.1	37.1	36.7	37.2	39.2
2004.....	40.3	42.1	44.8	48.4	50.7	57.7	57.0	55.2	56.7	58.3	60.1	60.3
2005.....	60.1	61.0	59.5	58.6	58.6	59.4	60.8	61.0	60.8	58.3	58.8	62.1
2006.....	61.3	61.0	62.2	62.6	64.0	65.3	60.8	62.6	63.8	64.0		
Manufacturing payrolls, 84 industries												
Over 1-month span:												
2002.....	19.6	21.4	18.5	29.2	25.0	30.4	36.9	25.6	28.6	17.9	17.9	19.6
2003.....	32.7	19.6	19.6	10.7	23.2	19.0	19.6	29.2	28.6	36.3	42.3	40.5
2004.....	44.0	47.6	44.6	64.9	53.6	45.8	56.5	52.4	41.7	42.3	39.9	39.3
2005.....	39.3	38.7	38.7	42.3	44.6	34.5	47.6	35.7	45.2	43.5	50.0	52.4
2006.....	59.5	48.8	49.4	57.7	50.0	60.7	45.2	39.9	44.0	44.0		
Over 3-month span:												
2002.....	9.5	9.5	11.3	17.9	14.9	17.9	22.6	25.6	22.6	17.3	9.5	11.9
2003.....	18.5	11.3	12.5	8.3	7.7	11.3	14.9	15.5	16.7	27.4	32.1	35.7
2004.....	43.5	42.3	43.5	53.6	57.7	58.9	53.6	48.8	48.2	40.5	38.1	31.0
2005.....	35.7	39.9	42.9	39.9	37.5	41.1	39.3	35.7	39.9	36.3	36.9	50.0
2006.....	56.0	51.8	48.8	50.6	48.8	51.2	48.8	49.4	37.5	38.1		
Over 6-month span:												
2002.....	7.1	8.3	7.7	8.3	8.3	11.9	12.5	11.9	13.7	8.9	7.1	7.7
2003.....	11.3	11.3	8.3	9.5	10.7	9.5	6.0	8.9	13.7	18.5	24.4	23.8
2004.....	28.6	33.3	33.3	45.8	47.6	51.2	56.0	51.8	48.2	49.4	39.3	35.7
2005.....	36.9	36.9	35.1	33.3	33.3	32.7	36.9	36.9	41.1	41.7	39.3	42.3
2006.....	37.5	45.8	45.2	51.2	48.2	51.8	45.2	45.2	47.6	42.3		
Over 12-month span:												
2002.....	7.1	6.0	6.0	6.5	7.1	3.6	4.8	6.0	4.8	7.1	4.8	8.3
2003.....	10.7	6.0	6.5	6.0	8.3	7.1	7.1	8.3	10.7	10.7	9.5	10.7
2004.....	13.1	14.3	13.1	20.2	23.2	35.7	36.9	38.1	36.3	44.0	44.6	44.6
2005.....	44.6	44.6	41.7	40.5	39.9	33.3	32.7	31.0	32.1	39.3	35.7	40.5
2006.....	41.1	39.9	39.9	42.9	41.7	46.4	42.9	42.9	45.8	45.2		

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							
	2006							2006							
	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	
Total ²	4,070	3,945	3,960	3,844	4,061	4,154	4,207	2.9	2.8	2.8	2.8	2.9	3.0	3.0	
Industry															
Total private ²	3,603	3,496	3,476	3,363	3,604	3,659	3,733	3.1	3.0	3.0	2.9	3.1	3.1	3.2	
Construction.....	138	119	161	148	162	140	134	1.8	1.6	2.1	1.9	2.1	1.8	1.8	
Manufacturing.....	323	311	301	305	310	307	364	2.2	2.1	2.1	2.1	2.1	2.1	2.5	
Trade, transportation, and utilities.....	672	687	640	605	686	736	640	2.5	2.6	2.4	2.3	2.6	2.7	2.4	
Professional and business services.....	748	693	616	651	661	728	752	4.2	3.9	3.4	3.6	3.7	4.0	4.1	
Education and health services.....	674	651	659	643	678	691	738	3.7	3.6	3.6	3.5	3.7	3.7	4.0	
Leisure and hospitality.....	485	496	487	482	501	520	559	3.6	3.7	3.6	3.6	3.7	3.8	4.1	
Government.....	467	452	467	478	464	492	490	2.1	2.0	2.1	2.1	2.1	2.2	2.2	
Region³															
Northeast.....	672	670	699	699	747	824	786	2.6	2.6	2.7	2.7	2.8	3.1	3.0	
South.....	1,600	1,591	1,507	1,498	1,548	1,582	1,631	3.2	3.2	3.0	3.0	3.1	3.2	3.3	
Midwest.....	770	787	777	739	809	783	740	2.4	2.4	2.4	2.3	2.5	2.4	2.3	
West.....	1,022	918	935	911	955	991	1,031	3.3	3.0	3.0	3.0	3.1	3.2	3.3	

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							
	2006							2006							
	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	
Total ²	4,649	4,949	4,899	4,995	4,831	4,803	4,893	3.4	3.7	3.6	3.7	3.6	3.5	3.6	
Industry															
Total private ²	4,301	4,573	4,508	4,741	4,396	4,395	4,520	3.8	4.0	4.0	4.2	3.9	3.9	4.0	
Construction.....	376	374	366	365	351	338	335	5.0	5.0	4.9	4.9	4.7	4.5	4.5	
Manufacturing.....	328	385	378	380	353	325	351	2.3	2.7	2.7	2.7	2.5	2.3	2.5	
Trade, transportation, and utilities.....	1,029	1,018	1,099	1,045	1,070	968	967	4.0	3.9	4.2	4.0	4.1	3.7	3.7	
Professional and business services.....	858	1,006	905	967	860	988	982	5.0	5.8	5.2	5.6	4.9	5.7	5.6	
Education and health services.....	481	549	465	521	482	465	508	2.7	3.1	2.6	2.9	2.7	2.6	2.8	
Leisure and hospitality.....	775	811	846	850	794	827	868	6.0	6.2	6.5	6.5	6.1	6.3	6.6	
Government.....	361	379	392	338	409	380	343	1.6	1.7	1.8	1.5	1.9	1.7	1.6	
Region³															
Northeast.....	849	852	729	841	738	718	748	3.3	3.3	2.9	3.3	2.9	2.8	2.9	
South.....	1,777	1,849	1,877	1,849	1,907	1,993	1,873	3.7	3.8	3.9	3.8	3.9	4.1	3.9	
Midwest.....	965	1,133	1,072	1,123	1,008	997	1,065	3.1	3.6	3.4	3.6	3.2	3.1	3.4	
West.....	1,152	1,114	1,207	1,177	1,160	1,122	1,182	3.9	3.7	4.0	3.9	3.9	3.7	3.9	

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

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

³ **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia;

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The 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							
	2006							2006							
	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	
Total ²	4,495	4,811	4,631	4,479	4,386	4,380	4,386	3.3	3.6	3.4	3.3	3.2	3.2	3.2	
Industry															
Total private ²	4,203	4,488	4,299	4,168	4,083	4,050	4,113	3.7	4.0	3.8	3.7	3.6	3.6	3.6	
Construction.....	373	478	324	415	348	332	351	5.0	6.4	4.3	5.5	4.6	4.4	4.7	
Manufacturing.....	346	381	370	358	364	391	345	2.4	2.7	2.6	2.5	2.6	2.8	2.4	
Trade, transportation, and utilities.....	1,022	1,046	1,082	935	997	1,004	952	3.9	4.0	4.2	3.6	3.8	3.9	3.7	
Professional and business services.....	790	833	755	735	705	781	909	4.6	4.8	4.4	4.2	4.1	4.5	5.2	
Education and health services.....	437	487	424	431	460	390	406	2.5	2.8	2.4	2.4	2.6	2.2	2.3	
Leisure and hospitality.....	770	799	802	818	801	711	712	5.9	6.1	6.2	6.3	6.1	5.4	5.4	
Government.....	302	324	315	306	304	322	278	1.4	1.5	1.4	1.4	1.4	1.5	1.3	
Region³															
Northeast.....	711	779	724	763	695	766	736	2.8	3.1	2.8	3.0	2.7	3.0	2.9	
South.....	1,710	1,828	1,858	1,687	1,703	1,659	1,589	3.5	3.8	3.8	3.5	3.5	3.4	3.3	
Midwest.....	992	1,045	871	1,087	942	904	1,002	3.2	3.3	2.8	3.4	3.0	2.9	3.2	
West.....	1,116	1,136	1,137	979	1,070	1,031	1,057	3.7	3.8	3.8	3.3	3.6	3.4	3.5	

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

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

³ **Northeast:** Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont; **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia;

Midwest: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin; **West:** Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

NOTE: The 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							
	2006							2006							
	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	Apr.	May	June	July	Aug.	Sept.	Oct. ^P	
Total ²	2,541	2,723	2,699	2,623	2,597	2,473	2,576	1.9	2.0	2.0	1.9	1.9	1.8	1.9	
Industry															
Total private ²	2,383	2,565	2,554	2,469	2,442	2,309	2,430	2.1	2.3	2.3	2.2	2.2	2.0	2.1	
Construction.....	167	207	154	157	143	131	129	2.2	2.8	2.0	2.1	1.9	1.7	1.7	
Manufacturing.....	175	202	190	189	194	182	193	1.2	1.4	1.3	1.3	1.4	1.3	1.4	
Trade, transportation, and utilities.....	613	622	615	586	604	594	573	2.4	2.4	2.4	2.3	2.3	2.3	2.2	
Professional and business services.....	409	434	386	412	388	401	437	2.4	2.5	2.2	2.4	2.2	2.3	2.5	
Education and health services.....	253	276	290	277	300	262	275	1.4	1.6	1.6	1.6	1.7	1.5	1.5	
Leisure and hospitality.....	535	533	622	549	542	495	523	4.1	4.1	4.8	4.2	4.1	3.8	4.0	
Government.....	159	159	146	156	153	159	140	.7	.7	.7	.7	.7	.7	.6	
Region³															
Northeast.....	370	370	358	378	404	383	358	1.5	1.5	1.4	1.5	1.6	1.5	1.4	
South.....	1,026	1,152	1,153	1,081	1,095	1,029	1,036	2.1	2.4	2.4	2.2	2.3	2.1	2.1	
Midwest.....	575	581	552	562	551	522	575	1.8	1.8	1.8	1.8	1.7	1.6	1.8	
West.....	593	612	631	598	553	544	598	2.0	2.0	2.1	2.0	1.8	1.8	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 2006.

County by NAICS supersector	Establishments, second quarter 2006 (thousands)	Employment		Average weekly wage ¹	
		June 2006 (thousands)	Percent change, June 2005-06 ²	Second quarter 2006	Percent change, second quarter 2005-06 ²
United States ³	8,774.8	135,481.1	2.0	\$784	4.4
Private industry	8,496.4	114,201.0	2.2	774	4.6
Natural resources and mining	123.8	1,904.1	2.7	790	13.3
Construction	875.1	7,870.8	5.5	820	5.8
Manufacturing	364.2	14,256.1	-.1	952	4.2
Trade, transportation, and utilities	1,895.9	26,042.5	1.5	682	4.0
Information	144.2	3,065.0	-.1	1,188	4.7
Financial activities	846.1	8,219.2	1.9	1,141	5.4
Professional and business services	1,425.8	17,646.2	4.2	944	4.4
Education and health services	794.6	16,871.9	2.7	735	4.4
Leisure and hospitality	708.1	13,570.7	2.0	330	4.8
Other services	1,109.9	4,446.1	1.2	509	4.3
Government	278.3	21,280.1	1.0	836	3.3
Los Angeles, CA	387.2	4,196.7	2.0	882	3.6
Private industry	383.3	3,607.8	2.3	864	4.2
Natural resources and mining .....	.6	12.0	4.8	1,317	20.6
Construction	14.1	158.4	6.1	876	3.9
Manufacturing	15.9	468.3	-1.0	938	5.2
Trade, transportation, and utilities	55.8	804.7	1.8	749	4.3
Information	8.9	210.4	4.6	1,433	-2.9
Financial activities	25.1	249.3	1.9	1,368	5.6
Professional and business services	43.2	600.9	(⁴)	1,007	6.3
Education and health services	28.2	463.3	2.0	810	4.0
Leisure and hospitality	27.1	394.2	2.4	491	4.9
Other services	164.3	246.0	4.0	410	2.8
Government	3.9	588.9	.1	993	.5
Cook, IL	134.0	2,565.5	1.4	942	4.3
Private industry	132.8	2,246.9	1.6	936	4.8
Natural resources and mining .....	.1	1.5	-2.4	998	7.3
Construction	11.7	100.6	5.3	1,147	6.2
Manufacturing	7.3	246.7	-2.2	960	4.9
Trade, transportation, and utilities	27.4	480.5	.7	771	4.6
Information	2.5	59.5	-2.5	1,308	6.9
Financial activities	15.0	220.8	1.1	1,477	7.4
Professional and business services	27.5	436.6	3.7	1,186	2.0
Education and health services	13.2	360.2	1.9	799	4.6
Leisure and hospitality	11.3	240.1	3.3	416	8.9
Other services	13.4	96.5	.0	676	6.0
Government	1.2	318.7	.0	983	.8
New York, NY	115.7	2,312.6	2.2	1,453	7.8
Private industry	115.5	1,860.5	2.8	1,557	7.4
Natural resources and mining .....	.0	.1	4.2	1,272	11.2
Construction	2.2	31.6	7.1	1,386	7.9
Manufacturing	3.0	39.8	-6.2	1,066	-.8
Trade, transportation, and utilities	21.3	241.4	1.5	1,100	6.6
Information	4.2	132.1	1.4	1,826	6.8
Financial activities	17.6	369.5	3.2	2,810	10.8
Professional and business services	23.1	466.0	3.2	1,660	4.5
Education and health services	8.1	279.5	2.1	956	6.5
Leisure and hospitality	10.5	201.2	2.5	711	6.6
Other services	16.7	85.2	-.1	876	7.4
Government .....	.2	452.1	-.3	1,028	9.4
Harris, TX	92.0	1,941.2	4.1	959	7.5
Private industry	91.6	1,695.4	4.6	976	7.6
Natural resources and mining	1.4	71.2	8.7	2,680	17.2
Construction	6.3	141.6	8.7	912	7.5
Manufacturing	4.6	176.3	5.4	1,189	4.7
Trade, transportation, and utilities	21.2	406.2	3.4	862	5.6
Information	1.3	32.2	.0	1,150	4.5
Financial activities	10.0	116.8	1.6	1,180	7.2
Professional and business services	17.9	317.6	6.3	1,075	6.6
Education and health services	9.6	201.9	3.9	806	4.5
Leisure and hospitality	7.0	170.6	2.3	366	9.3
Other services	10.7	57.1	1.6	553	4.3
Government .....	.4	245.8	.9	843	6.3
Maricopa, AZ	91.2	1,784.4	5.7	794	4.5
Private industry	90.7	1,601.1	6.0	782	5.2
Natural resources and mining .....	.5	9.8	-2.7	644	18.4
Construction	9.2	181.4	11.6	806	6.1
Manufacturing	3.4	137.5	2.8	1,076	6.0
Trade, transportation, and utilities	19.3	361.7	4.7	765	3.9
Information	1.5	31.9	-2.7	942	3.6
Financial activities	11.0	149.7	4.8	1,020	3.4
Professional and business services	19.5	311.5	5.9	769	5.2
Education and health services	8.7	185.1	6.0	829	6.4
Leisure and hospitality	6.4	175.9	6.0	383	9.4
Other services	6.4	48.2	3.6	556	7.8
Government .....	.6	183.4	2.8	892	.2

See footnotes at end of table.

22. Continued—Quarterly Census of Employment and Wages: 10 largest counties, second quarter 2006.

County by NAICS supersector	Establishments, second quarter 2006 (thousands)	Employment		Average weekly wage ¹	
		June 2006 (thousands)	Percent change, June 2005-06 ²	Second quarter 2006	Percent change, second quarter 2005-06 ²
Orange, CA	95.5	1,530.4	1.8	\$916	6.3
Private industry	94.1	1,375.7	1.7	907	6.1
Natural resources and mining .....	.2	6.9	.2	549	-6.8
Construction	7.1	109.0	5.8	945	4.8
Manufacturing	5.6	183.8	.3	1,137	11.8
Trade, transportation, and utilities	18.0	270.6	.8	845	3.8
Information	1.4	31.4	-2.6	1,226	3.2
Financial activities	11.4	139.5	-1.1	1,381	4.2
Professional and business services	19.3	275.6	2.8	966	8.7
Education and health services	9.9	136.5	3.2	811	4.1
Leisure and hospitality	7.1	173.4	3.2	392	5.7
Other services	14.1	49.0	-1	542	4.2
Government	1.4	154.6	2.6	995	7.7
Dallas, TX	66.6	1,462.9	3.3	956	4.9
Private industry	66.1	1,304.6	3.7	966	5.0
Natural resources and mining .....	.5	7.5	4.7	2,925	39.2
Construction	4.3	80.4	3.0	924	8.5
Manufacturing	3.2	148.0	2.7	1,118	5.5
Trade, transportation, and utilities	14.9	303.9	2.5	916	4.3
Information	1.7	53.0	-1.4	1,271	5.0
Financial activities	8.4	140.3	3.8	1,249	5.4
Professional and business services	13.9	261.4	6.5	1,039	.8
Education and health services	6.3	137.0	4.2	906	7.6
Leisure and hospitality	5.1	129.7	3.1	422	5.0
Other services	6.5	40.5	1.0	604	6.3
Government .....	.4	158.3	.5	874	4.0
San Diego, CA	91.6	1,327.9	1.4	850	4.7
Private industry	90.2	1,105.9	1.7	830	4.3
Natural resources and mining .....	.8	11.6	-5.3	522	.6
Construction	7.3	95.9	2.9	862	3.0
Manufacturing	3.3	105.1	-4	1,117	4.5
Trade, transportation, and utilities	14.7	218.9	2.4	691	2.1
Information	1.3	37.2	-1.3	1,839	19.9
Financial activities	10.1	84.8	1.2	1,065	1.9
Professional and business services	16.5	215.4	1.0	1,013	5.0
Education and health services	8.0	122.9	1.1	785	4.7
Leisure and hospitality	6.8	157.8	3.9	376	3.3
Other services	21.3	56.3	2.7	468	2.6
Government	1.4	222.0	.1	949	6.5
King, WA	74.7	1,160.2	3.7	988	6.1
Private industry	74.2	1,006.5	4.3	996	6.8
Natural resources and mining .....	.4	3.4	2.8	1,172	5.7
Construction	6.6	67.6	14.5	940	5.5
Manufacturing	2.5	111.6	4.6	1,368	8.7
Trade, transportation, and utilities	14.7	220.2	2.3	859	5.3
Information	1.7	72.9	5.0	1,754	4.7
Financial activities	6.8	76.8	2.3	1,232	6.9
Professional and business services	12.4	180.6	7.5	1,156	8.3
Education and health services	6.2	117.9	2.5	774	4.0
Leisure and hospitality	5.8	110.0	1.9	417	5.6
Other services	17.1	45.5	.1	532	6.0
Government .....	.5	153.7	.0	939	2.1
Miami-Dade, FL	84.1	993.7	1.8	786	3.0
Private industry	83.8	860.3	2.0	763	5.0
Natural resources and mining .....	.5	8.9	4.1	459	1.1
Construction	5.7	51.9	14.6	850	7.7
Manufacturing	2.6	47.9	-3.2	727	7.4
Trade, transportation, and utilities	22.9	248.7	2.8	731	5.3
Information	1.7	21.8	-5.5	1,108	5.4
Financial activities	10.0	71.8	4.8	1,096	4.2
Professional and business services	16.8	138.8	-3.8	888	1.8
Education and health services	8.5	131.1	3.4	764	5.8
Leisure and hospitality	5.6	99.8	-1.1	457	(⁴)
Other services	7.6	35.0	3.8	497	2.9
Government .....	.3	133.4	.1	924	-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 2006.

State	Establishments, second quarter 2006 (thousands)	Employment		Average weekly wage ¹	
		June 2006 (thousands)	Percent change, June 2005-06	Second quarter 2006	Percent change, second quarter 2005-06
United States ²	8,774.8	135,481.1	2.0	\$784	4.4
Alabama	116.5	1,944.8	2.3	672	4.3
Alaska	20.8	327.2	3.8	788	4.2
Arizona	148.7	2,581.3	5.7	753	4.1
Arkansas	81.1	1,185.3	2.4	612	3.2
California	1,249.0	15,733.0	2.4	888	4.5
Colorado	174.2	2,277.7	2.8	794	3.3
Connecticut	111.5	1,700.6	1.5	971	2.8
Delaware	30.0	430.4	2.0	851	6.8
District of Columbia	31.2	677.9	.4	1,300	5.3
Florida	586.6	7,889.6	3.2	722	4.8
Georgia	263.8	4,054.1	3.2	743	3.1
Hawaii	37.4	621.8	2.5	704	4.0
Idaho	54.7	660.0	5.7	612	7.4
Illinois	347.4	5,912.4	1.7	837	4.1
Indiana	154.6	2,917.5	.9	684	3.0
Iowa	92.5	1,502.9	1.9	639	4.1
Kansas	84.8	1,339.5	1.2	667	5.0
Kentucky	109.2	1,797.2	1.2	672	3.4
Louisiana	122.2	1,831.7	-3.9	680	10.2
Maine	49.1	616.0	.8	632	3.8
Maryland	162.9	2,567.8	1.6	855	4.7
Massachusetts	207.8	3,256.7	1.1	963	5.1
Michigan	256.7	4,320.8	-1.0	783	1.8
Minnesota	173.0	2,731.9	2.3	789	4.0
Mississippi	68.6	1,127.4	.9	587	5.6
Missouri	171.7	2,743.6	1.6	703	3.7
Montana	41.2	442.8	4.3	575	4.0
Nebraska	57.4	915.6	1.1	632	5.7
Nevada	70.7	1,284.6	5.2	748	1.4
New Hampshire	48.6	639.1	1.2	774	2.5
New Jersey	277.5	4,053.9	1.0	948	5.1
New Mexico	52.6	824.4	5.0	653	4.6
New York	570.4	8,566.2	1.0	962	5.4
North Carolina	241.1	3,965.0	3.0	690	3.8
North Dakota	25.3	342.4	2.7	591	5.3
Ohio	291.5	5,396.5	.4	716	3.3
Oklahoma	96.2	1,512.5	3.0	639	7.4
Oregon	127.9	1,732.5	3.0	710	3.3
Pennsylvania	332.2	5,675.5	1.0	766	3.9
Rhode Island	35.9	490.7	.6	755	4.7
South Carolina	125.0	1,858.5	1.5	646	4.2
South Dakota	29.6	396.1	2.3	563	4.3
Tennessee	136.1	2,749.2	2.2	703	4.9
Texas	532.8	9,965.6	3.8	781	5.8
Utah	86.4	1,182.9	5.6	655	5.3
Vermont	24.6	307.7	1.1	665	3.1
Virginia	219.6	3,697.5	2.1	822	4.4
Washington	210.9	2,911.9	3.0	799	5.1
West Virginia	48.3	714.3	1.6	636	3.9
Wisconsin	162.6	2,828.3	1.1	685	3.3
Wyoming	23.9	278.6	5.1	685	10.3
Puerto Rico	60.0	1,039.6	-.4	435	4.1
Virgin Islands	3.4	45.3	3.2	679	5.6

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)					
1996	7,189,168	117,963,132	\$3,414,514,808	\$28,946	\$557
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
UI covered					
1996	7,137,644	115,081,246	\$3,298,045,286	\$28,658	\$551
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
Private industry covered					
1996	6,946,858	99,268,446	\$2,837,334,217	\$28,582	\$550
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
State government covered					
1996	62,146	4,191,726	\$131,605,800	\$31,397	\$604
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
Local government covered					
1996	128,640	11,621,074	\$329,105,269	\$28,320	\$545
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
Federal government covered (UCFE)					
1996	51,524	2,881,887	\$116,469,523	\$40,414	\$777
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

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 2005

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 industries²										
Establishments, first quarter	8,203,193	4,937,585	1,368,471	900,660	620,350	210,747	119,647	29,663	10,633	5,437
Employment, March	108,400,665	7,342,119	9,060,122	12,154,050	18,712,178	14,484,991	17,908,651	10,135,444	7,202,266	11,400,844
Natural resources and mining										
Establishments, first quarter	122,314	69,037	23,171	15,130	9,542	3,024	1,679	505	170	56
Employment, March	1,591,414	110,672	153,458	203,615	285,777	207,152	254,726	175,153	114,603	86,258
Construction										
Establishments, first quarter	831,198	541,438	136,884	81,651	49,546	13,963	6,186	1,178	279	73
Employment, March	6,801,693	788,401	897,445	1,095,463	1,480,278	946,712	911,056	393,664	185,993	102,681
Manufacturing										
Establishments, first quarter	365,703	139,265	62,539	55,531	53,217	25,598	19,498	6,468	2,432	1,155
Employment, March	14,154,939	241,424	419,954	763,046	1,655,600	1,792,309	2,996,843	2,232,678	1,644,836	2,408,249
Trade, transportation, and utilities										
Establishments, first quarter	1,857,536	986,399	378,634	243,020	154,658	53,059	32,572	6,921	1,746	527
Employment, March	25,178,580	1,648,596	2,519,528	3,253,554	4,670,426	3,660,431	4,845,270	2,356,307	1,132,759	1,091,709
Information										
Establishments, first quarter	141,249	80,206	20,516	16,131	13,347	5,569	3,553	1,153	518	256
Employment, March	3,044,649	111,997	136,803	220,670	410,443	384,425	539,896	393,212	352,742	494,461
Financial activities										
Establishments, first quarter	801,843	514,145	145,932	80,803	39,849	11,798	6,105	1,872	884	455
Employment, March	7,920,659	838,192	961,226	1,069,124	1,186,061	805,249	917,119	647,897	614,198	881,593
Professional and business services										
Establishments, first quarter	1,352,317	914,425	186,219	116,874	77,281	29,848	19,141	5,588	2,075	866
Employment, March	16,461,563	1,277,785	1,223,193	1,575,508	2,339,310	2,069,104	2,908,692	1,909,120	1,412,210	1,746,641
Education and health services										
Establishments, first quarter	758,591	356,913	171,672	109,414	69,888	25,217	17,969	3,985	1,810	1,723
Employment, March	16,369,857	659,950	1,139,990	1,470,423	2,099,073	1,757,066	2,693,346	1,355,658	1,260,059	3,934,292
Leisure and hospitality										
Establishments, first quarter	683,022	265,161	115,748	124,094	128,070	37,122	10,332	1,563	624	308
Employment, March	12,325,005	421,191	780,979	1,739,011	3,861,338	2,485,398	1,460,338	528,449	422,549	625,752
Other services										
Establishments, first quarter	1,097,218	889,756	117,854	56,303	24,642	5,518	2,603	429	95	18
Employment, March	4,284,985	1,069,170	769,066	741,466	715,321	375,264	380,117	143,056	62,317	29,208

¹ Includes establishments that reported no workers in March 2005.

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

² Includes data for unclassified establishments, not shown separately.

Table 26. Average annual wages for 2004 and 2005 for all covered workers¹ by metropolitan area

Metropolitan area ²	Average annual wages ³		
	2004	2005	Percent change, 2004-05
Metropolitan areas ⁴	\$40,917	\$42,253	3.3
Abilene, TX	27,103	27,876	2.9
Aguadilla-Isabela-San Sebastian, PR	18,579	18,717	0.7
Akron, OH	36,548	37,471	2.5
Albany, GA	30,930	31,741	2.6
Albany-Schenectady-Troy, NY	38,557	39,201	1.7
Albuquerque, NM	34,530	35,665	3.3
Alexandria, LA	29,003	30,114	3.8
Allentown-Bethlehem-Easton, PA-NJ	37,461	38,506	2.8
Altoona, PA	29,115	29,642	1.8
Amarillo, TX	30,780	31,954	3.8
Ames, IA	32,689	33,889	3.7
Anchorage, AK	40,652	41,712	2.6
Anderson, IN	31,719	31,418	-0.9
Anderson, SC	28,937	29,463	1.8
Ann Arbor, MI	44,926	45,820	2.0
Anniston-Oxford, AL	29,915	31,231	4.4
Appleton, WI	33,618	34,431	2.4
Asheville, NC	29,989	30,926	3.1
Athens-Clarke County, GA	31,702	32,512	2.6
Atlanta-Sandy Springs-Marietta, GA	43,250	44,595	3.1
Atlantic City, NJ	35,700	36,735	2.9
Auburn-Opelika, AL	28,785	29,196	1.4
Augusta-Richmond County, GA-SC	33,513	34,588	3.2
Austin-Round Rock, TX	42,144	43,500	3.2
Bakersfield, CA	33,707	34,165	1.4
Baltimore-Towson, MD	41,815	43,486	4.0
Bangor, ME	29,882	30,707	2.8
Barnstable Town, MA	34,598	35,123	1.5
Baton Rouge, LA	33,162	34,523	4.1
Battle Creek, MI	36,576	37,994	3.9
Bay City, MI	32,386	33,572	3.7
Beaumont-Port Arthur, TX	34,675	36,530	5.3
Bellingham, WA	29,957	31,128	3.9
Bend, OR	30,084	31,492	4.7
Billings, MT	30,290	31,748	4.8
Binghamton, NY	32,168	33,290	3.5
Birmingham-Hoover, AL	37,983	39,353	3.6
Bismarck, ND	30,825	31,504	2.2
Blacksburg-Christiansburg-Radford, VA	30,906	32,196	4.2
Bloomington, IN	29,288	30,080	2.7
Bloomington-Normal, IL	38,823	39,404	1.5
Boise City-Nampa, ID	33,614	34,623	3.0
Boston-Cambridge-Quincy, MA-NH	52,976	54,199	2.3
Boulder, CO	47,264	49,115	3.9
Bowling Green, KY	30,695	31,306	2.0
Bremerton-Silverdale, WA	35,599	36,467	2.4
Bridgeport-Stamford-Norwalk, CT	67,223	71,095	5.8
Brownsville-Harlingen, TX	24,222	24,893	2.8
Brunswick, GA	30,408	30,902	1.6
Buffalo-Niagara Falls, NY	34,923	35,302	1.1
Burlington, NC	30,218	31,084	2.9
Burlington-South Burlington, VT	37,319	38,582	3.4
Canton-Massillon, OH	31,304	32,080	2.5
Cape Coral-Fort Myers, FL	33,932	35,649	5.1
Carson City, NV	36,799	38,428	4.4
Casper, WY	32,284	34,810	7.8
Cedar Rapids, IA	36,546	37,902	3.7
Champaign-Urbana, IL	32,595	33,278	2.1
Charleston, WV	34,236	35,363	3.3
Charleston-North Charleston, SC	32,233	33,896	5.2
Charlotte-Gastonia-Concord, NC-SC	41,897	43,728	4.4
Charlottesville, VA	35,743	37,392	4.6
Chattanooga, TN-GA	32,701	33,743	3.2
Cheyenne, WY	31,007	32,208	3.9
Chicago-Naperville-Joliet, IL-IN-WI	45,181	46,609	3.2
Chico, CA	29,082	30,007	3.2
Cincinnati-Middletown, OH-KY-IN	39,170	40,343	3.0
Clarksville, TN-KY	28,353	29,870	5.4
Cleveland, TN	31,529	32,030	1.6
Cleveland-Elyria-Mentor, OH	39,172	39,973	2.0
Coeur d'Alene, ID	27,505	28,208	2.6
College Station-Bryan, TX	27,716	29,032	4.7
Colorado Springs, CO	36,318	37,268	2.6
Columbia, MO	30,462	31,263	2.6
Columbia, SC	32,619	33,386	2.4
Columbus, GA-AL	30,263	31,370	3.7
Columbus, IN	38,076	38,446	1.0
Columbus, OH	38,687	39,806	2.9
Corpus Christi, TX	31,907	32,975	3.3
Corvallis, OR	37,248	39,357	5.7

See footnotes at end of table.

Table 26. Average annual wages for 2004 and 2005 for all covered workers¹ by metropolitan area — Continued

Metropolitan area ²	Average annual wages ³		
	2004	2005	Percent change, 2004-05
Cumberland, MD-WV	\$28,143	\$28,645	1.8
Dallas-Fort Worth-Arlington, TX	43,925	45,337	3.2
Dalton, GA	31,972	32,848	2.7
Danville, IL	31,218	31,861	2.1
Danville, VA	27,855	28,449	2.1
Davenport-Moline-Rock Island, IA-IL	34,555	35,546	2.9
Dayton, OH	36,996	37,922	2.5
Decatur, AL	32,772	33,513	2.3
Decatur, IL	36,487	38,444	5.4
Deltona-Daytona Beach-Ormond Beach, FL	29,346	29,927	2.0
Denver-Aurora, CO	44,568	45,940	3.1
Des Moines, IA	38,499	39,760	3.3
Detroit-Warren-Livonia, MI	45,798	46,790	2.2
Dothan, AL	29,492	30,253	2.6
Dover, DE	32,358	33,132	2.4
Dubuque, IA	31,596	32,414	2.6
Duluth, MN-WI	32,512	32,638	0.4
Durham, NC	45,892	46,743	1.9
Eau Claire, WI	30,161	30,763	2.0
El Centro, CA	28,935	29,879	3.3
Elizabethtown, KY	30,144	30,912	2.5
Elkhart-Goshen, IN	34,626	35,573	2.7
Elmira, NY	31,048	32,989	6.3
El Paso, TX	27,988	28,666	2.4
Erie, PA	31,247	32,010	2.4
Eugene-Springfield, OR	31,344	32,295	3.0
Evansville, IN-KY	34,388	35,302	2.7
Fairbanks, AK	37,847	39,399	4.1
Fajardo, PR	20,331	20,011	-1.6
Fargo, ND-MN	31,571	32,291	2.3
Farmington, NM	32,281	33,695	4.4
Fayetteville, NC	29,506	30,325	2.8
Fayetteville-Springdale-Rogers, AR-MO	33,678	34,598	2.7
Flagstaff, AZ	29,121	30,733	5.5
Flint, MI	38,243	37,982	-0.7
Florence, SC	31,838	32,326	1.5
Florence-Muscle Shoals, AL	28,586	28,885	1.0
Fond du Lac, WI	31,760	32,634	2.8
Fort Collins-Loveland, CO	35,522	36,612	3.1
Fort Smith, AR-OK	28,251	29,599	4.8
Fort Walton Beach-Crestview-Destin, FL	31,163	32,976	5.8
Fort Wayne, IN	34,204	34,717	1.5
Fresno, CA	31,429	32,266	2.7
Gadsden, AL	27,904	28,438	1.9
Gainesville, FL	30,832	32,992	7.0
Gainesville, GA	32,849	33,828	3.0
Glens Falls, NY	30,288	31,710	4.7
Goldsboro, NC	27,461	28,316	3.1
Grand Forks, ND-MN	27,601	28,138	1.9
Grand Junction, CO	29,965	31,611	5.5
Grand Rapids-Wyoming, MI	36,302	36,941	1.8
Great Falls, MT	27,060	28,021	3.6
Greeley, CO	32,593	33,636	3.2
Green Bay, WI	34,861	35,467	1.7
Greensboro-High Point, NC	34,129	34,876	2.2
Greenville, NC	30,592	31,433	2.7
Greenville, SC	33,557	34,469	2.7
Guayama, PR	22,359	23,263	4.0
Gulfport-Biloxi, MS	28,857	31,688	9.8
Hagerstown-Martinsburg, MD-WV	32,088	33,202	3.5
Hanford-Corcoran, CA	29,655	29,989	1.1
Harrisburg-Carlisle, PA	38,204	39,144	2.5
Harrisonburg, VA	29,145	30,366	4.2
Hartford-West Hartford-East Hartford, CT	48,381	50,154	3.7
Hattiesburg, MS	27,973	28,568	2.1
Hickory-Lenoir-Morganton, NC	29,568	30,090	1.8
Hinesville-Fort Stewart, GA	28,058	30,062	7.1
Holland-Grand Haven, MI	35,505	36,362	2.4
Honolulu, HI	36,618	37,654	2.8
Hot Springs, AR	26,176	27,024	3.2
Houma-Bayou Cane-Thibodaux, LA	31,689	33,696	6.3
Houston-Baytown-Sugar Land, TX	44,656	47,157	5.6
Huntington-Ashland, WV-KY-OH	30,434	31,415	3.2
Huntsville, AL	40,964	42,401	3.5
Idaho Falls, ID	28,937	29,795	3.0
Indianapolis, IN	38,968	39,830	2.2
Iowa City, IA	33,777	34,785	3.0
Ithaca, NY	36,071	36,457	1.1
Jackson, MI	35,031	35,879	2.4
Jackson, MS	32,178	33,099	2.9

See footnotes at end of table.

