MONTHLY LABOR
REVIEW

U.S. Department of Labor   Bureau of Labor Statistics

Expenditures
of Retirees

Producer Prices in 2001
Expenditures of Single Parents

Departments

The July *Review*

This issue leads off with William F. Snyders, Jon Weinhagen, and Amy Popick's account of price changes at the producers' level in 2001. Most simply put, pricing was tight for producers last year; at the finished goods level, the Producer Price Index fell 1.6 percent overall, mostly in the energy sector. As they trace prices changes back through the intermediate and crude materials stages, not only did the index declines become bigger, they spread to food and the "core" indexes as well.

The rest of the articles are on one aspect or another of consumer expenditure studies. Geoffrey D. Paulin and Yoon G. Lee compare the way single parents—both male and female—spend their money. Single female parents spend often substantially larger shares of their budget on items like food and clothing, while single fathers spend larger share on things that are more discretionary. Much of these differences reflect somewhat higher incomes for the single men.

Paulin and Abby L. Duly do a similar comparison of the spending patterns of pre-retired (working and 55 to 64 years old) and retired (no labor income and 65 to 74 years old) persons. Again, one of the big differences across groups is in income. Not very surprisingly, the pre-retired had higher total incomes, in general because they had substantial average labor earnings. On the expenditure side, conclusions about the role of retirement in expenditure plans were more difficult to draw, in part because of the degree of similarity of pre- and post-retirement patterns that was apparent when variables such as income and demography had been accounted for.

Injuries in eating and drinking places

Approximately 304,000 nonfatal occupational injuries and illnesses occurred in the eating and drinking places industry in 1999, down from about 397,000 in 1992. Most of the on-the-job injuries and illnesses that occur in eating and drinking places tend to be relatively minor. In 1999, about a third involved lost work time, compared with almost half of injuries and illnesses for all private industry workers.

However, there were 147 fatal occupational injuries at eating and drinking places in 1999. Homicides were the leading cause of worker fatalities in the eating and drinking places industry: almost two-thirds of fatalities were homicides in 1999. More information is available in "Occupational Hazards in Eating and Drinking Places," by Timothy Webster, *Compensation and Working Conditions*.

Average compensation $23.15 an hour

In March 2002, employer costs for employee compensation for civilian workers in the United States averaged $23.15 per hour worked. Wages and salaries, which averaged $16.76, accounted for 72.4 percent of these costs, while benefits, which averaged $6.39, accounted for the remaining 27.6 percent.

Legally required benefits were $1.80 per hour on average, representing the largest nonwage employer cost. Employer costs for insurance benefits were $1.61 per hour, paid leave benefits were $1.59 per hour, and retirement and savings benefits were 80 cents per hour.

For additional information see "Employer Costs for Employee Compensation, March 2002," news release USDL 02–346. Publication of this news release will change to a quarterly basis beginning with June 2002 data.

Women's earning and educaton

Earnings for female full-time wage and salary workers vary considerably by educational level. In 2001, those with less than a high school diploma had median earnings of $314 per week. This compares with $784 per week for those with a college degree. Women who graduated high school but did not attend college earned $441 a week at the median, while those with some college or an associate degree earned $525.

New productivity series

Labor productivity—defined as output per hour—increased 3.0 percent from 1999 to 2000 in wholesale trade. This rise was below the 4 percent annual increase for the 1995-2000 period, but exceeded the 2.7-percent annual growth of 1990–95.

These figures are from a new productivity series for the wholesale trade industry introduced this month. In addition, there are now productivity series for durable-goods wholesale trade and nondurable-goods wholesale trade, and for all three-digit SIC (Standard Industrial Classification) industries in wholesale trade. Unit labor costs series are also now available for each of these industries.

The wholesale trade sector includes establishments involved in selling merchandise to retailers; to industrial, commercial, institutional, farm, construction contractors, or professional business users; or acting as brokers in purchases or sales of merchandise between businesses. See "BLS Releases New Series on Productivity and Costs in Wholesale Trade Industries, 1990–2000" news release USDL 02–347. □

Producer price highlights during 2001

The decline of the PPI for finished goods in 2001 was the largest in 15 years; prices for natural gas and crude petroleum fell back to 1999 levels

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The Producer Price Index (PPI) for Finished Goods declined 1.6 percent in 2001, the largest calendar year decrease since a 2.3-percent drop in 1986. This index rose 3.6 percent in 2000, and 2.9 percent in 1999. Finished goods are commodities that are ready for sale to the final-demand user, either an individual consumer or a business firm. The majority of the 2001 decline in finished goods prices can be traced to a 17.1-percent drop in finished energy prices. Excluding energy, the index for finished goods advanced 1.2 percent in 2001. Following a 1.7-percent gain in the prior year, the index for finished consumer foods rose 1.8 percent in 2001. Prices for finished goods less foods and energy—a category that includes both consumer goods and capital equipment—increased 0.9 percent in 2001, following a 1.3-percent advance throughout the previous 12 months.

Prices for commodities at the overall crude and intermediate stages of processing also experienced declines for the 2001 calendar year. The PPI for intermediate materials, supplies, and components fell 4 percent in 2001, after posting a 4.1-percent gain in 2000. Intermediate goods in the PPI reflect material inputs to the manufacturing process, as well as various supplies consumed in the production process. Prices for crude materials for furthering processing dropped 32.5 percent, following a 35.5-percent jump in the prior calendar year. Crude goods are unprocessed goods that are prima-

rily outputs from mining industries and agricultural production.

Throughout 2001, energy prices turned down at both the crude and intermediate stages of processing. The index for intermediate foods and feeds rose at a much slower rate in 2001 than it did in 2000. Prices for crude foodstuffs and feedstuffs turned down, after falling a year earlier. Excluding foods and energy, the indexes for intermediate goods and crude materials posted declines. (See table 1.)

Energy goods

Falling prices for both natural gas and petroleum-based commodities pushed energy prices down in 2001 at all three stages of processing. The crude energy index dropped 52.9 percent, compared with an 85.6-percent jump in 2000. This decrease was primarily the result of declining prices for natural gas and crude petroleum. Prices for energy goods at the intermediate stage of processing fell 16.9 percent, subsequent to a 19-percent gain a year earlier. The indexes for jet fuels, diesel fuel, and industrial and commercial natural gas registered declines in 2001, after rising in the prior year. At the final stage of processing, the index for finished energy goods decreased 17.1 percent, following a 16.6-percent advance in 2000. Falling prices were observed for gasoline, residential natural gas, liquefied petroleum gas, and home heating oil. (See table 2.)

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Table 1. Annual percent changes for major categories of the Producer Price Index by stage of processing, 1992–2001

Index	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Finished goods	1.6	0.2	1.7	2.3	2.8	−1.2	0.0	2.9	3.6	−1.6
Foods	1.6	2.4	1.1	1.9	3.4	−.8	.1	.8	1.7	1.8
Energy	−.3	−4.1	3.5	1.1	11.7	−6.4	−11.7	18.1	16.6	−17.1
Other	2.0	.4	1.6	2.6	.6	0	2.5	.9	1.3	.9
Intermediate materials, supplies, and components	1.0	1.0	4.4	3.3	.7	−.8	−3.3	3.7	4.1	−4.0
Foods and feeds	−.5	5.5	−4.5	10.3	2.1	−1.7	−7.3	−4.2	3.6	.3
Energy	.7	−4.2	2.9	1.1	11.2	−7.0	−12.1	19.6	19.0	−16.9
Other	1.2	1.6	5.2	3.2	−.9	.3	−1.6	1.9	1.6	−1.6
Crude materials for further processing	3.3	.1	−.5	5.5	14.7	−11.3	−16.7	15.3	35.5	−32.5
Foodstuffs and feedstuffs	3.0	7.2	−9.4	12.9	−1.0	−4.0	−11.0	−.1	7.4	−7.6
Energy	2.3	−12.3	−.1	3.7	51.2	−23.1	−23.8	36.9	85.6	−52.9
Other	5.7	10.7	17.3	−4.2	−5.5	0	−16.0	14.0	−5.5	−9.9

Table 2. Annual percent changes in Producer Price Indexes for selected energy items, 1996–2001

Index	1996	1997	1998	1999	2000	2001
Finished energy goods	11.7	−6.4	−11.7	18.1	16.6	−17.1
Gasoline	27.1	−15.0	−33.1	74.8	17.2	−33.1
Residential natural gas	11.2	2.4	−2.4	.9	41.8	−22.1
Liquefied petroleum gas	71.4	−29.3	−32.6	87.0	49.3	−55.3
Home heating oil	25.0	−21.7	−36.1	89.4	37.0	−42.9
Residential electric power	.6	−.2	−2.5	−.5	3.2	3.6
Intermediate energy goods	11.2	−7.0	−12.1	19.6	19.0	−16.9
Jet fuels	26.1	−22.3	−35.8	90.9	42.6	−44.3
Diesel fuels	26.2	−22.5	−33.8	86.4	39.8	−44.7
Industrial natural gas	22.3	3.1	−9.7	7.4	91.9	−36.7
Commercial natural gas	16.8	.9	−4.7	4.1	56.0	−24.3
Natural gas to electric utilities	6.1	9.3	−24.3	15.6	83.1	−39.9
Residual fuel	32.8	−7.6	−39.8	91.1	29.8	−29.1
Industrial electric power	0	.5	−1.3	−.1	4.9	3.2
Commercial electric power	−.1	0	−1.8	.6	4.4	4.4
Crude energy materials	51.2	−23.1	−23.8	36.9	85.6	−52.9
Natural gas	92.0	−27.9	−17.8	7.9	192.6	−65.6
Crude petroleum	35.8	−28.3	−48.6	172.0	11.0	−42.4
Coal	−1.1	4.9	−1.2	−9.3	0	10.1

Natural gas. The last 5 years have shown volatile price movements within the natural gas market, especially looking at the years 2000 and 2001. Prices were relatively lower and more stable in 1998 compared with 1997. Throughout the 1998–99 winter heating season, the natural gas index fell, but at a smaller magnitude compared with the previous season. Mild winter weather caused less demand for consumption, and therefore resulted in higher storage levels. By the winter of 1999–2000, weather conditions continued to be much warmer than expected; therefore, prices remained low.