Table 26. Average annual wages for 2004 and 2005 for all covered workers¹ by metropolitan area — Continued

Metropolitan area ²	Average annual wages ³		
	2004	2005	Percent change, 2004-05
Jackson, TN	\$32,525	\$33,286	2.3
Jacksonville, FL	36,870	38,224	3.7
Jacksonville, NC	23,969	24,803	3.5
Janesville, WI	34,022	34,107	0.2
Jefferson City, MO	30,027	30,991	3.2
Johnson City, TN	29,293	29,840	1.9
Johnstown, PA	28,315	29,335	3.6
Jonesboro, AR	27,540	28,550	3.7
Joplin, MO	28,386	29,152	2.7
Kalamazoo-Portage, MI	36,113	36,042	-0.2
Kankakee-Bradley, IL	31,322	31,802	1.5
Kansas City, MO-KS	38,650	39,749	2.8
Kennewick-Richland-Pasco, WA	37,611	38,453	2.2
Killeen-Temple-Fort Hood, TX	28,883	30,028	4.0
Kingsport-Bristol-Bristol, TN-VA	33,100	33,568	1.4
Kingston, NY	29,506	30,752	4.2
Knoxville, TN	34,718	35,724	2.9
Kokomo, IN	44,394	44,462	0.2
La Crosse, WI-MN	30,445	31,029	1.9
Lafayette, IN	34,064	35,176	3.3
Lafayette, LA	33,042	34,729	5.1
Lake Charles, LA	32,077	33,728	5.1
Lakeland, FL	31,163	32,235	3.4
Lancaster, PA	34,296	35,264	2.8
Lansing-East Lansing, MI	36,706	38,135	3.9
Laredo, TX	25,954	27,401	5.6
Las Cruces, NM	27,492	28,569	3.9
Las Vegas-Paradise, NV	37,066	38,940	5.1
Lawrence, KS	27,665	28,492	3.0
Lawton, OK	27,276	28,459	4.3
Lebanon, PA	30,239	30,704	1.5
Lewiston, ID-WA	28,995	29,414	1.4
Lewiston-Auburn, ME	30,415	31,008	1.9
Lexington-Fayette, KY	36,051	36,683	1.8
Lima, OH	31,618	32,630	3.2
Lincoln, NE	32,108	32,711	1.9
Little Rock-North Little Rock, AR	34,019	34,920	2.6
Logan, UT-ID	25,281	25,869	2.3
Longview, TX	29,925	32,603	8.9
Longview, WA	32,742	33,993	3.8
Los Angeles-Long Beach-Santa Ana, CA	45,085	46,592	3.3
Louisville, KY-IN	36,466	37,144	1.9
Lubbock, TX	29,061	30,174	3.8
Lynchburg, VA	30,956	32,025	3.5
Macon, GA	32,275	33,110	2.6
Madera, CA	28,108	29,356	4.4
Madison, WI	37,250	38,210	2.6
Manchester-Nashua, NH	43,638	45,066	3.3
Mansfield, OH	32,352	32,688	1.0
Mayaguez, PR	19,066	19,597	2.8
McAllen-Edinburg-Pharr, TX	24,529	25,315	3.2
Medford, OR	29,786	30,502	2.4
Memphis, TN-MS-AR	38,292	39,094	2.1
Merced, CA	29,122	30,209	3.7
Miami-Fort Lauderdale-Miami Beach, FL	38,557	40,174	4.2
Michigan City-La Porte, IN	30,065	30,724	2.2
Midland, TX	35,566	38,267	7.6
Milwaukee-Waukesha-West Allis, WI	39,315	40,181	2.2
Minneapolis-St. Paul-Bloomington, MN-WI	45,064	45,507	1.0
Missoula, MT	28,625	29,627	3.5
Mobile, AL	31,925	33,496	4.9
Modesto, CA	33,127	34,325	3.6
Monroe, LA	27,917	29,264	4.8
Monroe, MI	39,106	39,449	0.9
Montgomery, AL	32,694	33,441	2.3
Morgantown, WV	30,516	31,529	3.3
Morristown, TN	31,112	31,215	0.3
Mount Vernon-Anacortes, WA	30,016	31,387	4.6
Muncie, IN	30,742	32,172	4.7
Muskegon-Norton Shores, MI	32,578	33,035	1.4
Myrtle Beach-Conway-North Myrtle Beach, SC	26,074	26,642	2.2
Napa, CA	39,026	40,180	3.0
Naples-Marco Island, FL	34,856	38,211	9.6
Nashville-Davidson--Murfreesboro, TN	37,394	38,753	3.6
New Haven-Milford, CT	43,007	43,931	2.1
New Orleans-Metairie-Kenner, LA	34,487	37,239	8.0
New York-Northern New Jersey-Long Island, NY-NJ-PA	55,431	57,660	4.0
Niles-Benton Harbor, MI	34,718	35,029	0.9
Norwich-New London, CT	41,443	42,151	1.7
Ocala, FL	29,013	30,008	3.4

See footnotes at end of table.

Table 26. Average annual wages for 2004 and 2005 for all covered workers: by metropolitan area — Continued

Metropolitan area ²	Average annual wages ³		
	2004	2005	Percent change, 2004-05
Ocean City, NJ	\$30,227	\$31,033	2.7
Odessa, TX	31,744	33,475	5.5
Ogden-Clearfield, UT	30,406	31,195	2.6
Oklahoma City, OK	32,328	33,142	2.5
Olympia, WA	35,033	36,230	3.4
Omaha-Council Bluffs, NE-IA	35,208	36,329	3.2
Orlando, FL	35,041	36,466	4.1
Oshkosh-Neenah, WI	38,135	38,820	1.8
Owensboro, KY	30,606	31,379	2.5
Oxnard-Thousand Oaks-Ventura, CA	42,805	44,597	4.2
Palm Bay-Melbourne-Titusville, FL	37,912	38,287	1.0
Panama City-Lynn Haven, FL	30,257	31,894	5.4
Parkersburg-Marietta, WV-OH	30,427	30,747	1.1
Pascagoula, MS	32,323	34,735	7.5
Pensacola-Ferry Pass-Brent, FL	30,361	32,064	5.6
Peoria, IL	37,182	39,871	7.2
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	45,008	46,454	3.2
Phoenix-Mesa-Scottsdale, AZ	38,816	40,245	3.7
Pine Bluff, AR	29,892	30,794	3.0
Pittsburgh, PA	37,821	38,809	2.6
Pittsfield, MA	34,672	35,807	3.3
Pocatello, ID	26,784	27,686	3.4
Ponce, PR	19,430	19,660	1.2
Portland-South Portland-Biddeford, ME	34,983	35,857	2.5
Portland-Vancouver-Beaverton, OR-WA	39,973	41,048	2.7
Port St. Lucie-Fort Pierce, FL	31,726	33,235	4.8
Poughkeepsie-Newburgh-Middletown, NY	36,773	38,187	3.8
Prescott, AZ	27,906	29,295	5.0
Providence-New Bedford-Fall River, RI-MA	36,841	37,796	2.6
Provo-Orem, UT	29,501	30,395	3.0
Pueblo, CO	30,463	30,165	-1.0
Punta Gorda, FL	29,998	31,937	6.5
Racine, WI	37,082	37,659	1.6
Raleigh-Cary, NC	38,450	39,465	2.6
Rapid City, SD	27,945	28,758	2.9
Reading, PA	35,414	36,210	2.2
Redding, CA	31,036	32,139	3.6
Reno-Sparks, NV	37,260	38,453	3.2
Richmond, VA	39,629	41,274	4.2
Riverside-San Bernardino-Ontario, CA	34,287	35,201	2.7
Roanoke, VA	32,801	32,987	0.6
Rochester, MN	40,176	41,296	2.8
Rochester, NY	37,243	37,991	2.0
Rockford, IL	34,150	35,652	4.4
Rocky Mount, NC	30,569	30,983	1.4
Rome, GA	32,930	33,896	2.9
Sacramento-Arden-Arcade--Roseville, CA	41,317	42,800	3.6
Saginaw-Saginaw Township North, MI	36,322	36,325	0.0
St. Cloud, MN	31,693	31,705	0.0
St. George, UT	24,518	26,046	6.2
St. Joseph, MO-KS	29,047	30,009	3.3
St. Louis, MO-IL	38,640	39,985	3.5
Salem, OR	30,490	31,289	2.6
Salinas, CA	34,681	36,067	4.0
Salisbury, MD	31,118	32,240	3.6
Salt Lake City, UT	35,562	36,857	3.6
San Angelo, TX	28,990	29,530	1.9
San Antonio, TX	33,919	35,097	3.5
San Diego-Carlsbad-San Marcos, CA	42,382	43,824	3.4
Sandusky, OH	32,586	32,631	0.1
San Francisco-Oakland-Fremont, CA	55,793	58,634	5.1
San German-Cabo Rojo, PR	18,158	18,745	3.2
San Jose-Sunnyvale-Santa Clara, CA	69,637	71,970	3.4
San Juan-Caguas-Guaynabo, PR	23,219	23,952	3.2
San Luis Obispo-Paso Robles, CA	32,942	33,759	2.5
Santa Barbara-Santa Maria-Goleta, CA	37,471	39,080	4.3
Santa Cruz-Watsonville, CA	37,386	38,016	1.7
Santa Fe, NM	32,590	33,253	2.0
Santa Rosa-Petaluma, CA	38,512	40,017	3.9
Sarasota-Bradenton-Venice, FL	32,118	33,905	5.6
Savannah, GA	32,839	34,104	3.9
Scranton--Wilkes-Barre, PA	31,329	32,057	2.3
Seattle-Tacoma-Bellevue, WA	45,095	46,644	3.4
Sheboygan, WI	34,844	35,067	0.6
Sherman-Denison, TX	31,623	32,800	3.7
Shreveport-Bossier City, LA	31,435	31,962	1.7
Sioux City, IA-NE-SD	30,830	31,122	0.9
Sioux Falls, SD	32,030	33,257	3.8
South Bend-Mishawaka, IN-MI	33,812	34,086	0.8
Spartanburg, SC	34,984	35,526	1.5

See footnotes at end of table.

Table 26. Average annual wages for 2004 and 2005 for all covered workers¹ by metropolitan area — Continued

Metropolitan area ²	Average annual wages ³		
	2004	2005	Percent change, 2004-05
Spokane, WA	\$31,643	\$32,621	3.1
Springfield, IL	38,256	39,299	2.7
Springfield, MA	35,793	36,791	2.8
Springfield, MO	29,298	30,124	2.8
Springfield, OH	30,287	30,814	1.7
State College, PA	33,042	34,109	3.2
Stockton, CA	34,175	35,030	2.5
Sumter, SC	26,770	27,469	2.6
Syracuse, NY	35,863	36,494	1.8
Tallahassee, FL	32,610	33,548	2.9
Tampa-St. Petersburg-Clearwater, FL	35,328	36,374	3.0
Terre Haute, IN	29,839	30,597	2.5
Texarkana, TX-Texarkana, AR	30,185	31,302	3.7
Toledo, OH	35,122	35,848	2.1
Topeka, KS	32,071	33,303	3.8
Trenton-Ewing, NJ	50,467	52,034	3.1
Tucson, AZ	33,992	35,650	4.9
Tulsa, OK	34,014	35,211	3.5
Tuscaloosa, AL	32,223	34,124	5.9
Tyler, TX	33,704	34,731	3.0
Utica-Rome, NY	30,174	30,902	2.4
Valdosta, GA	24,779	25,712	3.8
Vallejo-Fairfield, CA	37,118	38,431	3.5
Vero Beach, FL	31,812	32,591	2.4
Victoria, TX	33,316	34,327	3.0
Vineland-Millville-Bridgeton, NJ	36,228	36,387	0.4
Virginia Beach-Norfolk-Newport News, VA-NC	33,458	34,580	3.4
Visalia-Porterville, CA	27,927	28,582	2.3
Waco, TX	30,709	32,325	5.3
Warner Robins, GA	34,535	36,762	6.4
Washington-Arlington-Alexandria, DC-VA-MD-WV	53,134	55,525	4.5
Waterloo-Cedar Falls, IA	32,322	33,123	2.5
Wausau, WI	32,399	33,259	2.7
Weirton-Steubenville, WV-OH	30,173	30,596	1.4
Wenatchee, WA	26,440	27,163	2.7
Wheeling, WV-OH	28,772	29,808	3.6
Wichita, KS	34,618	35,976	3.9
Wichita Falls, TX	28,144	29,343	4.3
Williamsport, PA	30,050	30,699	2.2
Wilmington, NC	30,379	31,792	4.7
Winchester, VA-WV	32,396	33,787	4.3
Winston-Salem, NC	36,559	36,654	0.3
Worcester, MA	40,428	41,094	1.6
Yakima, WA	26,497	27,334	3.2
Yauco, PR	18,274	17,818	-2.5
York-Hanover, PA	34,966	36,834	5.3
Youngstown-Warren-Boardman, OH-PA	31,943	32,176	0.7
Yuba City, CA	30,913	32,133	3.9
Yuma, AZ	25,978	27,168	4.6

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

² Includes data for Metropolitan Statistical Areas (MSA) and Primary Metropolitan Statistical Areas (PMSA) as defined by OMB Bulletin No. 99-04. In the New England areas, the New England County Metropolitan Area (NECMA) definitions were used.

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	1995	1996	1997 ¹	1998 ¹	1999 ¹	2000 ¹	2001	2002	2003	2004	2005
Civilian noninstitutional population.....	198,584	200,591	203,133	205,220	207,753	212,577	215,092	217,570	221,168	223,357	226,082
Civilian labor force.....	132,304	133,943	136,297	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320
Labor force participation rate.....	66.6	66.8	67.1	67.1	67.1	67.1	66.8	66.6	66.2	66.0	66.0
Employed.....	124,900	126,708	129,558	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730
Employment-population ratio.....	62.9	63.2	63.8	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7
Unemployed.....	7,404	7,236	6,739	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591
Unemployment rate.....	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1
Not in the labor force.....	66,280	66,647	66,836	67,547	68,385	69,994	71,359	72,707	74,658	75,956	76,762

¹ Not strictly comparable with prior years.

28. Annual data: Employment levels by industry

[In thousands]

Industry	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total private employment.....	97,866	100,169	103,113	106,021	108,686	110,996	110,707	108,828	108,416	109,862	111,836
Total nonfarm employment.....	117,298	119,708	122,770	125,930	128,993	131,785	131,826	130,341	129,999	131,480	133,631
Goods-producing.....	23,156	23,410	23,886	24,354	24,465	24,649	23,873	22,557	21,816	21,884	22,141
Natural resources and mining.....	641	637	654	645	598	599	606	583	572	591	629
Construction.....	5,274	5,536	5,813	6,149	6,545	6,787	6,826	6,716	6,735	6,964	7,233
Manufacturing.....	17,241	17,237	17,419	17,560	17,322	17,263	16,441	15,259	14,510	14,329	14,279
Private service-providing.....	74,710	76,759	79,227	81,667	84,221	86,346	86,834	86,271	86,599	87,978	89,696
Trade, transportation, and utilities.....	23,834	24,239	24,700	25,186	25,771	26,225	25,983	25,497	25,287	25,510	25,833
Wholesale trade.....	5,433.1	5,522.0	5,663.9	5,795.2	5,892.5	5,933.2	5,772.7	5,652.3	5,607.5	5,654.9	5,724.0
Retail trade.....	13,896.7	14,142.5	14,388.9	14,609.3	14,970.1	15,279.8	15,238.6	15,025.1	14,917.3	15,034.7	15,174.1
Transportation and warehousing.....	3,837.8	3,935.3	4,026.5	4,168.0	4,300.3	4,410.3	4,372.0	4,223.6	4,185.4	4,250.0	4,358.6
Utilities.....	666.2	639.6	620.9	613.4	608.5	601.3	599.4	596.2	577.0	570.2	576.0
Information.....	2,843	2,940	3,084	3,218	3,419	3,631	3,629	3,395	3,188	3,138	3,142
Financial activities.....	6,827	6,969	7,178	7,462	7,648	7,687	7,807	7,847	7,977	8,052	8,227
Professional and business services.....	12,844	13,462	14,335	15,147	15,957	16,666	16,476	15,976	15,987	16,414	16,935
Education and health services.....	13,289	13,683	14,087	14,446	14,798	15,109	15,645	16,199	16,588	16,954	17,344
Leisure and hospitality.....	10,501	10,777	11,018	11,232	11,543	11,862	12,036	11,986	12,173	12,479	12,748
Other services.....	4,572	4,690	4,825	4,976	5,087	5,168	5,258	5,372	5,401	5,431	5,467
Government.....	19,432	19,539	19,664	19,909	20,307	20,790	21,118	21,513	21,583	21,618	21,795

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

Industry	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Private sector:											
Average weekly hours.....	34.3	34.3	34.5	34.5	34.3	34.3	34.0	33.9	33.7	33.7	33.8
Average hourly earnings (in dollars).....	11.64	12.03	12.49	13.00	13.47	14.00	14.53	14.95	15.35	15.67	16.11
Average weekly earnings (in dollars).....	399.53	412.74	431.25	448.04	462.49	480.41	493.20	506.07	517.30	528.56	543.86
Goods-producing:											
Average weekly hours.....	40.8	40.8	41.1	40.8	40.8	40.7	39.9	39.9	39.8	40.0	40.1
Average hourly earnings (in dollars).....	12.96	13.38	13.82	14.23	14.71	15.27	15.78	16.33	16.80	17.19	17.60
Average weekly earnings (in dollars).....	528.62	546.48	568.43	580.99	599.99	621.86	630.04	651.61	669.13	688.03	705.38
Natural resources and mining											
Average weekly hours.....	45.3	46.0	46.2	44.9	44.2	44.4	44.6	43.2	43.6	44.5	45.6
Average hourly earnings (in dollars).....	14.78	15.10	15.57	16.20	16.33	16.55	17.00	17.19	17.56	18.08	18.73
Average weekly earnings (in dollars).....	670.32	695.07	720.11	727.28	721.74	734.92	757.92	741.97	765.94	804.03	854.42
Construction:											
Average weekly hours.....	38.8	38.9	38.9	38.8	39.0	39.2	38.7	38.4	38.4	38.3	38.6
Average hourly earnings (in dollars).....	14.73	15.11	15.67	16.23	16.80	17.48	18.00	18.52	18.95	19.23	19.48
Average weekly earnings (in dollars).....	571.57	588.48	609.48	629.75	655.11	685.78	695.89	711.82	726.83	735.70	751.56
Manufacturing:											
Average weekly hours.....	41.3	41.3	41.7	41.4	41.4	41.3	40.3	40.5	40.4	40.8	40.7
Average hourly earnings (in dollars).....	12.34	12.75	13.14	13.45	13.85	14.32	14.76	15.29	15.74	16.14	16.56
Average weekly earnings (in dollars).....	509.26	526.55	548.22	557.12	573.17	590.65	595.19	618.75	635.99	658.53	673.20
Private service-providing:											
Average weekly hours.....	32.6	32.6	32.8	32.8	32.7	32.7	32.5	32.5	32.4	32.3	32.4
Average hourly earnings (in dollars).....	11.19	11.57	12.05	12.59	13.07	13.60	14.16	14.56	14.96	15.26	15.71
Average weekly earnings (in dollars).....	364.14	376.72	394.77	412.78	427.30	445.00	460.32	472.88	483.89	493.67	508.98
Trade, transportation, and utilities:											
Average weekly hours.....	34.1	34.1	34.3	34.2	33.9	33.8	33.5	33.6	33.6	33.5	33.4
Average hourly earnings (in dollars).....	11.10	11.46	11.90	12.39	12.82	13.31	13.70	14.02	14.34	14.59	14.95
Average weekly earnings (in dollars).....	378.79	390.64	407.57	423.30	434.31	449.88	459.53	471.27	481.14	488.58	499.74
Wholesale trade:											
Average weekly hours.....	38.6	38.6	38.8	38.6	38.6	38.8	38.4	38.0	37.9	37.8	37.7
Average hourly earnings (in dollars).....	13.34	13.80	14.41	15.07	15.62	16.28	16.77	16.98	17.36	17.66	18.16
Average weekly earnings (in dollars).....	515.14	533.29	559.39	582.21	602.77	631.40	643.45	644.38	657.29	666.93	685.27
Retail trade:											
Average weekly hours.....	30.8	30.7	30.9	30.9	30.8	30.7	30.7	30.9	30.9	30.7	30.6
Average hourly earnings (in dollars).....	8.85	9.21	9.59	10.05	10.45	10.86	11.29	11.67	11.90	12.08	12.37
Average weekly earnings (in dollars).....	515.14	533.29	559.39	582.21	602.77	631.40	643.45	644.38	657.29	666.93	685.27
Transportation and warehousing:											
Average weekly hours.....	38.9	39.1	39.4	38.7	37.6	37.4	36.7	36.8	36.8	37.2	37.0
Average hourly earnings (in dollars).....	13.18	13.45	13.78	14.12	14.55	15.05	15.33	15.76	16.25	16.53	16.73
Average weekly earnings (in dollars).....	513.37	525.60	542.55	546.86	547.97	562.31	562.70	579.75	598.41	614.90	619.84
Utilities:											
Average weekly hours.....	42.3	42.0	42.0	42.0	42.0	42.0	41.4	40.9	41.1	40.9	41.1
Average hourly earnings (in dollars).....	19.19	19.78	20.59	21.48	22.03	22.75	23.58	23.96	24.77	25.62	26.67
Average weekly earnings (in dollars).....	811.52	830.74	865.26	902.94	924.59	955.66	977.18	979.09	1,017.27	1,048.82	1,096.13
Information:											
Average weekly hours.....	36.0	36.4	36.3	36.6	36.7	36.8	36.9	36.5	36.2	36.3	36.5
Average hourly earnings (in dollars).....	15.68	16.30	17.14	17.67	18.40	19.07	19.80	20.20	21.01	21.42	22.14
Average weekly earnings (in dollars).....	564.98	592.68	622.40	646.52	675.32	700.89	731.11	738.17	760.81	777.42	808.63
Financial activities:											
Average weekly hours.....	35.5	35.5	35.7	36.0	35.8	35.9	35.8	35.6	35.5	35.5	35.9
Average hourly earnings (in dollars).....	12.28	12.71	13.22	13.93	14.47	14.98	15.59	16.17	17.14	17.53	17.97
Average weekly earnings (in dollars).....	436.12	451.49	472.37	500.95	517.57	537.37	558.02	575.51	609.08	622.99	645.37
Professional and business services:											
Average weekly hours.....	34.0	34.1	34.3	34.3	34.4	34.5	34.2	34.2	34.1	34.2	34.2
Average hourly earnings (in dollars).....	12.53	13.00	13.57	14.27	14.85	15.52	16.33	16.81	17.21	17.46	18.02
Average weekly earnings (in dollars).....	426.44	442.81	465.51	490.00	510.99	535.07	557.84	574.66	587.02	596.96	616.38
Education and health services:											
Average weekly hours.....	32.0	31.9	32.2	32.2	32.1	32.2	32.3	32.4	32.3	32.4	32.6
Average hourly earnings (in dollars).....	11.80	12.17	12.56	13.00	13.44	13.95	14.64	15.21	15.64	16.16	16.69
Average weekly earnings (in dollars).....	377.73	388.27	404.65	418.82	431.35	449.29	473.39	492.74	505.69	523.83	543.70
Leisure and hospitality:											
Average weekly hours.....	25.9	25.9	26.0	26.2	26.1	26.1	25.8	25.8	25.6	25.7	25.7
Average hourly earnings (in dollars).....	6.62	6.82	7.13	7.48	7.76	8.11	8.35	8.58	8.76	8.91	9.13
Average weekly earnings (in dollars).....	171.43	176.48	185.81	195.82	202.87	211.79	215.19	221.26	224.30	228.63	234.96
Other services:											
Average weekly hours.....	32.6	32.5	32.7	32.6	32.5	32.5	32.3	32.0	31.4	31.0	30.9
Average hourly earnings (in dollars).....	10.51	10.85	11.29	11.79	12.26	12.73	13.27	13.72	13.84	13.98	14.25
Average weekly earnings (in dollars).....	342.36	352.62	368.63	384.25	398.77	413.41	428.64	439.76	434.41	433.04	440.80

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	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
	Sept. 2006										
Civilian workers²	96.5	97.0	98.0	98.6	99.4	100.0	100.7	101.6	102.7	1.1	3.3
Workers by occupational group											
Management, professional, and related.....	96.2	96.8	98.0	98.5	99.4	100.0	100.9	101.6	103.0	1.4	3.6
Management, business, and financial.....	97.1	97.7	99.0	99.4	99.7	100.0	101.3	101.9	102.7	.8	3.0
Professional and related.....	95.7	96.3	97.5	98.1	99.3	100.0	100.7	101.4	103.2	1.8	3.9
Sales and office.....	96.6	96.8	97.7	98.4	99.3	100.0	100.5	101.6	102.4	.8	3.1
Sales and related.....	96.8	96.3	97.3	97.9	99.2	100.0	99.9	101.1	101.7	.6	2.5
Office and administrative support.....	96.4	97.1	98.0	98.7	99.4	100.0	100.9	101.9	102.8	.9	3.4
Natural resources, construction, and maintenance.....	96.4	97.0	97.8	98.8	99.5	100.0	100.8	102.0	103.0	1.0	3.5
Construction and extraction.....	96.3	97.1	97.6	98.5	99.4	100.0	100.7	102.0	103.0	1.0	3.6
Installation, maintenance, and repair.....	96.6	96.9	98.0	99.1	99.6	100.0	100.9	102.0	103.0	1.0	3.4
Production, transportation, and material moving.....	97.3	97.7	98.4	99.0	99.7	100.0	100.4	101.1	101.8	.7	2.1
Production.....	97.3	97.7	98.5	99.1	99.6	100.0	100.4	101.0	101.6	.6	2.0
Transportation and material moving.....	97.2	97.6	98.2	98.8	99.8	100.0	100.5	101.3	102.2	.9	2.4
Service occupations.....	96.5	97.0	97.8	98.3	99.4	100.0	100.8	101.4	102.5	1.1	3.1
Workers by industry											
Goods-producing.....	96.5	96.9	98.0	99.0	99.8	100.0	100.3	101.3	102.0	.7	2.2
Manufacturing.....	96.7	96.9	98.2	99.1	99.8	100.0	100.1	101.0	101.4	.4	1.6
Service-providing.....	96.5	97.0	97.9	98.5	99.3	100.0	100.9	101.6	102.9	1.3	3.6
Education and health services.....	95.8	96.4	97.2	97.6	99.1	100.0	100.6	101.3	103.5	2.2	4.4
Health care and social assistance.....	96.3	96.7	97.8	98.5	99.3	100.0	101.1	102.0	103.5	1.5	4.2
Hospitals.....	95.5	96.2	97.5	98.2	99.3	100.0	101.2	101.9	103.2	1.3	3.9
Nursing and residential care facilities.....	96.1	96.6	97.5	98.3	99.2	100.0	101.0	101.4	102.6	1.2	3.4
Education services.....	95.5	96.1	96.7	97.0	99.0	100.0	100.2	100.7	103.4	2.7	4.4
Elementary and secondary schools.....	95.3	96.0	96.4	96.7	98.9	100.0	100.2	100.5	103.5	3.0	4.7
Public administration ³	95.1	95.8	97.1	97.5	99.0	100.0	100.6	101.2	102.4	1.2	3.4
Private industry workers	96.7	97.2	98.2	98.9	99.5	100.0	100.8	101.7	102.5	.8	3.0
Workers by occupational group											
Management, professional, and related.....	96.5	97.1	98.5	99.1	99.6	100.0	101.1	101.9	102.9	1.0	3.3
Management, business, and financial.....	97.3	97.9	99.1	99.6	99.7	100.0	101.3	102.0	102.7	.7	3.0
Professional and related.....	95.8	96.5	98.0	98.8	99.5	100.0	101.0	101.8	103.1	1.3	3.6
Sales and office.....	96.6	96.8	97.8	98.5	99.3	100.0	100.5	101.6	102.3	.7	3.0
Sales and related.....	96.8	96.2	97.2	97.9	99.2	100.0	99.9	101.1	101.7	.6	2.5
Office and administrative support.....	96.5	97.2	98.1	98.9	99.5	100.0	100.9	101.9	102.7	.8	3.2
Natural resources, construction, and maintenance.....	96.5	97.1	97.9	98.9	99.5	100.0	100.8	102.1	103.0	.9	3.5
Construction and extraction.....	96.4	97.2	97.7	98.7	99.5	100.0	100.7	102.2	103.1	.9	3.6
Installation, maintenance, and repair.....	96.7	97.0	98.1	99.3	99.6	100.0	100.9	102.1	103.0	.9	3.4
Production, transportation, and material moving.....	97.4	97.8	98.5	99.0	99.7	100.0	100.4	101.1	101.7	.6	2.0
Production.....	97.4	97.7	98.6	99.1	99.6	100.0	100.4	101.0	101.6	.6	2.0
Transportation and material moving.....	97.5	97.9	98.3	99.0	99.8	100.0	100.4	101.2	102.0	.8	2.2
Service occupations.....	97.2	97.7	98.5	99.0	99.5	100.0	100.8	101.5	102.3	.8	2.8
Workers by industry and occupational group											
Goods-producing industries.....	96.5	96.9	98.0	99.0	99.8	100.0	100.3	101.3	102.0	.7	2.2
Management, professional, and related.....	94.5	95.6	98.0	99.2	100.2	100.0	100.2	100.7	101.6	.9	1.4
Sales and office.....	97.0	95.8	96.8	98.0	99.7	100.0	99.9	102.7	102.1	-1.6	2.4
Natural resources, construction, and maintenance.....	96.7	97.3	97.9	98.9	99.6	100.0	100.6	101.9	102.7	.8	3.1
Production, transportation, and material moving.....	97.5	97.8	98.6	99.2	99.8	100.0	100.3	101.0	101.6	.6	1.8
Construction.....	96.5	96.7	97.4	98.5	99.7	100.0	100.7	101.9	103.0	1.1	3.3
Manufacturing.....	96.7	96.9	98.2	99.1	99.8	100.0	100.1	101.0	101.4	.4	1.6
Management, professional, and related.....	94.8	95.1	97.6	98.9	99.8	100.0	100.0	100.5	101.3	.8	1.5
Sales and office.....	96.6	96.3	97.6	98.7	99.9	100.0	99.5	102.8	101.3	-1.5	1.4
Natural resources, construction, and maintenance.....	97.3	97.9	98.3	99.2	99.5	100.0	100.1	100.8	101.5	.7	2.0
Production, transportation, and material moving.....	97.6	97.9	98.7	99.3	99.8	100.0	100.2	100.9	101.5	.6	1.7
Service-providing industries.....	96.8	97.3	98.3	98.9	99.5	100.0	101.0	101.8	102.7	.9	3.2
Management, professional, and related.....	96.8	97.4	98.6	99.1	99.5	100.0	101.3	102.2	103.2	1.0	3.7
Sales and office.....	96.6	96.9	97.9	98.5	99.3	100.0	100.6	101.5	102.3	.8	3.0
Natural resources, construction, and maintenance.....	96.3	96.7	97.9	99.0	99.4	100.0	101.2	102.5	103.6	1.1	4.2
Production, transportation, and material moving.....	97.4	97.7	98.3	98.8	99.6	100.0	100.6	101.3	101.9	.6	2.3
Service occupations.....	97.2	97.7	98.5	99.0	99.5	100.0	100.9	101.5	102.3	.8	2.8
Trade, transportation, and utilities.....	96.9	97.0	98.1	98.5	99.4	100.0	100.8	101.4	102.4	1.0	3.0

See footnotes at end of table.