Natural gas prices began to rise considerably in 2000 when the combination of decreasing supplies, high crude oil prices, and weather-related demand pushed natural gas prices to new heights. Demand for natural gas rose as consumers began switching from higher-priced crude oil to lower-priced natural gas. During the spring and early summer of 2000, supplies began to tighten, causing the price of natural gas to climb throughout the rest of the year.

After surging 192.6 percent in 2000, the PPI for natural gas decreased 65.6 percent for the 2001 calendar year. Prices be-gan to drop significantly in February and March as milder temperatures moved into the high consumption regions, causing storage levels to rebound. Mild temperatures continued through October, which allowed prices to continue to decline. In November, the natural gas index shot up 56.4 percent as a result of colder weather. By the end of the year, mild weather pushed gas storage stocks to record levels, which helped push prices down again.[1]

For the 12 months ended in December 2001, industrial and commercial natural gas prices declined 36.7 and 24.3 percent respectively, falling to their lowest levels since May 2000. A sharp decrease in spot natural gas prices pulled gas prices substantially lower from their record highs in January 2001, when the conjunction of falling supplies, rising crude oil prices, and higher weather-related demand helped push natural gas prices to unprecedented heights. After an 83.1-percent jump in 2000, the index for natural gas to electric utilities fell 39.9 percent in 2001. The index for residential natural gas decreased 22.1 percent in 2001, following a 41.8-percent gain in 2000. After January 2001—the peak of residential natural

gas prices—this index declined sharply as a result of increased production levels and record supply numbers. In December 2001, residential natural gas prices were at their lowest point since May 2000.

The liquefied petroleum gas (LPG) index decreased 55.3 percent in 2001, after an increase of 49.3 percent in 2000. Prices fell with the help of mild weather throughout the summer and fall of 2001. Over the last 6 years, liquefied petroleum gas prices have experienced a period of volatility. In 1996, prices increased as a cold winter season created higher demand and a large drop in inventories. By the start of 1997, however, prices began to fall and continued in a downward trend until the end of 1998. This period was marked by decreasing demand due to warmer-than-normal temperatures, restored inventories, higher production levels, and strong imports in the LPG market. Lower prices in the crude petroleum and natural gas markets also helped lower the LPG index for 1997 and 1998. From January 1999 until February 2001, LPG prices rallied with rising prices for crude oil and natural gas.

Petroleum-based products. Prices for crude petroleum dropped 42.4 percent in 2001, following an 11-percent gain in 2000 and a 172-percent surge in 1999. In March of 1999, both Organization of Petroleum Exporting Countries (OPEC) and major non-OPEC member countries announced an agreement to reduce oil production, in order to bolster lackluster prices from previous years. Throughout 1999, oil prices increased dramatically, which ultimately resulted in OPEC receiving international pressure to raise their output. In March of 2000, OPEC decided to raise output by 1.7 million barrels per day.[2] Consequently, production from OPEC members increased throughout the year 2000. However, prices continued to climb as worldwide economic growth generated demand that outpaced the increased supply. By 2001, the combination of improved oil supplies and lower demand due to the economic recession in the United States helped bring prices down from their previous year's level.

Looking further down the pipeline for petroleum-based products, the index for jet fuels fell 44.3 percent in 2001, after advancing 42.6 percent a year earlier. From the spring of 1999 through the summer of 2000, jet fuel prices rose due to the large increase in crude oil prices during the same period. After peaking in September 2000, prices finally leveled off with the increase in inventories and began falling in the early part of 2001 as a result of declining oil prices. Starting in April, volatile supply levels created a price roller coaster for jet fuels causing the index to jump up in May, fall in July, and rebound in early September. Following the events surrounding the September 11, 2001, terrorist attacks, prices once again dropped due to falling demand.

The PPI for gasoline declined 33.1 percent, following a 17.2-percent increase in 2000. Prices were relatively stable up until

April, when gasoline shortages caused a significant rise in prices. Refineries then greatly advanced production, pulling prices down considerably during the late spring. In response to lower prices, refineries once again adjusted and set production levels lower. These production cuts, combined with a late summer surge in demand, put upward pressure on gasoline prices. Demand, however, declined due to the events of September 11th and the end of the driving season. Furthermore, OPEC's inability to reduce global output resulted in an excess supply of oil in the world market, causing a substantial drop in gasoline prices.

In 2001, prices for diesel fuel decreased 44.7 percent, compared with a 39.8-percent rise in the previous year. For the first quarter of 2001, prices declined as distillate supplies increased. By April, distillate production began to taper off because refineries shifted more of their resources to gasoline production. Hence, prices climbed in the spring. Prices were then pulled back down in the summer as a result of oversupply. Due to the slowing of the U.S. economy, prices collapsed more rapidly in the last quarter of 2001.

The downward trend in the natural gas market helped lower residual fuel prices. The index for residual fuel fell 29.1 percent, following a 29.8-percent gain in 2000. Also adding to the downward price pressure were the events of September 11th, the contracting economy, the drop in oil prices, and unseasonably warm temperatures.

Home heating oil prices decreased 42.9 percent in 2001, compared with a 37-percent rise in the prior year. The supply of distillates remained quite low throughout the summer of 2000, and consequently put upward pressure on home heating oil prices. Supplies then rebounded in the beginning of October and continued through March of 2001, pulling down prices for this period. In April and May, the rising tide of gasoline prices carried other petroleum-based products along with it, including home heating oil. Prices then dropped in the summer months as supplies once again began to climb. The months of August and September saw a brief rebound in the home heating oil index resulting from increased demand. Like other petroleum-based commodities, prices then collapsed following the events of September 11th.

Electric power. The PPI for residential electricity increased 3.6 percent in 2001, after rising 3.2 percent in the previous year. Subsequent to price increases in 2000, the indexes for commercial electric power and industrial electric power advanced 4.4 percent and 3.2 percent, respectively. Residential electricity prices continued to increase through the first half of 2001 due to the ongoing crisis in California. Contrary to predictions, the crisis in California failed to widen in the summer of 2001 as lower fuel costs, cooler summer temperatures, and increased conservation within the State prevented the crisis from escalating further. However, the higher prices

brought on by the crisis did not subside much by the end of the year. Electricity prices as a whole continued to be high due to the rate increases in California and the Pacific Northwest. Drought conditions in the Pacific Northwest lowered reservoirs, putting a strain on the hydroelectric power industry found in that region.

Foods and related products

The producer price index for finished consumer foods advanced 1.8 percent in 2001, following a 1.7-percent increase in the previous year. Leading this gain, prices for fresh fruits and melons rose 24 percent during 2001. The indexes for dairy products, soft drinks, processed fruits and vegetables, and pork also rose, contributing to the overall increase. By contrast, prices for eggs for fresh use, beef and veal, and finfish and shellfish turned down in 2001, partially offsetting the rise in finished consumer food prices. (See table 3.)

Prices for intermediate foods and feeds rose 0.3 percent in 2001, after increasing 3.6 percent in 2000. Most of this deceleration can be traced to the index for prepared animal feeds that fell 3.6 percent in 2001, following an 8.3-percent gain in the preceding year. The index for beef and veal also fell in the current year, after posting an increase in 2000, while prices for fluid milk products and flour rose at a slower pace in 2001 than they did in the year before. Partly offsetting the intermediate foods and feeds deceleration, crude vegetable oils; refined sugar; and natural, processed, and imitation cheese prices turned up in 2001, after falling in the prior year. The index for

confectionery materials escalated at a faster rate in 2001 than in the year before.

Following a 7.4-percent increase in 2000, the index for crude foodstuffs and feedstuffs posted a 7.6-percent decline in 2001. Contributing most significantly to this deceleration, the index for slaughter cattle fell 15.1 percent in 2001, after advancing 9.1 percent in the previous year. Prices for slaughter hogs and soybeans also posted declines in the current year, after increasing in 2000. Fluid milk, wheat, and corn prices moved upward at a slower rate in 2001 than they did in 2000. Alternatively, the indexes for fresh and dry vegetables and for fresh fruits and melons turned up in 2001.

Fruits and melons. Prices for fresh fruits and melons turned up 24 percent in 2001, following a 1.3-percent drop in the previous year. Underlying this increase, the index for strawberries shot up 95.7 percent in 2001, after rising 25 percent in 2000. The index for citrus fruits turned up as a result of price increases for navel oranges, lemons, and grapefruits. Price increases in 2001 were also registered for red delicious apples and pears. On the other hand, prices for McIntosh and Granny Smith apples turned down in 2001.