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

[December 2005 = 100]

Series	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
	Sept. 2006										
Wholesale trade.....	96.4	96.0	97.7	97.7	99.2	100.0	100.3	100.8	102.4	1.6	3.2
Retail trade.....	96.6	97.1	98.1	98.8	99.5	100.0	100.6	101.2	101.9	.7	2.4
Transportation and warehousing.....	98.4	98.5	98.4	98.6	99.7	100.0	100.4	101.0	101.6	.6	1.9
Utilities.....	95.2	95.1	98.1	99.3	99.5	100.0	107.8	109.3	110.1	.7	10.7
Information.....	96.6	96.8	98.3	99.2	99.5	100.0	100.9	102.1	103.0	.9	3.5
Financial activities.....	96.1	96.8	98.4	99.4	99.2	100.0	101.2	101.8	102.1	.3	2.9
Finance and insurance.....	96.9	97.8	98.7	100.0	99.5	100.0	101.5	102.4	102.6	.2	3.1
Real estate and rental and leasing.....	91.3	91.2	96.9	96.7	98.6	100.0	99.8	99.3	100.2	.9	1.6
Professional and business services.....	97.9	98.5	99.1	99.5	99.6	100.0	101.1	102.2	102.9	.7	3.3
Education and health services.....	96.1	96.7	97.7	98.4	99.3	100.0	101.0	101.8	103.2	1.4	3.9
Education services.....	95.6	96.4	97.1	97.5	99.6	100.0	100.7	101.5	103.2	1.7	3.6
Health care and social assistance.....	96.3	96.7	97.8	98.5	99.3	100.0	101.1	101.9	103.2	1.3	3.9
Hospitals.....	95.3	96.0	97.5	98.2	99.2	100.0	101.3	102.0	103.2	1.2	4.0
Leisure and hospitality.....	97.4	97.7	98.5	99.1	99.6	100.0	100.6	101.3	102.4	1.1	2.8
Accommodation and food services.....	97.2	97.9	98.7	98.9	99.5	100.0	100.5	101.4	102.5	1.1	3.0
Other services, except public administration.....	96.5	97.2	98.0	98.6	99.9	100.0	101.4	102.7	103.6	.9	3.7
State and local government workers.....	95.4	96.1	96.9	97.2	99.1	100.0	100.5	100.9	103.2	2.3	4.1
Workers by occupational group											
Management, professional, and related.....	95.5	96.2	97.0	97.3	99.0	100.0	100.3	100.8	103.3	2.5	4.3
Professional and related.....	95.5	96.1	96.8	97.1	98.9	100.0	100.2	100.8	103.4	2.6	4.6
Sales and office.....	95.7	96.5	97.5	97.6	99.3	100.0	100.9	101.5	103.3	1.8	4.0
Office and administrative support.....	95.6	96.4	97.4	97.5	99.2	100.0	101.0	101.6	103.5	1.9	4.3
Service occupations.....	94.9	95.5	96.2	96.7	99.1	100.0	100.6	101.2	103.1	1.9	4.0
Workers by industry											
Education and health services.....	95.5	96.1	96.7	97.0	99.0	100.0	100.3	100.8	103.7	2.9	4.7
Education services.....	95.4	96.1	96.6	96.9	98.9	100.0	100.2	100.5	103.5	3.0	4.7
Schools.....	95.5	96.1	96.6	96.9	98.9	100.0	100.2	100.5	103.5	3.0	4.7
Elementary and secondary schools.....	95.3	96.0	96.4	96.6	98.8	100.0	100.2	100.5	103.6	3.1	4.9
Health care and social assistance.....	96.3	96.5	97.6	98.0	99.5	100.0	101.3	102.9	105.1	2.1	5.6
Hospitals.....	96.1	96.7	97.6	98.0	99.5	100.0	100.9	101.3	103.3	2.0	3.8
Public administration ³	95.1	95.8	97.1	97.5	99.0	100.0	100.6	101.2	102.4	1.2	3.4

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

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

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

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

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

[December 2005 = 100]

Series	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
										Sept. 2006	
Civilian workers¹	97.2	97.5	98.1	98.7	99.4	100.0	100.7	101.5	102.6	1.1	3.2
Workers by occupational group											
Management, professional, and related.....	97.1	97.5	98.3	98.8	99.4	100.0	100.8	101.6	102.9	1.3	3.5
Management, business, and financial.....	97.9	98.4	99.1	99.5	99.6	100.0	101.2	102.0	102.7	.7	3.1
Professional and related.....	96.6	97.1	97.8	98.3	99.3	100.0	100.6	101.4	103.1	1.7	3.8
Sales and office.....	97.2	97.2	97.8	98.4	99.3	100.0	100.4	101.6	102.4	.8	3.1
Sales and related.....	97.4	96.6	97.3	97.8	99.2	100.0	99.8	101.3	102.0	.7	2.8
Office and administrative support.....	97.1	97.6	98.2	98.8	99.4	100.0	100.8	101.8	102.6	.8	3.2
Natural resources, construction, and maintenance.....	97.0	97.4	97.8	98.7	99.4	100.0	100.7	101.8	102.7	.9	3.3
Construction and extraction.....	96.8	97.4	97.8	98.4	99.3	100.0	100.7	101.9	102.9	1.0	3.6
Installation, maintenance, and repair.....	97.3	97.4	97.8	99.0	99.5	100.0	100.6	101.6	102.6	1.0	3.1
Production, transportation, and material moving.....	97.6	97.8	98.3	98.9	99.6	100.0	100.6	101.2	101.9	.7	2.3
Production.....	97.4	97.5	98.2	98.9	99.5	100.0	100.7	101.2	101.8	.6	2.3
Transportation and material moving.....	97.9	98.2	98.4	98.9	99.7	100.0	100.5	101.2	102.1	.9	2.4
Service occupations.....	97.1	97.6	98.2	98.7	99.5	100.0	100.5	101.2	102.2	1.0	2.7
Workers by industry											
Goods-producing.....	97.2	97.2	97.9	98.7	99.5	100.0	100.7	101.8	102.3	.5	2.8
Manufacturing.....	97.4	97.4	98.2	98.9	99.6	100.0	100.7	101.7	101.9	.2	2.3
Service-providing.....	97.2	97.5	98.2	98.7	99.4	100.0	100.7	101.5	102.7	1.2	3.3
Education and health services.....	96.6	97.0	97.6	98.0	99.1	100.0	100.4	101.1	103.1	2.0	4.0
Health care and social assistance.....	96.7	97.1	98.0	98.5	99.2	100.0	100.8	101.8	103.2	1.4	4.0
Hospitals.....	96.0	96.7	97.6	98.2	99.2	100.0	100.9	101.7	102.9	1.2	3.7
Nursing and residential care facilities.....	96.2	96.9	97.7	98.4	99.1	100.0	100.7	101.2	102.2	1.0	3.1
Education services.....	96.5	96.9	97.4	97.6	99.0	100.0	100.2	100.5	103.0	2.5	4.0
Elementary and secondary schools.....	96.5	96.9	97.1	97.3	98.9	100.0	100.0	100.3	102.9	2.6	4.0
Public administration ²	96.5	97.0	97.9	98.3	99.3	100.0	100.5	101.1	102.0	.9	2.7
Private industry workers	97.3	97.6	98.3	98.9	99.5	100.0	100.7	101.7	102.5	.8	3.0
Workers by occupational group											
Management, professional, and related.....	97.3	97.8	98.6	99.2	99.6	100.0	101.1	102.0	103.0	1.0	3.4
Management, business, and financial.....	98.1	98.5	99.2	99.7	99.5	100.0	101.3	102.2	102.8	.6	3.3
Professional and related.....	96.7	97.2	98.2	98.8	99.6	100.0	100.9	101.8	103.1	1.3	3.5
Sales and office.....	97.2	97.2	97.8	98.5	99.3	100.0	100.4	101.6	102.4	.8	3.1
Sales and related.....	97.4	96.6	97.3	97.8	99.2	100.0	99.8	101.3	102.0	.7	2.8
Office and administrative support.....	97.1	97.6	98.2	99.0	99.4	100.0	100.9	101.9	102.6	.7	3.2
Natural resources, construction, and maintenance.....	97.1	97.5	97.8	98.7	99.4	100.0	100.7	101.8	102.8	1.0	3.4
Construction and extraction.....	96.9	97.5	97.8	98.5	99.3	100.0	100.7	102.0	103.0	1.0	3.7
Installation, maintenance, and repair.....	97.3	97.4	97.8	99.1	99.5	100.0	100.7	101.6	102.6	1.0	3.1
Production, transportation, and material moving.....	97.6	97.8	98.3	98.9	99.6	100.0	100.6	101.2	101.8	.6	2.2
Production.....	97.4	97.5	98.3	98.9	99.5	100.0	100.7	101.2	101.7	.5	2.2
Transportation and material moving.....	97.9	98.2	98.5	98.9	99.7	100.0	100.4	101.2	102.0	.8	2.3
Service occupations.....	97.4	97.9	98.6	99.0	99.6	100.0	100.6	101.3	102.0	.7	2.4
Workers by industry and occupational group											
Goods-producing industries.....	97.2	97.2	97.9	98.7	99.5	100.0	100.7	101.8	102.3	.5	2.8
Management, professional, and related.....	97.0	97.2	98.0	98.8	99.7	100.0	101.1	101.7	102.4	.7	2.7
Sales and office.....	98.3	96.2	96.8	97.9	99.7	100.0	99.8	103.4	102.2	-1.2	2.5
Natural resources, construction, and maintenance.....	97.0	97.4	97.9	98.6	99.4	100.0	100.7	101.9	102.7	.8	3.3
Production, transportation, and material moving.....	97.4	97.5	98.2	98.9	99.5	100.0	100.7	101.3	101.9	.6	2.4
Construction.....	97.0	96.9	97.3	98.3	99.4	100.0	100.6	102.0	102.9	.9	3.5
Manufacturing.....	97.4	97.4	98.2	98.9	99.6	100.0	100.7	101.7	101.9	.2	2.3
Management, professional, and related.....	97.4	97.5	98.2	98.9	99.9	100.0	101.1	101.5	102.2	.7	2.3
Sales and office.....	97.8	97.2	97.9	98.6	100.0	100.0	99.5	103.8	101.1	-2.6	1.1
Natural resources, construction, and maintenance.....	96.8	97.1	97.8	98.6	99.1	100.0	100.9	101.7	102.3	.6	3.2
Production, transportation, and material moving.....	97.4	97.5	98.3	99.0	99.5	100.0	100.7	101.3	101.8	.5	2.3
Service-providing industries.....	97.3	97.7	98.4	99.0	99.5	100.0	100.8	101.7	102.6	.9	3.1
Management, professional, and related.....	97.4	97.9	98.7	99.2	99.6	100.0	101.1	102.0	103.1	1.1	3.5
Sales and office.....	97.1	97.3	97.9	98.5	99.3	100.0	100.5	101.4	102.4	1.0	3.1
Natural resources, construction, and maintenance.....	97.3	97.6	97.8	98.9	99.4	100.0	100.7	101.8	103.0	1.2	3.6
Production, transportation, and material moving.....	97.9	98.2	98.5	98.9	99.7	100.0	100.4	101.0	101.7	.7	2.0
Service occupations.....	97.4	98.0	98.6	99.1	99.6	100.0	100.6	101.3	102.0	.7	2.4
Trade, transportation, and utilities.....	97.3	97.3	97.9	98.4	99.5	100.0	100.4	100.9	102.1	1.2	2.6

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

[December 2005 = 100]

Series	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
										Sept. 2006	
Wholesale trade.....	97.3	96.1	97.5	97.4	99.0	100.0	100.2	100.7	102.7	2.0	3.7
Retail trade.....	96.9	97.4	98.0	98.8	99.6	100.0	100.5	100.9	101.9	1.0	2.3
Transportation and warehousing.....	98.5	98.7	98.2	98.8	99.9	100.0	100.1	100.7	101.4	.7	1.5
Utilities.....	97.1	97.4	98.4	99.2	99.5	100.0	100.8	102.1	103.0	.9	3.5
Information.....	97.4	97.6	98.4	99.2	99.3	100.0	101.0	101.7	102.6	.9	3.3
Financial activities.....	96.9	97.8	98.7	99.8	99.4	100.0	101.3	102.3	102.5	.2	3.1
Finance and insurance.....	98.3	99.2	99.1	100.7	99.7	100.0	101.6	102.8	102.9	.1	3.2
Real estate and rental and leasing.....	90.7	90.7	96.8	96.2	98.3	100.0	99.8	99.9	100.8	.9	2.5
Professional and business services.....	98.5	99.0	99.5	99.7	99.7	100.0	101.0	102.3	103.0	.7	3.3
Education and health services.....	96.5	97.0	97.9	98.4	99.3	100.0	100.7	101.6	103.0	1.4	3.7
Education services.....	96.0	96.8	97.4	97.8	99.7	100.0	100.7	101.4	103.1	1.7	3.4
Health care and social assistance.....	96.6	97.1	97.9	98.6	99.2	100.0	100.7	101.6	103.0	1.4	3.8
Hospitals.....	95.7	96.5	97.4	98.1	99.1	100.0	100.9	101.8	102.9	1.1	3.8
Leisure and hospitality.....	97.2	97.6	98.3	98.8	99.5	100.0	100.6	101.3	102.3	1.0	2.8
Accommodation and food services.....	96.7	97.5	97.9	98.3	99.3	100.0	100.5	101.3	102.2	.9	2.9
Other services, except public administration.....	96.6	97.1	97.8	98.4	99.8	100.0	101.3	102.6	103.4	.8	3.6
State and local government workers.....	96.6	97.0	97.6	97.8	99.1	100.0	100.3	100.8	102.8	2.0	3.7
Workers by occupational group											
Management, professional, and related.....	96.6	97.0	97.5	97.8	99.0	100.0	100.2	100.7	102.9	2.2	3.9
Professional and related.....	96.6	96.9	97.4	97.7	98.9	100.0	100.2	100.7	103.0	2.3	4.1
Sales and office.....	97.3	97.6	98.1	98.0	99.4	100.0	100.6	101.2	102.6	1.4	3.2
Office and administrative support.....	97.1	97.5	98.0	97.9	99.3	100.0	100.7	101.4	102.7	1.3	3.4
Service occupations.....	96.4	96.8	97.3	97.7	99.3	100.0	100.3	100.8	102.4	1.6	3.1
Workers by industry											
Education and health services.....	96.6	97.0	97.4	97.6	99.0	100.0	100.2	100.7	103.1	2.4	4.1
Education services.....	96.6	96.9	97.3	97.5	98.9	100.0	100.1	100.4	103.0	2.6	4.1
Schools.....	96.6	96.9	97.3	97.5	98.9	100.0	100.1	100.4	103.0	2.6	4.1
Elementary and secondary schools.....	96.5	96.9	97.1	97.2	98.9	100.0	100.0	100.3	103.0	2.7	4.1
Health care and social assistance.....	97.1	97.3	98.1	98.5	99.4	100.0	101.0	103.0	104.8	1.7	5.4
Hospitals.....	97.1	97.7	98.3	98.6	99.4	100.0	100.9	101.4	103.1	1.7	3.7
Public administration ²	96.5	97.0	97.9	98.3	99.3	100.0	100.5	101.1	102.0	.9	2.7

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	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
										Sept. 2006	
Civilian workers.....	94.8	95.7	97.6	98.3	99.5	100.0	100.9	101.6	102.8	1.2	3.3
Private industry workers.....	95.4	96.2	98.1	99.0	99.7	100.0	101.0	101.7	102.5	.8	2.8
Workers by occupational group											
Management, professional, and related.....	94.4	95.4	98.2	99.0	99.8	100.0	101.3	101.8	102.8	1.0	3.0
Sales and office.....	95.2	95.8	97.6	98.5	99.3	100.0	100.8	101.6	102.0	.4	2.7
Natural resources, construction, and maintenance.....	95.4	96.4	98.0	99.3	99.8	100.0	101.1	102.7	103.5	.8	3.7
Production, transportation, and material moving.....	97.1	97.7	98.7	99.3	100.0	100.0	100.1	101.0	101.6	.6	1.6
Service occupations.....	96.7	97.0	98.3	98.9	99.5	100.0	101.5	102.2	103.0	.8	3.5
Workers by industry											
Goods-producing.....	95.0	96.3	98.3	99.6	100.4	100.0	99.6	100.4	101.3	.9	.9
Manufacturing.....	95.3	96.0	98.3	99.4	100.0	100.0	99.0	99.7	100.5	.8	.5
Service-providing.....	95.5	96.1	98.1	98.7	99.4	100.0	101.5	102.3	103.0	.7	3.6
State and local government workers.....	93.0	94.1	95.5	96.0	99.0	100.0	100.7	101.3	104.1	2.8	5.2

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	2004		2005				2006			Percent change	
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	3 months ended	12 months ended
	Sept. 2006										
COMPENSATION											
Workers by bargaining status¹											
Union.....	96.7	97.3	97.9	98.8	99.6	100.0	100.5	101.8	102.4	0.6	2.8
Goods-producing.....	96.7	97.2	97.7	98.8	99.6	100.0	99.9	101.2	101.8	.6	2.2
Manufacturing.....	97.5	97.8	98.3	99.1	99.7	100.0	99.3	100.1	100.5	.4	.8
Service-providing.....	96.6	97.3	98.1	98.8	99.6	100.0	101.0	102.2	102.9	.7	3.3
Nonunion.....	96.7	97.2	98.3	98.9	99.5	100.0	100.9	101.7	102.6	.9	3.1
Goods-producing.....	96.4	96.8	98.1	99.0	99.9	100.0	100.5	101.4	102.0	.6	2.1
Manufacturing.....	96.4	96.6	98.2	99.1	99.8	100.0	100.3	101.3	101.7	.4	1.9
Service-providing.....	96.9	97.3	98.3	98.9	99.4	100.0	101.0	101.8	102.7	.9	3.3
Workers by region¹											
Northeast.....	96.3	96.6	97.6	98.5	99.2	100.0	100.9	101.8	102.5	.7	3.3
South.....	97.1	97.7	98.9	99.3	99.7	100.0	101.0	101.6	102.8	1.2	3.1
Midwest.....	96.6	96.9	97.8	98.4	99.5	100.0	100.7	101.7	102.3	.6	2.8
West.....	96.9	97.4	98.4	99.3	99.7	100.0	100.6	101.8	102.5	.7	2.8
WAGES AND SALARIES											
Workers by bargaining status¹											
Union.....	97.1	97.6	97.9	98.7	99.5	100.0	100.3	101.2	101.7	.5	2.2
Goods-producing.....	96.9	97.1	97.5	98.5	99.2	100.0	100.5	101.6	101.9	.3	2.7
Manufacturing.....	97.0	97.1	97.6	98.3	99.0	100.0	100.6	101.2	101.4	.2	2.4
Service-providing.....	97.3	98.0	98.2	99.0	99.7	100.0	100.1	100.9	101.6	.7	1.9
Nonunion.....	97.3	97.6	98.3	98.9	99.5	100.0	100.8	101.8	102.7	.9	3.2
Goods-producing.....	97.3	97.3	98.0	98.7	99.6	100.0	100.7	101.9	102.4	.5	2.8
Manufacturing.....	97.5	97.5	98.4	99.0	99.8	100.0	100.7	101.8	102.0	.2	2.2
Service-providing.....	97.3	97.7	98.4	99.0	99.5	100.0	100.8	101.7	102.7	1.0	3.2
Workers by region¹											
Northeast.....	97.1	97.2	97.8	98.6	99.2	100.0	100.8	101.7	102.5	.8	3.3
South.....	97.5	98.0	98.9	99.3	99.7	100.0	101.0	101.6	102.9	1.3	3.2
Midwest.....	96.9	97.1	97.8	98.2	99.4	100.0	100.4	101.4	102.0	.6	2.6
West.....	97.7	98.0	98.4	99.3	99.6	100.0	100.7	102.1	102.7	.6	3.1

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, 2003–05

Series	Year		
	2003	2004	2005
All retirement			
Percentage of workers with access			
All workers.....	57	59	60
White-collar occupations.....	67	69	70
Blue-collar occupations.....	59	59	60
Service occupations.....	28	31	32
Full-time.....	67	68	69
Part-time.....	24	27	27
Union.....	86	84	88
Nonunion.....	54	56	56
Average wage less than \$15 per hour.....	45	46	46
Average wage \$15 per hour or higher.....	76	77	78
Goods-producing industries.....	70	70	71
Service-producing industries.....	53	55	56
Establishments with 1–99 workers.....	42	44	44
Establishments with 100 or more workers.....	75	77	78
Percentage of workers participating			
All workers.....	49	50	50
White-collar occupations.....	59	61	61
Blue-collar occupations.....	50	50	51
Service occupations.....	21	22	22
Full-time.....	58	60	60
Part-time.....	18	20	19
Union.....	83	81	85
Nonunion.....	45	47	46
Average wage less than \$15 per hour.....	35	36	35
Average wage \$15 per hour or higher.....	70	71	71
Goods-producing industries.....	63	63	64
Service-producing industries.....	45	47	47
Establishments with 1–99 workers.....	35	37	37
Establishments with 100 or more workers.....	65	67	67
Take-up rate (all workers)¹.....	–	–	85
Defined benefit			
Percentage of workers with access			
All workers.....	20	21	22
White-collar occupations.....	23	24	25
Blue-collar occupations.....	24	26	26
Service occupations.....	8	6	7
Full-time.....	24	25	25
Part-time.....	8	9	10
Union.....	74	70	73
Nonunion.....	15	16	16
Average wage less than \$15 per hour.....	12	11	12
Average wage \$15 per hour or higher.....	34	35	35
Goods-producing industries.....	31	32	33
Service-producing industries.....	17	18	19
Establishments with 1–99 workers.....	9	9	10
Establishments with 100 or more workers.....	34	35	37
Percentage of workers participating			
All workers.....	20	21	21
White-collar occupations.....	22	24	24
Blue-collar occupations.....	24	25	26
Service occupations.....	7	6	7
Full-time.....	24	24	25
Part-time.....	8	9	9
Union.....	72	69	72
Nonunion.....	15	15	15
Average wage less than \$15 per hour.....	11	11	11

See footnotes at end of table.

34. Continued—National Compensation Survey: retirement benefits in private industry by access, participation, and selected series, 2003–05

Series	Year		
	2003	2004	2005
Average wage \$15 per hour or higher.....	33	35	34
Goods-producing industries.....	31	31	32
Service-producing industries.....	16	18	18
Establishments with 1–99 workers.....	8	9	9
Establishments with 100 or more workers.....	33	34	36
Take-up rate (all workers)¹	–	–	97
Defined contribution			
Percentage of workers with access			
All workers.....	51	53	53
White-collar occupations.....	62	64	64
Blue-collar occupations.....	49	49	50
Service occupations.....	23	27	28
Full-time.....	60	62	62
Part-time.....	21	23	23
Union.....	45	48	49
Nonunion.....	51	53	54
Average wage less than \$15 per hour.....	40	41	41
Average wage \$15 per hour or higher.....	67	68	69
Goods-producing industries.....	60	60	61
Service-producing industries.....	48	50	51
Establishments with 1–99 workers.....	38	40	40
Establishments with 100 or more workers.....	65	68	69
Percentage of workers participating			
All workers.....	40	42	42
White-collar occupations.....	51	53	53
Blue-collar occupations.....	38	38	38
Service occupations.....	16	18	18
Full-time.....	48	50	50
Part-time.....	14	14	14
Union.....	39	42	43
Nonunion.....	40	42	41
Average wage less than \$15 per hour.....	29	30	29
Average wage \$15 per hour or higher.....	57	59	59
Goods-producing industries.....	49	49	50
Service-producing industries.....	37	40	39
Establishments with 1–99 workers.....	31	32	32
Establishments with 100 or more workers.....	51	53	53
Take-up rate (all workers)¹	–	–	78
Employee contribution requirement			
Employee contribution required.....	–	–	61
Employee contribution not required.....	–	–	31
Not determinable.....	–	–	8
Percent of establishments			
Offering retirement plans.....	47	48	51
Offering defined benefit plans.....	10	10	11
Offering defined contribution plans.....	45	46	48

¹The take-up rate is an estimate of the percentage of workers with access to a plan who participate in the plan.

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

**35. National Compensation Survey: health insurance benefits in private industry
by access, participation, and selected series, 2003–05**

Series	Year		
	2003	2004	2005
Medical insurance			
Percentage of workers with access			
All workers.....	60	69	70
White-collar occupations.....	65	76	77
Blue-collar occupations.....	64	76	77
Service occupations.....	38	42	44
Full-time.....	73	84	85
Part-time.....	17	20	22
Union.....	67	89	92
Nonunion.....	59	67	68
Average wage less than \$15 per hour.....	51	57	58
Average wage \$15 per hour or higher.....	74	86	87
Goods-producing industries.....	68	83	85
Service-producing industries.....	57	65	66
Establishments with 1–99 workers.....	49	58	59
Establishments with 100 or more workers.....	72	82	84
Percentage of workers participating			
All workers.....	45	53	53
White-collar occupations.....	50	59	58
Blue-collar occupations.....	51	60	61
Service occupations.....	22	24	27
Full-time.....	56	66	66
Part-time.....	9	11	12
Union.....	60	81	83
Nonunion.....	44	50	49
Average wage less than \$15 per hour.....	35	40	39
Average wage \$15 per hour or higher.....	61	71	72
Goods-producing industries.....	57	69	70
Service-producing industries.....	42	48	48
Establishments with 1–99 workers.....	36	43	43
Establishments with 100 or more workers.....	55	64	65
Take-up rate (all workers)¹.....	–	–	75
Dental			
Percentage of workers with access			
All workers.....	40	46	46
White-collar occupations.....	47	53	54
Blue-collar occupations.....	40	47	47
Service occupations.....	22	25	25
Full-time.....	49	56	56
Part-time.....	9	13	14
Union.....	57	73	73
Nonunion.....	38	43	43
Average wage less than \$15 per hour.....	30	34	34
Average wage \$15 per hour or higher.....	55	63	62
Goods-producing industries.....	48	56	56
Service-producing industries.....	37	43	43
Establishments with 1–99 workers.....	27	31	31
Establishments with 100 or more workers.....	55	64	65
Percentage of workers participating			
All workers.....	32	37	36
White-collar occupations.....	37	43	42
Blue-collar occupations.....	33	40	39
Service occupations.....	15	16	17
Full-time.....	40	46	45
Part-time.....	6	8	9
Union.....	51	68	67
Nonunion.....	30	33	33
Average wage less than \$15 per hour.....	22	26	24

See footnotes at end of table.

35. Continued—National Compensation Survey: health insurance benefits in private industry by access, participation, and selected series, 2003–05

Series	Year		
	2003	2004	2005
Average wage \$15 per hour or higher.....	47	53	52
Goods-producing industries.....	42	49	49
Service-producing industries.....	29	33	33
Establishments with 1–99 workers.....	21	24	24
Establishments with 100 or more workers.....	44	52	51
Take-up rate (all workers) ¹	–	–	78
Vision care			
Percentage of workers with access.....	25	29	29
Percentage of workers participating.....	19	22	22
Outpatient prescription drug coverage			
Percentage of workers with access.....	–	–	64
Percentage of workers participating.....	–	–	48
Percent of establishments offering healthcare benefits			
	58	61	63
Percentage of medical premium paid by employer and employee			
Single coverage			
Employer share.....	82	82	82
Employee share.....	18	18	18
Family coverage			
Employer share.....	70	69	71
Employee share.....	30	31	29

¹The 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, 2003–05

Benefit	Year		
	2003	2004	2005
Life insurance.....	50	51	52
Short-term disability insurance.....	39	39	40
Long-term disability insurance.....	30	30	30
Long-term care insurance.....	11	11	11
Flexible work place.....	4	4	4
Section 125 cafeteria benefits			
Flexible benefits.....	—	—	17
Dependent care reimbursement account.....	—	—	29
Healthcare reimbursement account.....	—	—	31
Health Savings Account.....	—	—	5
Employee assistance program.....	—	—	40
Paid leave			
Holidays.....	79	77	77
Vacations.....	79	77	77
Sick leave.....	—	59	58
Personal leave.....	—	—	36
Family leave			
Paid family leave.....	—	—	7
Unpaid family leave.....	—	—	81
Employee assistance for childcare.....	18	14	14
Nonproduction bonuses.....	49	47	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 totals		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
Number of stoppages:															
Beginning in period.....	17	22	1	1	1	0	1	2	2	1	4	1	4	1	3
In effect during period.....	18	24	4	5	4	3	4	5	6	5	7	4	6	6	5
Workers involved:															
Beginning in period (in thousands).....	170.7	99.6	5.3	1.5	35.0	.0	3.6	4.2	3.1	5.0	10.8	3.0	19.6	3.9	15.0
In effect during period (in thousands).	316.5	160.7	12.3	13.8	41.5	6.5	10.1	12.9	14.2	13.9	18.2	10.4	25.8	22.2	19.9
Days idle:															
Number (in thousands).....	3,344.1	1,736.1	145.3	181.5	241.5	130.0	124.3	261.5	176.1	179.8	188.0	146.8	215.4	247.7	342.7
Percent of estimated working time ¹.....	.01	.1	.01	.01	.01	(²)	(²)	.01	.01	.01	.01	.01	.01	.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.

² Less than 0.005.

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items.....	188.9	195.3	199.2	197.6	196.8	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8
All items (1967 = 100).....	565.8	585.0	596.7	592.0	589.4	593.9	595.2	598.6	603.5	606.5	607.8	609.6	610.9	607.9	604.6
Food and beverages.....	186.6	191.2	192.5	192.8	193.2	194.5	194.4	194.5	194.2	194.7	195.1	195.6	196.0	196.7	197.5
Food.....	186.2	190.7	192.1	192.4	192.9	194.1	194.0	194.0	193.7	194.2	194.5	195.0	195.5	196.2	197.1
Food at home.....	186.2	189.8	190.8	191.0	191.7	193.4	192.6	192.3	191.5	191.9	192.2	192.6	193.1	194.1	195.1
Cereals and bakery products.....	206.0	209.0	209.4	209.1	208.4	210.6	210.3	210.9	210.9	211.9	212.8	214.6	214.6	213.6	214.6
Meats, poultry, fish, and eggs.....	181.7	184.7	184.6	185.8	185.7	185.8	185.4	185.9	185.5	184.7	186.0	185.1	187.1	188.0	188.1
Dairy and related product ¹	180.2	182.4	182.6	183.5	183.2	183.7	183.4	183.0	181.3	181.0	179.6	180.8	180.0	179.9	182.0
Fruits and vegetables.....	232.7	241.4	245.7	246.4	252.3	258.5	253.4	248.5	246.6	248.0	248.0	249.1	249.2	258.2	261.6
Nonalcoholic beverages and beverage materials.....	140.4	144.4	145.6	145.5	145.5	147.2	147.3	148.0	146.3	146.6	146.6	146.3	146.9	147.5	148.3
Other foods at home.....	164.9	167.0	168.3	167.3	167.6	169.1	169.1	169.2	168.8	170.0	170.0	171.0	170.6	169.8	170.1
Sugar and sweets.....	163.2	165.2	166.3	166.5	167.8	169.3	167.3	170.1	171.0	171.3	171.9	173.3	173.5	172.1	172.5
Fats and oils.....	167.8	167.7	168.6	166.2	165.2	169.9	170.4	168.5	165.0	168.6	167.3	166.9	167.5	167.9	169.1
Other foods.....	179.7	182.5	184.0	183.0	183.3	184.3	184.7	184.5	184.3	185.4	185.6	186.9	186.1	185.0	185.2
Other miscellaneous food ^{1,2}	110.4	111.3	112.1	112.7	112.4	112.6	113.4	113.0	113.2	114.3	114.4	115.0	113.8	114.2	113.7
Food away from home ¹	187.5	193.4	195.2	195.6	196.0	196.6	197.2	197.6	198.0	198.7	199.2	199.7	200.2	200.5	201.1
Other food away from home ^{1,2}	125.3	131.3	133.5	133.7	133.7	134.1	134.7	135.2	135.8	136.0	136.3	136.8	137.3	137.6	138.0
Alcoholic beverages.....	192.1	195.9	196.8	197.1	196.4	198.0	199.5	200.1	200.1	200.8	201.6	201.3	201.2	201.4	201.9
Housing.....	189.5	195.7	198.4	198.5	198.3	200.0	200.5	201.3	201.7	202.2	203.7	204.7	205.1	205.0	204.4
Shelter.....	218.8	224.4	225.7	225.4	225.6	226.8	228.3	229.9	230.7	231.2	232.2	233.6	234.2	233.9	234.8
Rent of primary residence.....	211.0	217.3	219.3	220.0	220.5	220.9	221.6	222.3	222.9	223.6	224.4	225.2	226.2	227.1	228.0
Lodging away from home.....	125.9	130.3	129.7	125.2	122.8	127.5	133.4	140.4	140.4	137.9	139.1	142.8	141.1	135.0	135.7
Owners' equivalent rent of primary residence ³	224.9	230.2	231.7	232.2	232.8	233.4	234.1	234.9	235.8	236.9	237.9	238.8	239.7	240.4	241.3
Tenants' and household insurance ^{1,2}	116.2	117.6	115.8	115.9	116.1	115.9	116.2	116.2	116.2	116.3	116.4	116.4	116.2	116.4	116.2
Fuels and utilities.....	161.9	179.0	192.8	194.6	191.6	198.7	194.6	192.3	190.8	192.0	197.6	198.5	199.0	199.6	190.1
Fuels.....	144.4	161.6	176.2	178.0	174.7	182.1	177.5	174.8	173.2	174.4	180.4	181.1	181.5	182.0	171.5
Fuel oil and other fuels.....	160.5	208.6	241.1	231.5	227.8	229.5	230.5	230.4	236.4	239.8	239.1	241.9	245.3	237.1	227.9
Gas (piped) and electricity.....	150.6	166.5	180.7	183.4	180.0	188.1	182.8	179.9	177.7	178.8	185.6	186.2	186.4	187.4	176.4
Household furnishings and operations.....	125.5	126.1	125.9	126.1	126.4	126.5	126.8	126.7	126.9	127.2	127.3	127.1	127.1	127.1	127.4
Apparel.....	120.4	119.5	122.7	121.5	117.5	114.9	116.6	122.0	123.4	122.4	118.9	113.8	116.1	121.7	123.3
Men's and boys' apparel.....	117.5	116.1	117.2	117.4	114.1	112.4	112.7	116.2	118.0	116.5	113.0	110.3	110.8	114.4	116.4
Women's and girls' apparel.....	113.0	110.8	115.1	113.9	108.9	103.0	106.3	115.0	116.3	114.4	110.3	102.3	105.7	114.6	116.4
Infants' and toddlers' appare ¹	118.5	116.7	116.3	115.3	115.0	113.3	116.6	118.7	118.2	118.3	115.0	114.4	115.6	116.5	119.4
Footwear.....	119.3	122.6	126.7	124.3	121.4	122.3	122.8	125.4	126.1	125.8	123.0	119.1	120.6	124.2	125.6
Transportation.....	163.1	173.9	184.0	175.6	172.7	175.9	175.8	177.4	184.1	187.6	187.3	189.0	188.5	180.6	174.8
Private transportation.....	159.4	170.2	180.5	171.8	168.9	172.1	171.9	173.5	180.4	183.9	183.2	184.9	184.5	176.5	170.7
New and used motor vehicle ²	94.2	95.6	95.7	95.8	95.8	96.2	96.2	96.0	96.0	95.8	95.7	95.6	95.5	95.3	95.2
New vehicles.....	137.1	137.9	137.1	138.0	138.3	139.3	139.3	138.8	138.4	137.7	137.2	136.9	136.4	136.3	136.8
Used cars and trucks ¹	133.3	139.4	140.6	139.4	139.2	139.3	139.5	140.0	140.4	140.9	141.5	142.1	142.4	141.0	139.3
Motor fuel.....	160.4	195.7	237.1	199.7	187.3	199.2	198.1	205.8	235.4	250.9	248.4	255.6	254.4	220.1	193.8
Gasoline (all types).....	159.7	194.7	235.9	198.6	186.2	198.2	197.0	204.7	234.4	249.8	247.3	254.6	253.2	219.0	192.7
Motor vehicle parts and equipment.....	108.7	111.9	113.0	113.6	114.0	114.4	114.9	115.4	115.8	117.0	117.0	117.9	118.2	118.7	118.9
Motor vehicle maintenance and repair.....	200.2	206.9	209.8	210.5	210.7	211.2	212.9	213.4	213.9	214.9	215.5	216.7	216.2	217.0	218.5
Public transportation.....	209.1	217.3	222.7	220.8	217.6	219.9	221.3	222.6	225.3	229.2	234.3	237.4	234.3	229.5	226.9
Medical care.....	310.1	323.2	326.2	328.1	328.4	329.5	332.1	333.8	334.7	335.6	336.0	337.0	337.7	338.3	339.3
Medical care commodities.....	269.3	276.0	278.9	280.3	280.8	282.0	283.1	284.3	285.3	286.3	286.3	287.1	287.6	288.1	288.1
Medical care services.....	321.3	336.7	339.7	341.7	342.0	342.9	346.1	348.0	348.8	349.7	350.3	351.2	352.1	352.7	354.0
Professional services.....	271.5	281.7	284.0	284.5	284.9	284.7	286.5	287.8	288.5	289.0	289.2	289.8	290.2	290.6	291.4
Hospital and related services.....	417.9	439.9	443.6	449.6	449.7	453.6	460.4	463.3	464.6	466.1	467.6	469.3	471.1	472.0	474.2
Recreation ²	108.6	109.4	109.9	109.8	109.7	109.9	110.2	110.6	111.1	111.2	111.2	111.3	111.3	111.1	111.2
Video and audio ^{1,2}	104.2	104.2	104.4	104.2	103.9	104.1	104.3	105.2	105.8	105.5	105.2	105.0	104.7	104.5	104.1
Education and communication ²	111.6	113.7	115.1	115.3	115.3	115.7	115.7	115.6	115.8	115.7	115.9	116.3	117.5	118.4	118.5
Education ²	143.7	152.7	157.4	157.5	157.6	158.3	158.4	158.4	158.6	158.9	159.5	160.3	163.9	166.6	167.1
Educational books and supplies.....	351.0	365.6	373.9	373.6	374.3	379.2	382.0	383.1	383.1	384.7	386.7	386.3	391.3	393.9	398.4
Tuition, other school fees, and child care.....	414.3	440.9	454.7	455.1	455.3	457.2	457.2	457.2	457.2	458.6	460.2	462.9	473.4	481.7	482.9
Communication ^{1,2}	86.7	84.7	84.2	84.4	84.3	84.5	84.5	84.4	84.5	84.2	84.3	84.3	84.3	84.2	84.0
Information and information processing ^{1,2}	84.6	82.6	82.0	82.2	82.2	82.1	82.0	81.9	82.1	81.7	81.8	81.9	81.8	81.7	81.5
Telephone services ^{1,2}	95.8	94.9	94.6	95.2	95.2	95.2	95.2	95.0	95.4	95.2	95.4	95.6	95.9	96.1	96.8
Information and information processing other than telephone service ^{1,4}	14.8	13.6	13.3	13.1	13.1	13.0	13.0	13.0	12.9	12.8	12.7	12.7	12.5	12.3	11.9
Personal computers and peripheral equipment ^{1,2}	15.3	12.8	12.2	12.0	11.7	11.6	11.5	11.4	11.1	10.8	10.7	10.6	10.6	10.5	10.4
Other goods and services.....	304.7	313.4	315.3	316.2	317.3	318.2	319.1	320.0	320.0	320.2	321.5	321.2	321.7	323.3	324.3
Tobacco and smoking products.....	478.0	502.8	509.4	511.2	513.1	515.1	515.9	519.0	518.1	517.5	521.5	521.5	521.1	520.8	521.1
Personal care ¹	181.7	185.6	186.4	186.9	187.6	188.1	188.6	189.1	189.1	189.4	189.9	189.7	190.1	191.3	192.0
Personal care products ¹	153.9	154.4	155.0	155.0	155.4	155.8	155.6	155.2	155.0	154.6	155.2	155.0	154.9	156.4	156.6
Personal care services ¹	197.6	203.9	204.8	205.2											

38. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. cit average, by expenditure category and commodity or service group
 [1982–84 = 100, unless otherwise indicated]

Series	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Miscellaneous personal services.....	293.9	303.0	305.0	305.9	306.6	308.2	309.3	310.9	311.3	312.4	313.3	312.9	314.4	316.4	317.6
Commodity and service group:															
Commodities.....	154.7	160.2	165.1	161.5	160.0	161.3	161.4	162.8	165.5	166.9	166.3	166.4	166.6	164.4	162.5
Food and beverages.....	186.6	191.2	192.5	192.8	193.2	194.5	194.4	194.5	194.2	194.7	195.1	195.6	196.0	196.7	197.5
Commodities less food and beverages.....	136.7	142.5	148.9	143.6	141.3	142.6	142.8	144.7	148.6	150.3	149.3	149.3	149.4	146.0	143.0
Nondurables less food and beverages.....	157.2	168.4	182.0	171.1	166.3	168.7	169.1	173.3	181.8	185.6	183.8	183.8	184.5	177.7	171.2
Apparel.....	120.4	119.5	122.7	121.5	117.5	114.9	116.6	122.0	123.4	122.4	118.9	113.8	116.1	121.7	123.3
Nondurables less food, beverages, and apparel.....	183.9	202.6	222.8	205.9	200.4	206.0	205.7	209.3	222.3	229.2	228.4	231.6	231.2	216.6	205.0
Durables.....	114.8	115.3	114.9	114.9	114.9	115.3	115.3	115.1	115.1	114.9	114.6	114.6	114.3	113.8	113.8
Services.....	222.8	230.1	233.0	233.5	233.2	234.9	235.7	236.6	237.1	237.7	239.2	240.2	240.9	241.1	240.9
Rent of shelter ³	227.9	233.7	235.1	234.9	235.0	236.2	237.8	239.6	240.4	241.0	242.0	243.4	244.1	243.8	244.7
Transportation services.....	220.6	225.7	227.6	228.4	227.8	228.2	228.7	228.8	229.6	230.7	231.8	232.7	232.2	231.7	232.3
Other services.....	261.3	268.4	271.5	272.1	272.3	273.2	273.9	274.6	275.5	275.8	276.6	277.2	279.1	280.8	281.2
Special indexes:															
All items less food.....	189.4	196.0	200.4	198.5	197.4	199.0	199.5	200.8	202.8	203.9	204.3	204.9	205.4	204.1	202.6
All items less shelter.....	179.3	186.1	191.1	189.0	187.7	189.3	189.4	190.3	192.3	193.5	193.7	194.0	194.4	193.1	191.2
All items less medical care.....	182.7	188.7	192.6	190.9	190.0	191.6	191.9	193.0	194.7	195.6	196.1	196.6	197.1	196.0	194.9
Commodities less food.....	138.8	144.5	150.8	145.6	143.3	144.7	144.9	146.8	150.6	152.3	151.3	151.3	151.4	148.0	145.1
Nondurables less food.....	159.3	170.1	183.0	172.7	168.1	170.5	171.0	175.0	182.9	186.5	184.9	184.9	185.5	179.1	173.1
Nondurables less food and apparel.....	183.8	201.2	219.6	204.2	199.2	204.3	204.2	207.5	219.2	225.5	224.8	227.6	227.3	214.2	203.8
Nondurables.....	172.2	180.2	188.0	182.4	180.1	182.0	182.2	184.4	188.7	191.0	190.2	190.4	191.0	187.8	184.8
Services less rent of shelter ³	233.5	243.2	248.2	249.5	248.8	251.2	251.0	250.9	251.0	251.8	253.9	254.6	255.4	256.2	254.4
Services less medical care services.....	214.5	221.2	224.1	224.4	224.2	225.9	226.5	227.3	227.8	228.4	229.9	231.0	231.6	231.8	231.5
Energy.....	151.4	177.1	204.3	187.6	180.0	189.5	186.4	188.6	201.4	209.3	211.3	215.1	214.7	199.1	181.3
All items less energy.....	194.4	198.7	200.1	200.2	200.1	200.8	201.6	202.6	203.0	203.3	203.6	203.9	204.4	204.9	205.6
All items less food and energy.....	196.6	200.9	202.3	202.3	202.1	202.6	203.6	204.9	205.0	205.3	205.9	206.2	207.6	207.2	207.8
Commodities less food and energy.....	139.6	140.3	141.0	140.8	140.1	139.9	140.3	141.5	141.7	141.5	140.7	139.6	139.9	140.9	141.2
Energy commodities.....	161.2	197.4	238.6	202.7	190.7	202.1	201.1	208.3	236.6	251.4	249.0	256.0	255.0	222.3	196.9
Services less energy.....	230.2	236.6	238.4	238.6	238.7	239.7	241.1	242.4	243.2	243.7	244.7	245.8	246.5	246.6	247.5
CONSUMER PRICE INDEX FOR URBAN															
WAGE EARNERS AND CLERICAL WORKERS															
All items.....	184.5	191.0	195.2	193.4	192.5	194.0	194.2	195.3	197.2	198.2	198.6	199.2	199.6	198.4	197.0
All items (1967 = 100).....	549.5	568.9	581.5	576.1	573.3	577.7	578.6	581.8	587.3	590.5	591.7	593.2	594.6	591.0	586.7
Food and beverages.....	186.2	190.5	191.8	192.1	192.5	193.8	193.7	193.8	194.4	193.9	194.6	194.6	195.2	195.9	196.7
Food.....	185.7	190.1	191.4	191.7	192.2	193.4	193.3	193.2	192.8	193.3	193.7	194.1	194.7	195.5	196.2
Food at home.....	185.4	188.9	189.9	190.1	190.7	192.4	191.7	191.4	190.5	190.9	191.2	191.6	192.2	193.3	194.2
Cereals and bakery products.....	206.0	208.9	209.2	208.9	208.4	210.8	210.5	211.1	211.2	212.2	213.1	214.9	214.8	214.1	214.9
Meats, poultry, fish, and eggs.....	181.8	184.7	184.5	185.8	185.6	185.4	185.1	185.8	185.1	184.4	185.4	184.7	186.7	187.5	187.5
Dairy and related products ¹	180.0	182.2	182.4	183.3	183.0	183.5	183.3	182.7	180.8	180.5	179.1	180.3	179.4	179.4	181.4
Fruits and vegetables.....	230.4	238.9	243.4	243.4	249.6	256.2	251.3	245.9	244.0	246.0	245.7	247.0	247.9	257.3	260.8
Nonalcoholic beverages and beverage materials.....	139.7	143.7	144.9	144.8	144.9	146.7	146.7	147.3	145.7	145.9	146.1	145.6	146.3	146.8	147.7
Other foods at home.....	164.5	166.5	167.7	166.9	167.1	168.5	168.7	168.7	168.2	169.4	169.5	170.4	170.0	169.3	169.5
Sugar and sweets.....	162.5	164.3	165.6	165.7	166.9	168.3	166.5	169.0	169.9	170.5	170.9	172.5	172.5	171.3	171.4
Fats and oils.....	167.8	167.8	168.6	166.3	165.6	170.4	171.2	169.4	165.7	169.1	167.9	167.9	168.2	168.6	169.8
Other foods.....	180.1	182.8	184.1	183.4	183.7	184.4	185.0	184.8	184.5	185.5	185.9	187.0	186.2	185.3	185.3
Other miscellaneous foods ^{1,2}	110.9	111.8	112.5	113.2	112.9	113.0	113.8	113.4	114.4	114.4	115.0	115.2	114.2	114.5	113.8
Food away from home ¹	187.4	193.3	195.1	195.5	195.8	196.4	197.0	197.4	197.8	198.4	198.9	199.4	199.9	200.2	200.8
Other food away from home ^{1,2}	125.1	131.1	133.3	133.5	133.6	133.7	134.4	134.8	135.6	135.8	136.0	136.3	136.7	137.1	137.5
Alcoholic beverages.....	192.4	195.8	196.5	197.0	196.3	198.0	199.4	200.5	200.3	200.6	201.0	200.8	200.7	200.9	201.8
Housing.....	185.0	191.2	194.1	194.4	194.2	195.8	196.1	196.6	196.8	197.4	198.9	199.7	200.3	200.4	199.6
Shelter.....	212.2	217.5	218.8	218.9	219.2	220.0	221.2	222.4	223.1	223.7	224.7	225.8	226.5	226.6	227.5
Rent of primary residence.....	210.2	216.5	218.4	219.1	219.7	220.1	220.8	221.4	222.0	222.7	223.5	224.3	225.3	226.2	227.1
Lodging away from home ²	126.4	130.0	129.2	124.5	122.4	126.1	133.1	140.4	139.8	136.6	138.7	142.6	141.1	134.0	134.7
Owners' equivalent rent of primary residence ³	204.1	208.8	210.2	210.7	211.2	211.7	212.4	213.0	213.9	214.8	215.7	216.5	217.3	218.0	218.8
Tenants' and household insurance ^{1,2}	116.4	117.9	116.0	116.2	116.4	116.2	116.5	116.5	116.5	116.6	116.7	116.7	116.6	116.8	116.6
Fuels and utilities.....	161.2	177.9	191.0	193.0	190.2	197.3	193.2	190.8	189.4	190.4	196.0	196.7	197.2	197.7	188.1
Fuels.....	143.2	159.7	173.5	175.5	172.4	179.7	175.0	172.4	170.8	171.8	177.8	178.3	178.6	179.0	168.7
Fuel oil and other fuels.....	160.0	208.1	241.2	231.3	227.4	228.9	229.7	229.8	235.8	238.9	238.3	241.3	244.6	235.8	226.6
Gas (piped) and electricity.....	149.8	165.4	178.8	181.6	178.3	186.4	181.1	178.3	176.1	177.1	183.7	184.1	184.3	185.3	174.3
Household furnishings and operations.....	121.1	121.8	121.8	121.8	121.9	122.0	122.4	122.5	122.5	122.8	122.9	122.7	122.7	122.7	122.8
Apparel.....	120.0	119.1	121.9	121.0	117.2	114.3	116.1	121.6	123.1	121.9	118.4	113.2	115.7	121.4	123.1
Men's and boys' apparel.....	117.3	115.6	116.6	116.9	113.5	112.0	112.7	115.7	117.5	116.5	113.0	110.3	110.9	114.5	116.4
Women's and girls' apparel.....	112.8	110.4	114.3	113.4	108.3	102.1	105.4	114.3	115.9	114.0	109.8	101.3	105.4	114.3	115.9
Infants' and toddlers' apparel ¹	121.3	119.3	118.7	117.8	117.6	115.8	118.1	120.8	120.3	120.2	116.8	115.9	117.7	118.5	121.8
Footwear.....	118.2	121.8	125.4	123.2	120.9	121.6	122.1	124.7	125.4	125.1	122.6	119.1	120.3	123.9	125.2
Transportation.....	161.5	173.0	183.7	174.7	171.6	174.9	174.8	176.6	183.9	187.7	187.1	189.0	188.6	180.1	173.7
Private transportation.....	158.8	170.3	181.1	171.9	168.8	172.2	172.0	173.8	181.2	184.9	184.2	186.1	185.8	177.1	170.7
New and used motor vehicles ²	92.8	94.7	94.9	94.9	9										

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		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
New vehicles.....	138.1	138.9	138.2	139.1	139.3	140.3	140.3	139.9	139.5	138.8	138.3	137.9	137.4	137.4	137.8
Used cars and trucks ¹	134.1	140.3	141.4	140.2	140.0	140.1	140.3	140.8	141.3	141.8	142.4	143.0	143.2	141.9	140.1
Motor fuel.....	160.9	196.3	238.0	200.5	188.0	199.9	198.7	206.5	236.1	251.3	248.8	256.2	255.1	220.8	194.4
Gasoline (all types).....	160.2	195.4	236.8	199.4	187.0	198.9	197.7	205.6	235.2	250.3	247.8	255.3	254.1	219.7	193.4
Motor vehicle parts and equipment.....	108.2	111.5	112.6	113.2	113.6	113.9	114.3	114.9	115.3	116.5	116.6	117.5	117.8	118.4	118.6
Motor vehicle maintenance and repair.....	202.0	209.3	212.4	213.1	213.2	213.6	215.4	215.8	216.3	217.4	218.0	219.1	218.6	219.4	221.1
Public transportation.....	207.1	215.5	220.9	219.4	216.6	219.0	220.4	221.6	224.0	227.5	232.0	234.1	231.4	227.8	225.6
Medical care.....	309.5	322.8	325.8	327.9	328.2	329.1	331.5	333.2	334.2	335.0	335.5	336.5	337.3	337.8	338.9
Medical care commodities.....	263.2	269.2	271.8	273.4	273.9	275.0	276.3	277.3	278.4	279.4	279.4	280.3	280.6	281.1	281.0
Medical care services.....	321.5	337.3	340.4	342.6	342.8	343.6	346.4	348.3	349.2	350.0	350.6	351.6	352.5	353.1	354.6
Professional services.....	274.0	284.3	286.6	287.1	287.4	287.2	288.9	290.2	290.8	291.3	291.5	292.1	292.5	292.8	293.6
Hospital and related services.....	414.0	436.1	439.8	446.4	446.4	450.1	455.4	458.4	459.9	461.2	462.8	464.8	466.7	467.5	469.9
Recreation ²	106.3	106.8	107.3	107.2	107.1	107.2	107.5	107.9	108.4	108.5	108.6	108.7	108.5	108.3	108.4
Video and audio ^{1,2}	103.4	103.4	103.7	103.5	103.2	103.3	103.6	104.4	104.9	104.7	104.5	104.3	104.1	103.9	103.5
Education and communication ²	110.0	111.4	112.4	112.7	112.6	113.1	113.1	113.0	113.2	113.0	113.3	113.5	114.5	115.3	115.4
Education ²	142.5	151.0	155.3	155.5	155.6	156.7	156.7	156.8	156.9	157.2	157.8	158.4	161.7	164.7	165.2
Educational books and supplies.....	352.2	367.1	375.1	374.8	375.5	380.6	383.5	384.9	384.7	386.2	388.1	387.6	393.0	395.4	400.9
Tuition, other school fees, and child care.....	402.5	427.1	439.7	440.3	440.5	443.3	443.1	443.5	444.4	446.1	448.0	457.7	466.6	467.4	467.4
Communication ^{1,2}	88.3	86.4	85.9	86.2	86.2	86.3	86.3	86.2	86.3	86.0	86.1	86.2	86.2	86.2	86.1
Information and information processing ^{1,2}	86.8	84.9	84.4	84.7	84.6	84.6	84.6	84.5	84.6	84.3	84.4	84.5	84.5	84.4	84.4
Telephone services ^{1,2}	96.0	95.0	94.8	95.3	95.3	95.3	95.4	95.2	95.6	95.3	95.5	95.7	96.0	96.2	96.9
Information and information processing other than telephone services ^{1,4}	15.3	14.2	13.8	13.7	13.6	13.6	13.5	13.6	13.5	13.3	13.3	13.3	13.1	12.9	12.4
Personal computers and peripheral equipment ^{1,2}	15.0	12.6	12.0	11.8	11.6	11.4	11.3	11.3	11.0	10.7	10.5	10.4	10.5	10.3	10.2
Other goods and services.....	312.6	322.2	324.5	325.4	326.6	327.6	328.4	329.4	329.3	329.3	330.8	330.7	331.0	332.2	333.1
Tobacco and smoking products.....	478.8	504.2	511.3	513.2	515.0	517.1	517.9	520.9	519.9	519.4	523.5	523.3	522.9	522.4	522.7
Personal care ¹	180.4	184.0	184.7	185.1	185.8	186.3	186.8	187.2	187.2	187.3	187.9	187.9	188.2	189.2	189.9
Personal care products ¹	154.4	154.5	155.0	154.9	155.4	155.8	155.6	155.2	155.0	154.7	155.1	155.0	155.0	156.3	156.5
Personal care services ¹	198.2	204.2	205.0	205.5	206.9	206.6	208.0	208.5	208.6	208.6	209.2	209.7	210.2	210.8	211.9
Miscellaneous personal services.....	294.0	303.4	305.4	306.2	307.0	308.6	309.7	311.4	311.8	312.7	313.8	313.9	315.1	316.8	317.9
Commodity and service group:															
Commodities.....	155.4	161.4	166.8	162.8	161.2	162.6	162.7	164.3	167.3	168.9	168.2	168.5	168.8	166.1	163.8
Food and beverages.....	186.2	190.5	191.8	192.1	192.5	193.8	193.7	193.8	193.4	193.9	194.2	194.6	195.2	195.9	196.7
Commodities less food and beverages.....	138.1	144.7	151.8	145.9	143.4	144.8	145.1	147.2	151.8	153.7	152.7	152.8	153.0	148.9	145.3
Nondurables less food and beverages.....	160.6	173.2	188.2	176.1	170.8	173.5	174.0	178.7	188.4	192.8	190.8	191.1	191.8	183.6	176.0
Apparel.....	120.0	119.1	121.9	121.0	117.2	114.3	116.1	121.6	123.1	121.9	118.4	113.2	115.7	121.4	123.1
Nondurables less food, beverages, and apparel.....	189.6	210.6	233.5	214.2	207.8	214.2	213.9	218.1	233.2	241.1	240.1	243.8	243.4	226.2	212.7
Durables.....	114.0	115.1	115.0	114.9	114.9	115.2	115.3	115.2	115.2	115.0	114.8	114.8	114.5	114.0	113.9
Services.....	218.6	225.7	228.6	229.3	229.2	230.7	231.2	231.8	232.2	232.8	234.3	235.2	235.9	236.3	235.8
Rent of shelter ³	204.3	209.5	210.8	210.9	211.2	211.9	213.1	214.3	215.0	215.6	216.5	217.6	218.3	218.4	219.3
Transportation services.....	220.9	225.9	227.5	228.5	228.3	228.6	229.0	229.0	229.5	230.3	231.0	231.4	231.1	231.3	232.2
Other services.....	254.1	260.0	262.6	263.2	263.5	264.4	265.0	265.7	266.6	266.8	267.6	268.1	269.6	271.0	271.4
Special indexes:															
All items less food.....	184.1	191.0	195.8	193.5	192.3	193.9	194.2	195.5	197.8	199.0	199.4	199.9	200.4	198.8	196.9
All items less shelter.....	176.4	183.4	188.7	186.2	184.8	186.6	186.5	187.6	189.8	191.1	191.3	191.6	192.0	190.3	188.0
All items less medical care.....	179.1	185.4	189.6	187.7	186.7	188.2	188.4	189.5	191.3	192.4	192.8	193.3	193.8	192.5	191.0
Commodities less food.....	140.0	146.5	153.5	147.8	145.3	146.8	147.0	149.1	153.6	155.5	154.5	154.6	154.8	150.8	147.3
Nondurables less food.....	162.6	174.6	188.9	177.4	172.4	175.1	175.6	180.1	189.3	193.4	191.6	191.9	192.5	184.7	177.6
Nondurables less food and apparel.....	189.0	208.4	229.3	211.8	205.9	211.9	211.7	215.6	229.4	236.6	235.7	239.1	238.7	223.1	210.9
Nondurables.....	173.9	182.5	190.9	184.7	182.2	184.2	184.5	186.9	191.8	194.2	193.4	193.8	194.4	190.5	186.9
Services less rent of shelter ³	207.4	215.9	220.4	221.7	221.1	223.4	222.9	222.7	222.7	223.3	225.3	225.8	226.3	227.2	225.2
Services less medical care services.....	210.6	217.2	220.1	220.7	220.6	222.2	222.5	223.0	224.0	224.0	225.5	226.4	227.0	227.4	226.9
Energy.....	151.3	177.2	204.8	187.1	179.3	188.8	185.9	188.4	202.0	210.0	211.8	215.7	215.3	198.7	180.6
All items less energy.....	189.5	193.5	194.8	195.0	194.9	195.4	196.1	197.0	197.4	197.7	197.9	198.0	198.6	199.2	199.9
All items less food and energy.....	190.6	194.6	195.9	196.1	195.9	196.2	197.1	198.2	198.7	198.9	199.1	199.2	199.8	200.4	201.0
Commodities less food and energy.....	139.4	140.6	141.3	141.2	140.4	140.2	140.7	141.9	142.2	141.9	141.2	140.0	140.4	141.4	141.7
Energy commodities.....	161.5	197.7	239.0	202.8	190.7	202.0	200.9	208.4	236.9	251.4	249.1	256.2	255.4	222.3	196.7
Services less energy.....	226.2	232.3	234.0	234.4	234.6	235.4	236.5	237.5	238.2	238.8	239.7	240.6	241.4	241.7	242.6

¹ Not seasonally adjusted.

⁴ Indexes on a December 1988 = 100 base.

² Indexes on a December 1997 = 100 base.

³ Indexes on a December 1982 = 100 base.

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

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

[1982-84 = 100, unless otherwise indicated]

	Pricing schedule ¹	All Urban Consumers						Urban Wage Earners					
		2006						2006					
		May	June	July	Aug.	Sept.	Oct.	May	June	July	Aug.	Sept.	Oct.
U.S. city average.....	M	202.5	202.9	203.5	203.9	202.9	201.8	198.2	198.6	199.2	199.6	198.4	197.0
Region and area size²													
Northeast urban.....	M	215.7	216.7	217.5	218.1	216.3	215.2	212.1	213.0	213.5	214.2	212.7	211.1
Size A—More than 1,500,000.....	M	218.1	219.3	220.1	220.7	219.1	217.7	212.8	214.0	214.3	215.1	214.0	212.1
Size B/C—50,000 to 1,500,000 ³	M	127.4	127.7	128.2	128.5	127.2	126.9	128.0	128.1	128.6	128.9	127.5	127.0
Midwest urban ⁴	M	193.6	194.1	194.6	195.1	193.7	192.3	189.0	189.5	190.0	190.4	188.7	187.0
Size A—More than 1,500,000.....	M	195.1	195.6	196.3	196.9	195.7	194.1	189.7	190.1	190.7	191.3	189.8	187.9
Size B/C—50,000 to 1,500,000 ³	M	123.7	124.0	124.1	124.1	123.2	122.6	123.3	123.6	123.8	123.8	122.5	121.7
Size D—Nonmetropolitan (less than 50,000).....	M	188.1	189.3	190.1	190.9	189.1	187.1	186.4	187.6	188.6	189.3	187.3	185.1
South urban.....	M	195.5	196.3	197.0	197.1	195.8	194.7	192.9	193.5	194.3	194.5	192.9	191.5
Size A—More than 1,500,000.....	M	197.4	198.2	198.9	199.2	198.3	197.2	195.7	196.3	197.1	197.5	196.4	195.0
Size B/C—50,000 to 1,500,000 ³	M	124.6	125.0	125.5	125.4	124.4	123.7	123.3	123.7	124.2	124.2	122.9	122.1
Size D—Nonmetropolitan (less than 50,000).....	M	195.9	196.7	198.0	198.3	197.1	195.7	196.3	196.9	198.1	198.5	196.9	195.2
West urban.....	M	206.9	206.4	206.7	207.5	207.8	207.1	201.9	201.5	201.7	202.5	202.4	201.3
Size A—More than 1,500,000.....	M	210.3	209.5	210.0	210.7	211.3	210.5	203.6	203.0	203.3	204.0	204.3	203.0
Size B/C—50,000 to 1,500,000 ³	M	125.7	125.6	125.6	126.2	125.9	125.5	125.6	125.4	125.5	126.0	125.6	125.0
Size classes:													
A ⁵	M	185.3	185.6	186.2	186.7	186.1	185.0	183.7	184.0	184.5	185.1	184.3	182.8
B/C ³	M	125.0	125.3	125.6	125.7	124.8	124.2	124.4	124.6	125.0	125.1	124.0	123.3
D.....	M	194.4	195.3	196.0	196.6	195.6	194.3	193.3	194.1	194.8	195.4	194.1	192.5
Selected local areas⁶													
Chicago—Gary—Kenosha, IL—IN—WI.....	M	198.4	199.0	199.3	200.4	199.6	197.5	192.0	192.4	192.8	193.8	192.8	190.3
Los Angeles—Riverside—Orange County, CA.....	M	212.4	211.1	211.4	211.9	212.9	211.4	205.0	204.2	204.5	205.0	205.3	203.5
New York, NY—Northern NJ—Long Island, NY—NJ—CT—PA.....	M	221.6	222.6	223.1	224.1	222.9	221.7	215.5	216.7	216.8	217.8	216.9	215.3
Boston—Brockton—Nashua, MA—NH—ME—CT.....	1	222.9	—	225.1	—	224.5	—	222.9	—	223.9	—	224.3	—
Cleveland—Akron, OH.....	1	192.4	—	193.1	—	190.7	—	183.8	—	184.3	—	181.7	—
Dallas—Ft. Worth, TX.....	1	191.2	—	191.7	—	192.0	—	192.9	—	193.9	—	193.7	—
Washington—Baltimore, DC—MD—VA—WV ⁷	1	128.8	—	130.7	—	130.2	—	128.2	—	129.8	—	129.9	—
Atlanta, GA.....	2	—	196.0	—	197.3	—	192.7	—	194.4	—	195.8	—	190.9
Detroit—Ann Arbor—Flint, MI.....	2	—	196.8	—	198.6	—	196.6	—	192.0	—	194.0	—	191.2
Houston—Galveston—Brazoria, TX.....	2	—	182.4	—	182.5	—	180.4	—	181.4	—	182.0	—	178.9
Miami—Ft. Lauderdale, FL.....	2	—	203.8	—	205.6	—	204.8	—	202.5	—	204.6	—	203.1
Philadelphia—Wilmington—Atlantic City, PA—NJ—DE—MD.....	2	—	213.9	—	216.4	—	211.6	—	213.2	—	215.8	—	211.1
San Francisco—Oakland—San Jose, CA.....	2	—	209.1	—	210.7	—	211.0	—	205.2	—	206.7	—	206.2
Seattle—Tacoma—Bremerton, WA.....	2	—	208.2	—	209.6	—	209.8	—	203.8	—	205.1	—	203.9

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; Cincinnati, OH—KY—IN; Kansas City, MO—KS; Milwaukee—Racine, WI; Minneapolis—St. Paul, MN—WI; Pittsburgh, PA; Portland—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	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Consumer Price Index for All Urban Consumers:											
All items:											
Index.....	152.4	156.9	160.5	163.0	166.6	172.2	177.1	179.9	184.0	188.9	195.3
Percent change.....	2.8	3.0	2.3	1.6	2.2	3.4	2.8	1.6	2.3	2.7	3.4
Food and beverages:											
Index.....	148.9	153.7	157.7	161.1	164.6	168.4	173.6	176.8	180.5	186.6	191.2
Percent change.....	2.8	3.2	2.6	2.2	2.2	2.3	3.1	1.8	2.1	3.3	2.5
Housing:											
Index.....	148.5	152.8	156.8	160.4	163.9	169.6	176.4	180.3	184.8	189.5	195.7
Percent change.....	2.6	2.9	2.6	2.3	2.2	3.5	4.0	2.2	2.5	2.5	3.3
Apparel:											
Index.....	132.0	131.7	132.9	133.0	131.3	129.6	127.3	124.0	120.9	120.4	119.5
Percent change.....	-1.0	-2	.9	.1	-1.3	-1.3	-1.8	-2.6	-2.5	-4	-7
Transportation:											
Index.....	139.1	143.0	144.3	141.6	144.4	153.3	154.3	152.9	157.6	163.1	173.9
Percent change.....	3.6	2.8	0.9	-1.9	2.0	6.2	0.7	-9	3.1	3.5	6.6
Medical care:											
Index.....	220.5	228.2	234.6	242.1	250.6	260.8	272.8	285.6	297.1	310.1	323.2
Percent change.....	4.5	3.5	2.8	3.2	3.5	4.1	4.6	4.7	4.0	4.4	4.2
Other goods and services:											
Index.....	206.9	215.4	224.8	237.7	258.3	271.1	282.6	293.2	298.7	304.7	313.4
Percent change.....	4.2	4.1	4.4	5.7	8.7	5.0	4.2	3.8	1.9	2.0	2.9
Consumer Price Index for Urban Wage Earners and Clerical Workers:											
All items:											
Index.....	149.8	154.1	157.6	159.7	163.2	168.9	173.5	175.9	179.8	188.9	191.0
Percent change.....	2.9	2.9	2.3	1.3	2.2	3.5	2.7	1.4	2.2	5.1	1.1

41. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2005			2006									
	2004	2005	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July ^p	Aug. ^p	Sept. ^p	Oct. ^p
Finished goods	148.5	155.7	160.9	158.3	158.7	159.9	158.0	159.1	160.7	161.2	161.8	161.7	162.1	160.3	158.4
Finished consumer goods.....	151.7	160.4	167.1	163.7	164.2	165.7	163.0	164.5	166.5	167.2	168.0	168.3	168.8	165.9	163.3
Finished consumer foods.....	152.7	155.7	155.8	156.3	157.5	157.1	153.8	154.4	154.8	154.2	156.1	156.4	158.3	159.3	158.1
Finished consumer goods excluding foods.....	150.9	161.9	171.2	166.1	166.5	168.7	166.2	168.0	170.7	171.9	172.3	172.5	172.5	168.1	165.0
Nondurable goods less food.....	156.6	172.0	184.9	178.0	178.7	181.7	177.9	180.6	184.7	186.5	187.2	188.8	188.8	181.8	176.8
Durable goods.....	135.0	136.6	138.0	137.1	136.6	137.3	137.5	137.4	137.1	137.1	136.7	134.1	134.1	135.4	135.9
Capital equipment.....	141.4	144.6	145.9	145.5	145.3	145.8	146.2	146.4	146.6	146.7	146.7	145.8	145.9	146.6	146.8
Intermediate materials, supplies, and components	142.6	154.0	162.5	159.9	159.6	161.6	160.7	161.2	163.1	164.9	166.1	166.6	167.4	165.4	163.2
Materials and components for manufacturing.....	137.9	146.0	149.3	149.4	149.8	151.2	151.9	152.7	153.9	156.3	157.3	158.2	158.5	158.3	158.4
Materials for food manufacturing.....	145.0	146.0	146.6	146.6	146.3	146.0	144.6	144.4	143.7	144.4	145.7	147.5	147.0	148.3	147.7
Materials for nondurable manufacturing...	147.8	163.2	172.9	170.9	170.8	172.2	173.4	173.3	173.1	176.2	178.1	177.7	178.2	175.6	175.9
Materials for durable manufacturing.....	146.6	158.3	159.9	162.2	164.4	167.6	169.6	170.5	175.4	182.4	183.4	186.4	186.6	187.5	187.5
Components for manufacturing.....	127.4	129.9	130.2	130.8	130.8	131.4	131.7	133.1	133.8	134.0	134.4	135.0	135.3	136.1	136.0
Materials and components for construction.....	166.4	176.6	179.2	180.8	181.7	184.2	185.0	185.5	186.7	188.2	189.2	190.2	190.9	191.4	190.8
Processed fuels and lubricants.....	124.3	150.0	180.5	166.5	162.6	167.2	160.1	160.0	165.6	167.4	169.4	169.2	171.6	161.4	150.5
Containers.....	159.3	167.1	166.8	168.3	169.9	170.5	171.2	173.1	172.8	173.3	176.3	176.6	176.6	176.8	177.3
Supplies.....	146.7	151.9	153.6	153.8	154.1	155.3	155.6	155.9	156.2	156.5	156.8	157.2	157.6	157.8	158.4
Crude materials for further processing	159.0	182.2	211.6	208.5	200.6	199.0	182.9	178.4	183.0	186.9	181.6	186.2	191.5	184.6	165.1
Foodstuffs and feedstuffs.....	127.0	122.7	120.8	120.9	123.4	119.3	116.6	114.2	113.1	112.7	116.9	118.8	119.0	121.0	124.9
Crude nonfood materials.....	179.2	223.4	276.5	271.1	255.2	255.7	229.3	223.4	232.4	239.6	226.7	233.4	242.6	228.8	191.2
Special groupings:															
Finished goods, excluding foods.....	147.2	155.5	162.0	158.5	158.7	160.3	158.8	160.1	161.9	162.7	163.0	162.8	162.8	160.2	158.2
Finished energy goods.....	113.0	132.6	152.3	140.9	141.9	145.7	139.1	143.1	149.6	151.9	153.1	155.4	155.4	144.3	136.4
Finished goods less energy.....	152.4	155.9	156.8	156.7	156.9	157.4	156.9	157.2	157.2	157.3	157.7	156.9	157.4	158.2	158.1
Finished consumer goods less energy.....	157.2	160.8	161.6	161.6	162.0	162.4	161.5	161.8	161.9	161.9	162.4	161.8	162.5	163.3	163.0
Finished goods less food and energy.....	152.7	156.4	157.5	157.3	157.1	157.9	158.3	158.5	158.5	158.7	158.6	157.5	157.5	158.2	158.5
Finished consumer goods less food and energy.....	160.3	164.3	165.4	165.3	165.1	166.0	166.5	166.7	166.5	166.9	166.6	165.4	165.4	166.1	166.4
Consumer nondurable goods less food and energy.....	180.8	187.1	187.9	188.5	188.7	189.8	190.6	191.0	191.0	191.7	191.6	191.9	191.7	191.8	192.1
Intermediate materials less foods and feeds.....	143.0	155.1	163.8	161.2	160.8	163.0	162.1	162.6	164.6	166.5	167.6	168.2	169.0	166.8	164.6
Intermediate foods and feeds.....	137.1	133.8	134.4	133.6	134.1	135.0	133.6	133.8	133.0	133.1	133.9	135.2	134.3	135.2	135.7
Intermediate energy goods.....	123.2	149.2	180.1	165.8	162.1	166.5	160.5	160.4	165.9	168.1	169.9	169.3	170.9	160.3	150.3
Intermediate goods less energy.....	145.8	153.3	155.7	156.3	156.8	158.3	158.7	159.4	160.3	162.0	162.9	163.8	164.3	164.5	164.5
Intermediate materials less foods and energy.....	146.5	154.6	157.1	157.7	158.3	159.7	160.3	161.0	162.0	163.7	164.7	165.6	166.2	166.4	166.3
Crude energy materials.....	174.6	234.0	308.6	298.0	274.0	274.5	233.6	223.6	231.6	233.5	216.9	224.7	241.6	221.4	169.4
Crude materials less energy.....	144.0	143.5	143.2	145.0	147.6	144.7	144.9	144.1	146.4	151.4	153.4	155.8	153.6	155.4	157.2
Crude nonfood materials less energy.....	193.0	202.4	206.4	212.8	215.6	216.1	224.0	227.7	239.4	259.5	255.4	259.3	250.4	251.6	247.9

p = preliminary

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

[December 2003 = 100, unless otherwise indicated]