Grains. Corn prices rose 2.8 percent in 2001, after increasing 7.8 percent in the preceding year. The index for corn exhibited a spike in July, rising 16.2 percent as a result of decreased supplies due to abnormally hot weather. In addition, elevated corn prices for 2001 were the result of increased foreign consumption of U.S. corn due to diminished production from for-

Table 3. Annual percent changes in Producer Price Indexes for selected food items, 1996–2001

Index	1996	1997	1998	1999	2000	2001
Finished consumer foods	3.4	−0.8	0.1	0.8	1.7	1.8
Fresh fruits and melons	37.2	−8.2	−19.0	8.2	−1.3	24.0
Dairy products	2.4	4.7	10.7	−11.1	3.2	2.3
Soft drinks	.1	−1.0	1.9	3.3	3.6	3.0
Pork	21.9	−13.6	−27.3	29.8	5.0	4.7
Fresh and dry vegetables	−24.3	21.6	8.8	4.4	−23.7	9.7
Bakery products	3.6	1.1	1.0	1.6	2.7	2.1
Processed poultry	2.6	−6.3	3.8	−3.7	1.1	1.4
Unprocessed and packaged fish	5.1	4.7	−3.4	8.8	.6	−7.8
Beef and veal	7.4	−5.4	−2.7	10.8	8.2	−4.5
Eggs for fresh use	15.0	−15.6	−6.2	−27.4	46.3	−27.5
Intermediate foods and feeds	2.1	−1.7	−7.3	−4.2	3.6	.3
Crude vegetable oils	−9.3	13.9	−2.7	−37.5	−16.5	15.9
Refined sugar	4.2	−4.5	.6	−2.2	−9.6	6.3
Confectionery materials	2.2	−15.8	−1.0	1.7	.7	15.1
Flour	−9.0	−8.2	−5.6	−7.5	7.9	4.1
Prepared animal feeds	5.4	−3.1	−20.4	−2.7	8.3	−3.6
Crude foodstuffs and feedstuffs	−1.0	−4.0	−11.0	−.1	7.4	−7.6
Slaughter cattle	−2.5	2.0	−12.0	19.4	9.1	−15.1
Slaughter hogs	23.2	−21.7	−76.8	266.9	14.9	−24.9
Soybeans	−3.7	1.8	−21.3	−17.5	9.9	−12.5
Wheat	−19.3	−11.3	−15.0	−13.9	13.9	1.7
Corn	−21.0	2.2	−22.5	−12.4	7.8	2.8
Fluid milk	1.1	2.8	25.6	−31.3	7.0	3.0

eign suppliers. Following July's upsurge, corn prices decelerated through October 2001.

The index for wheat posted a 1.7-percent gain for the 12 months ended December 2001, following a 13.9-percent increase in 2000. Prices fluctuated throughout 2001; however, the yearly increase can be attributed mostly to a 9.4-percent rise in May. Wheat supplies, which were at their lowest level since 1988 due to adverse weather conditions, caused prices to increase.[3] Due to planting flexibility allowed for under current Government programs, wheat crops were substituted by other crops that yielded higher returns.

Soybean prices fell 12.5 percent over the past 12 months, compared with a 9.9-percent advance in 2000. In addition to declines in January, February, and April, the soybean index posted price decreases for the last 4 months of 2001. Most of this annual decline can be attributed to record supplies that exceeded 3 billion bushels in 2001.[4] Soybean production increased, "in part because the soybean loan rate has supported expected returns and because per-acre costs of fertilizer and energy inputs are lower than those of corn," according to the USDA.[5]

Lower prices for soybeans led to depressed prices for prepared animal feeds in 2001. The index for prepared animal feeds fell 3.6 percent in 2001, following an 8.3-percent gain in the prior year. U.S. feed grain production increased 4 percent in 2001 from the year before, contributing to the fall in prepared animal feed prices.[6]

Meats. The PPI for slaughter livestock fell 16.7 percent in 2001, after moving up 9.8 percent in the previous year. Driving this downturn, prices for slaughter cattle dropped 15.1 percent over the 12 months ended December 2001, compared with a 9.1-percent advance in 2000. This significant decrease resulted from the record numbers of cattle remaining in feed lots without bids from packing houses. Decreased demand, both foreign and domestic, could not meet the overwhelming supply of slaughter cattle in 2001. Due to reduced travel and dining in the United States throughout the fall, domestic demand for slaughter cattle waned. Japan, which makes up approximately 50 percent of foreign beef exports, had reduced demand for slaughter cattle since the detection of mad cow disease (bovine spongiform encephalopathy), which had raised concern about the safety of beef products.

Transmission of weakened slaughter cattle prices led to declines in beef and veal prices over 2001. The PPI for beef and veal dropped 4.5 percent in 2001, following an 8.2-percent gain in the preceding year. Excess supply due to increased slaughter numbers and weights put downward pressure on beef and veal prices. In addition, the weakened economy in the second half of 2001 reduced demand by the restaurant and hotel industry for beef products. Similar to the slaughter

cattle market, foreign demand dropped in 2001 due to anxiety about mad cow disease and hoof-and-mouth disease in Japan and Europe.

Slaughter hog prices also exhibited a significant drop, falling 24.9 percent in 2001, after advancing 14.9 percent in 2000. This decline, like that of slaughter cattle prices, can be traced to reduced demand from the restaurant and hotel industry throughout the second half of 2001. Increased supplies as well as record weights of existing hogs also applied downward pressure on slaughter hog prices. In spite of declining slaughter hog prices, the index for pork rose in 2001, although at a slower rate than it did in the prior year.

Dairy products. Posting monthly price increases from March through September, fluid milk prices moved up 3 percent in 2001, compared with a 7-percent gain in the previous year. Most of this price increase can be traced to diminished supplies as a result of inclement weather in top milk-producing States. Bad winter weather makes dairy cattle less productive and increases the cases of mastitis (inflammation of the udder) among cattle, which also hinders their ability to produce milk. Winter weather conditions can also stop milk from arriving at the processor before it spoils. Excessive heat in summer months, especially in California, also caused stress to dairy cattle, decreasing the milk-per-cow ratio. In addition to weather problems, the tight supplies of top forage, such as high-quality alfalfa hay, added to the overall reduction of fluid milk supplies. The high prices of replacement cattle also left many dairy farms operating below capacity.

At later stages of processing, dairy product prices rose 2.3 percent over the 12 months ended December 2001. The increase in fluid milk prices, as well as energy problems in California, the top milk-producing State, led to decreased supplies of dairy products. The rolling blackouts and high energy prices in California cut milk processing times and spoiled some milk in refrigeration. Increased demand for cheese; ice cream; butter; and dry, condensed and evaporated milk products also contributed to the rise in dairy product prices in 2001.

Finished goods other than foods and energy

The PPI for finished goods other than foods and energy—the core index—rose 0.9 percent in 2001, after increasing 1.3 percent in the previous year. Capital equipment prices showed no change, following a 1.2-percent gain in 2000. The index for finished consumer goods other than foods and energy increased 1.5 percent in 2001, after rising 1.4 percent a year earlier.

Within capital equipment, the index for civilian aircraft moved up at a slower pace in 2001 than it did in the previous year. Prices for light motor trucks, metal-cutting machine tools, truck trailers, and construction machinery and equipment turned down, after increasing in 2000. The indexes for electronic computers and passenger cars fell more than they did in the prior year. By contrast, prices for x-ray and electromedical equipment, and for office and store machines and equipment advanced in 2001, after declining a year earlier. The communications and related equipment index fell less than it did in the previous year. Prices for pumps, compressors, and equipment, and agricultural machinery and equipment advanced at a faster rate than in 2000.

The index for finished consumer goods other than foods and energy moved up 1.5 percent in 2001, after advancing 1.4 percent a year earlier. Rising prices for cigarettes, alcoholic beverages, book publishing, newspaper circulation, household furniture, sanitary papers and health products, pet food, and periodical circulation outweighed falling prices for light motor trucks, passenger cars, men's and boy's apparel, women's apparel, and floor coverings. (See table 4.)

Civilian aircraft. The index for civilian aircraft increased 3.8 percent in 2001, following a 6.7-percent gain in 2000. Prices for civilian aircraft rose throughout the majority of 2001; however, price increases slowed toward the end of the year, and the index declined in September and November (the index had not fallen since August 1999). The slower rate of increase for civilian aircraft prices in the latter months of 2001 resulted from declining sales, as civilian aircraft shipments fell to 3,483 in 2001, down from 3,780 in 2000.[7] Within civilian aircraft, sales for general aviation aircraft and helicopters decreased, and sales for transport aircraft advanced.

Motor vehicles. Prices for motor vehicles declined significantly in 2001, as prices fell for both light trucks and passen-

ger cars; however, prices for heavy trucks rose. A 3.7-percent fall in the October passenger car index represented the largest monthly decline in the index since a 5.2-percent decrease in October 1972. Manufacturer incentives, including 0 percent financing, were primarily responsible for driving down light truck and passenger car prices, helping to boost U.S. automobile sales to their second highest level on record.[8] Light truck sales finished 2 percent higher in 2001 than in the prior year.

Electronic computers. Prices for electronic computers dropped 29.9 percent in 2001, after showing a 14.2-percent decline in the previous year. Prices fell sharply for personal computers and workstations (31.6 percent); mid-range general purpose computers (34.5 percent); large-scale general purpose computers (31.2 percent); and portable computers (31.5 percent). Manufacturers of electronic computers benefited from declining input costs in 2001, as MOS memory prices dropped 40.7 percent, MOS microprocessor prices fell 38.7 percent, and prices for computer storage devices decreased 12.9 percent.