NAICS	Industry	2005			2006									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July ^P	Aug. ^P	Sept. ^P	Oct. ^P
	Total mining industries (December 1984=100)	254.3	247.4	234.6	234.3	207.4	202.0	210.6	215.4	204.2	211.3	222.9	206.5	172.6
211	Oil and gas extraction (December 1985=100)	352.8	336.6	312.2	308.9	259.2	247.1	257.1	259.3	241.7	252.6	272.3	245.7	185.0
212	Mining, except oil and gas.....	130.4	131.8	132.5	136.8	137.4	140.0	146.1	154.8	150.3	154.0	154.1	151.4	151.8
213	Mining support activities.....	144.7	154.8	156.9	160.2	163.4	167.2	172.7	174.3	176.6	174.1	178.4	174.7	173.2
	Total manufacturing industries (December 1984=100)	156.6	152.7	152.8	154.1	153.5	155.0	157.2	158.5	159.5	159.4	159.8	156.8	155.8
311	Food manufacturing (December 1984=100).....	146.7	146.1	146.2	146.4	145.1	145.2	144.1	144.7	146.4	147.4	147.3	147.9	147.3
312	Beverage and tobacco manufacturing.....	105.2	105.5	105.5	106.0	106.4	106.6	106.5	106.6	106.9	106.2	106.1	106.3	105.9
313	Textile mills.....	104.6	104.9	105.1	105.6	106.1	106.0	106.1	106.8	106.6	106.8	107.1	107.2	107.2
315	Apparel manufacturing.....	99.9	99.9	99.8	100.1	100.2	100.3	100.4	100.5	100.4	100.4	100.7	100.7	100.7
316	Leather and allied product manufacturing (December 1984=100).....	144.7	144.8	144.7	144.9	145.6	145.9	146.4	146.6	146.5	146.6	146.9	146.7	146.8
321	Wood products manufacturing.....	110.7	107.7	108.4	109.6	109.8	110.1	110.2	110.9	109.6	108.7	107.4	107.6	105.8
322	Paper manufacturing.....	106.5	107.4	107.8	108.2	109.5	110.5	110.6	111.7	112.9	113.3	113.5	114.0	114.1
323	Printing and related support activities.....	103.7	103.7	103.9	104.5	104.8	105.2	105.3	105.4	105.5	105.6	105.8	106.1	106.5
324	Petroleum and coal products manufacturing (December 1984=100).....	259.5	208.2	209.2	216.1	205.9	222.8	249.2	260.0	267.6	267.4	269.9	226.1	213.1
325	Chemical manufacturing (December 1984=100).....	191.2	193.6	193.9	195.7	196.2	196.2	195.7	196.6	197.2	197.6	198.2	198.5	198.8
326	Plastics and rubber products manufacturing (December 1984=100).....	143.7	147.2	148.2	149.0	149.1	148.7	148.8	148.8	148.9	149.5	150.9	150.7	151.6
331	Primary metal manufacturing (December 1984=100).....	155.8	159.2	160.7	163.9	165.6	166.4	171.4	178.4	182.3	186.7	186.7	188.9	189.5
332	Fabricated metal product manufacturing (December 1984=100).....	150.5	150.7	151.1	152.0	152.5	153.0	153.6	154.3	155.4	156.4	157.5	157.5	157.7
333	Machinery manufacturing.....	106.3	106.5	106.8	107.4	107.6	107.8	108.0	108.3	108.6	108.9	109.1	109.4	109.9
334	Computer and electronic products manufacturing.....	97.0	96.8	96.6	96.5	96.5	96.5	96.7	96.6	96.5	96.5	96.5	96.7	96.5
335	Electrical equipment, appliance, and components manufacturing.....	109.0	110.3	110.9	111.9	112.3	112.8	114.1	116.0	117.6	117.8	119.0	119.4	119.9
336	Transportation equipment manufacturing.....	103.9	102.9	102.5	103.1	103.2	103.4	103.4	103.4	103.1	101.1	101.1	102.0	102.3
337	Furniture and related product manufacturing (December 1984=100).....	159.2	159.4	160.0	160.7	161.3	161.5	161.6	162.3	162.5	162.9	163.0	163.1	163.4
339	Miscellaneous manufacturing.....	103.3	103.3	103.6	104.0	103.9	104.2	104.5	104.9	104.8	105.1	105.1	104.8	104.8
	Retail trade													
441	Motor vehicle and parts dealers.....	107.4	107.1	107.9	109.2	109.6	112.4	113.2	114.3	114.7	113.8	114.2	113.4	112.7
442	Furniture and home furnishings stores.....	115.1	114.6	115.0	115.9	115.1	116.1	114.9	116.1	116.8	117.0	118.8	118.9	120.0
443	Electronics and appliance stores.....	100.2	99.9	95.3	98.7	97.0	102.9	105.6	103.9	96.9	97.0	96.6	96.1	100.5
446	Health and personal care stores.....	107.0	110.7	111.9	115.6	114.1	120.5	120.1	118.7	118.7	118.6	118.5	119.8	119.2
447	Gasoline stations (June 2001=100).....	64.6	61.9	48.3	45.6	58.3	44.9	44.4	48.9	44.7	49.3	55.2	65.9	52.7
454	Nonstore retailers.....	122.0	118.3	114.0	120.5	120.4	112.0	111.8	111.6	113.0	108.1	120.4	134.8	118.4
	Transportation and warehousing													
481	Air transportation (December 1992=100).....	173.7	178.9	173.2	177.7	180.1	182.5	182.7	179.7	185.4	186.9	187.8	171.0	175.6
483	Water transportation.....	109.7	108.5	108.0	109.4	109.6	111.0	110.5	111.1	110.9	111.5	111.9	112.8	113.1
491	Postal service (June 1989=100).....	155.0	155.0	155.0	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7	164.7
	Utilities													
221	Utilities.....	131.2	130.0	129.6	131.3	127.0	123.5	121.5	121.0	120.8	122.3	125.6	124.5	116.7
	Health care and social assistance													
6211	Office of physicians (December 1996=100).....	116.7	116.7	116.7	116.9	116.9	117.2	117.1	117.2	117.6	117.8	117.2	117.1	117.9
6215	Medical and diagnostic laboratories.....	104.4	104.4	104.4	104.1	104.2	104.2	104.4	104.4	104.4	104.5	104.5	104.5	104.4
6216	Home health care services (December 1996=100).....	121.6	121.7	121.2	121.4	121.6	121.7	121.7	121.7	121.8	121.8	121.8	121.8	122.1
622	Hospitals (December 1992=100).....	149.5	149.9	149.9	151.3	151.5	151.7	152.1	152.3	152.5	153.3	153.8	153.6	155.3
6231	Nursing care facilities.....	107.5	107.7	107.7	108.3	108.5	108.6	108.7	108.8	109.0	110.1	109.7	109.9	110.6
62321	Residential mental retardation facilities.....	104.7	106.0	106.3	107.3	107.3	107.3	108.0	108.0	108.0	108.4	108.4	109.3	109.0
	Other services industries													
511	Publishing industries, except Internet	104.9	105.0	105.0	105.4	105.5	105.2	105.3	106.1	106.0	106.4	106.1	107.0	107.1
515	Broadcasting, except Internet.....	104.6	105.2	102.9	100.6	101.1	101.7	102.6	103.8	103.4	100.9	100.1	101.2	102.4
517	Telecommunications.....	97.7	97.4	97.3	97.2	97.1	97.6	97.8	97.8	98.1	98.4	99.0	99.0	99.4
5182	Data processing and related services.....	99.0	98.9	98.9	99.0	99.3	99.2	99.0	99.6	99.5	99.8	100.0	100.0	100.1
523	Security, commodity contracts, and like activity.....	110.3	109.9	110.4	111.2	111.4	111.4	111.9	113.5	114.2	114.5	113.2	113.7	115.1
53112	Lessors or nonresidential buildings (except miniwarehouse).....	106.5	104.9	108.4	105.6	105.5	106.5	106.9	107.5	107.2	109.5	109.0	110.3	108.9
5312	Offices of real estate agents and brokers.....	110.5	110.4	110.3	110.3	110.4	111.3	111.3	110.6	110.8	111.8	111.4	109.7	110.8
5313	Real estate support activities.....	101.4	100.9	102.5	103.8	102.7	103.2	103.1	103.1	102.9	102.6	102.8	103.0	102.7
5321	Automotive equipment rental and leasing (June 2001=100).....	111.0	112.2	112.7	112.8	114.4	114.2	114.9	111.6	114.6	116.4	112.5	115.6	112.5
5411	Legal services (December 1996=100).....	139.6	139.9	140.0	143.6	144.1	144.3	144.7	144.9	144.8	144.9	144.9	145.2	145.6
541211	Offices of certified public accountants.....	104.0	105.1	106.6	104.4	105.9	106.7	105.3	106.5	106.6	106.7	105.9	107.0	107.3
5413	Architectural, engineering, and related services (December 1996=100).....	130.0	130.4	130.6	131.8	132.7	132.8	132.9	134.1	134.4	134.7	134.9	134.8	136.1
54181	Advertising agencies.....	101.8	101.8	102.0	103.2	103.6	103.6	103.5	103.5	103.5	104.7	105.0	104.9	104.9
5613	Employment services (December 1996=100).....	117.3	117.7	118.4	117.8	117.8	118.8	118.9	118.4	118.6	119.2	120.5	119.8	119.7
56151	Travel agencies.....	96.7	96.4	98.0	98.3	98.3	98.4	98.5	99.1	101.5	99.4	99.2	99.2	101.4
56172	Janitorial services.....	101.8	102.0	102.1	102.4	102.6	102.6	103.3	103.6	103.7	103.8	104.5	104.5	104.5
5621	Waste collection.....	103.4	103.4	103.4	103.4	104.0	104.0	104.0	104.0	104.2	104.2	104.5	104.4	104.8
721	Accommodation (December 1996=100).....	133.1	133.1	131.7	133.8	133.5	134.9	135.7	136.3	137.3	138.1	138.1	139.7	136.2

p = preliminary.

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

[1982 = 100]

Index	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Finished goods											
Total.....	127.9	131.3	131.8	130.7	133.0	138.0	140.7	138.9	143.3	148.5	155.7
Foods.....	129.0	133.6	134.5	134.3	135.1	137.2	141.3	140.1	145.9	152.6	155.6
Energy.....	78.1	83.2	83.4	75.1	78.8	94.1	96.8	88.8	102.0	113.0	132.7
Other.....	140.0	142.0	142.4	143.7	146.1	148.0	150.0	150.2	150.5	152.7	156.4
Intermediate materials, supplies, and components											
Total.....	124.9	125.7	125.6	123.0	123.2	129.2	129.7	127.8	133.7	142.5	153.9
Foods.....	119.5	125.3	123.2	123.2	120.8	119.2	124.3	123.3	134.4	145.0	146.0
Energy.....	84.1	89.8	89.0	80.8	84.3	101.7	104.1	95.9	111.9	123.1	149.1
Other.....	135.2	134.0	134.2	133.5	133.1	136.6	136.4	135.8	138.5	146.5	154.5
Crude materials for further processing											
Total.....	102.7	113.8	111.1	96.8	98.2	120.6	121.3	108.1	135.3	159.0	182.1
Foods.....	105.8	121.5	112.2	103.9	98.7	100.2	106.2	99.5	113.5	126.9	122.6
Energy.....	69.4	85.0	87.3	68.6	78.5	122.1	122.8	102.0	147.5	174.7	233.8
Other.....	105.8	105.7	103.5	84.5	91.1	118.0	101.8	101.0	116.8	149.0	176.8

44. U.S. export price indexes by Standard International Trade Classification

[2000 = 100]

SITC Rev. 3	Industry	2005							2006					
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
0	Food and live animals.....	124.3	124.3	124.2	123.8	125.2	123.7	122.8	123.7	123.2	122.9	122.8	122.5	126.8
01	Meat and meat preparations.....	140.2	137.8	139.2	142.7	142.8	141.6	136.9	131.4	130.6	127.1	121.3	125.6	130.8
04	Cereals and cereal preparations.....	118.7	120.5	118.4	117.0	121.7	119.9	121.1	124.6	126.7	129.3	129.1	129.7	136.0
05	Vegetables, fruit, and nuts, prepared fresh or dry.....	133.6	132.1	131.5	129.2	130.0	126.0	123.9	124.4	119.2	117.5	121.4	118.6	125.9
2	Crude materials, inedible, except fuels.....	130.3	129.5	129.0	126.4	127.4	128.5	131.3	135.2	136.9	137.5	142.4	147.4	151.8
22	Oilseeds and oleaginous fruits.....	136.5	137.1	135.7	121.7	116.8	119.7	119.7	124.9	120.0	120.8	113.3	120.1	119.5
24	Cork and wood.....	97.6	97.2	97.0	96.9	96.9	97.2	97.3	98.1	98.7	99.5	99.4	99.9	100.0
25	Pulp and waste paper.....	101.5	99.9	99.0	99.3	98.7	97.6	97.5	96.9	97.6	98.1	99.2	100.6	101.3
26	Textile fibers and their waste.....	103.1	104.3	103.3	104.8	107.7	108.4	109.2	112.9	112.0	109.1	109.8	107.7	110.4
28	Metalliferous ores and metal scrap.....	212.9	209.1	206.8	206.2	214.2	214.0	227.8	242.7	259.1	261.1	295.8	321.9	346.1
3	Mineral fuels, lubricants, and related products.....	181.0	193.5	192.3	231.9	244.6	203.5	205.5	216.7	210.7	211.0	227.0	233.4	232.3
33	Petroleum, petroleum products, and related materials....	188.7	200.3	197.0	239.3	245.0	206.0	206.3	217.1	215.0	223.0	240.7	252.2	251.7
5	Chemicals and related products, n.e.s.	115.7	116.3	117.1	118.8	120.9	120.8	119.6	120.1	120.8	120.7	120.5	121.6	123.4
54	Medicinal and pharmaceutical products.....	107.6	107.2	107.1	107.3	107.4	107.2	107.1	108.2	108.6	108.3	108.4	108.6	109.6
55	Essential oils; polishing and cleaning preparations.....	112.4	112.2	112.2	112.6	112.2	112.0	111.8	111.7	112.0	112.9	113.6	114.3	114.6
57	Plastics in primary forms	122.1	121.8	123.3	126.9	136.5	139.0	135.3	134.1	134.5	132.3	129.0	131.6	133.4
58	Plastics in nonprimary forms.....	103.3	103.8	104.2	104.9	105.7	107.3	108.0	109.1	109.4	109.1	109.7	109.5	109.6
59	Chemical materials and products, n.e.s.	106.1	106.2	106.2	106.3	107.4	107.6	107.7	109.7	110.4	110.4	109.8	110.1	110.7
6	Manufactured goods classified chiefly by materials.....	113.9	113.5	113.5	113.9	114.5	115.0	116.0	117.7	118.7	119.6	120.5	121.9	124.2
62	Rubber manufactures, n.e.s.	115.5	116.5	116.2	116.9	116.9	117.1	117.8	119.1	119.3	119.4	119.7	121.0	121.1
64	Paper, paperboard, and articles of paper, pulp, and paperboard.....	103.9	103.4	103.4	103.7	103.0	102.7	102.8	104.3	104.7	105.0	107.6	107.6	109.5
66	Nonmetallic mineral manufactures, n.e.s.	103.5	103.7	103.9	104.2	105.2	105.5	105.5	105.8	105.8	105.3	105.2	105.2	105.7
68	Nonferrous metals.....	106.1	106.6	107.5	108.5	110.5	113.2	118.2	122.5	126.3	130.9	134.7	144.0	156.5
7	Machinery and transport equipment.....	98.7	98.3	98.0	98.0	98.1	98.0	98.1	98.3	98.3	98.4	98.6	98.7	98.7
71	Power generating machinery and equipment.....	111.3	111.1	111.1	111.2	111.8	112.4	112.4	113.2	113.4	113.3	114.0	114.1	114.2
72	Machinery specialized for particular industries.....	110.7	111.3	111.6	112.1	112.6	112.8	114.1	115.0	115.2	115.3	116.3	116.5	116.7
74	General industrial machines and parts, n.e.s., and machine parts.....	109.3	109.3	109.3	109.4	109.7	109.8	109.9	110.4	110.8	110.9	111.6	111.7	111.8
75	Computer equipment and office machines.....	80.9	79.5	79.5	79.1	78.3	77.5	77.1	77.9	77.7	77.7	77.1	77.5	77.0
76	Telecommunications and sound recording and reproducing apparatus and equipment.....	89.7	89.5	89.5	89.4	89.4	89.4	89.5	88.6	87.9	87.7	88.1	88.0	87.8
77	Electrical machinery and equipment.....	87.4	86.7	85.2	84.9	84.9	84.6	84.6	84.3	83.9	83.9	84.0	84.0	84.0
78	Road vehicles.....	103.0	103.2	103.3	103.5	103.8	103.9	103.8	104.1	104.2	104.2	104.3	104.4	104.4
87	Professional, scientific, and controlling instruments and apparatus.....	103.1	103.6	103.6	103.8	103.6	103.5	103.7	104.0	104.2	104.2	104.3	104.6	104.8

NOTE: The data series for table 44 end at June 2006. This table will be deleted from the CLS department in the January 2007 edition.

45. U.S. import price indexes by Standard International Trade Classification

[2000 = 100]

SITC Rev. 3	Industry	2005							2006					
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
0	Food and live animals.....	113.9	113.3	113.9	113.5	114.8	115.4	117.4	119.5	115.9	116.5	115.2	117.3	117.3
01	Meat and meat preparations.....	138.5	139.6	139.5	140.8	140.5	141.2	140.4	139.1	140.5	138.6	138.3	138.6	137.8
03	Fish and crustaceans, mollusks, and other aquatic invertebrates.....	87.8	90.0	90.9	91.4	92.4	91.1	91.7	91.4	93.2	94.7	93.9	95.1	94.9
05	Vegetables, fruit, and nuts, prepared fresh or dry.....	109.0	106.6	109.0	106.2	110.4	112.3	120.6	124.4	109.4	111.3	108.3	113.6	114.5
07	Coffee, tea, cocoa, spices, and manufactures thereof.....	127.8	120.5	118.7	119.1	117.4	122.1	120.3	128.7	127.7	124.7	124.9	124.6	121.7
1	Beverages and tobacco.....	108.5	108.7	108.8	108.9	108.8	108.6	108.5	108.5	109.0	109.4	109.5	109.6	109.7
11	Beverages.....	109.1	109.3	109.3	109.5	109.6	109.4	109.3	109.3	109.4	109.9	110.0	110.1	110.3
2	Crude materials, inedible, except fuels.....	130.5	128.7	127.9	132.0	131.8	129.8	133.7	136.4	137.4	134.6	135.3	138.6	137.6
24	Cork and wood.....	127.0	122.4	120.9	124.5	126.2	119.6	123.6	126.9	126.6	125.4	123.8	128.3	120.6
25	Pulp and waste paper.....	103.6	104.2	102.8	102.2	105.9	105.6	106.0	105.7	107.9	108.5	111.4	115.5	116.6
28	Metalliferous ores and metal scrap.....	176.0	180.1	185.7	193.3	187.5	190.8	195.2	196.3	199.6	203.6	207.6	211.2	211.6
29	Crude animal and vegetable materials, n.e.s.	111.7	103.5	95.6	106.0	102.7	101.9	111.3	113.7	112.7	91.0	92.7	93.0	93.6
3	Mineral fuels, lubricants, and related products.....	179.0	192.6	206.4	223.5	222.1	204.0	202.3	212.2	203.5	201.9	221.1	233.5	228.8
33	Petroleum, petroleum products, and related materials.....	182.4	197.1	211.7	225.1	216.9	195.9	195.7	208.1	206.0	207.6	230.6	244.8	241.1
34	Gas, natural and manufactured.....	148.5	157.8	164.4	209.1	257.1	259.3	245.5	241.0	187.3	165.6	162.2	162.8	151.5
5	Chemicals and related products, n.e.s.	112.4	113.2	113.5	114.6	115.7	115.1	115.0	115.9	115.9	115.9	115.4	115.7	116.6
52	Inorganic chemicals.....	138.2	140.4	144.0	151.7	164.4	163.7	162.0	160.8	159.7	161.4	162.1	160.4	159.4
53	Dying, tanning, and coloring materials.....	110.3	110.8	110.6	111.0	110.6	110.4	110.2	109.0	108.0	108.1	106.6	106.7	107.3
54	Medicinal and pharmaceutical products.....	110.3	110.8	110.6	111.0	110.6	110.4	110.2	109.0	108.0	108.1	106.6	106.7	107.3
55	Essential oils; polishing and cleaning preparations.....	94.5	94.5	95.3	95.2	95.1	95.0	94.7	94.7	94.3	94.4	94.4	94.7	94.6
57	Plastics in primary forms.....	125.1	125.5	123.4	125.5	130.7	135.9	138.0	135.7	134.6	132.8	130.7	130.1	130.7
58	Plastics in nonprimary forms.....	107.2	106.7	106.4	106.6	106.5	107.0	106.9	107.8	108.0	108.0	108.5	108.5	108.5
59	Chemical materials and products, n.e.s.	102.4	101.7	101.8	101.8	103.4	103.2	103.1	102.8	102.2	102.0	102.1	102.3	102.5
6	Manufactured goods classified chiefly by materials..	112.8	112.4	112.1	112.8	114.1	114.2	114.4	115.9	117.4	118.2	119.8	123.6	126.5
62	Rubber manufactures, n.e.s.	104.5	104.3	104.3	104.4	104.5	104.5	104.6	104.8	104.9	105.5	106.1	106.2	107.0
64	Paper, paperboard, and articles of paper, pulp, and paperboard.....	102.1	103.9	103.7	103.7	104.0	104.4	104.4	105.2	105.6	105.7	106.7	106.9	107.7
66	Nonmetallic mineral manufactures, n.e.s.	101.4	101.4	101.7	101.9	102.1	101.9	101.8	101.9	102.0	102.1	103.3	103.3	103.4
68	Nonferrous metals.....	117.7	118.8	118.4	121.1	125.1	128.6	133.3	140.4	148.2	152.9	158.6	181.8	196.8
69	Manufactures of metals, n.e.s.	108.6	108.7	108.4	109.0	108.8	108.9	108.4	110.0	110.8	110.7	110.8	111.1	111.5
7	Machinery and transport equipment.....	95.0	94.6	94.6	94.4	94.3	94.2	94.1	94.0	94.0	94.0	94.0	94.0	94.2
72	Machinery specialized for particular industries.....	110.9	110.8	110.8	111.0	111.0	111.1	111.1	111.9	112.3	112.3	112.4	112.7	113.0
74	General industrial machines and parts, n.e.s., and machine parts.....	107.2	107.4	107.1	107.3	107.4	107.3	107.3	108.3	108.8	109.0	109.5	110.1	110.7
75	Computer equipment and office machines.....	70.5	69.2	69.1	68.3	68.0	67.6	67.3	66.8	66.4	66.2	65.8	65.4	65.2
76	Telecommunications and sound recording and reproducing apparatus and equipment.....	82.1	81.4	80.9	80.5	80.3	80.0	79.8	79.5	79.3	79.2	79.0	78.8	78.7
77	Electrical machinery and equipment.....	94.4	93.9	94.1	94.0	93.7	93.7	94.0	94.0	94.3	94.4	94.4	94.5	95.3
78	Road vehicles.....	103.8	103.9	104.0	104.1	104.2	104.2	104.1	103.9	104.0	103.9	104.1	104.1	104.2
85	Footwear.....	100.5	100.8	100.7	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9	100.9
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	99.0	98.3	97.9	98.1	98.2	98.3	98.0	97.5	97.7	97.4	97.5	97.6	98.0

NOTE: The data series for table 45 end at June 2006. This table will be deleted from the CLS department in the January 2007 edition.

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

[2000 = 100]

Category	2005			2006									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
ALL COMMODITIES	108.3	107.6	107.7	108.5	108.6	108.8	109.6	110.4	111.2	111.6	112.1	111.7	111.4
Foods, feeds, and beverages.....	123.0	122.5	121.9	122.8	121.9	121.7	121.0	122.0	125.6	128.5	129.5	128.9	130.5
Agricultural foods, feeds, and beverages.....	122.9	122.4	121.7	122.8	121.6	121.5	120.8	121.9	125.7	128.9	129.8	129.3	131.1
Nonagricultural (fish, beverages) food products.....	123.8	123.2	123.6	122.7	124.2	123.2	122.5	122.9	125.0	125.6	126.9	126.0	124.8
Industrial supplies and materials.....	130.1	127.4	127.9	129.9	130.6	131.3	133.9	136.5	138.8	139.2	141.2	139.5	137.2
Agricultural industrial supplies and materials.....	117.3	117.7	117.4	116.9	117.2	116.8	117.2	116.4	117.3	116.6	118.8	118.1	117.8
Fuels and lubricants.....	191.5	163.1	163.4	172.0	169.7	173.5	187.0	194.9	196.3	199.0	207.2	191.1	177.5
Nonagricultural supplies and materials, excluding fuel and building materials.....	124.7	125.0	125.7	127.0	128.1	128.5	129.8	132.0	134.7	134.9	136.0	136.3	135.3
Selected building materials.....	105.8	106.1	106.5	107.2	108.4	108.5	108.6	109.0	109.8	109.8	110.1	110.0	110.3
Capital goods.....	97.7	97.6	97.7	98.1	98.1	98.2	98.4	98.4	98.4	98.5	98.3	98.5	98.7
Electric and electrical generating equipment.....	103.3	103.4	103.6	103.7	104.0	104.4	104.5	104.6	104.8	104.8	104.9	105.1	105.9
Nonelectrical machinery.....	92.6	92.4	92.5	92.8	92.7	92.7	92.7	92.7	92.7	92.7	92.4	92.6	92.7
Automotive vehicles, parts, and engines.....	104.0	104.0	103.9	104.1	104.2	104.4	104.6	104.7	104.9	105.1	105.1	105.1	105.3
Consumer goods, excluding automotive.....	102.0	102.0	101.9	102.3	102.4	102.3	102.6	103.2	103.5	103.7	103.9	104.1	104.0
Nondurables, manufactured.....	101.7	101.6	101.6	102.3	102.5	102.4	102.7	103.0	103.3	103.6	103.7	103.9	103.7
Durables, manufactured.....	101.4	101.5	101.5	101.5	101.4	101.3	101.4	102.2	102.4	102.5	102.9	103.2	103.2
Agricultural commodities.....	121.9	121.6	121.0	121.7	120.8	120.7	120.2	120.9	124.1	126.5	127.7	127.2	128.6
Nonagricultural commodities.....	107.3	106.6	106.8	107.6	107.8	108.0	108.8	109.6	110.3	110.5	111.0	110.6	110.1

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

[2000 = 100]

Category	2005			2006									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
ALL COMMODITIES	114.5	112.3	112.3	113.7	112.8	112.7	115.1	117.2	117.3	118.2	118.8	116.2	113.5
Foods, feeds, and beverages.....	115.1	115.6	117.5	119.2	116.7	117.0	116.2	118.1	118.0	118.1	120.6	120.9	120.9
Agricultural foods, feeds, and beverages.....	123.4	124.6	127.2	129.7	125.4	125.4	124.6	127.1	126.8	126.5	129.9	130.3	130.6
Nonagricultural (fish, beverages) food products.....	96.5	95.3	95.9	95.8	97.2	98.3	97.6	98.1	98.5	99.4	99.8	99.8	99.2
Industrial supplies and materials.....	167.6	159.1	158.6	163.8	160.8	160.4	170.1	178.2	178.1	180.9	182.8	172.2	160.9
Fuels and lubricants.....	221.5	204.1	202.4	211.7	203.3	201.5	221.1	233.9	230.2	237.6	240.9	216.5	193.4
Petroleum and petroleum products.....	217.5	197.1	196.6	208.1	206.0	207.2	230.7	245.4	242.6	251.3	253.7	226.1	203.3
Paper and paper base stocks.....	105.4	105.8	106.1	106.7	107.5	107.7	109.3	110.4	111.3	111.9	112.9	113.1	112.9
Materials associated with nondurable supplies and materials.....	118.3	117.6	117.8	118.3	118.8	119.3	119.0	119.5	120.6	121.7	121.4	121.8	122.0
Selected building materials.....	120.0	116.0	116.9	118.5	118.5	118.0	118.1	120.0	117.2	116.8	115.2	115.8	112.2
Unfinished metals associated with durable goods...	140.4	143.5	145.8	150.8	157.4	161.1	165.4	180.2	193.2	184.2	188.7	194.1	192.3
Nonmetals associated with durable goods.....	100.9	100.9	100.5	100.9	101.0	100.8	101.0	101.0	101.1	101.2	101.5	101.3	101.5
Capital goods.....	91.3	91.1	91.0	91.1	91.1	91.1	91.0	91.0	91.2	91.3	91.3	91.3	91.3
Electric and electrical generating equipment.....	99.2	99.2	99.3	99.8	100.0	100.1	100.3	100.9	102.1	102.2	102.1	102.7	102.7
Nonelectrical machinery.....	88.4	88.3	88.1	88.1	88.0	88.0	87.8	87.7	87.8	87.9	87.9	87.8	87.8
Automotive vehicles, parts, and engines.....	103.7	103.7	103.6	103.4	103.5	103.5	103.6	103.7	103.9	104.1	104.1	104.2	104.4
Consumer goods, excluding automotive.....	99.6	99.5	99.6	99.8	99.9	99.6	99.5	99.7	99.8	100.3	100.4	100.5	100.6
Nondurables, manufactured.....	102.9	102.8	102.7	103.1	102.9	102.8	102.6	102.5	102.6	103.0	103.0	103.0	102.9
Durables, manufactured.....	96.2	95.9	96.2	96.3	96.5	96.3	96.4	96.9	97.0	97.5	97.7	97.8	97.9
Nonmanufactured consumer goods.....	100.4	100.0	101.2	101.6	101.4	98.2	98.4	98.4	98.6	99.7	100.1	100.5	102.1

48. U.S. international price indexes for selected categories of services

[2000 = 100, unless indicated otherwise]

Category	2004		2005				2006		
	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.
Air freight (inbound).....	118.7	125.1	126.3	125.6	127.5	124.6	124.6	129.2	127.7
Air freight (outbound).....	100.7	104.7	103.8	107.2	112.4	112.0	113.5	117.2	116.3
Inbound air passenger fares (Dec. 2003 = 100).....	110.1	112.5	114.5	116.1	118.3	108.5	110.5	121.0	122.2
Outbound air passenger fares (Dec. 2003 = 100).....	114.2	105.4	105.0	120.5	120.1	110.8	110.6	128.7	121.1
Ocean liner freight (inbound).....	120.3	122.7	121.3	128.5	127.9	126.8	125.4	114.9	113.9

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

[1992 = 100]

Item	2003		2004				2005				2006		
	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
Business													
Output per hour of all persons.....	130.8	130.3	131.4	132.8	133.0	133.5	134.5	134.9	136.6	136.7	138.2	138.6	138.6
Compensation per hour.....	152.5	153.6	154.4	155.8	157.5	160.1	161.6	162.0	165.2	166.5	171.9	174.6	176.3
Real compensation per hour.....	118.4	118.9	118.5	118.3	119.1	120.0	120.4	119.5	120.3	120.3	123.6	124.0	124.3
Unit labor costs.....	116.6	117.9	117.5	117.3	118.5	119.9	120.1	120.0	121.0	121.8	124.4	126.0	127.2
Unit nonlabor payments.....	120.2	119.5	122.9	126.2	125.5	125.8	127.9	130.0	131.1	132.3	130.2	130.1	129.1
Implicit price deflator.....	118.0	118.5	119.5	120.6	121.1	122.1	123.0	123.7	124.7	125.7	126.6	127.5	127.9
Nonfarm business													
Output per hour of all persons.....	130.1	129.9	130.5	132.2	132.2	132.4	133.5	134.3	135.8	135.8	137.2	137.6	137.6
Compensation per hour.....	151.7	152.9	153.4	154.8	156.6	158.7	160.4	161.0	164.1	165.3	170.6	173.4	175.0
Real compensation per hour.....	117.8	118.4	117.8	117.6	118.3	118.9	119.5	118.9	119.5	119.4	122.6	123.1	123.3
Unit labor costs.....	116.6	117.7	117.6	117.2	118.4	119.9	120.1	119.9	120.9	121.7	124.4	126.0	127.2
Unit nonlabor payments.....	121.5	120.5	123.6	126.8	126.6	127.0	129.4	131.8	133.1	134.3	132.2	132.3	131.1
Implicit price deflator.....	118.4	118.7	119.8	120.7	121.4	122.5	123.5	124.3	125.3	126.4	127.3	128.3	128.6
Nonfinancial corporations													
Output per hour of all employees.....	135.7	136.6	137.6	138.6	140.5	141.0	142.8	144.5	145.6	146.7	150.6	150.7	—
Compensation per hour.....	150.8	152.0	151.8	153.2	155.0	157.1	158.6	159.3	162.4	163.6	168.5	171.2	—
Real compensation per hour.....	117.1	117.7	116.5	116.4	117.1	117.7	118.2	117.6	118.3	118.2	121.1	121.5	—
Total unit costs.....	111.0	110.9	110.0	110.2	110.0	110.8	110.9	110.2	111.9	111.3	110.9	112.5	—
Unit labor costs.....	111.1	111.3	110.4	110.5	110.3	111.4	111.1	110.2	111.6	111.5	111.9	113.6	—
Unit nonlabor costs.....	110.8	110.0	109.1	109.3	109.2	109.3	110.3	110.2	112.6	110.5	108.3	109.6	—
Unit profits.....	112.9	117.8	131.2	139.2	142.3	142.4	148.5	159.0	149.9	159.6	172.9	165.9	—
Unit nonlabor payments.....	111.4	112.1	115.0	117.3	118.1	118.2	120.5	123.3	122.6	123.6	125.6	124.6	—
Implicit price deflator.....	111.2	111.6	111.9	112.8	112.9	113.7	114.2	114.6	115.3	115.6	116.5	117.3	—
Manufacturing													
Output per hour of all persons.....	163.0	162.6	161.8	163.3	164.0	166.1	168.1	169.7	171.2	173.2	174.8	176.0	178.5
Compensation per hour.....	159.4	162.0	157.5	159.8	163.0	165.5	166.1	167.8	170.7	170.9	176.3	178.0	179.3
Real compensation per hour.....	123.7	125.4	120.8	121.4	123.2	124.0	123.7	123.8	124.3	123.4	126.7	126.4	126.4
Unit labor costs.....	97.7	99.6	97.3	97.8	99.4	99.6	98.8	98.9	99.7	98.7	100.9	101.2	100.4

NOTE: Dash indicates data not available.