Tobacco products and alcohol. The index for tobacco products rose 12.6 percent in 2001, following a 2.3-percent gain in 2000. The majority of the increase in tobacco prices was due to a 14.1-percent jump in the index for cigarettes, which followed a 1.9-percent gain in 2000. In January and May, tobacco manufacturers instituted two 14-cent-per-pack price increases to offset losses from a $206 billion legal settlement with 46 U.S. States, causing the index to rise significantly in these 2 months.[9] Tobacco producers also raised prices in anticipation of a 5-cent-per-pack increase in the Federal excise tax on cigarettes that went into effect January 2002. Alcohol prices advanced 2.6 percent in 2001, following a 4.2-percent rise in 2000. Accounting for the majority of this gain, the index for malt beverages increased at a 3.3-percent rate, after rising at a 4.4-percent rate in 2000. Advancing prices for grains

Table 4.	**Annual percent changes in Producer Price Indexes for selected finished goods other than foods and energy, 1996–2001**					
Index	1996	1997	1998	1999	2000	2001
Finished goods other than foods and energy	0.6	0.0	2.5	0.9	1.3	0.9
Finished consumer goods less foods and energy ..	.8	.3	4.2	1.2	1.4	1.5
Cigarettes	3.3	10.0	49.4	9.6	1.9	14.1
Alcoholic beverages	3.8	−.5	1.5	.6	4.2	2.6
Books	3.2	3.3	4.1	1.8	3.4	3.4
Newspapers	4.2	.1	1.1	1.4	4.3	3.2
Sanitary papers and health products	−2.6	−2.0	−.6	−1.0	2.7	1.6
Men's and boys' apparel	1.1	.2	.6	−.3	.2	−1.7
Passenger cars	−.8	−2.6	.5	1.2	−.7	−1.6
Light trucks	.2	−3.6	1.0	.3	1.8	−3.3
Capital equipment	.4	−.6	0	.3	1.2	0
Civilian aircraft	3.2	.5	.5	2.1	6.7	3.8
Computers	−22.3	−21.6	−26.6	−19.7	−14.2	−29.9
Construction machinery	1.8	1.9	1.7	1.4	.9	−.1
Communication and related equipment	1.5	.8	−1.1	−1.9	−1.3	−.7
Heavy trucks	-4.5	.6	3.9	1.4	.7	.3

in 2001 may have contributed to the rise in the malt beverage index. The indexes for wine and brandy and for distilled spirits also increased in 2001.

Newspaper circulation and book publishing. In 2001, the index for newspaper circulation rose 3.2 percent, after increasing 4.3 percent a year earlier. Price increases were observed for subscriptions and sales of both daily and weekly publications. The book publishing index advanced 3.4 percent, following a similar increase in 2000. Prices moved up for the publication of text books; technical, scientific, and professional books; general books; pamphlets; and religious books; however, prices fell for the publication of general reference books.

Intermediate industrial materials

The PPI for intermediate materials other than foods and energy decelerated, falling 1.6 percent in 2001, following a 1.6-percent gain in the previous year. Prices also turned down for nondurable manufacturing materials and durable manufacturing materials. The index for construction materials showed no change after inching up in 2000. (See table 5.)

Nondurable manufacturing materials. Prices for nondurable manufacturing materials dropped 5.5 percent in 2001, following a 4.1-percent increase in 2000. Not since 1951, when the index closed down 6.1 percent, has the nondurable manufacturing materials index fallen at such a steep rate over a calendar year. Much of the 2001 deceleration was the result of a downturn in prices for basic organic chemicals. The indexes for nitrogenates, plastic resins and materials, paperboard, woodpulp, and paper also decreased in 2001, after advancing in the prior year. By contrast, prices for fats and oils (inedible) turned up in 2001, after falling a year earlier. Prices for phosphates declined less than they did in 2000.

Prices for basic organic chemicals moved down 11.6 percent in 2001, after rising 5.8 percent a year earlier. The index for primary basic organic chemicals decreased 29.5 percent, following a 13.4-percent gain in 2000. Intermediate basic organic chemical prices fell at a faster rate than they did in the previous year. Petroleum is a major input to primary basic organic chemicals, which include aromatics (not made in a refinery), liquefied refinery gases, and other basic organic chemicals, making primary basic organic chemical prices especially sensitive to changes in the petroleum market. In 2001, a 42.4-percent drop in crude petroleum prices coupled with weak demand put downward pressure on basic organic chemical prices.

Price decreases were widespread within the pulp and paper products industry in 2001. Woodpulp prices plummeted 24.3 percent, falling each month of the year with the excep-

Table 5.	Annual percent changes in Producer Price Indexes for selected intermediate and crude materials other than foods and energy, 1996–2001						
Index	1996	1997	1998	1999	2000	2001
Intermediate goods other than foods and energy	−0.9	0.3	−1.6	1.9	1.6	−1.6
Nondurable manufacturing materials	−3.3	.3	−5.3	4.0	4.1	−5.5
Basic organic chemicals	3.6	−1.7	−6.4	6.9	5.8	−11.6
Nitrogenates	5.9	−13.5	−19.0	2.2	44.9	−25.5
Plastic resins and materials	4.2	−2.8	−13.4	15.9	2.2	−9.8
Woodpulp	−33.0	4.1	−12.5	12.1	14.8	−24.3
Paperboard	−19.0	5.8	−8.0	13.0	10.6	−7.0
Paper	−14.2	3.8	−4.1	2.8	4.1	−3.1
Durable manufacturing materials	−1.4	0	−5.5	2.4	.2	−4.0
Steel mill products	−1.4	.5	−6.5	−2.4	−.6	−6.1
Aluminum mill shapes	−7.9	6.8	−8.5	4.2	4.7	−2.9
Copper and brass mill shapes	−10.6	−6.5	−11.5	8.6	3.8	−9.5
Cement	5.0	3.5	5.2	1.6	−.9	1.0
Plywood	−1.3	−1.1	4.9	−.2	−6.2	−1.9
Building paper and board	−5.8	−2.0	−1.3	10.3	−9.3	−3.0
Construction materials	1.8	1.2	.1	2.2	.1	0
Plastic construction products	−1.1	−2.0	−2.2	5.6	1.6	−2.7
Nonferrous wire and cable	−3.1	−2.2	−4.6	.3	4.6	−4.0
Hardwood lumber	1.6	7.4	−1.2	3.5	2.4	−5.0
Softwood lumber	19.6	−3.8	−10.1	10.1	−14.5	−2.4
Millwork	3.5	1.0	.2	2.4	.5	1.7
Gypsum products	6.6	7.1	7.3	23.1	−27.1	.4
Crude nonfood materials less energy	−5.5	0	−16.0	14.0	−5.5	−9.9
Raw cotton	−13.0	−11.2	−8.0	−20.8	30.2	−46.7
Nonferrous metal ores	−16.8	−18.0	−10.0	6.6	4.4	−11.2
Wastepaper	−1.3	11.6	−28.9	110.5	−18.5	−30.2
Iron and steel scrap	−11.1	14.5	−39.9	40.0	−28.8	−5.6

tions of November and December. Weak demand, resulting from a slow domestic economy, in conjunction with high supplies of woodpulp drove down prices. Paper prices turned down 3.1 percent in 2001, following a 4.1-percent increase in the previous year. The paper index rose in the first 4 months of 2001 in spite of falling prices for woodpulp, a major input to paper, but then showed eight consecutive decreases—more closely reflecting the decline in price for woodpulp. Within paper, the indexes for newsprint, writing and printing papers, and packaging and industrial converting paper all decreased in 2001. The index for paperboard moved down 7 percent in 2001, after rising 10.6 percent in the previous year, as prices fell for the first 11 months in 2001. Price changes for woodpulp, paper, and paperboard are closely related because woodpulp is a major input for both paper and paperboard. (See chart 1.)

Prices for plastic resins and materials declined in 2001, falling 9.8 percent. Both the indexes for thermoplastic resins and thermosetting resins decreased, after advancing a year earlier. Falling prices for crude petroleum and the economic downturn were the most likely causes of declining prices for plastic resins and materials.

Durable manufacturing materials. The index for durable manufacturing materials fell 4 percent in 2001, after increasing 0.2 percent in the prior year. Prices for aluminum mill shapes,

cold rolled sheet and strip, primary aluminum (except extrusion billet), copper and brass mill shapes, and hardwood lumber turned down, after rising in 2000. The indexes for hot rolled sheets and strip and hot rolled bars, plates, and structural shapes declined at a faster pace in 2001 than in the previous year. On the other hand, prices for building paper and board, plywood, and semi-finished steel mill products fell less in 2001 than they did a year earlier. The index for cement advanced, after moving down in 2000.

Prices for steel mill products declined substantially in 2001 as the indexes for cold rolled sheet and strip; hot rolled sheet and strip; hot rolled bars, plates, and structural shapes; and semi-finished steel mill products fell 9.5, 8.2, 4.3, and 0.2 percent, respectively. Steel producers faced fierce import competition throughout 2001, causing the steel mill product index to decline 11 months out of the year. Domestic steel manufacturers complained of unfair foreign competition, prompting the Bush Administration to request the International Trade Commission to investigate whether restrictions on steel imports were needed.

The index for aluminum dropped 14.5 percent in 2001, registering 8 monthly price declines during the year, after moving up 3.3 percent in 2000. The American Metal Market reported that primary aluminum production levels declined to a 33-year low in 2001, reflecting extremely weak demand conditions. In

Chart 1. Paper-related indexes
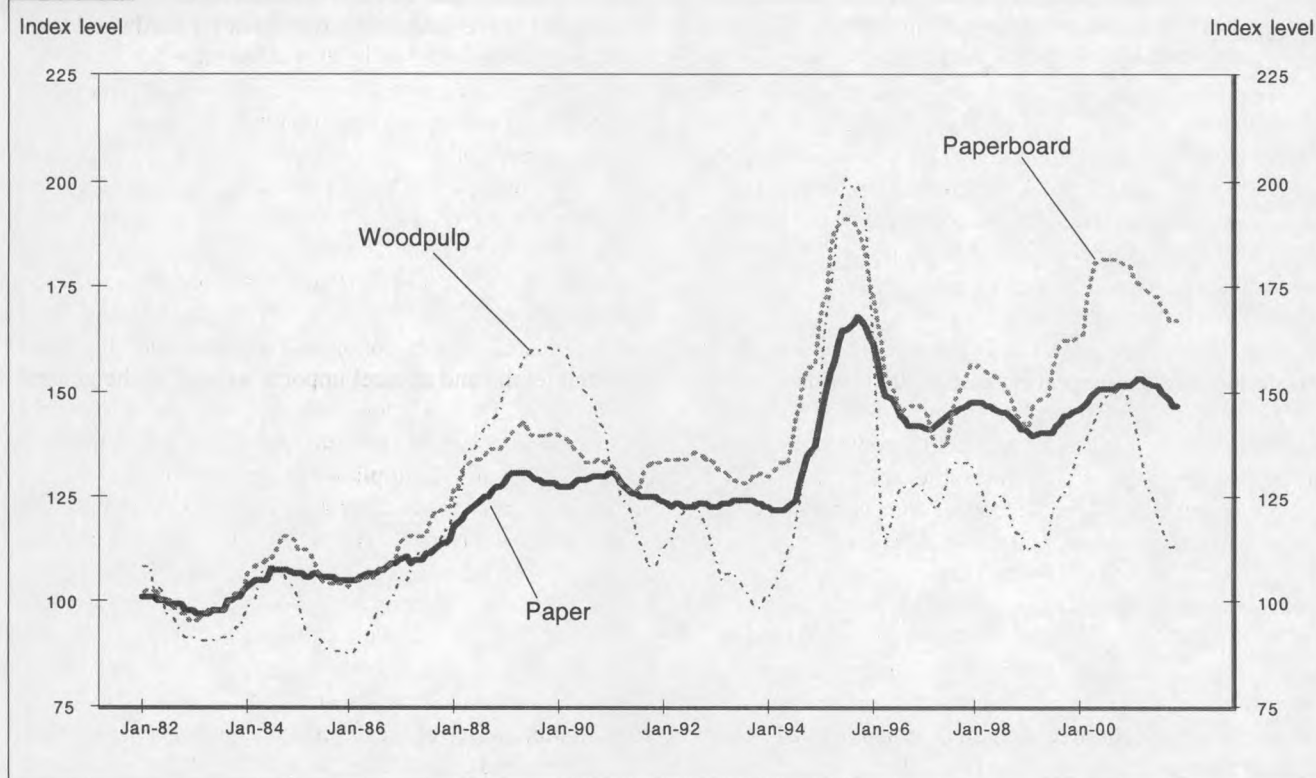
addition, high producer inventories contributed to falling aluminum prices in 2001. Prices for aluminum mill shapes fell 2.9 percent in 2001, following a 4.7-percent increase in the previous year. Decreasing aluminum prices may have been partially responsible for the fall in the index for aluminum mill shapes.

In 2001, the index for building paper and board fell 3.0 percent, following a 9.3-percent drop a year earlier. Accounting for the majority of the decline in building paper and board prices, the hardboard, particleboard, and fiberboard product index moved down 3.3 percent. The index for plywood decreased 1.9 percent in 2001, after declining 6.2 percent in the previous year. Falling prices for softwood plywood were primarily responsible for the drop in plywood prices. Manufacturers of softwood plywood benefited from lower prices for softwood lumber, which decreased 2.4 percent in 2001. Although the index for plywood finished down for the year, prices exhibited a high degree of volatility, resulting from uncertainty surrounding the March 31, 2002, termination of the Canada-U.S. Softwood Lumber Agreement.[10] Under the agreement, Canada was entitled to unlimited access to the U.S. market without threat of trade action.

Materials and Components for Construction. The PPI for materials and components for construction showed no change in 2001, after edging up 0.1 percent in the prior year. Falling prices for plastic construction products, nonferrous wire and cable, hardwood lumber, softwood lumber, fabricated structural metal products, plywood, and wiring devices offset rising prices for millwork, asphalt felts and coatings, switchgear and switchboard equipment, air conditioning and refrigeration equipment, and metal valves (except fluid power).

From December 2000 to December 2001, prices for plastic construction products fell 2.7 percent. Manufacturers were able to lower output prices as input costs declined. Prices for plastic resins and materials fell substantially in 2001 due to weak demand resulting from a slow economy and plummeting prices for crude petroleum.

Prices for nonferrous wire and cable declined 4 percent in 2001, following a 4.6-percent increase in 2000. Within nonferrous wire and cable, price declines for electric wire and cable, telephone and telegraph wire and cable, control and signal wire and cable, building wire and cable, apparatus wire and cordage, power wire and cable, copper and copper alloy wire and cable, aluminum wire and cable (bare), and fiber optic cable outweighed price increases for magnet wire and for appliance and flexible cord sets. Manufacturers of nonferrous wire and cable may have been able to pass decreasing costs forward through the chain of production as prices for copper base scrap, nonferrous metal ores, and primary nonferrous metals (except precious) all declined in 2001. Over the same time period, prices for fabricated structural metal

products declined 0.4 percent, after increasing 0.3 percent in 2000.

The index for lumber decreased 3.2 percent in 2001, after falling 9.6 percent in the previous year. Prices for hardwood lumber moved down 5 percent, following a 2.4-percent increase in 2000. After rising 10 percent in May and falling 5.9 percent in July, the index for softwood lumber decreased 2.4 percent in 2001. As mentioned in the previous section, uncertainty surrounding the end of the Canadian-U.S softwood lumber agreement resulted in larger than normal price swings for softwood lumber. Canadian producers, fearing retroactive tariffs on U.S. exports, limited their supplies to U.S. markets, and U.S. buyers held off purchasing in anticipation of a surge in Canadian imports.

Basic industrial materials

Prices for basic industrial materials dropped 9.9 percent in 2001, following a 5.5-percent decline in the preceding year. Contributing most significantly to this overall deceleration, the index for raw cotton plunged 46.7 percent, after advancing 30.2 percent in 2000. Prices for nonferrous metal ores, copper base scrap, and leaf tobacco turned down in 2001, while prices for wastepaper, aluminum base scrap, and pulpwood fell at a faster rate in 2001 than they did in the prior year. By contrast, the index for iron and steel scrap fell 5.6 percent in 2001, compared with a 28.8-percent drop in 2000. Prices for softwood logs, bolts, and timber also fell at a slower pace in 2001 than they did in the previous year. The index for hardwood logs, bolts, and timber turned up in 2001. (See table 5.)

Raw cotton prices dropped considerably in 2001, registering declining monthly prices from January through October. Supplies of raw cotton increased approximately 17 percent in 2001 from the year before due to larger planting areas and increased yield. Despite the drought in the southwestern States, other areas of the Cotton Belt experienced decreased abandonment levels and increased harvested areas. Cotton exports rose in 2001; however, overall demand declined as a result of decreased U.S. cotton mill consumption. Increases in cotton textile and apparel imports, as well as the general slowdown of the U.S. economy, weakened the demand for cotton from the spinning and from the textile and apparel industries. The gain in supplies and reduction in demand has increased ending stocks to their highest level since 1986.[11]

Prices for nonferrous metal ores fell 11.2 percent in 2001, turning down from a 4.4-percent gain in 2000. The index for nonferrous scrap decreased 14.7 percent, following a 6.4-percent drop a year earlier. Prices for both nonferrous ores and scrap declined as a result of weak demand from the automotive, construction, and aerospace industries. This diminished consumption, which primarily affected the copper and aluminum sectors, had been sliding since 1999. However, with the

downturn of the U.S. economy and the effects of the terrorist attacks on September 11th, demand softened even further than had been expected. The high inventories that remained from 2000 magnified the effects of the waning demand for nonferrous metals in 2001.

After dropping 18.5 percent in 2000, the PPI for wastepaper decreased 30.2 percent over the 12 months ended December 2001. The index registered declining prices for the first 6 months of 2001 due to weakened demand. Decreased overseas shipments and the weakening U.S. economy softened demand for wastepaper, while large stocks leftover from 2000 forced consumers of wastepaper to reduce orders. During the second half of 2001, prices rose minimally as demand began to increase.

Iron and steel scrap prices declined at a slower rate in 2001 than in the prior year. The iron and steel scrap market experienced another year of falling prices due to continued weak demand from the steel industry. This diminished demand was most significant in the automobile and appliances sectors that felt the effects of the weakening U.S. economy. A reduction in scrap exports from Eastern Europe—especially Russia, Ukraine, and Romania—helped to increase foreign demand for U.S. steel scrap, and kept prices from falling further in 2001.

Selected service industries

A majority of the service industries tracked in the PPI exhibited advancing prices in 2001. Rising prices were registered by the following indexes: property and casualty insurance; grocery stores; offices and clinics of doctors of medicine; general medical and surgical hospitals; new car dealers; skilled and intermediate care facilities; real estate agents and managers; legal services; drug stores and proprietary stores; operators and lessors of non-residential buildings; United States Postal Service; engineering design, analysis, and consulting services; air transportation (scheduled); and home healthcare services. Alternatively, prices declined for security brokers, dealers, and investment bankers; telephone communications (except radiotelephone); travel agencies; truck rental and leasing (without drivers); camera and photographic supply stores; catalog and mail order houses; optical goods stores; and trucking (except local) during 2001. (See table 6.)