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

[2000 = 100, unless otherwise indicated]

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Private business													
Productivity:													
Output per hour of all persons.....	86.4	87.3	87.5	90.1	91.8	94.4	97.2	100.0	102.8	107.0	111.2	115.0	118.0
Output per unit of capital services.....	102.9	104.4	103.3	103.5	103.7	103.0	102.0	100.0	96.3	95.2	96.4	98.6	98.9
Multifactor productivity.....	93.0	93.7	93.5	95.1	96.0	97.5	98.7	100.0	100.2	101.8	104.7	107.7	109.6
Output.....	73.2	76.8	79.2	82.8	87.2	91.5	96.2	100.0	100.5	102.0	105.5	110.6	115.0
Inputs:													
Labor input.....	82.5	86.2	88.7	90.5	94.1	96.3	98.9	100.0	98.6	97.3	97.2	98.7	100.1
Capital services.....	71.2	73.6	76.6	80.0	84.1	88.8	94.3	100.0	104.4	107.1	109.4	112.1	116.3
Combined units of labor and capital input.....	78.7	82.0	84.7	87.1	90.8	93.9	97.5	100.0	100.3	100.2	100.8	102.7	104.9
Capital per hour of all persons.....	84.0	83.6	84.7	87.1	88.5	91.6	95.3	100.0	106.8	112.3	115.3	116.6	119.3
Private nonfarm business													
Productivity:													
Output per hour of all persons.....	86.8	87.8	88.3	90.7	92.1	94.7	97.3	100.0	102.7	106.9	111.1	114.9	—
Output per unit of capital services.....	103.9	105.2	104.3	104.2	104.1	103.4	102.3	100.0	96.3	95.1	96.3	98.6	—
Multifactor productivity.....	93.5	94.3	94.3	95.6	96.3	97.7	98.8	100.0	100.1	101.8	104.6	107.7	—
Output.....	73.2	76.7	79.3	82.8	87.2	91.5	96.3	100.0	100.5	102.1	105.5	110.6	—
Inputs:													
Labor input.....	82.2	85.6	88.1	90.1	93.7	96.0	98.9	100.0	98.7	97.3	97.3	98.9	—
Capital services.....	70.5	72.9	76.0	79.5	83.7	88.5	94.2	100.0	104.5	107.3	109.6	112.3	—
Combined units of labor and capital input.....	78.3	81.4	84.1	86.6	90.5	93.7	97.5	100.0	100.4	100.2	100.9	102.8	—
Capital per hour of all persons.....	83.6	83.5	84.7	87.0	88.5	91.5	95.2	100.0	106.7	112.4	115.4	116.6	—
Manufacturing [1996 = 100]													
Productivity:													
Output per hour of all persons.....	90.2	93.0	96.5	100.0	103.8	108.9	114.0	118.3	119.7	—	—	—	—
Output per unit of capital services.....	96.9	99.7	100.6	100.0	101.4	101.7	101.7	101.0	95.1	—	—	—	—
Multifactor productivity.....	95.1	97.3	99.2	100.0	103.1	105.7	108.7	111.3	110.3	—	—	—	—
Output.....	88.3	92.9	96.9	100.0	105.6	110.5	114.7	117.4	112.1	—	—	—	—
Inputs:													
Hours of all persons.....	97.8	99.9	100.4	100.0	101.7	101.5	100.7	99.2	93.6	—	—	—	—
Capital services.....	91.1	93.2	96.4	100.0	104.1	108.7	112.8	116.2	117.9	—	—	—	—
Energy.....	96.6	99.9	102.3	100.0	97.5	100.6	102.9	104.3	98.9	—	—	—	—
Nonenergy materials.....	86.5	90.3	93.1	100.0	101.9	107.5	107.9	106.9	105.5	—	—	—	—
Purchased business services.....	92.9	96.0	100.4	100.0	103.9	103.1	105.4	106.5	97.7	—	—	—	—
Combined units of all factor inputs.....	92.8	95.5	97.7	100.0	102.4	104.6	105.5	105.5	101.6	—	—	—	—

NOTE: Dash indicates data not available.

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

[1992 = 100]

Item	1960	1970	1980	1990	1997	1998	1999	2000	2001	2002	2003	2004	2005
Business													
Output per hour of all persons.....	48.9	66.3	79.2	94.4	106.5	109.4	112.7	115.9	118.8	123.6	128.6	133.1	136.6
Compensation per hour.....	13.9	23.6	54.1	90.6	113.0	119.8	125.6	134.4	140.0	144.9	150.7	157.8	165.8
Real compensation per hour.....	60.8	78.8	89.1	96.2	100.5	105.1	107.9	111.8	113.3	115.4	117.3	119.6	121.6
Unit labor costs.....	28.4	35.6	68.4	96.0	106.1	109.5	111.5	116.0	117.8	117.2	117.1	118.5	121.4
Unit nonlabor payments.....	24.9	31.5	61.3	93.7	113.8	110.0	109.4	107.3	110.0	114.2	118.7	123.9	127.5
Implicit price deflator.....	27.1	34.1	65.8	95.1	109.0	109.7	110.7	112.7	114.9	116.1	117.7	120.6	123.7
Nonfarm business													
Output per hour of all persons.....	51.9	68.0	80.6	94.5	106.4	109.3	112.4	115.5	118.3	123.1	128.0	132.4	136.0
Compensation per hour.....	14.5	23.7	54.4	90.4	112.8	119.5	125.1	133.9	139.2	144.2	149.9	156.7	164.7
Real compensation per hour.....	63.3	79.2	89.5	96.1	100.3	104.8	107.4	111.3	112.6	114.8	116.6	118.8	120.8
Unit labor costs.....	27.9	34.9	67.5	95.7	106.0	109.3	111.3	115.9	117.6	117.1	117.1	118.4	121.1
Unit nonlabor payments.....	24.3	31.2	60.4	93.5	114.5	111.0	111.0	108.8	111.6	116.1	120.0	124.8	129.2
Implicit price deflator.....	26.6	33.5	64.9	94.9	109.1	109.9	111.1	113.3	115.4	116.7	118.2	120.7	124.1
Nonfinancial corporations													
Output per hour of all employees.....	56.2	69.8	80.8	95.4	109.9	113.5	117.3	121.5	123.5	128.2	133.7	139.1	145.9
Compensation per hour.....	16.2	25.7	57.2	91.1	111.7	118.1	123.5	131.9	137.3	142.0	147.6	153.6	161.8
Real compensation per hour.....	70.8	85.9	94.1	96.8	99.4	103.6	106.1	109.7	111.0	113.0	114.9	116.4	118.7
Total unit costs.....	27.3	35.6	69.2	96.0	101.1	102.9	104.0	107.4	111.6	110.7	110.5	110.4	110.1
Unit labor costs.....	28.8	36.9	70.8	95.5	101.7	104.1	105.3	108.6	111.2	110.7	110.4	110.4	110.9
Unit nonlabor costs.....	23.3	32.2	64.9	97.3	99.7	99.5	100.4	104.2	112.6	110.8	110.8	110.2	107.9
Unit profits.....	50.2	44.4	66.9	96.9	154.3	137.0	129.1	108.7	82.2	98.0	116.5	137.7	158.1
Unit nonlabor payments.....	30.5	35.4	65.5	97.2	114.3	109.5	108.0	105.4	104.5	107.4	112.3	117.6	121.3
Implicit price deflator.....	29.4	36.4	69.0	96.1	105.9	105.9	106.2	107.5	108.9	109.6	111.0	112.8	114.4
Manufacturing													
Output per hour of all persons.....	—	—	—	92.9	118.0	123.8	128.3	134.4	137.1	146.2	154.4	163.0	171.2
Compensation per hour.....	—	—	—	90.5	112.2	118.8	123.4	134.7	137.9	147.8	160.1	163.8	174.6
Real compensation per hour.....	—	—	—	96.1	99.8	104.2	106.0	112.0	111.5	117.7	124.6	124.1	128.2
Unit labor costs.....	—	—	—	97.4	95.1	95.9	96.2	100.3	100.6	101.1	103.7	100.5	102.2
Unit nonlabor payments.....	—	—	—	100.4	109.7	103.9	104.7	106.1	104.8	103.0	—	—	—
Implicit price deflator.....	—	—	—	99.2	104.2	100.8	101.5	103.9	103.2	102.3	—	—	—

Dash indicates data not available.

52. Annual indexes of output per hour for selected NAICS industries, 1987–2005

[1997=100]

NAICS	Industry	1987	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Mining														
21	Mining.....	85.5	85.1	101.7	101.3	100.0	103.6	111.4	111.2	109.1	113.9	116.2	107.2	–
211	Oil and gas extraction.....	80.1	75.7	95.3	98.1	100.0	101.2	107.9	119.4	121.6	124.0	130.3	112.4	–
212	Mining, except oil and gas.....	69.8	79.3	94.0	96.0	100.0	104.6	105.9	106.8	109.0	111.4	114.0	115.4	–
2121	Coal mining.....	58.4	68.1	88.2	94.9	100.0	106.5	110.3	115.8	114.4	112.2	113.1	112.8	–
2122	Metal ore mining.....	71.2	79.9	98.5	95.3	100.0	109.5	112.7	124.4	131.8	142.4	146.3	139.4	–
2123	Nonmetallic mineral mining and quarrying.....	88.5	92.3	97.3	97.1	100.0	101.3	101.2	96.2	99.3	103.6	108.1	112.5	–
Utilities														
2211	Power generation and supply.....	65.6	71.1	88.5	95.2	100.0	103.7	103.5	107.0	106.4	102.9	105.1	107.5	–
2212	Natural gas distribution.....	67.8	71.4	89.0	96.0	100.0	99.0	102.7	113.2	110.1	115.4	114.1	118.6	–
Manufacturing														
3111	Animal food.....	83.6	91.5	93.8	86.1	100.0	109.0	110.9	109.7	131.4	142.7	137.0	149.4	–
3112	Grain and oilseed milling.....	81.1	88.6	98.7	90.0	100.0	107.5	116.1	113.1	119.5	122.4	123.9	129.9	–
3113	Sugar and confectionery products.....	87.6	89.5	93.2	97.8	100.0	103.5	106.5	109.9	108.6	108.0	112.5	116.3	–
3114	Fruit and vegetable preserving and specialty.....	92.4	87.6	98.3	98.8	100.0	107.1	109.5	111.8	121.4	126.6	122.6	126.0	–
3115	Dairy products.....	82.7	91.1	97.6	97.8	100.0	100.0	93.6	95.9	97.1	104.9	110.6	106.8	–
3116	Animal slaughtering and processing.....	97.4	94.3	99.0	94.2	100.0	100.0	101.2	102.6	103.7	107.3	106.8	108.9	–
3117	Seafood product preparation and packaging.....	123.1	119.7	110.3	118.0	100.0	120.2	131.6	140.5	153.0	169.8	173.3	158.7	–
3118	Bakeries and tortilla manufacturing.....	100.9	94.5	100.7	97.3	100.0	103.8	108.6	108.3	109.9	110.7	111.1	114.3	–
3119	Other food products.....	97.5	92.5	104.1	105.1	100.0	107.8	111.4	112.6	106.2	112.0	118.7	118.5	–
3121	Beverages.....	77.1	87.6	103.2	102.0	100.0	99.0	90.7	90.8	92.7	99.8	107.9	111.5	–
3122	Tobacco and tobacco products.....	71.9	79.1	97.3	98.4	100.0	98.5	91.0	95.9	98.2	67.0	78.7	82.3	–
3131	Fiber, yarn, and thread mills.....	66.5	74.4	91.9	98.9	100.0	102.1	103.9	101.3	109.1	133.3	148.8	150.8	–
3132	Fabric mills.....	68.0	75.3	95.5	98.1	100.0	104.2	110.0	110.1	110.3	125.4	136.8	139.1	–
3133	Textile and fabric finishing mills.....	91.3	82.0	84.3	85.0	100.0	101.2	102.2	104.4	108.5	119.8	125.2	121.0	–
3141	Textile furnishings mills.....	91.2	88.0	92.3	93.8	100.0	99.3	99.1	104.5	103.1	105.5	114.4	120.7	–
3149	Other textile product mills.....	92.2	91.4	95.9	97.2	100.0	96.7	107.6	108.9	103.1	105.3	104.5	117.7	–
3151	Apparel knitting mills.....	76.2	86.2	109.3	122.1	100.0	96.1	101.4	108.9	105.6	112.0	106.4	92.7	–
3152	Cut and sew apparel.....	69.8	70.1	85.2	90.6	100.0	102.3	114.6	119.8	119.5	104.0	117.3	110.9	–
3159	Accessories and other apparel.....	97.8	101.3	112.1	112.6	100.0	109.0	99.2	98.3	105.2	76.1	78.9	73.3	–
3161	Leather and hide tanning and finishing.....	79.8	64.6	79.7	91.2	100.0	100.0	104.8	115.1	114.9	83.2	80.9	83.8	–
3162	Footwear.....	76.7	78.1	96.5	103.7	100.0	102.1	117.3	122.3	130.7	102.7	103.2	101.1	–
3169	Other leather products.....	99.4	102.9	74.4	80.3	100.0	113.2	105.8	113.4	109.1	95.1	101.3	129.0	–
3211	Sawmills and wood preservation.....	77.6	79.4	90.4	95.9	100.0	100.3	104.7	105.4	108.8	114.5	121.3	117.3	–
3212	Plywood and engineered wood products.....	99.8	102.9	101.5	101.1	100.0	105.2	98.8	98.9	105.3	110.5	107.3	101.8	–
3219	Other wood products.....	103.2	105.5	99.8	100.5	100.0	101.1	104.6	103.1	104.9	114.4	114.4	119.4	–
3221	Pulp, paper, and paperboard mills.....	81.7	84.0	98.4	95.4	100.0	102.5	111.1	116.3	119.9	133.1	141.4	145.4	–
3222	Converted paper products.....	89.0	90.1	97.2	97.7	100.0	102.5	100.1	101.1	100.5	105.7	109.6	112.5	–
3231	Printing and related support activities.....	97.7	97.6	98.8	99.9	100.0	100.6	102.8	104.6	105.3	110.2	111.2	114.0	–
3241	Petroleum and coal products.....	72.1	76.1	89.9	93.5	100.0	102.2	107.1	113.5	112.1	118.0	119.3	123.2	–
3251	Basic chemicals.....	94.6	93.4	91.3	89.4	100.0	102.7	115.7	117.5	108.8	123.7	136.1	148.7	–
3252	Resin, rubber, and artificial fibers.....	77.4	76.4	95.4	93.1	100.0	106.0	109.8	109.8	106.2	123.1	122.2	123.3	–
3253	Agricultural chemicals.....	80.4	85.8	89.9	91.7	100.0	98.8	87.4	92.1	90.0	99.2	108.2	115.6	–
3254	Pharmaceuticals and medicines.....	87.3	91.3	95.9	100.0	100.0	93.8	95.7	95.6	99.5	96.7	100.6	104.2	–
3255	Paints, coatings, and adhesives.....	89.3	87.1	92.3	99.1	100.0	100.1	100.3	100.8	105.6	108.9	115.3	119.4	–
3256	Soap, cleaning compounds, and toiletries.....	84.4	84.8	96.1	97.3	100.0	98.0	93.0	102.8	106.0	124.0	118.0	127.7	–
3259	Other chemical products and preparations.....	75.4	77.8	93.5	94.0	100.0	99.2	109.3	119.7	110.4	120.9	123.1	118.8	–
3261	Plastics products.....	83.1	85.2	94.5	96.6	100.0	104.2	109.9	112.3	114.6	123.8	129.4	130.6	–
3262	Rubber products.....	75.5	83.5	92.9	94.2	100.0	99.4	100.2	101.7	102.3	107.1	110.9	112.0	–
3271	Clay products and refractories.....	86.9	89.4	97.4	102.4	100.0	101.2	102.7	102.9	98.4	99.7	103.5	109.3	–
3272	Glass and glass products.....	82.3	79.1	87.5	94.7	100.0	101.4	106.7	108.2	102.8	107.4	114.9	113.7	–
3273	Cement and concrete products.....	93.6	96.6	99.7	102.0	100.0	105.1	105.9	101.6	98.0	102.4	108.2	102.0	–
3274	Lime and gypsum products.....	88.2	85.4	90.0	93.7	100.0	114.9	104.4	98.5	101.8	98.5	106.7	103.4	–
3279	Other nonmetallic mineral products.....	83.0	79.5	91.4	96.0	100.0	99.0	95.6	96.6	98.6	106.0	112.6	107.8	–
3311	Iron and steel mills and ferroalloy production.....	64.8	70.2	90.0	94.1	100.0	101.3	104.8	106.0	104.4	124.9	130.3	157.7	–
3312	Steel products from purchased steel.....	79.7	84.4	100.6	100.5	100.0	100.6	93.8	96.4	97.9	96.8	93.9	94.1	–
3313	Alumina and aluminum production.....	90.5	90.7	95.9	95.4	100.0	101.5	103.5	96.6	96.2	124.4	126.7	136.8	–
3314	Other nonferrous metal production.....	96.8	96.3	102.7	105.9	100.0	111.3	108.4	102.3	99.5	107.7	120.2	120.9	–
3315	Foundries.....	81.8	86.6	93.1	96.0	100.0	101.2	104.5	103.6	107.4	116.7	116.3	123.7	–
3321	Forging and stamping.....	85.4	89.0	93.9	97.4	100.0	103.5	110.9	121.1	120.7	125.0	133.2	140.1	–
3322	Cutlery and hand tools.....	86.3	85.4	97.2	103.8	100.0	99.9	108.0	105.9	110.3	113.6	113.4	111.8	–
3323	Architectural and structural metals.....	88.7	87.9	93.3	93.9	100.0	101.0	102.0	100.7	101.7	106.2	109.0	103.7	–
3324	Boilers, tanks, and shipping containers.....	86.0	90.1	97.3	100.7	100.0	100.0	96.5	94.2	94.4	105.7	108.5	99.9	–
3325	Hardware.....	88.7	84.8	97.2	102.2	100.0	100.5	105.2	114.3	113.5	115.4	125.3	123.6	–
3326	Spring and wire products.....	82.2	85.2	99.0	102.4	100.0	110.6	111.4	112.6	111.9	129.3	139.4	134.4	–
3327	Machine shops and threaded products.....	76.9	79.2	98.3	99.8	100.0	99.6	104.2	108.2	108.8	115.1	115.9	113.0	–

52. Continued—Annual indexes of output per hour for selected NAICS industries, 1987–2004

[1997=100]

NAICS	Industry	1987	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
3328	Coating, engraving, and heat treating metals.....	75.5	81.3	102.2	101.7	100.0	100.9	101.0	105.5	107.3	116.3	118.5	125.5	—
3329	Other fabricated metal products.....	91.0	86.5	96.3	98.2	100.0	101.9	99.6	99.9	96.7	106.5	111.6	111.4	—
3331	Agriculture, construction, and mining machinery....	74.6	83.3	95.4	95.7	100.0	103.3	94.3	100.3	100.3	103.6	116.1	126.7	—
3332	Industrial machinery.....	75.1	81.6	97.1	98.5	100.0	95.1	105.8	130.0	105.8	117.6	117.0	125.0	—
3333	Commercial and service industry machinery.....	86.9	95.6	103.6	107.2	100.0	105.9	109.8	100.9	94.3	97.6	104.5	106.1	—
3334	HVAC and commercial refrigeration equipment.....	84.0	90.6	96.4	97.2	100.0	106.2	110.2	107.9	110.8	118.6	130.0	130.4	—
3335	Metalworking machinery.....	85.1	86.5	99.2	97.5	100.0	99.1	100.3	106.1	103.3	112.9	115.4	117.1	—
3336	Turbine and power transmission equipment.....	80.2	85.9	91.3	98.0	100.0	105.0	110.8	114.9	126.9	130.8	143.0	124.0	—
3339	Other general purpose machinery.....	83.5	86.8	94.0	94.9	100.0	103.7	106.0	113.7	110.5	118.1	128.3	124.0	—
3341	Computer and peripheral equipment.....	11.0	14.7	49.9	72.6	100.0	140.4	195.8	234.9	252.0	298.9	375.4	431.7	—
3342	Communications equipment.....	39.8	48.4	74.4	84.5	100.0	107.1	135.4	164.1	152.9	128.3	143.2	143.5	—
3343	Audio and video equipment.....	61.7	77.0	141.6	106.1	100.0	105.4	119.6	126.3	128.4	149.9	170.7	242.8	—
3344	Semiconductors and electronic components.....	17.0	21.9	63.8	83.1	100.0	125.8	173.9	232.4	230.4	263.9	324.4	362.4	—
3345	Electronic instruments.....	70.2	78.5	97.9	97.6	100.0	102.3	106.7	116.7	119.3	118.4	125.7	141.7	—
3346	Magnetic media manufacturing and reproduction...	85.7	83.7	105.0	103.1	100.0	106.4	108.9	105.8	99.8	110.4	126.1	140.3	—
3351	Electric lighting equipment.....	91.1	88.2	91.9	95.8	100.0	104.4	102.7	102.0	106.7	112.3	111.6	120.4	—
3352	Household appliances.....	73.3	76.5	91.8	91.9	100.0	105.3	103.9	117.2	124.7	133.0	147.5	157.6	—
3353	Electrical equipment.....	68.7	73.6	98.0	100.4	100.0	100.2	98.7	99.4	101.0	101.8	103.2	110.2	—
3359	Other electrical equipment and components.....	78.7	76.0	92.0	96.3	100.0	105.2	113.8	119.1	112.7	114.4	116.5	116.2	—
3361	Motor vehicles.....	75.4	85.6	88.5	91.0	100.0	113.4	122.6	109.7	110.0	126.0	140.7	142.0	—
3362	Motor vehicle bodies and trailers.....	85.0	75.9	97.4	98.5	100.0	102.9	103.1	98.8	88.7	105.4	109.8	108.2	—
3363	Motor vehicle parts.....	78.7	76.0	92.3	93.0	100.0	105.0	110.0	112.3	114.8	130.4	136.9	138.3	—
3364	Aerospace products and parts.....	86.5	89.1	94.9	98.9	100.0	120.2	120.0	103.2	116.7	118.1	124.3	116.8	—
3365	Railroad rolling stock.....	55.6	77.6	81.8	80.8	100.0	103.3	116.5	118.5	126.1	145.9	139.8	126.1	—
3366	Ship and boat building.....	95.5	99.6	93.1	93.5	100.0	99.3	112.0	121.9	121.5	131.0	133.9	136.8	—
3369	Other transportation equipment.....	73.7	62.9	94.1	101.5	100.0	111.5	113.8	132.4	140.2	150.9	163.7	168.7	—
3371	Household and institutional furniture.....	85.2	88.2	97.2	99.8	100.0	102.2	103.1	101.9	105.5	112.1	115.1	118.2	—
3372	Office furniture and fixtures.....	85.8	82.2	84.9	86.3	100.0	100.0	98.2	100.2	98.0	115.8	126.6	129.5	—
3379	Other furniture-related products.....	86.3	88.9	94.8	97.6	100.0	106.9	102.0	99.5	105.0	110.2	110.0	121.1	—
3391	Medical equipment and supplies.....	76.3	82.9	96.6	100.5	100.0	108.7	110.4	114.6	119.3	131.2	141.1	143.4	—
3399	Other miscellaneous manufacturing.....	85.4	90.5	95.9	99.7	100.0	102.0	105.0	113.6	111.7	118.1	124.6	125.8	—
Wholesale trade														
42	Wholesale trade.....	73.2	79.8	94.0	97.1	100.0	103.4	110.9	116.2	118.0	123.8	127.9	134.7	135.5
423	Durable goods.....	62.3	67.5	90.1	94.7	100.0	106.9	118.9	124.6	128.3	139.7	145.5	159.8	164.8
4231	Motor vehicles and parts.....	74.5	78.6	94.6	96.1	100.0	106.4	120.4	116.6	119.9	133.4	137.8	144.0	153.0
4232	Furniture and furnishings.....	80.5	90.1	102.7	103.2	100.0	99.9	102.3	112.4	110.5	116.0	123.9	129.8	127.2
4233	Lumber and construction supplies.....	109.1	108.4	101.6	103.9	100.0	105.4	109.3	107.6	116.4	123.9	133.2	138.9	131.5
4234	Commercial equipment.....	28.0	34.2	74.5	88.1	100.0	124.8	160.3	179.0	213.4	261.0	288.1	332.2	359.1
4235	Metals and minerals.....	101.7	103.1	105.2	102.3	100.0	100.9	94.0	93.9	94.4	96.3	97.8	108.9	105.0
4236	Electric goods.....	42.8	50.3	83.8	89.2	100.0	105.9	127.4	152.7	147.4	159.4	165.9	194.7	201.8
4237	Hardware and plumbing.....	82.2	88.0	99.2	99.2	100.0	101.8	104.3	103.7	100.5	102.6	104.0	107.7	105.9
4238	Machinery and supplies.....	74.1	81.5	90.0	94.3	100.0	104.3	102.9	105.5	102.8	100.3	103.1	111.9	118.2
4239	Miscellaneous durable goods.....	89.8	90.5	99.5	101.0	100.0	100.8	113.7	114.7	116.8	124.6	119.5	134.8	135.7
424	Nondurable goods.....	91.0	98.9	98.5	99.2	100.0	99.1	100.8	105.1	105.1	105.8	110.7	113.5	114.2
4241	Paper and paper products.....	85.6	81.0	95.4	95.0	100.0	98.4	100.1	100.9	104.6	116.6	119.7	131.1	144.9
4242	Druggists' goods.....	70.7	80.6	94.8	99.5	100.0	94.2	93.1	85.9	84.9	89.8	100.5	106.4	112.0
4243	Apparel and piece goods.....	86.3	99.3	90.6	97.0	100.0	103.6	105.1	108.8	115.2	122.8	125.9	130.8	144.1
4244	Grocery and related products.....	87.9	96.2	103.9	100.4	100.0	101.1	101.0	102.4	101.8	98.6	104.3	103.2	101.5
4245	Farm product raw materials.....	81.6	79.4	87.4	89.2	100.0	94.3	101.6	105.1	102.1	98.1	98.2	109.1	100.5
4246	Chemicals.....	90.4	101.1	98.7	98.7	100.0	97.1	93.3	87.9	85.3	89.1	91.9	90.1	88.1
4247	Petroleum.....	83.8	109.3	100.6	106.9	100.0	88.5	102.9	138.1	140.6	153.6	155.9	167.0	152.8
4248	Alcoholic beverages.....	99.3	110.0	101.5	101.2	100.0	106.5	105.6	108.4	106.4	106.8	107.9	103.0	108.9
4249	Miscellaneous nondurable goods.....	111.2	109.0	99.8	101.2	100.0	105.4	106.8	115.0	111.9	106.1	109.1	119.7	126.7
425	Electronic markets and agents and brokers.....	64.3	74.3	95.4	100.4	100.0	103.3	110.9	119.3	117.8	117.8	111.8	107.4	98.1
Retail trade														
44-45	Retail trade.....	79.1	81.4	94.0	97.6	100.0	105.7	112.7	116.1	120.1	125.6	131.6	138.0	142.7
441	Motor vehicle and parts dealers.....	78.3	82.7	95.5	98.5	100.0	106.4	115.1	114.3	116.0	119.9	124.3	127.4	128.0
4411	Automobile dealers.....	79.2	84.1	95.8	98.3	100.0	106.5	116.3	113.7	115.5	117.2	119.5	124.7	123.4
4412	Other motor vehicle dealers.....	70.6	69.7	88.3	98.1	100.0	109.6	114.8	115.3	124.6	133.6	133.8	142.8	150.5
4413	Auto parts, accessories, and tire stores.....	71.8	79.0	95.2	97.8	100.0	105.1	107.6	108.4	101.3	107.7	115.1	110.3	118.6
442	Furniture and home furnishings stores.....	75.1	79.0	93.7	97.3	100.0	104.1	110.8	115.9	122.4	129.3	134.6	147.0	149.4
4421	Furniture stores.....	77.3	84.8	93.6	96.0	100.0	104.3	107.5	112.0	119.7	125.2	128.8	139.4	138.4
4422	Home furnishings stores.....	71.3	71.0	93.3	98.7	100.0	104.1	115.2	121.0	126.1	134.9	142.6	157.1	163.8
443	Electronics and appliance stores.....	38.0	47.7	87.8	93.5	100.0	122.6	150.6	173.7	196.7	233.5	292.7	334.7	365.1
444	Building material and garden supply stores.....	75.8	79.5	91.9	96.6	100.0	107.4	113.8	113.3	116.8	120.8	127.1	134.6	135.1

52. Continued—Annual indexes of output per hour for selected NAICS industries, 1987–2004

[1997=100]

NAICS	Industry	1987	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
4441	Building material and supplies dealers	77.6	81.6	93.4	97.1	100.0	108.3	115.3	115.1	116.7	121.3	127.5	134.0	134.6
4442	Lawn and garden equipment and supplies stores ...	66.9	69.0	83.9	93.8	100.0	102.3	105.5	103.1	118.4	118.3	125.7	140.2	139.4
445	Food and beverage stores	110.9	107.5	102.3	101.0	100.0	100.0	101.9	101.1	103.9	104.8	107.2	113.1	119.1
4451	Grocery stores.....	111.1	106.9	102.7	100.9	100.0	99.6	102.5	101.1	103.3	104.8	106.7	112.3	117.3
4452	Specialty food stores	138.5	127.2	102.9	101.0	100.0	100.5	96.4	98.5	108.2	105.3	112.2	121.1	137.4
4453	Beer, wine and liquor stores	94.7	98.7	95.4	101.7	100.0	105.9	100.3	107.0	108.3	111.4	118.4	129.9	147.6
446	Health and personal care stores	84.0	91.0	91.4	96.3	100.0	104.0	107.1	112.2	116.2	122.9	129.5	134.0	132.8
447	Gasoline stations	83.9	84.2	99.4	99.5	100.0	106.7	110.7	107.7	112.9	125.1	119.9	122.3	129.5
448	Clothing and clothing accessories stores	66.3	69.8	92.7	99.5	100.0	106.3	114.0	123.5	126.4	131.3	138.9	139.2	147.5
4481	Clothing stores	67.1	70.0	91.7	98.8	100.0	108.7	114.2	125.0	130.3	136.0	141.8	141.0	153.7
4482	Shoe stores	65.3	70.8	96.4	103.7	100.0	94.2	104.9	110.0	111.5	125.2	132.5	124.9	129.4
4483	Jewelry, luggage, and leather goods stores	64.5	68.1	94.1	98.8	100.0	108.7	122.5	130.5	123.9	118.7	132.9	144.5	137.2
451	Sporting goods, hobby, book, and music stores	74.4	82.1	95.0	95.9	100.0	107.9	114.0	121.1	127.1	127.5	131.3	151.1	164.2
4511	Sporting goods and musical instrument stores	70.5	79.5	94.7	95.1	100.0	111.6	119.3	127.8	132.4	132.7	136.7	160.1	172.8
4512	Book, periodical, and music stores	84.3	87.9	95.4	97.6	100.0	100.9	104.0	108.7	116.9	117.8	121.8	134.8	149.3
452	General merchandise stores	73.5	75.1	92.0	96.7	100.0	105.3	113.4	120.2	124.8	129.1	136.9	140.7	146.1
4521	Department stores	87.2	83.9	94.6	98.5	100.0	100.4	104.5	106.2	103.8	102.0	106.8	109.0	109.6
4529	Other general merchandise stores	54.8	61.2	87.2	93.8	100.0	114.7	131.0	147.3	164.7	179.3	188.8	192.9	203.5
453	Miscellaneous store retailers	65.1	69.5	88.8	94.8	100.0	108.9	111.3	114.1	112.6	119.1	126.1	131.2	142.0
4531	Florists	77.6	73.3	82.4	92.8	100.0	102.3	116.2	115.2	102.7	113.8	108.9	103.0	127.5
4532	Office supplies, stationery and gift stores	61.4	66.4	91.7	93.3	100.0	111.5	119.2	127.3	132.3	141.5	153.9	173.0	182.6
4533	Used merchandise stores	64.5	70.4	85.9	94.8	100.0	119.1	113.4	116.5	121.9	142.0	149.7	155.7	168.1
4539	Other miscellaneous store retailers	68.3	75.0	88.9	97.0	100.0	105.3	103.0	104.4	96.9	94.4	99.9	97.2	104.3
454	Nonstore retailers	50.7	54.7	79.8	91.4	100.0	114.3	128.9	152.2	163.6	182.1	195.5	216.1	222.3
4541	Electronic shopping and mail-order houses	39.4	43.4	72.5	85.5	100.0	120.2	142.6	160.2	179.6	212.7	243.6	272.8	284.2
4542	Vending machine operators	95.5	95.1	86.4	94.6	100.0	106.3	105.4	111.1	95.7	91.2	102.3	110.4	112.7
4543	Direct selling establishments	70.8	74.1	93.2	101.7	100.0	101.9	104.2	122.5	127.9	135.0	127.0	131.8	128.7
Transportation and warehousing														
481	Air transportation.....	81.1	77.5	95.3	98.8	100.0	97.6	98.2	98.2	91.9	102.2	112.7	125.6	—
5E+05	Line-haul railroads.....	58.9	69.8	92.0	98.4	100.0	102.1	105.5	114.3	121.9	131.9	142.0	146.4	—
48412	General freight trucking, long-distance	85.7	89.2	95.8	95.3	100.0	99.4	99.1	101.9	103.2	107.0	110.7	109.8	—
48421	Used household and office goods moving.....	106.7	112.6	101.4	97.7	100.0	91.0	96.1	94.8	84.0	81.6	86.2	88.7	—
491	U.S. Postal service	90.9	94.2	97.7	96.7	100.0	101.6	102.8	105.5	106.3	106.4	107.8	110.1	—
492	Couriers and messengers.....	148.3	138.5	101.5	100.2	100.0	112.6	117.6	121.9	123.4	131.1	134.1	126.5	—
Information														
5111	Newspaper, book, and directory publishers.....	105.9	96.3	92.7	92.5	100.0	103.9	104.1	107.7	105.8	104.7	109.6	107.0	—
5112	Software publishers.....	10.2	28.4	73.2	88.3	100.0	134.8	129.2	119.2	117.4	122.1	138.1	161.6	—
51213	Motion picture and video exhibition	90.7	109.2	99.4	98.9	100.0	99.8	101.8	106.5	101.6	99.8	100.6	103.9	—
515	Broadcasting, except internet.....	99.5	98.2	102.5	101.3	100.0	100.8	102.9	103.6	99.2	104.0	106.7	108.2	—
5151	Radio and television broadcasting	98.1	97.7	104.8	103.4	100.0	91.5	92.6	92.1	89.6	95.1	94.4	91.4	—
5152	Cable and other subscription programming.....	105.6	100.3	92.8	93.0	100.0	136.2	139.1	141.2	128.1	129.8	145.9	158.4	—
5171	Wired telecommunications carriers	56.9	66.0	87.6	96.5	100.0	107.7	116.7	122.7	116.7	124.1	130.2	131.3	—
5172	Wireless telecommunications carriers.....	75.6	70.4	90.0	101.7	100.0	110.5	145.2	152.8	191.9	217.9	242.5	288.7	—
5175	Cable and other program distribution.....	105.2	100.0	92.6	92.6	100.0	97.1	95.8	91.6	87.7	95.0	101.2	113.7	—
Finance and insurance														
52211	Commercial banking	72.8	80.7	95.6	100.0	100.0	96.9	99.1	101.7	97.5	100.3	102.6	108.1	—
Real estate and rental and leasing														
5E+05	Passenger car rental	90.5	88.5	100.2	109.0	100.0	100.0	112.2	111.9	112.2	114.1	120.4	118.3	—
53212	Truck, trailer and RV rental and leasing	60.6	68.8	88.7	96.9	100.0	115.1	120.4	119.9	114.4	112.6	113.7	134.5	—
53223	Video tape and disc rental.....	77.0	97.1	119.5	102.4	100.0	113.2	129.4	134.9	133.3	130.3	148.5	154.7	—
Professional, scientific, and technical services														
5E+05	Tax preparation services.....	82.9	76.2	90.6	96.2	100.0	107.6	105.8	100.9	94.4	111.4	110.0	101.3	—
54181	Advertising agencies.....	95.9	107.9	102.5	103.4	100.0	89.2	97.9	107.5	106.9	112.9	120.7	133.0	—
5E+05	Photography studios, portrait.....	98.1	95.9	107.3	100.6	100.0	124.8	109.8	108.9	102.2	97.6	104.2	92.1	—
Administrative and waste management														
56151	Travel agencies.....	89.3	94.6	93.0	100.1	100.0	111.4	115.5	119.4	115.2	127.6	147.3	167.7	—
56172	Janitorial services.....	70.1	87.0	90.4	96.4	100.0	95.6	99.0	101.4	102.5	106.0	119.2	117.5	—
Assistance														
6215	Medical and diagnostic laboratories.....	-	-	90.8	94.5	100.0	118.8	124.8	131.9	135.4	137.6	141.0	141.1	—
6E+05	Medical laboratories.....	-	-	91.3	94.7	100.0	117.1	121.5	127.4	127.7	123.1	128.7	130.8	—
6E+05	Diagnostic imaging centers.....	-	-	89.8	94.1	100.0	121.4	129.7	139.9	148.6	163.3	160.3	154.3	—
Accommodation and food services														
7211	Traveler accommodations.....	82.9	80.0	97.7	99.6	100.0	100.3	106.4	112.9	109.3	113.3	115.6	122.2	—
722	Food services and drinking places	96.0	102.4	100.3	99.1	100.0	101.0	100.9	103.5	103.8	104.4	106.3	107.1	108.8