The index for property and casualty insurance moved up 3.7 percent over the 12 months ended December 2001 due partially to rising prices for private passenger automobile insurance and homeowner's insurance. Private passenger automobile insurance advanced 5.9 percent in 2001, with significant increases in California and Florida. In Florida, cases of automobile insurance fraud are currently being investigated as causes for rising premiums. Prices for homeowner's insurance rose 5.1 percent in 2001, with large gains in California,

Florida, and Texas. The gain in prices resulted from an increase in claims surrounding mold problems that arise in warm climates after water damage.

Prices for health services climbed upward in 2001, rising 3.1 percent over the 12 months. Contributing most significantly to this price increase was the index for offices and clinics of doctors of medicine, which rose 2.8 percent in 2001. Medicare increased payments to physicians by approximately 4.5 percent in 2001, allowing doctors to increase prices.[12] The Medicare increase affected not only direct Medicare payments to physicians, but also the payments by private payers and State Medicaid agencies that adjust contracts according to Medicare rates. This increase in the payment rate, along with a change in the Medicare payment system, caused prices for physician's offices to advance in 2001. The index for general medical and surgical hospitals rose 2.7 percent in 2001 due to increased labor, pharmaceutical and supply expenses, and increased liability insurance costs. The weakening economy also decreased investment returns used to subsidize hospital operating losses. Similarly to physician offices, prices for skilled and intermediate care facilities and home healthcare services rose partly as a result of increased Medicare payments in 2001.

The grocery store index rose 5.6 percent in 2001. Margin increases were influenced by rising produce, bakery, dairy, and health and beauty care margins. On the other hand, the index for convenience food stores dropped due to falling margins for convenience food/gasoline stores.

From December 2000 to December 2001, prices for real estate agents and managers rose 1.6 percent. Leading this price increase, prices for real estate brokerage (residential sales) advanced 4.1 percent in 2001, due partly to an increase in the median price of existing homes—to $147,500 in 2001, up from $139,000 in 2000.[13] This index also registered a decline in prices between the third and fourth quarters of 2001, mirroring the trend of median housing prices in those quarters. The index for operators and lessors of nonresidential buildings also moved up in 2001, posting a 1.3-percent gain.

Prices for the United States Postal Service advanced 7.5 percent from December 2000 to December 2001. The indexes for first class mail, periodicals (second class mail), standard class A mail (third class mail), and standard class B mail (fourth class mail) moved up in 2001 as the United States Postal Service implemented rate increases in January and July. Postal rates were raised to offset large projected losses for 2001. Even after the January rate increase, the Postal Service projected losses of up to $2.4 billion for the year 2001, leading to the July rate hike.[14]

The index for security brokers, dealers, and investment bankers dropped 13.2 percent in 2001. Falling share prices in the stock market translated into lower fees for security brokers and dealers in 2001 as the S&P 500 index declined 14.4

Table 6.	Percent change in Producer Price Indexes for the net output of selected service industries, 1996–2001					
SIC code	Industry	1996–97	1997–98	1998–99	1999–2000	2000–01
	Distribution:					
4011	Railroads, line-haul operating	1.0	0.5	0.1	1.8	2.3
4212	Local trucking without storage	.2	1.7	1.1	4.2	2.8
4213	Trucking, except local	2.6	3.4	3.4	6.3	–.4
4214	Local trucking with storage	.6	.5	.5	1.4	1.0
4215	Courier services, except by air	3.8	4.2	3.4	4.4	2.6
4221	Farm product warehousing and storage	2.0	.6	5.3	1.6	3.3
4222	Refrigerated warehousing and storage	.1	.5	1.2	1.7	1.2
4225	General warehousing and storage	.7	2.9	2.6	3.0	3.0
4311	United States Postal Service	0	0	2.2	0	7.5
4412	Deep sea foreign transportation of freight	–3.7	4.7	22.9	12.8	7.4
4424	Deep sea domestic transportation of freight	–.6	.2	1.2	4.8	2.1
4432	Freight transportation on the Great Lakes-St. Lawrence Seaway	1.4	.8	–.1	–.1	.1
4449	Water transportation of freight, n.e.c.	–.4	–2.2	8.1	9.8	–.5
4491	Marine cargo handling	1.2	1.8	1.5	2.6	1.1
4492	Tugging and towing services	2.2	2.8	2.9	4.1	.9
4513	Air courier services	–3.9	3.1	5.1	8.3	3.3
4581	Airports, flying fields, and airport services	3.0	3.0	3.9	5.8	0
4612	Crude petroleum pipelines	–3.7	1.4	–1.7	6.1	11.1
4613	Refined petroleum pipelines	1.2	–1.1	.3	1.0	5.0
4731	Freight transportation arrangement	–1.4	–.6	–2.8	4.5	–2.7
5411	Grocery stores	–	–	–	4.7	5.6
5421	Meat and fish (seafood) markets	–	–	–	6.9	2.1
5431	Fruit and vegetable market	–	–	–	5.2	1.3
5441	Candy, nut, and confectionery stores	–	–	–	5.0	3.4
5461	Retail bakeries	–	–	–	1.0	3.3
5499	Miscellaneous food stores	–	–	–	10.0	15.6
5511	New car dealers	–	–	–	1.0	3.0
5912	Drug stores and proprietary stores	–	–	–	–	6.3
5921	Liquor stores	–	–	–	–	1.9
5941	Sporting goods stores	–	–	–	–	8.8
5942	Book stores	–	–	–	–	–1.5
5943	Stationery stores	–	–	–	–	2.1
5944	Jewelry stores	–	–	–	–	–1.6
5945	Hobby, toy, and game shops	–	–	–	–	1.0
5946	Camera and photographic supply stores	–	–	–	–	–13.9
5947	Gift, novelty, and souvenir shops	–	–	–	–	–1.0
5948	Luggage and leather goods stores	–	–	–	–	1.3
5949	Sewing, needlework, and piece goods stores	–	–	–	–	–9.2
5961	Catalog and mail-order houses	–	–	–	–	–1.5
5962	Automatic merchandising machine operators	–	–	–	–	.8
598	Fuel dealers	–	–	–	–	5.7
5992	Florists	–	–	–	–	5.2
5995	Optical goods stores	–	–	–	–	–8.9
5999	Miscellaneous retail stores, n.e.c.	–	–	–	–	–.6
	Communications:					
4812	Wireless telecommunications	–	–	–	–6.1	–1.2
4813	Telephone communications, except radiotelephone	–.4	–1.7	–3.0	–1.7	–4.0
4832	Radio broadcasting	3.1	.8	7.7	4.9	–2.3
4841	Cable and other pay television services	4.7	3.7	3.3	5.7	.8
	Real estate:					
6512	Operators and lessors of nonresidential buildings	2.2	1.2	5.7	1.3	1.3
6531	Real estate agents and managers	1.4	2.6	1.5	4.6	1.6
	Professional, scientific, and technical:					
7311	Advertising agencies	2.5	1.3	2.8	4.0	2.5
8111	Legal services	4.1	2.5	2.9	3.9	4.2
8711	Engineering design, analysis, and consulting services	3.1	2.9	3.1	3.1	5.9
8712	Architectural design, analysis, and consulting services	3.0	5.3	4.9	2.5	1.2
8721	Accounting, auditing, and bookkeeping services	2.1	3.0	3.5	3.3	.6
	Healthcare:					
8011	Offices and clinics of doctors of medicine	1.2	2.6	2.1	1.6	2.8
8053	Skilled and intermediate care facilities	4.2	4.4	4.0	6.3	5.4
8062	General medical and surgical hospitals	.5	1.3	1.8	3.7	2.7
8063	Psychiatric hospitals	–6.7	.5	.9	–.6	2.2
8069	Specialty hospitals, except psychiatric	.6	2.3	2.7	2.6	3.1
8071	Medical laboratories	.9	.2	–.8	4.6	2.3
8082	Home healthcare services	6.2	.5	4.0	1.0	3.2

Table 6. **Continued—Percent change in Producer Price Indexes for the net output of selected service industries, 1996–2001**

SIC code	Industry	1996–97	1997–98	1998–99	1999–2000	2000–01
	Other:					
4512	Air transportation, scheduled	.9	2.5	6.7	18.6	2.0
4522	Air transportation, nonscheduled	−1.6	2.6	2.0	8.1	1.1
4724	Travel agencies	1.5	−2.3	.3	14.6	−7.8
6211	Security brokers, dealers, and investment bank companies	–	–	–	–	−13.2
6311	Life insurance carriers	–	–	−.3	−.6	1.4
6331	Property and casualty insurance	–	–	1.1	1.1	3.7
7011	Hotels and motels	4.1	4.2	2.8	5.7	.8
7349	Building cleaning and maintenance services, n.e.c.	1.4	1.1	2.6	3.9	3.7
7361	Employment agencies	1.0	2.9	2.2	2.4	1.8
7363	Help supply services	1.8	2.2	1.8	1.2	0
7372	Prepackaged software	–	.9	−2.4	2.4	−2.6
7513	Truck rental and leasing, without drivers	.5	−.9	.3	4.5	−4.2
7514	Passenger car rental, without drivers	13.7	−4.0	3.8	2.8	−1.0

NOTE: Calculations are based on a 12-month change from December to December of indicated years. Dashes indicate index was not used in estimation. n.e.c. = not elsewhere classified.