52. Continued—Annual indexes of output per hour for selected NAICS industries, 1987–2004

[1997=100]

NAICS	Industry	1987	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
7221	Full-service restaurants	92.1	99.4	96.2	96.1	100.0	100.9	100.8	103.0	103.6	104.4	104.2	104.9	107.5
7222	Limited-service eating places	96.5	103.6	104.1	102.0	100.0	101.2	100.4	102.0	102.5	102.7	105.4	106.9	106.8
7223	Special food services	89.9	99.8	100.8	98.3	100.0	100.6	105.2	115.0	115.3	114.9	117.6	118.8	122.8
7224	Drinking places, alcoholic beverages.....	136.7	123.3	104.6	102.4	100.0	99.7	98.8	100.6	97.6	102.9	118.6	112.6	119.7
	Other services (except public administration)													
8111	Automotive repair and maintenance.....	85.9	89.9	103.2	99.8	100.0	103.6	106.0	109.4	108.9	103.6	104.0	112.1	-
81211	Hair, nail and skin care services	83.4	82.1	93.3	96.4	100.0	108.5	108.5	108.1	114.4	110.2	119.4	126.2	-
81221	Funeral homes and funeral services.....	103.7	98.4	102.4	98.6	100.0	106.8	103.3	94.8	91.8	94.6	95.7	93.3	-
8123	Drycleaning and laundry services	97.1	94.8	99.2	100.9	100.0	100.1	105.1	107.6	110.9	112.5	103.8	111.5	-
81292	Photofinishing	95.8	107.7	108.0	106.6	100.0	69.2	76.3	73.8	81.2	100.5	100.4	102.9	-

NOTE: Dash indicates data are not available.

53. Unemployment rates, approximating U.S. concepts, nine countries, seasonally adjusted

[Percent]

Country			2004				2005				2006		
	2004	2005	I	II	III	IV	I	II	III	IV	I	II	III
United States.....	5.5	5.1	5.7	5.6	5.5	5.4	5.2	5.1	5.0	5.0	4.7	4.7	4.7
Canada.....	6.4	6.0	6.6	6.5	6.3	6.4	6.2	6.0	6.0	5.8	5.7	5.5	5.6
Australia.....	5.5	5.1	5.7	5.6	5.6	5.2	5.1	5.1	5.1	5.2	5.2	5.0	4.8
Japan.....	4.8	4.5	4.9	4.7	4.8	4.6	4.6	4.4	4.4	4.5	4.3	4.1	-
France.....	9.8	9.7	9.8	9.8	9.8	9.8	9.9	9.8	9.7	9.5	9.4	9.0	-
Germany.....	10.3	11.2	10.2	10.3	10.4	10.5	11.4	11.4	11.2	10.9	10.8	10.6	10.3
Italy.....	8.1	7.8	8.3	8.1	8.0	8.0	7.9	7.9	7.7	7.6	7.3	7.1	-
Sweden.....	6.6	7.7	6.7	6.8	6.6	6.4	-	-	-	-	-	-	-
United Kingdom.....	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.8	4.8	5.1	5.3	5.5	-

NOTE: Dash indicates data not available.

Quarterly figures for France, Germany, Italy, and Sweden 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.

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, 1960-2005 (Bureau of Labor Statistics, October 19, 2006), 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.

Monthly and quarterly unemployment rates, updated monthly, are available on the Internet at <ftp://ftp.bls.gov/pub/special.requests/ForeignLabor/flsjec.txt>.

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

[Numbers in thousands]

Employment status and country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Civilian labor force											
United States.....	132,304	133,943	136,297	137,673	139,368	142,583	143,734	144,863	146,510	147,401	149,320
Canada.....	14,456	14,623	14,884	15,135	15,403	15,637	15,891	16,366	16,729	16,955	17,108
Australia.....	8,995	9,115	9,204	9,339	9,414	9,590	9,752	9,907	10,092	10,244	10,524
Japan.....	65,990	66,450	67,200	67,240	67,090	66,990	66,860	66,240	66,010	65,770	65,850
France.....	24,742	24,982	25,116	25,434	25,791	26,099	26,393	26,710	26,930	26,969	27,019
Germany.....	38,980	39,142	39,415	39,752	39,375	39,302	39,459	39,413	39,276	39,711	40,760
Italy.....	22,576	22,677	22,751	23,002	23,174	23,359	23,521	23,726	24,017	24,066	24,156
Netherlands.....	7,208	7,301	7,536	7,617	7,848	8,138	8,130	8,311	8,394	8,505	8,480
Sweden.....	4,460	4,459	4,418	4,402	4,430	4,489	4,530	4,544	4,567	4,576	4,693
United Kingdom.....	28,129	28,239	28,401	28,474	28,777	28,952	29,085	29,335	29,557	29,776	30,094
Participation rate¹											
United States.....	66.6	66.8	67.1	67.1	67.1	67.1	66.8	66.6	66.2	66.0	66.0
Canada.....	64.8	64.7	65.0	65.3	65.8	65.8	65.9	66.7	67.3	67.3	67.0
Australia.....	64.5	64.6	64.3	64.3	64.0	64.4	64.4	64.4	64.6	64.7	65.4
Japan.....	62.9	63.0	63.2	62.8	62.4	62.0	61.6	60.8	60.3	60.0	60.0
France.....	55.5	55.7	55.6	56.0	56.4	56.6	56.8	57.0	57.1	56.7	56.5
Germany.....	57.1	57.1	57.3	57.7	56.9	56.7	56.7	56.4	56.0	56.4	57.6
Italy.....	47.3	47.3	47.3	47.6	47.9	48.1	48.2	48.5	49.1	49.0	48.7
Netherlands.....	58.8	59.2	60.8	61.1	62.6	64.4	63.9	64.9	65.2	65.7	65.4
Sweden.....	64.1	64.0	63.3	62.8	62.8	63.8	63.7	64.0	64.0	63.7	64.9
United Kingdom.....	62.4	62.4	62.5	62.5	62.8	62.9	62.7	62.9	63.0	63.0	63.1
Employed											
United States.....	124,900	126,708	129,558	131,463	133,488	136,891	136,933	136,485	137,736	139,252	141,730
Canada.....	13,210	13,338	13,637	13,973	14,331	14,681	14,866	15,223	15,579	15,861	16,080
Australia.....	8,256	8,364	8,444	8,618	8,762	8,989	9,091	9,271	9,481	9,677	9,987
Japan.....	63,900	64,200	64,900	64,450	63,920	63,790	63,460	62,650	62,510	62,640	62,910
France.....	21,955	22,036	22,176	22,597	23,080	23,714	24,167	24,311	24,337	24,330	24,392
Germany.....	35,780	35,637	35,508	36,059	36,042	36,236	36,350	36,018	35,615	35,604	36,185
Italy.....	20,032	20,122	20,167	20,368	20,615	20,971	21,357	21,663	21,969	22,106	22,268
Netherlands.....	6,730	6,858	7,163	7,321	7,595	7,908	7,947	8,079	8,083	8,118	8,078
Sweden.....	4,056	4,019	3,973	4,034	4,117	4,229	4,303	4,310	4,303	4,276	4,333
United Kingdom.....	25,691	25,941	26,413	26,686	27,051	27,368	27,599	27,812	28,073	28,358	28,637
Employment-population ratio²											
United States.....	62.9	63.2	63.8	64.1	64.3	64.4	63.7	62.7	62.3	62.3	62.7
Canada.....	59.3	59.1	59.6	60.4	61.3	62.0	61.9	62.4	63.0	63.3	63.4
Australia.....	59.2	59.3	59.0	59.3	59.6	60.3	60.1	60.3	60.7	61.2	62.1
Japan.....	60.9	60.9	61.0	60.2	59.4	59.0	58.4	57.5	57.1	57.1	57.3
France.....	49.2	49.1	49.1	49.7	50.4	51.4	52.0	51.9	51.6	51.2	51.0
Germany.....	52.4	52.0	51.6	52.3	52.1	52.2	52.2	51.5	50.8	50.6	51.2
Italy.....	42.0	42.0	41.9	42.2	42.6	43.2	43.8	44.3	44.9	45.0	44.9
Netherlands.....	54.9	55.6	57.8	58.7	60.6	62.6	62.5	63.1	62.8	62.7	62.3
Sweden.....	58.3	57.7	56.9	57.6	58.4	60.1	60.5	60.7	60.3	59.5	59.9
United Kingdom.....	57.0	57.3	58.2	58.5	59.1	59.4	59.5	59.6	59.8	60.0	60.0
Unemployed											
United States.....	7,404	7,236	6,739	6,210	5,880	5,692	6,801	8,378	8,774	8,149	7,591
Canada.....	1,246	1,285	1,248	1,162	1,072	956	1,026	1,143	1,150	1,093	1,028
Australia.....	739	751	759	721	652	602	661	636	611	567	537
Japan.....	2,100	2,250	2,300	2,790	3,170	3,200	3,400	3,590	3,500	3,130	2,940
France.....	2,787	2,946	2,940	2,837	2,711	2,385	2,226	2,399	2,593	2,639	2,627
Germany.....	3,200	3,505	3,907	3,693	3,333	3,065	3,110	3,396	3,661	4,107	4,575
Italy.....	2,544	2,555	2,584	2,634	2,559	2,388	2,164	2,062	2,048	1,960	1,889
Netherlands.....	478	443	374	296	253	230	183	232	311	387	402
Sweden.....	404	440	445	368	313	260	227	234	264	300	361
United Kingdom.....	2,439	2,298	1,987	1,788	1,726	1,584	1,486	1,524	1,484	1,417	1,458
Unemployment rate											
United States.....	5.6	5.4	4.9	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1
Canada.....	8.6	8.8	8.4	7.7	7.0	6.1	6.5	7.0	6.9	6.4	6.0
Australia.....	8.2	8.2	8.3	7.7	6.9	6.3	6.8	6.4	6.1	5.5	5.1
Japan.....	3.2	3.4	3.4	4.1	4.7	4.8	5.1	5.4	5.3	4.8	4.5
France.....	11.3	11.8	11.7	11.2	10.5	9.1	8.4	9.0	9.6	9.8	9.7
Germany.....	8.2	9.0	9.9	9.3	8.5	7.8	7.9	8.6	9.3	10.3	11.2
Italy.....	11.3	11.3	11.4	11.5	11.0	10.2	9.2	8.7	8.5	8.1	7.8
Netherlands.....	6.6	6.1	5.0	3.9	3.2	2.8	2.2	2.8	3.7	4.6	4.7
Sweden.....	9.1	9.9	10.1	8.4	7.1	5.8	5.0	5.1	5.8	6.6	7.7
United Kingdom.....	8.7	8.1	7.0	6.3	6.0	5.5	5.1	5.2	5.0	4.8	4.8

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, 1960-2005* (Bureau of Labor Statistics, October 19, 2006), 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.

55. Annual indexes of manufacturing productivity and related measures, 15 economies

[1992 = 100]

Measure and economy	1980	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Output per hour																
United States.....	68.4	93.5	96.3	102.7	108.1	112.1	116.8	121.7	130.2	136.7	147.7	149.2	165.0	176.8	186.3	195.7
Canada.....	74.2	93.4	95.3	105.8	110.8	112.4	109.7	117.0	120.7	124.5	129.8	127.4	129.8	130.6	135.9	143.7
Australia.....	69.4	91.6	96.6	105.8	104.9	105.5	112.8	114.7	117.6	118.9	127.1	130.7	135.2	140.7	139.7	142.4
Japan.....	63.6	94.4	99.0	101.7	103.3	111.0	116.1	120.7	120.4	124.9	131.7	128.9	133.1	142.3	150.4	154.1
Korea.....	—	82.7	92.7	108.3	118.1	129.7	142.6	160.8	179.3	199.4	216.4	214.8	235.8	252.2	281.2	305.1
Taiwan.....	49.1	89.8	96.8	101.3	105.2	112.9	121.5	126.5	132.7	140.9	148.4	155.1	166.7	171.7	179.9	191.4
Belgium.....	65.4	96.8	99.1	102.5	108.4	113.2	116.0	125.7	126.9	124.6	129.3	130.7	136.9	141.0	145.5	149.7
Denmark.....	82.3	98.5	99.7	100.3	112.7	112.7	109.0	117.7	117.1	119.0	123.2	123.4	124.2	124.7	125.8	125.8
France.....	60.5	92.7	96.4	101.2	109.4	116.0	116.7	125.8	132.6	138.7	148.2	150.7	157.4	164.2	170.0	176.7
Germany.....	77.2	99.0	98.3	101.0	108.5	110.2	113.3	120.0	120.4	123.4	132.0	135.4	137.0	142.4	149.0	156.9
Italy.....	75.5	97.7	97.0	102.8	107.6	111.1	112.5	113.3	112.5	112.5	116.0	116.2	114.2	111.3	112.4	112.4
Netherlands.....	69.1	98.7	99.0	102.0	113.1	117.3	120.5	121.2	124.5	129.3	138.5	139.2	143.4	146.4	153.7	160.0
Norway.....	77.9	98.1	98.2	99.6	99.6	100.7	102.5	102.0	99.9	103.6	106.6	109.8	112.8	122.6	128.8	132.5
Sweden.....	73.1	94.6	95.5	107.3	118.2	125.1	130.2	142.0	150.7	164.1	176.8	172.6	190.7	204.5	224.6	235.4
United Kingdom.....	57.3	90.1	94.3	102.8	105.4	103.7	102.8	104.1	105.6	110.9	117.9	121.8	125.1	130.6	137.9	141.4
Output																
United States.....	73.6	98.2	96.8	104.2	112.2	117.3	121.6	129.0	137.7	143.7	152.7	144.2	148.2	151.0	158.2	164.5
Canada.....	85.0	106.0	99.0	105.9	114.1	119.6	119.6	127.7	134.0	145.5	159.6	153.2	154.5	154.4	161.6	165.1
Australia.....	89.8	104.1	100.9	103.5	109.0	108.4	111.7	114.7	117.7	117.3	122.9	122.2	127.7	130.2	130.0	129.9
Japan.....	60.8	97.1	102.0	96.3	94.9	98.9	103.0	106.1	99.2	99.9	105.1	99.3	97.5	102.7	107.5	108.7
Korea.....	28.6	88.1	96.0	105.1	117.1	130.8	139.2	146.0	134.5	163.7	191.5	195.7	210.5	222.2	246.8	264.1
Taiwan.....	45.4	91.0	96.4	100.9	106.9	112.7	118.7	125.5	129.5	139.0	149.2	138.1	148.3	155.9	170.6	180.5
Belgium.....	78.2	101.0	100.7	97.0	101.4	104.2	105.6	112.5	114.1	113.3	118.3	118.3	119.1	118.1	120.8	120.3
Denmark.....	92.3	101.7	100.3	97.0	107.5	112.7	107.5	116.3	117.2	118.2	122.5	122.5	119.0	114.6	111.7	111.7
France.....	80.0	97.7	99.2	95.9	100.6	106.2	106.3	113.3	119.0	123.1	128.7	130.0	129.9	132.3	134.5	136.5
Germany.....	85.3	99.1	102.4	92.0	94.9	94.0	92.0	96.1	97.2	98.2	104.8	106.6	104.6	105.7	110.6	113.9
Italy.....	81.0	100.5	100.2	97.6	104.1	109.1	107.8	109.6	109.9	109.6	112.9	111.8	110.4	107.8	108.6	106.3
Netherlands.....	76.9	99.0	99.8	97.7	104.5	108.2	109.8	111.3	115.1	119.4	127.4	127.2	127.2	125.8	127.8	128.1
Norway.....	104.9	101.4	99.0	101.7	104.6	107.3	110.3	114.2	113.7	113.6	112.8	112.3	112.2	115.6	121.0	124.1
Sweden.....	90.7	110.1	104.1	101.9	117.5	132.5	137.1	147.6	159.5	173.9	189.7	185.6	196.4	203.6	223.6	229.3
United Kingdom.....	87.3	105.3	100.1	101.4	106.2	107.9	108.6	110.6	111.3	112.3	115.0	113.5	110.5	110.7	113.0	111.7
Total hours																
United States.....	107.5	105.0	100.5	101.4	103.8	104.6	104.2	106.0	105.7	105.1	103.4	96.6	89.8	85.4	84.9	84.0
Canada.....	114.6	113.5	103.9	100.1	103.0	106.4	109.0	109.1	111.0	116.9	122.9	120.2	119.0	118.2	118.9	114.8
Australia.....	129.3	113.6	104.4	97.8	103.9	102.8	99.1	100.0	100.1	98.7	96.7	93.5	94.5	92.5	93.0	91.2
Japan.....	95.5	102.9	103.1	94.7	91.9	89.1	88.8	87.9	82.4	79.9	79.8	77.1	73.3	72.2	71.5	70.5
Korea.....	—	106.4	103.6	97.1	99.2	100.9	97.6	90.8	75.0	82.1	88.5	91.1	89.3	88.1	87.8	86.5
Taiwan.....	92.4	101.4	99.6	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
Belgium.....	119.7	104.3	101.5	94.7	93.6	92.0	91.1	89.6	89.9	90.9	91.4	90.5	87.0	83.8	83.0	80.4
Denmark.....	112.1	103.3	100.6	96.8	95.4	100.0	98.6	98.8	100.1	99.4	99.4	99.3	95.8	91.9	88.8	88.8
France.....	132.3	105.5	102.9	94.8	91.9	91.6	91.0	90.1	89.7	88.7	86.8	86.3	82.5	80.6	79.1	77.2
Germany.....	110.5	100.1	104.1	91.1	87.5	85.3	81.2	80.1	80.7	79.6	79.4	78.7	76.4	74.3	74.2	72.6
Italy.....	107.4	102.9	103.3	95.0	96.8	98.2	95.8	96.7	97.7	97.4	97.3	96.2	96.7	96.8	96.6	94.5
Netherlands.....	111.2	100.3	100.8	95.8	92.4	92.3	91.1	91.8	92.4	92.3	91.9	91.4	88.7	85.9	83.2	80.0
Norway.....	134.7	103.4	100.8	102.1	105.0	106.6	107.6	112.0	113.7	109.6	105.9	102.3	99.4	94.3	94.0	93.7
Sweden.....	124.0	116.4	109.0	94.9	99.4	105.9	105.3	103.9	105.9	106.0	107.3	107.5	103.0	99.6	99.6	97.4
United Kingdom.....	152.3	116.9	106.2	98.7	100.8	104.0	105.7	106.3	105.4	101.2	97.5	93.2	88.3	84.8	81.9	79.0
Hourly compensation (national currency basis)																
United States.....	55.9	90.5	95.6	102.0	105.3	107.3	109.3	112.2	118.7	123.4	134.7	137.9	147.8	158.2	161.4	168.8
Canada.....	47.9	88.5	95.0	102.0	103.9	106.5	107.4	111.7	115.8	116.6	118.9	122.7	126.2	130.5	131.6	138.2
Australia.....	—	86.3	94.0	105.9	103.9	112.7	122.3	124.0	127.7	132.2	138.9	147.7	154.7	164.5	167.8	177.6
Japan.....	58.6	90.6	96.5	102.7	104.7	108.3	109.1	112.7	115.6	115.5	114.9	116.4	117.2	114.6	115.1	117.0
Korea.....	—	68.0	85.5	115.9	133.1	161.6	188.1	204.5	222.7	223.9	239.1	246.7	271.6	285.0	325.5	345.6
Taiwan.....	29.6	85.2	93.5	105.9	111.1	120.2	128.2	132.1	137.1	139.6	142.3	151.4	145.0	147.3	144.0	149.5
Belgium.....	52.5	90.1	97.3	104.8	106.1	109.2	111.1	115.5	117.3	118.8	120.9	127.3	132.8	136.7	138.9	144.8
Denmark.....	44.5	93.6	97.8	102.4	106.0	108.2	112.6	116.5	119.6	122.6	125.0	130.9	136.5	142.5	146.7	150.1
France.....	37.1	88.5	93.9	104.3	108.0	110.7	112.5	116.3	117.2	121.0	127.0	130.6	137.4	141.4	144.7	148.7
Germany.....	53.6	89.4	91.4	106.2	111.0	117.0	122.5	124.9	126.7	129.6	136.3	140.6	144.1	147.2	148.0	150.6
Italy.....	30.4	87.6	94.2	105.7	107.3	112.0	120.0	124.1	123.3	125.6	128.7	133.5	136.9	140.6	145.1	149.5
Netherlands.....	60.5	89.8	94.8	104.5	109.0	112.1	114.6	117.6	122.4	126.5	132.8	138.9	146.8	152.8	158.0	163.2
Norway.....	39.0	92.3	97.5	101.5	104.4	109.2	113.6	118.7	125.7	133.0	140.5	148.9	156.7	163.3	167.6	173.4
Sweden.....	37.3	87.8	95.5	97.4	99.8	106.8	115.2	121.0	125.6	130.3	136.8	143.8	151.7	159.2	162.6	169.2
United Kingdom.....	35.8	88.8	99.8	103.2	104.7	106.5	107.0	110.9	120.0	127.3	134.4	140.0	148.1	154.9	162.2	169.1

See notes at end of table.

55. Continued— Annual indexes of manufacturing productivity and related measures, 15 economies

Measure and economy	1980	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Unit labor costs																
(national currency basis)																
United States.....	81.8	96.8	99.2	99.3	97.4	95.7	93.6	92.2	91.2	90.3	91.2	92.4	89.6	89.5	86.7	86.3
Canada.....	64.6	94.8	99.7	96.5	93.8	94.7	97.9	95.5	95.9	93.7	91.6	96.3	97.2	99.9	96.8	96.2
Australia.....	—	94.2	97.3	100.1	99.1	106.8	108.4	108.1	108.5	111.1	109.3	113.0	114.4	116.9	120.1	124.7
Japan.....	92.1	95.9	97.4	101.0	101.4	97.6	94.0	93.4	96.1	92.5	87.3	90.3	88.0	80.5	76.5	75.9
Korea.....	44.4	82.1	92.2	107.0	112.7	124.6	131.9	127.1	124.2	112.3	110.5	114.8	115.2	113.0	115.8	113.3
Taiwan.....	60.3	94.9	96.5	104.6	105.6	106.5	105.5	104.5	103.4	99.1	95.9	97.6	87.0	85.8	80.1	78.1
Belgium.....	80.3	93.0	98.1	102.3	97.9	96.4	95.8	91.9	92.4	95.4	93.5	97.4	97.0	97.0	95.4	96.8
Denmark.....	54.1	95.0	98.1	102.2	94.1	96.0	103.3	98.9	102.1	103.0	101.4	106.1	109.9	114.3	116.6	119.3
France.....	61.3	95.5	97.4	103.1	98.7	95.4	96.4	92.4	88.3	87.3	85.7	86.7	87.3	86.1	85.1	84.1
Germany.....	69.4	90.3	93.0	105.2	102.4	106.2	108.2	104.1	105.2	105.1	103.3	103.8	105.1	103.4	99.3	96.0
Italy.....	40.3	89.7	97.1	102.9	99.8	100.8	106.6	109.5	109.6	111.7	110.9	114.9	119.8	126.3	129.2	133.0
Netherlands.....	87.6	91.1	95.7	102.4	96.4	95.6	95.1	97.1	98.3	97.8	95.9	99.8	102.4	104.3	102.8	102.0
Norway.....	50.0	94.1	99.2	101.9	104.8	108.4	110.8	116.4	125.7	128.3	131.9	135.6	138.8	133.3	130.2	130.9
Sweden.....	51.0	92.9	100.0	90.8	84.4	85.3	88.5	85.2	83.3	79.4	77.4	83.3	79.5	77.9	72.4	71.9
United Kingdom.....	62.4	98.5	105.9	100.4	99.4	102.7	104.1	106.5	113.6	114.8	114.0	115.0	118.4	118.6	117.6	119.6
Unit labor costs																
(U.S. dollar basis)																
United States.....	81.8	96.8	99.2	99.3	97.4	95.7	93.6	92.2	91.2	90.3	91.2	92.4	89.6	89.5	86.7	86.3
Canada.....	66.7	98.1	105.2	90.4	83.0	83.4	86.7	83.3	78.1	76.2	74.5	75.1	74.8	86.2	89.9	95.9
Australia.....	—	100.1	103.1	92.6	98.6	107.6	115.4	109.3	92.9	97.5	86.4	79.5	84.6	103.7	120.3	129.3
Japan.....	51.5	83.9	91.8	115.3	125.8	131.7	109.6	97.8	93.0	103.1	102.6	94.2	89.1	88.1	89.7	87.4
Korea.....	57.3	90.7	98.2	104.2	109.6	126.5	128.6	105.3	69.6	74.0	76.7	69.7	72.3	74.4	79.3	86.8
Taiwan.....	42.1	88.7	90.8	99.6	100.4	101.1	96.7	91.3	77.5	77.2	77.2	72.6	63.4	62.7	60.4	61.2
Belgium.....	88.3	89.5	92.3	95.1	94.2	105.2	99.4	82.5	81.8	81.0	68.8	69.5	73.1	87.5	94.6	96.0
Denmark.....	57.9	92.7	92.5	95.1	89.4	103.5	107.6	90.4	92.0	89.0	75.6	76.9	84.2	104.9	117.5	120.1
France.....	76.9	92.8	91.3	96.3	94.2	101.3	99.7	83.8	79.3	75.0	63.8	62.6	66.6	78.7	85.5	84.5
Germany.....	59.6	87.3	87.5	99.3	98.6	115.8	112.2	93.8	93.4	89.4	76.2	74.2	79.4	93.5	98.6	95.4
Italy.....	58.0	92.2	96.4	80.6	76.3	76.2	85.2	79.2	77.7	75.7	65.1	65.5	72.1	91.0	102.2	105.4
Netherlands.....	77.5	87.9	90.0	96.9	93.2	104.8	99.2	87.4	87.2	83.2	70.7	71.3	77.3	94.3	102.1	101.3
Norway.....	62.9	93.5	95.0	89.1	92.3	106.4	106.6	102.1	103.5	102.2	93.0	93.7	108.1	117.0	120.0	126.3
Sweden.....	70.2	91.3	96.3	67.8	63.7	69.6	76.9	64.9	61.1	55.9	49.1	46.9	47.6	56.2	57.4	56.0
United Kingdom.....	82.2	99.5	106.0	85.3	86.2	91.8	92.0	98.8	106.6	105.1	97.8	93.7	100.7	109.7	122.0	123.3

NOTE: Data for Germany for years before 1991 are for the former West Germany. Data for 1991 onward are for unified Germany. Dash indicates data not available.

56. 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 SECTOR⁵													
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 fishing⁵													
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.

56. 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.

57. Fatal occupational injuries by event or exposure, 1998-2003

Event or exposure ¹	Fatalities			
	1998-2002 average ²	2002 ³ Number	2003	
			Number	Percent
Total.....	6,896	5,534	5,559	100
Transportation incidents.....	2,549	2,385	2,367	42
Highway incident.....	1,417	1,373	1,350	24
Collision between vehicles, mobile equipment.....	696	636	648	12
Moving in same direction.....	136	155	135	2
Moving in opposite directions, oncoming.....	249	202	269	5
Moving in intersection.....	148	146	123	2
Vehicle struck stationary object or equipment in roadway.....	27	33	17	(⁴)
Vehicle struck stationary object, or equipment on side of road.....	281	293	324	6
Noncollision incident.....	367	373	321	6
Jackknifed or overturned—no collision.....	303	312	252	5
Nonhighway (farm, industrial premises) incident.....	358	323	347	6
Overturned.....	192	164	186	3
Worker struck by a vehicle.....	380	356	336	6
Rail vehicle.....	63	64	43	1
Water vehicle.....	92	71	68	1
Aircraft.....	235	194	208	4
Assaults and violent acts.....	910	840	901	16
Homicides.....	659	609	631	11
Shooting.....	519	469	487	9
Stabbing.....	61	58	58	1
Self-inflicted injuries.....	218	199	218	4
Contact with objects and equipment.....	963	872	911	16
Struck by object.....	547	505	530	10
Struck by falling object.....	336	302	322	6
Struck by flying object.....	55	38	58	1
Caught in or compressed by equipment or objects.....	272	231	237	4
Caught in running equipment or machinery.....	141	110	121	2
Caught in or crushed in collapsing materials.....	126	116	126	2
Falls.....	738	719	691	12
Fall to lower level.....	651	638	601	11
Fall from ladder.....	113	126	113	2
Fall from roof.....	152	143	127	2
Fall from scaffold, staging.....	91	88	85	2
Fall on same level.....	65	64	69	1
Exposure to harmful substances or environments.....	526	539	485	9
Contact with electric current.....	289	289	246	4
Contact with overhead power lines.....	130	122	107	2
Contact with temperature extremes.....	45	60	42	1
Exposure to caustic, noxious, or allergenic substances.....	102	99	121	2
Inhalation of substances.....	50	49	65	1
Oxygen deficiency.....	89	90	73	1
Drowning, submersion.....	69	60	52	1
Fires and explosions.....	190	165	198	4

¹ Based on the 1992 BLS *Occupational Injury and Illness Classification Manual*. Includes other events and exposures, such as bodily reaction, in addition to those shown separately.

² Excludes fatalities from the Sept. 11, 2001, terrorist attacks.

³ The BLS news release of September 17, 2003, reported a total of 5,524 fatal work injuries for calendar year 2003.

Since then, an additional 10 job-related fatalities were identified, bringing the total job-related fatality count for 2002 to 5,534.

⁴ Equal to or greater than 0.5 percent.

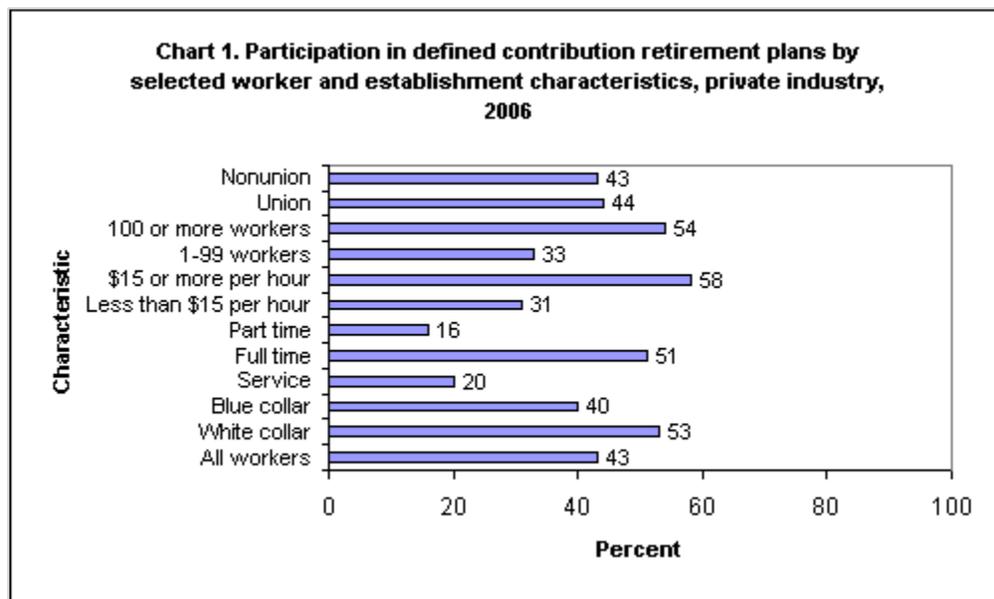
NOTE: Totals for major categories may include sub-categories not shown separately. Percentages may not add to totals because of rounding. •

Access, Participation, and Take-up Rates in Defined Contribution Retirement Plans among Workers in Private Industry, 2006

by [Allan Beckmann](#)
 Bureau of Labor Statistics

Originally Posted: December 27, 2006

Employee participation rates for defined contribution retirement plans vary widely among groups of workers and their employers, primarily reflecting how frequently the employers provide access for employees to participate in these plans. Anyone reading the business section of one of the Nation’s major newspapers over the last several years is likely to be aware of the shift that is currently taking place in American private sector employer-provided retirement plans. The transition continues toward less reliance on [defined benefit plans](#) and a much greater emphasis on [defined contribution plans](#).¹ In 1992-93, 32 percent of workers in private industry participated in a defined benefit plan while 35 percent participated in a defined contribution plan.² According to the 2006 [National Compensation Survey benefits data](#),³ the participation rate for private industry workers in defined benefit plans has decreased to 20 percent, while participation in defined contribution plans has increased to 43 percent. As can be seen in chart 1, however, the employee participation rates in defined contribution retirement plans vary widely across worker and establishment characteristics.



The chart also shows that more than half of all workers in white-collar occupations, higher paying jobs (\$15 or more per hour), and those in large establishments (100 or more workers) participate in defined contribution retirement plans. In contrast, 16 percent of part-time workers and 20 percent of workers in service occupations participate in such retirement plans.

Two other statistics that give additional insight to participation rates are *access rates* and *take-up rates*. Access rates measure the proportion of employees who work for employers who offer them a retirement plan. Take-up rates measure the proportion of employees among those with access who choose to enroll in the plans.⁴ Take-up rates differ from participation rates because they reflect the elections of only those workers who actually have access to a retirement plan. Participation rates reflect the status of all workers, including those without access to a retirement plan.

National Compensation Survey data demonstrate that the differences observed in participation rates for defined contribution plans are due more to access rates than to take-up rates. This is true across worker characteristics. While access rates vary

widely among groups of workers, take-up rates are consistently robust. Greater variability in access produces greater variation in participation rates.

Table 1 shows the consistently robust take-up rates and the large differences among worker characteristics in access rates. From a low of 65 percent for service workers and part-time workers to a high of 86 percent for union workers, the data show that if offered a defined contribution retirement plan, the vast majority of private industry workers will opt to enroll. In contrast to the consistently high rate of take-up rates, access rates differ considerably. While only 25 percent of part-time workers have access, 63 percent of full-time workers and 70 percent of workers in establishments of 100 or more workers have access to defined contribution retirement plans.

Access rates have a large impact on participation rates. For example, although workers in small and large establishments elect to enroll in defined contribution plans at similar rates, about half of workers in establishments employing 100 or more workers participate in a plan, compared with about one-third of those in smaller establishments. These differences largely reflect the access rates of workers in the two establishment size classes. (See table 2.)

Workers in lower wage jobs appear to be at a disadvantage when it comes to saving for retirement. According to the report from the Department of Labor's 2006 National Summit on Retirement Savings, not only do lower wage workers generally have less access to defined contribution retirement plans, they also tend to have less money available for savings. The report states that when "low-income workers receive their paychecks, many have already committed all or most of the money to covering [their] day-to-day expenses. Making savings a spending priority by setting aside money in a personal retirement account seems next to impossible."⁵

The apparent disadvantage that workers in lower wage jobs face is exacerbated by the fact that many of the plans offered to them require an employee contribution in order to receive the employer contribution. In 2003, 85 percent of workers in jobs paying less than \$15 per hour and who participated in a defined contribution retirement plan were enrolled in plans that required an employee contribution.⁶

Union workers generally have greater access to most kinds of employer-provided benefits than nonunion workers. One exception is in access to defined contribution retirement plans. Only 50 percent of union workers have access to defined contribution plans, compared with 55 percent of nonunion workers. An explanation for this is that union workers have a long history of maintaining access to defined benefit plans as their primary form of retirement plan. Defined benefit plans predate defined contribution plans by almost a century. When defined contribution plans began to appear, union workers already enjoyed widespread access to and participation in defined benefit plans.

Because many of the worker characteristics are interrelated, the effects that one worker or establishment characteristic might have in depressing or amplifying the access rate in other characteristics were examined. Part-time workers are more prevalent in service occupations, lower wage jobs, and smaller establishments than they are in white-collar and blue-collar occupations, higher wage jobs, and larger establishments. Also, because part-time workers experience the lowest access to defined contribution retirement plans, access rates were compared using only full-time workers as a method to control for work schedule status. The differences diminished but remained quite noticeable. (See table 3.)

The access rate for full-time workers in lower wage jobs was higher (53 percent) than the access rate for all workers in lower wage jobs (43 percent), but it still trailed the access rate for full-time workers in higher wage jobs (72 percent) by a substantial margin. Similarly, at 50 percent, the access rate for full-time workers in small establishments also was higher than the rate for all workers in small establishments, but it still trailed the access rate for full-time workers in larger establishments. Thus, this analysis concludes that while the various characteristics are interrelated, the interrelation does not appear to obscure the basic differences observed in access rates.

NOTE: Standard errors have not been calculated for NCS benefits estimates. Consequently, none of the statistical inferences made in this report could be verified by a statistical test.

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Notes

1 For more information on defined benefit plans and defined contribution plans, see BLS Glossary, available on the Internet at <http://www.bls.gov/bls/glossary.htm#D>.

2 See Stephanie L. Costo, "Trends in retirement plan coverage over the last decade," *Monthly Labor Review*, February 2006; available on the Internet at <http://www.bls.gov/opub/mlr/2006/02/art5full.pdf>.

3 *National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2006*, Summary 06-05 (Bureau of Labor Statistics, August 2006); available on the Internet at <http://www.bls.gov/ncs/ebs/sp/ebsm0004.pdf>.

4 Take up rates from the NCS equal the ratio of employees in surveyed jobs who participate in plans to the employees in surveyed jobs who are offered the plan. Some surveyed jobs are not offered the plan because all workers in the job are ineligible for reasons such as part-time work schedules. Other estimates of take-up rates generally are calculated for the entire establishment reflecting the ratio of all workers in the establishment who participate in the plan to the number who are eligible for the plan.

5 *Saving for Your Golden Years: Trends, Challenges, and Opportunities*, report from the Department of Labor National Summit on Retirement Savings, March 2006; available on the Internet at <http://www.dol.gov/ebsa/pdf/2006background.pdf>.

6 See *National Compensation Survey: Employee Benefits in Private Industry in the United States, 2003*, Bulletin 2577 (Bureau of Labor Statistics, October 2005), table 59, p. 74; available on the Internet at <http://www.dol.gov/ncs/ebs.sp/ebbl0021.pdf>.

**Table 1: Access and take-up rates for defined contribution retirement plans among workers in private industry, National Compensation Survey, 2006
[In percent]**

Characteristic	Access	Take-up Rate
All Workers	54	79
White Collar	65	82
Blue Collar	53	77
Service	30	65
Full time	63	80
Part time	25	65
Less than \$15 per hour	43	71
\$15 per hour or more	69	85
1-99 workers	41	81
100 or more workers	70	77
Union	50	86
Nonunion	55	78

**Table 2: Take-up, access, and participation rates in defined contribution retirement plans by establishment size, National Compensation Survey, 2006
[In percent]**

Size of Establishment	Take-up Rate	Access Rate	Participation Rate
1-99 workers	81	41	33
100 or more workers	77	70	54

Table 3: Participation, access and take-up rates for defined contribution retirement plans among full-time workers in private industry, National Compensation Survey, 2006
[In percent]

Characteristic	Participation	Access	Take-up
All Workers	51	63	81
White Collar	60	72	83
Blue Collar	44	57	77
Service	30	45	67
Less than \$15 per hour	39	53	74
\$15 per hour or more	61	72	85
1-99 workers	42	50	84
100 or more workers	59	75	79
Union	47	55	85
Nonunion	51	64	80

Data for Chart 1. Participation in defined contribution retirement plans by selected worker and establishment characteristics, private industry, 2006

Characteristic	Participation
All workers	43
White collar	53
Blue collar	40
Service	20
Full time	51
Part time	16
Less than \$15 per hour	31
\$15 or more per hour	58
1-99 workers	33
100 or more workers	54
Union	44
Nonunion	43

Access to Wellness and Employee Assistance Programs in the United States

by Eli R. Stoltzfus
Bureau of Labor Statistics

Originally Posted: April 22, 2009

Wellness programs and employee assistance programs are important benefits for workers and their employers; data from the National Compensation Survey (NCS) show that workers in the public and private sectors had greater access to these kinds of benefits in 2008 than they did a decade earlier. Moreover, for all worker groups examined in this study, public sector workers have higher rates of access to wellness programs and employee assistance programs than do private sector workers.

In an age of ever-increasing health care costs and health risk awareness, services that promote health and wellness have become an important element of U.S. society. A discussion paper recently published by the Brookings Institution points out that there is an “emerging, multibillion dollar wellness industry”¹ in the United States that provides services such as nutrition education, physical fitness, and stress management—proactive measures aimed at reducing medical care costs and improving the quality of life. Many workers in the United States have access to these services through their employers benefits packages, some of which include *wellness programs* and *employee assistance programs*.

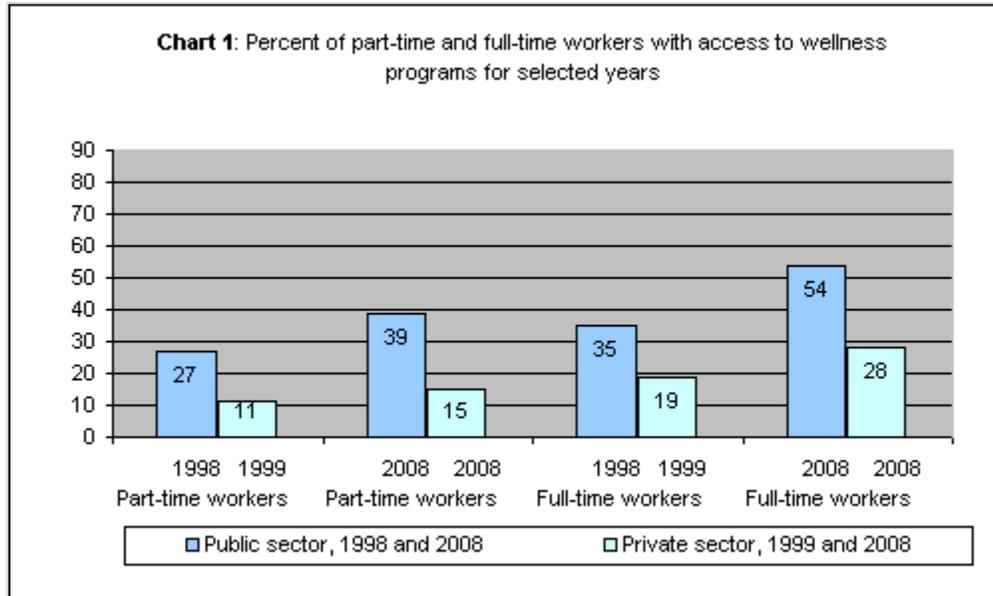
Wellness programs are considered to be an important component of employer benefits packages because they offer workers and their families choices for pursuing healthier lifestyles with less illness, ultimately leading to less costly benefits packages.² Wellness programs often include a health education and awareness component and, according to some analysts, these programs address issues that increase worker satisfaction and productivity. Employee assistance programs typically deal with more serious personal problems than the essentially medical issues included in wellness programs. Employee assistance programs provide employees with access to referral or counseling services for problems such as alcohol or drug abuse, as well as for financial and legal difficulties. (See the [glossary](#) for more information on these benefits.)

The [National Compensation Survey \(NCS\)](#) collects and publishes benefits data on the civilian economy, with separate estimates for State and local government (referred to here as the public sector) and for private industry.³ Benefits data include information on the prevalence of wellness programs and employee assistance programs in the workplace for a variety of employer and employee characteristics.

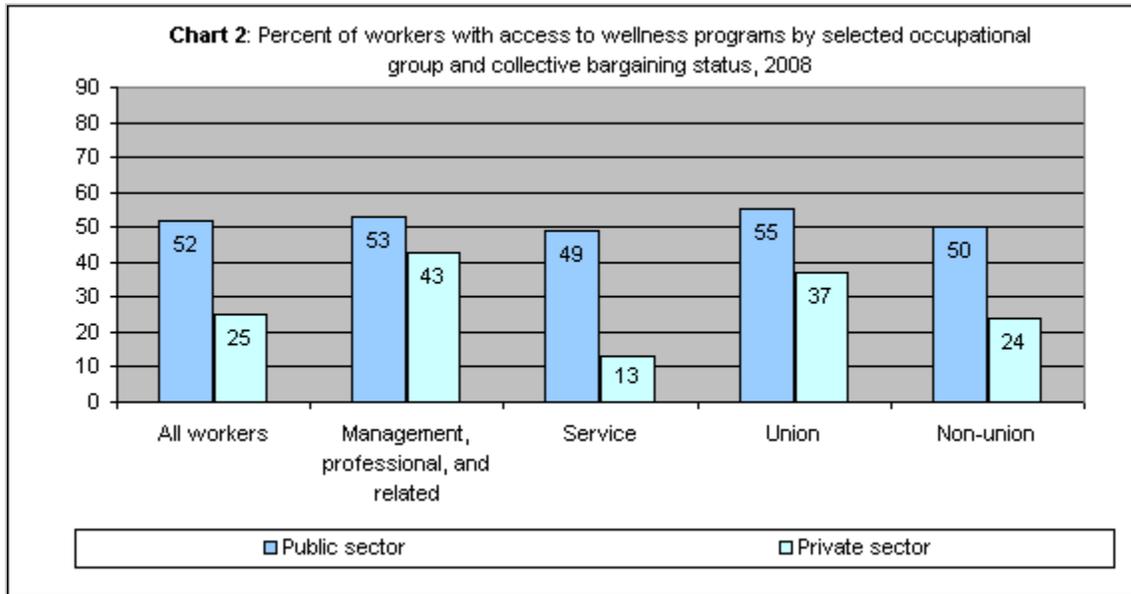
NCS data show that public sector workers have greater access to wellness programs and employee assistance programs than do private sector workers. The difference in access can be attributed to a number of factors, including occupational composition and the different job functions of public and private sector workers.⁴ For example, the ratio of public sector workers in education and public safety jobs is relatively high compared with private sector workers. According to NCS data, about 55 percent of public sector workers are employed in management, professional, and related jobs, which includes teachers and university professors; and about 45 percent of public sector service workers are employed in protective service jobs such as police officers and firefighters. (See [exhibit 1](#).) These jobs require a high degree of specialized education and training, as well as physical fitness, and in some cases, a considerable amount of personal risk; and generally these jobs are associated with relatively higher pay and greater access to benefits.

A larger percentage of public sector workers than private sector workers are represented by union contracts. According to data from the [Current Population Survey](#), in 2008, 35 percent of State government workers and 46 percent of local government workers were represented by union contracts, while only 8 percent of private sector workers were represented by union contracts.⁵ Union representation generally is positively correlated to higher pay and access to benefits.⁶

In recent years, for both public and private sector workers, there has been a considerable increase in employee access to wellness programs and employee assistance programs. The charts that follow show access rates for part-time and full-time public and private sector employees by a number of characteristics. In the charts that show historical comparisons, the data are for 1998 for the public sector and for 1999 for the private sector.⁷

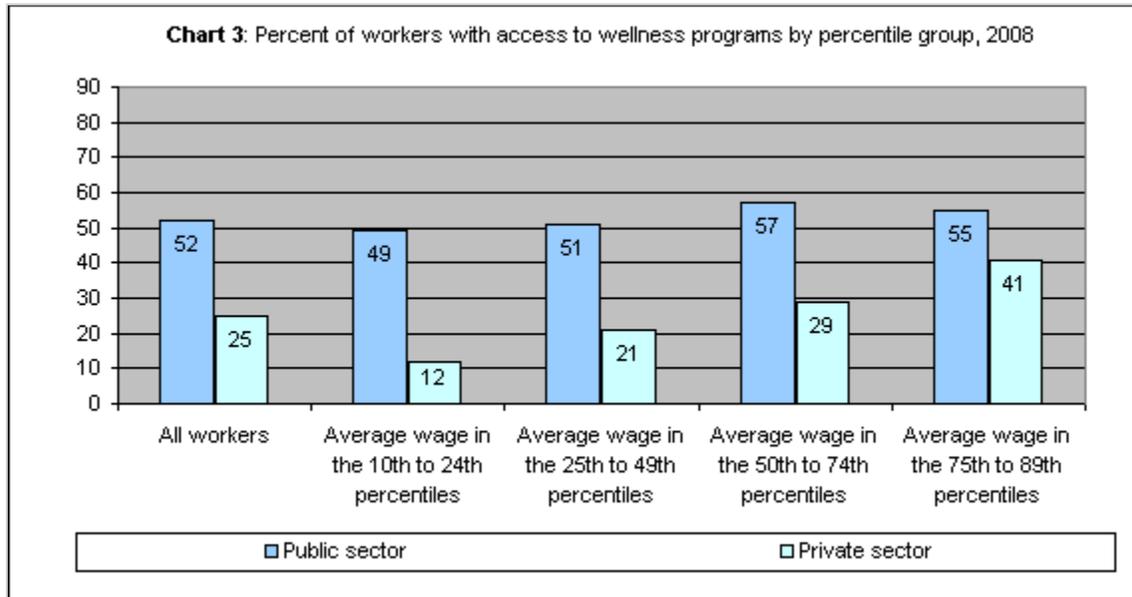


- Chart 1 shows that employee access to employer-provided wellness programs increased markedly over the last decade for part-time and full-time public sector workers and for part-time and full-time private sector workers.
- From 1998 to 2008, access increased from 35 percent to 54 percent for public sector full-time workers; from 1999 to 2008, access increased from 19 percent to 28 percent for private sector full-time workers.
- Chart 1 also shows that public sector workers, whether they work part-time or full-time, had higher rates of access than their private sector counterparts.

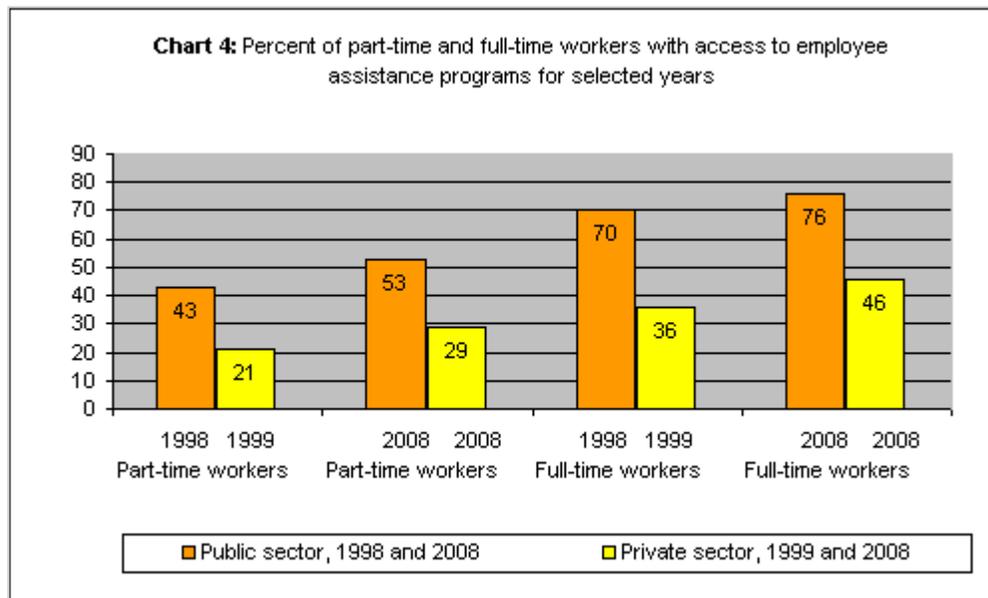


- Chart 2 shows that public sector workers in management, professional, and related occupations and in service occupations had access to wellness programs at about the same rate in 2008; private sector workers in management, professional, and related occupations, however, had a notably higher rate of access than did private sector workers in service occupations.

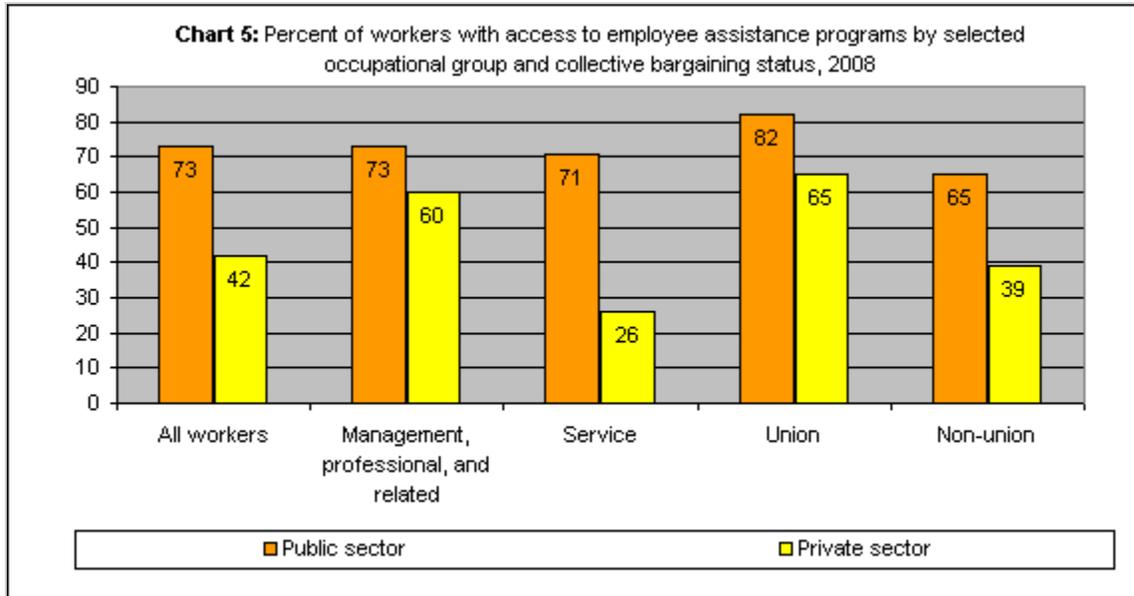
- Chart 2 also shows that public sector union and nonunion workers had access to wellness programs at about the same rate, but private sector union workers had higher rates of access than did private sector nonunion workers.



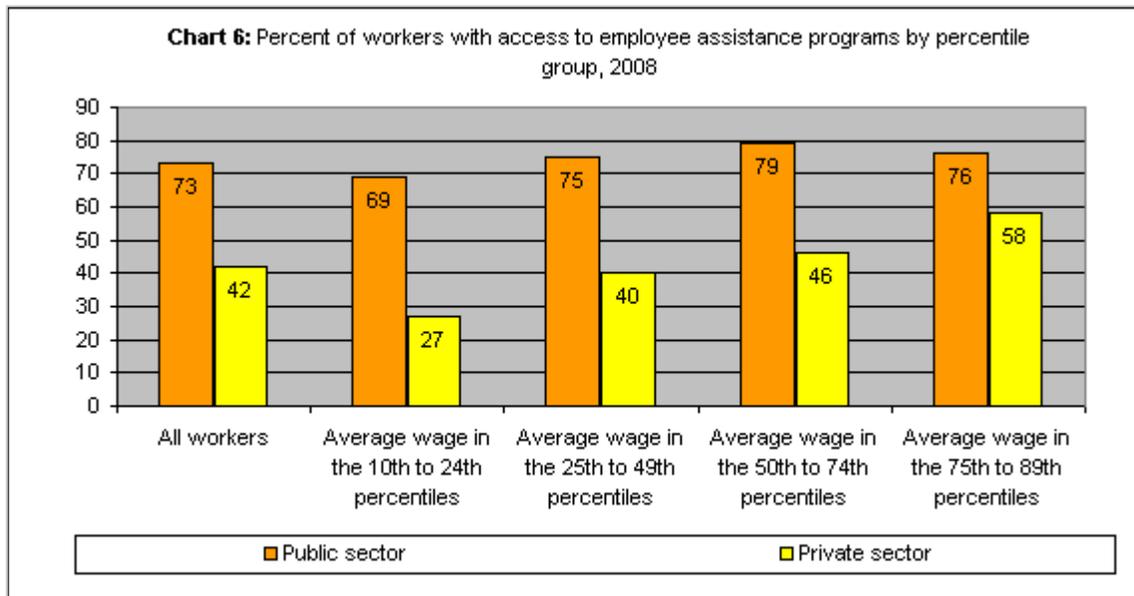
- Chart 3 shows that public sector wage earners in the 50th to 89th percentiles had access to wellness programs at about the same rate.⁸
- Chart 3 also shows that private sector wage earners in lower percentile groupings had notably lower rates of access than did those in higher percentile groupings.



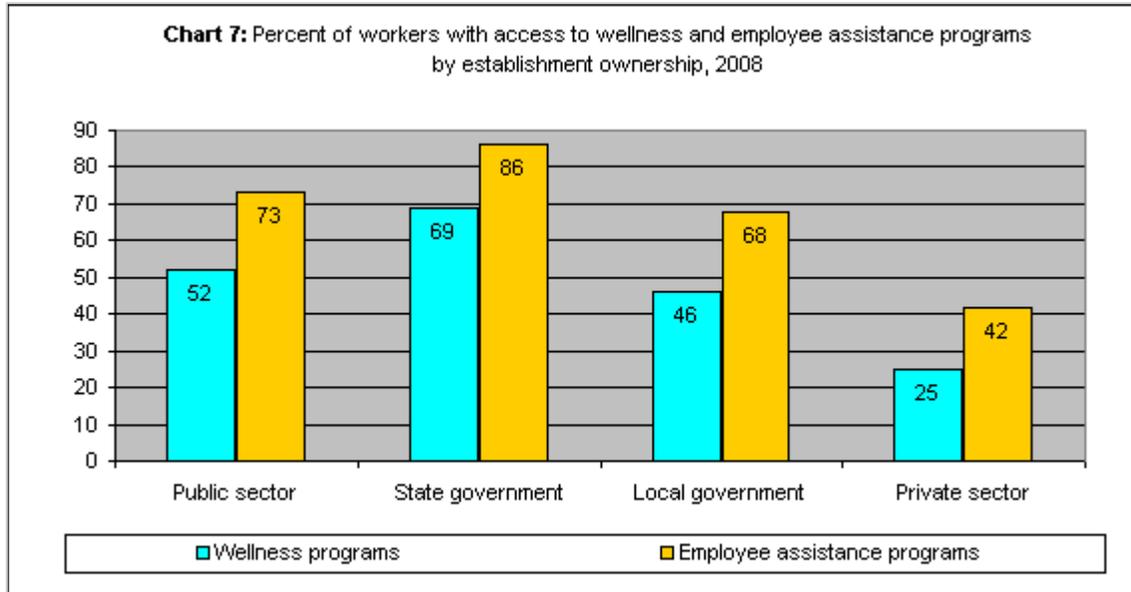
- Chart 4 shows that, from 1998 to 2008, access to employee assistance programs increased from 70 percent to 76 percent for full-time public sector workers; for full-time private sector workers, access increased from 36 percent to 46 percent between 1999 and 2008.
- Chart 4 also shows that public sector workers, whether part-time or full-time, had higher rates of access than their private sector counterparts.



- Chart 5 shows that public sector workers in management, professional, and related occupations and in service occupations had access to employee assistance programs at about the same rate in 2008; private sector workers in management, professional, and related occupations, however, had access to employee assistance programs at more than twice the rate of private sector workers in service occupations.
- Chart 5 also shows that both public sector union workers and private sector union workers had higher rates of access to employee assistance programs than did their nonunion counterparts.



- Chart 6 shows that public sector wage earners in the 50th to 89th percentiles had access to employee assistance programs at about the same rate.
- Chart 6 also shows that private sector wage earners in lower percentile groupings had notably lower rates of access than did those in higher percentile groupings.



- Chart 7 shows that, among public sector workers, State government workers had higher rates of access to wellness programs and employee assistance programs than did local government workers.

NOTE: For the 1998 and 1999 data used in this study, standard errors have not been calculated. Consequently, the inferences made using data from 1998 and 1999 cannot be verified by a statistical test. For the 2008 data, standard errors are available and the inferences made when comparing different elements of 2008 data have been verified.

Glossary

Wellness programs, as defined by NCS, offer employees two or more of the following benefits:

- Smoking cessation clinics
- Exercise/physical fitness programs
- Weight control programs
- Nutrition education
- Hypertension tests
- Periodic physical examinations
- Stress management courses
- Back care courses

Employee assistance programs provide employee referral services or counseling concerning any of the following:

- Alcoholism
- Drug abuse
- Marital difficulties
- Financial problems
- Emotional problems
- Legal problems

Exhibit 1.

Number Of Workers Represented By NCS, March 2008

Occupational Group	State and local government	Private industry
All workers	19,328,100	107,406,000
Management, professional, and related	10,619,000	24,528,900
Service	4,127,400	22,459,300
Protective Service	1,864,300	Data not available

The number of workers represented by the survey is 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, see *Employee Benefits in the United States*, (Bureau of Labor Statistics, March 2008), appendix table 2; available on the Internet at <http://www.bls.gov/ncs/ebs/home.htm>.

Occupations are classified using the [Standard Occupational Classification \(SOC\)](http://www.bls.gov/soc/home.htm) 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.

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Notes

1 Jeanne M. Lambrew, *A Wellness Trust to Prioritize Disease Prevention* (Brookings, April 2007); quote, p.14; available on the internet at www.hamiltonproject.org.

2 Carlyne Foster, "A Proactive Choice to Wellness," *OR Today*, May 2007, pp. 32-35.

3 Workers represented in this study are public sector workers excluding Federal government workers, and workers in the private nonfarm economy excluding household workers and self-employed workers.

4 Ken McDonnell, "Benefit Cost Comparisons Between State and Local Governments and Private-Sector Employers," *EBRI Notes* (Employee Benefits Research Institute, June 2008).

5 Labor Force Statistics from the [Current Population Survey](http://www.bls.gov/cps/), Household Data Annual Averages, table 3, Union affiliation of employed wage and salary workers by occupation and industry. For more information, visit the CPS page on the BLS website at <http://www.bls.gov/cps/>.

The Current Population Survey defines workers "represented by unions" as union members, as well as workers who have no union affiliation but whose jobs are covered by a union or an employee association contract. About 1.7 million wage and salary workers were represented by a union on their main job in 2008, while not being union members themselves. About half of these workers were employed in government. For more information, see [Union Members in 2008](http://www.bls.gov/news.release/union2.toc.htm), USDL 09-0095 (U.S. Department of Labor) Jan. 28, 2009; available on the Internet at <http://www.bls.gov/news.release/union2.toc.htm>.

The National Compensation Survey defines union workers as workers whose wages are determined by a collective bargaining agreement. For more information, see [National Compensation Survey: Occupational Earnings in the United States, 2007](http://www.bls.gov/ncs/ncswage2007.htm), Bulletin 2704 (Bureau of Labor Statistics, August 2008), available on the Internet at <http://www.bls.gov/ncs/ncswage2007.htm>.

6 See McDonnell, "Benefit Cost Comparisons Between State and Local Governments and Private-Sector Employers."

7 As defined by the National Compensation Survey, an employee has access to a benefit plan if the employee is in an occupation that is offered the plan. By definition, either all employees in an occupation have access to a benefit or none has access. Historical data for both 1998 (public sector) and 1999 (private sector) are being used for this study because prior to 2000 surveys were conducted in alternating years on different sectors of the economy: public sector establishments were surveyed during even years and private sector establishments during odd years. In addition, in the 1998 survey of public sector workers, data for full-time employees were aggregated separately from data for part-time

employees; an *all worker* aggregation was not published for public sector workers. This explains the use of the full-time workers category in charts 1 and 4. Beginning in 2000, benefits data were published annually for the private sector. The 2008 public sector benefits data used in this study, however, are only the second release of benefits data on State and local government workers since 1998.

8 Averages for occupations within an establishment were used to produce estimates for worker groups averaging hourly pay within the six earnings percentiles: Below the 10th percentile, 10th to under the 25th percentile, 25th to under the 50th percentile, 50th to under the 75th percentile, 75th to under the 90th percentile, and the 90th percentile and greater. Individual workers can fall into an earnings category different from the average for an occupation and establishment into which they are classified. The percentile breakouts are based on the average wage for each occupation surveyed, which may include workers both above and below the threshold. The percentile values are based on wages published in *National Compensation Survey: Occupational Earnings in the United States, 2007*, Bulletin 2704 (Bureau of Labor Statistics, August 2008), available on the Internet at <http://www.bls.gov/ncs/ncswage2007.htm>.

Data for Chart 1: Percent of part-time and full-time workers with access to wellness programs for selected years

	Public sector, 1998	Private sector, 1999	Public sector, 2008	Private sector, 2008
Part-time workers	27	11	39	15
Full-time workers	35	19	54	28

Data for Chart 2: Percent of workers with access to wellness programs by selected occupational group and collective bargaining status, 2008

Sector and establishment characteristic	Public sector	Private sector
All workers	52	25
Management, professional, and related	53	43
Service	49	13
Union	55	37
Non-union	50	24

Data for Chart 3: Percent of workers with access to wellness programs by percentile group, 2008

Sector and establishment characteristic	Public sector	Private sector
All workers	52	25
Average wage in the 10 th to 24 th percentiles	49	12
Average wage in the 25 th to 49 th percentiles	51	21
Average wage in the 50 th to 74 th percentiles	57	29
Average wage in the 75 th to 89 th percentiles	55	41

Data for Chart 4: Percent of part-time and full-time workers with access to employee assistance programs for selected years

	Public sector, 1998	Private sector, 1999	Public sector, 2008	Private sector, 2008
Part-time workers	43	21	53	29
Full-time workers	70	36	76	46

Data for Chart 5: Percent of workers with access to employee assistance programs by selected occupational group and collective bargaining status, 2008

Sector and Establishment Characteristic	Public sector	Private sector
All workers	73	42

Sector and Establishment Characteristic	Public sector	Private sector
Management, professional, and related	73	60
Service	71	26
Union	82	65
Non-union	65	39

Data for Chart 6: Percent of workers with access to employee assistance programs by percentile group, 2008

Sector and Establishment Characteristic	Public sector	Private sector
All workers	73	42
Average wage in the 10 th to 24 th percentiles	69	27
Average wage in the 25 th to 49 th percentiles	75	40
Average wage in the 50 th to 74 th percentiles	79	46
Average wage in the 75 th to 89 th percentiles	76	58

Data for Chart 7: Percent of workers with access to wellness and employee assistance programs by establishment ownership, 2008

Local and state government establishments	Wellness programs	Employee assistance programs
Public sector	52	73
State government	69	86
Local government	46	68
Private sector	25	42