Chart 2. **S&P 500**
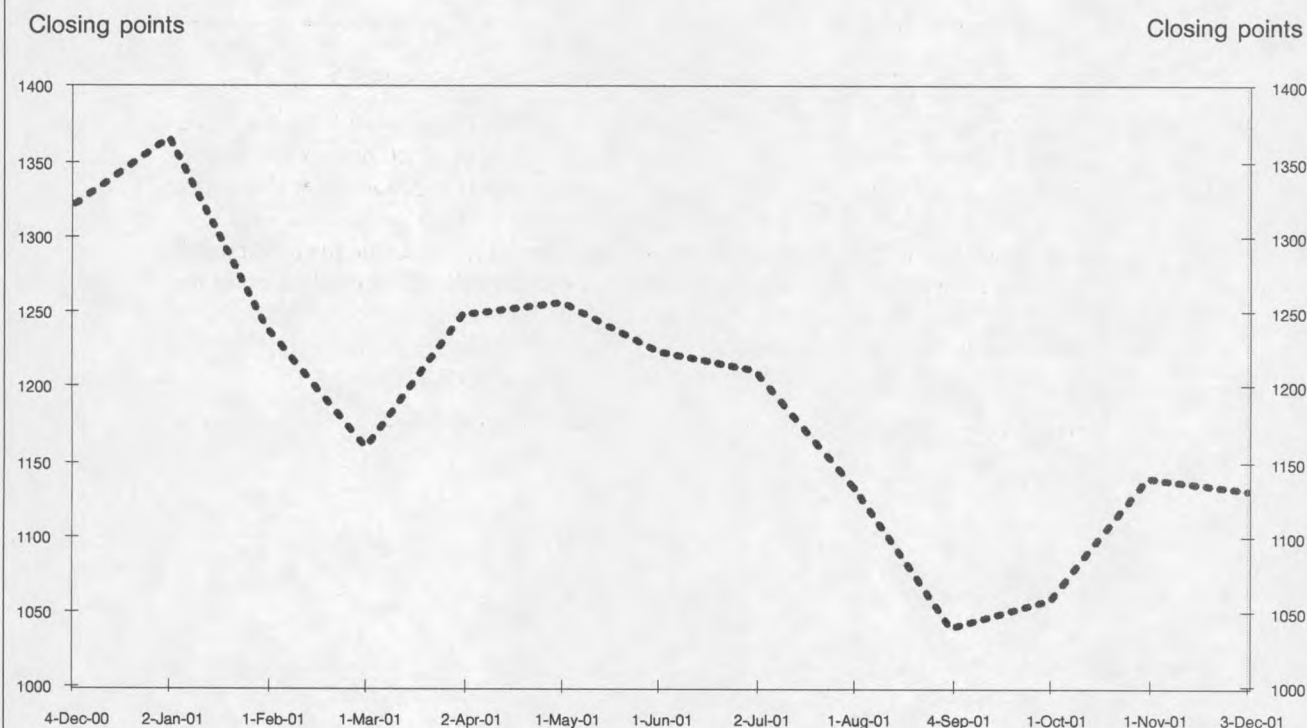
percent during the same period. (See chart 2.) Security broker fees are often based on a percentage of stock prices; thus, decreasing share prices lead to lower commissions for security brokers.   □

Notes

[1] On the Internet at http://www.eia.doe.gov/emeu/aer/txt/tab0607.htm

[2] On the Internet at http://abcnews.go.com/sections/business/DailyNews/opec000328.html

[3] "U.S. Corn & Wheat Acreage Decline, While Soybean & Cotton Rise," *Agricultural Outlook*, (USDA Economic Research Service, August 2001).

[4] "Abundant Field Crop Supplies Expected in 2001/02," *Agricultural Outlook*, (USDA Economic Research Service, June–July 2001).

[5] Ibid.

[6] *Feed Situation and Outlook Yearbook*, (USDA Economic Research Service, April 2001).

[7] "2001 Year-End Review and Forecast," *Aerospace Industries Association*.

[8] "2001 auto sales were second highest ever," *Milwaukee Journal Sentinel*, January 4, 2002.

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Expenditures of single parents: how does gender figure in?

Regression analysis indicates that, for the most part, expenditure patterns are the same for both families headed by a single father and families headed by a single mother; among the few differences found were effects due to income, marital status, and age

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Over the last few decades, the proportion of traditional two-parent families has been declining. In 1980, married couples headed 81 percent of all family households with their own children under 18. By 1999, the figure had fallen to 72 percent.[1] The change was due mostly to the growth in the number of single-parent households. For example, in 1980, the married-couple households just described numbered slightly under 25 million. In 1999, the figure was slightly *over* 25 million, a small change.[2] By contrast, households headed by a single parent grew from just under 6.1 million in 1980 to nearly 7.8 million in 1999.[3] In total, single-parent families with their own children under 18 accounted for 20 percent of family households in 1980 and 28 percent in 1999.[4]

One explanation for the increase in single-parent families is the high divorce rate in the Nation today. Between 1980 and 1999, the number of divorced persons doubled, from 9.9 million to 19.7 million.[5] Divorce undoubtedly has contributed to the increasing number of single fathers in the United States. In 1980, approximately 616,000 family households with their own children under the age of 18 included a father, but no mother. By 1999, the figure had risen to 1,706,000, an increase of 177 percent.[6] Similarly, over the same period, single-mother households grew from 5.4 million to 6.6 million, an increase of 21 percent.[7] Put another way, single fathers accounted for 2 percent of family households with their own children under 18 in 1980 and 5 percent in 1999. Single mothers accounted for 18 percent of these households

in 1980 and 23 percent in 1999.[8]

Child rearing is difficult even when two parents are present. Yet, single mothers and single fathers face the same tasks that married parents do (for example, making sure that children are clean, clothed, and fed; helping with homework; preparing children for school; earning enough money to pay bills; disciplining children; and comforting them when they are upset), but with fewer resources: not only is there no other adult to share in the time spent with children, but in 1998 single parents received less than half the income ($24,530) that husband-and-wife families reported ($59,653).[9] According to Douglas B. Downey, ample literature supports the claim that children from single-parent families are outperformed in the classroom by their counterparts from two-parent families.[10] Downey reports that a leading explanation for this phenomenon is the lower economic status of families headed by a single mother, compared with the economic status of two-parent families.[11] However, he finds that, despite higher levels of education and income for single fathers compared with single mothers,[12] children in single-father families do no better in school than those from single-mother families.[13]

Because an increasing proportion of children in the United States reside with one parent only, and because the economic status of single-parent families remains relatively low, research on the economic status of these families is important, regardless of the gender of the parent. For example, profiling the basic economic situation of families in which parents are raising children

without a spouse can provide useful information for public policymakers. Furthermore, understanding the income sources, expenditure levels, budget shares, and characteristics of single-parent families is useful for those who provide financial, economic, or other counseling to families headed by single parents. Moreover, given that the proliferation of single-father households in the past decade was even more dramatic than that of single-mother households, and in view of the fact that single-father families grew more rapidly than either two-parent or single-mother families in the 1980s, it is important for family researchers to appreciate the heterogeneity among single-parent families.[14] That is, it is useful to ascertain whether there are important differences between consumption levels and budget shares by single mothers and single fathers for various categories of consumption.

Literature review

Expenditure patterns of single-parent families. There is a vast literature examining single-parent families from different perspectives. Using the 1984–85 Consumer Expenditure Survey, Mark Lino examined the allocation of expenditures of single-parent households.[15] His findings show that these households spent 35 percent (the largest share) of their total expenditures on housing, 20 percent on transportation, and 13 percent on food at home. He also found that single-parent households spent 5 percent of their total expenditures on entertainment, 3 percent on health care, and 2 percent on education. In another work, Lino analyzed the expenditures of single-parent families by marital status and found that the total expenditures of single-parent families maintained by a widowed parent reached $22,071, those headed by a divorced or separated parent summed to $16,426, and those maintained by a never-married parent amounted to $7,741.[16] In addition, he found that the shares of total expenditures for all categories compared in the study were similar for the divorced or separated families and the widowed families, but were substantially different for the categories of housing, transportation, and food for never-married parents.[17]

In yet another article, Lino reported on factors influencing the housing, transportation, food, and clothing expenditures of single-parent households, also using data from the 1984–85 Consumer Expenditure Survey.[18] He found that household size, automobile ownership (for transportation), and the gender, age, race, education, and employment status of the single parent were significant factors affecting expenditures. Not surprisingly, he also found that the larger the family size, the greater were the expenditures on transportation and food. The following other significant socioeconomic characteristics of single-parent households were revealed in Lino's study: (1) households headed by women spent 148 percent more on clothing than did households headed by men, all else held constant; (2) the higher the educational level of the single

parent, the greater were the expenditures on housing, all else held constant; and (3) whether a single-parent household resided in an urban or a rural area had no significant effect on expenditures for housing, transportation, food, or clothing. Although Lino found that homeownership had no significant effect on housing expenditures for single-parent households, he also found that those who owned an automobile had transportation expenditures higher than did those who did not own an automobile, all else held constant.

A year later, using the 1987 Consumer Expenditure Survey, Lino examined child-rearing expenses in single-parent families.[19] In the database, 91 percent of single-parent households are headed by a woman. The findings indicate that child-rearing expenses increase with the age of the child and with family income. Lino also found that single-parent households spent slightly more per child than did married-couple households in the same income group. Estimated total expenditures for the younger child in a two-child, single-parent household ranged from $3,800 to $5,650 per year for households in the lower income group and from $7,830 to $10,030 per year for households in the higher income group.[20] For both income groups, the largest proportion of child-related expenditures was allocated to housing, while the second-largest proportion was allocated to transportation. This was also the case within each income group, regardless of the age of the child. The smallest share was allocated to health care in each group. The other categories Lino considered were food; clothing; and education, child care, and other expenditures, but no clear patterns emerged for these expenditures.[21]

Comparisons of single- and two-parent families. Sally E. Horton and Jeanne L. Hafstrom compared differences in consumption expenditures between families headed by a single mother (that is, families maintained by a woman without a husband present) and two-parent families, using the 1972–73 Consumer Expenditure Survey.[22] The authors modeled total expenditures and expenditures on six consumption categories (total food, food at home, shelter, household expenses, clothing and cleaning, and recreation and reading) as functions of current and permanent income.[23] The major focus of the study was to examine whether families headed by a single mother would change their expenditures on selected items by the same percentage as two-parent families, given the same percentage increase in income for each type of family. The major finding was that only the two families' expenditures for shelter differed significantly. That is, the authors estimated that married couples would increase their expenditures for shelter by a larger percentage (0.60 percent), given a 1-percent increase in (current) income, than would single mothers (0.26 percent). However, the authors also found that, for each of the two types of family, a 1-percent increase in current income was associated with a 1-percent increase in expenditures for recre-

ation and reading.[24] Lino's study, which included single-parent families maintained by fathers and used data from the more recent 1984–85 Consumer Expenditure Survey,[25] found that families maintained by single fathers did not have different expenditure patterns for housing, transportation, or food, all else held equal, than did families maintained by single mothers. However, Lino did find a significant gender difference in expenditures for clothing. (Families headed by single mothers spent more.)

Using the 1984–86 Consumer Expenditure Survey, Maureen Boyle compared the spending patterns and income of single parents and married parents.[26] Married parents, on average, had more than twice as many vehicles as single parents had, and they also had a higher rate of homeownership. Single parents spent less than married parents for major expenditure categories (food, housing, transportation, and apparel), even when "per capita" expenditures were compared. However, on a per capita basis, single parents spent more than married parents on some items, such as utilities, fuels, and public services ($545, compared with $519); babysitting and day care ($142, compared with $106), and clothing for boys aged 2 to 15 years ($43, compared with $33). Single parents also spent less on food away from home, entertainment, personal care, reading, personal insurance, and pensions than did married parents. However, single parents spent more on miscellaneous expenditures, which included legal fees, than did married parents. The expenditures for education, tobacco and smoking supplies, and cash contributions were not significantly different between single and married parents. Similarly, single parents appeared to spend more per capita ($68) than did married parents ($6) on public transportation, but the difference was not statistically significant.

Mohamed Abdel-Ghany and F. N. Schwenk also examined differences in consumption patterns of single-parent and two-parent families for six major expenditure categories.[27] The major hypothesis of their study was similar to that of Horton and Hafstrom: the consumption patterns of single- and two-parent families differ as regards major expenditure categories. However, Abdel-Ghany and Schwenk analyzed more recent data, obtained from the 1989 Consumer Expenditure Survey. They compared the influence of permanent income, family size, geographical region, race, gender, age, and education of the head of the family on the major expenditure categories. Using the Chow test for equality of the entire set of single-parent and two-parent regression coefficients, they found that the five expenditure categories of total food, food at home, household expenses, apparel, and recreation and reading had a significant F-statistic. This means that the consumption patterns of the two groups with regard to those five categories were significantly different. (Only expenditures for shelter were found to be essentially the same.) This finding contrasts with Horton and Hafstrom's that only expenditures for shelter *differed* sig-

nificantly between the two groups. The discrepancy may lie in the fact that Horton and Hafstrom compared one specific determinant of expenditures (income), whereas Abdel-Ghany and Schwenk compared models as a whole, through the Chow test.

In sum, several studies have analyzed the expenditures of single-parent families, and a number of studies have compared differences in consumption expenditures between families headed by single mothers and two-parent families. Yet, despite the fact that single parenting has become commonplace, only limited scholarly attention has been paid to the expenditure patterns of single fathers compared with those of single mothers. Nevertheless, the gender of single parents may play a critical role in a family's expenditure patterns. Understanding the differential expenditures between the two sexes is important, especially given the increasing number of single-father households. Indeed, one study suggests that using the characteristics of female-headed single-parent families to represent all single-parent families is no longer possible, considering the rapid increase in the number of single-father families during the past two decades.[28]

The analysis in this article

By comparing levels of expenditures and budget shares of single-mother and single-father households, this article examines whether there are differences in household consumption patterns based on the gender of the parent. If there are, such differences may translate into differences in economic well-being in single-mother and single-father households, particularly for children in those households.

One reason for the aforementioned lack of attention to gender-related differences is the absence of separate data on single-mother and single-father households. This article uses data from a nationwide survey to compare major expenditures for the two kinds of household. The data for the survey are collected from national probability samples of households in the U.S. population.[29] Selected for study are 221 single-father and 1,660 single-mother families.

The data.   The data used in this article are from the Interview component of the Consumer Expenditure Survey. The Interview component is a panel survey designed to collect expenditure information from families over five consecutive quarters. During each interview, the respondent is asked to recall the family's last 3 months' expenditures for most items listed in the survey. The first interview is used for bounding purposes— that is, to make sure that the expenditures subsequently reported actually took place during the reference period. (For example, a family that purchased a refrigerator during the 3 months prior to the first interview should report the purchase during the first interview. If the respondent for that same family then reports purchasing a refrigerator in the second inter-

view, the interviewer can make sure that the respondent is not referring to the same refrigerator reported in the first interview.) The Interview component of the Consumer Expenditure Survey is designed primarily to collect accurate information on recurring (for example, rent or insurance) and "big ticket" (for instance, automobiles or major appliances) expenditures, because outlays for such items tend to be remembered for long periods. As it turns out, the Interview component actually covers up to 95 percent of *all* expenditures.[30] (The Interview component is also the source of Consumer Expenditure Survey data used in the works described in the previous section.)

The sample that is examined in this article consists of single parents, interviewed in 1998 or 1999, who live with their own children only. That is, no other relatives or unrelated persons live with these individuals, so that no one (other than, perhaps, their children) shares in or otherwise directly affects their expenditure decisions. The parents are also between the ages of 25 and 49, and their oldest child is under 18 years. The parents' age range of 25 to 49 years is used for both a theoretical and an empirical reason. The theoretical reason is to narrow the focus to parents who are old enough to have established themselves economically. That is, they are not financially dependent on someone else strictly because of their age, and they are legally old enough to obtain substantial employment, to own or rent a home, to purchase, rent, or lease a vehicle, and to have been "of age" for at least a few years. In addition, although they may have children preparing for college or other events, the parents themselves are probably not expecting major events in their own careers, such as imminent retirement, nor are they experiencing age-related health problems that may have a great impact on their spending patterns. The empirical reason is that the sample for men is extremely small below age 25: during the 2 years covered in the survey, only 11 single fathers under age 25 participated. By comparison, during the same period, there were 13 single fathers between the ages of 25 and 27 alone. The children's age was selected to ensure that the children would be financially dependent on their parents.

Demographic analysis. Table 1 shows the demographic composition of single parents in the sample selected for study. The vast majority is female; in fact, women outnumber men in the sample by more than 7 to 1. Obviously, women are represented in the single-parent category at a much higher rate than they are in the general population, and males are underrepresented. But this is only one of many differences across gender.

Despite the deliberate selection of men and women in the same age range (25 to 49 years old), men are still 4 years older than women, on average. They also have fewer children (1.4) than women have (1.8), and about twice as many vehicles (2.1,

compared with 0.9). It is interesting to note that although both men and women own about one automobile, on average, men have many more "other" vehicles—primarily recreational vehicles (such as boats, campers, and motorcycles), but also trucks and vans. In addition, men are more likely than women to own at least one vehicle (91 percent, compared with 72 percent).

The circumstances of single parenthood also differ dramatically by gender. Three-fourths of all single fathers have become single due to divorce, compared with a bit more than half (54 percent) of single mothers. The death of a spouse is equally likely for both groups (6 percent) and could be a function of age, given that both groups presumably have similar mortality rates under age 50. Single mothers are twice as likely as single fathers never to have been married, but still, a substantial proportion of the fathers—nearly 1 in 5—has never been married.

Race and ethnicity play an interesting role in this analysis. Of all interviews conducted in 1998–99, 11.2 percent involve families whose reference person is black, and 8.5 percent report Hispanic ethnicity.[31] However, in the distribution by gender among single parents, blacks are overrepresented (30.7 percent of women and 13.1 percent—only a slight overrepresentation— of men). In contrast, Hispanic men are underrepresented (5.4 percent), although Hispanic women also are overrepresented (13.7 percent).

Single fathers are much more likely than single mothers to own their homes. In fact, the numbers are almost exactly opposite with regard to owning and renting: nearly two-thirds of single fathers (64 percent) own their homes, while nearly two-thirds of single mothers (63 percent) rent their homes. Like income, homeownership is an important measure of economic well-being. For example, because owners can build equity in their property, they have greater access to loans in case of emergency or even planned-for events, such as their children's education.

Income. Income is an important measure of the ability of parents to provide basic goods and services for their children. Table 2 shows that there are large differences in income between single fathers and single mothers, at least for complete reporters.[32]

The income distribution by gender is quite different for single mothers and single fathers. Men are underrepresented in the two lowest quintiles, with slightly more than one-fourth of single fathers reporting incomes placing them there. By contrast, five-eighths of single mothers are found in that part of the distribution. Single fathers also are about 3 times as likely (47 percent) to appear in the highest two quintiles than are single mothers (15 percent).

Similarly, single fathers report almost twice as much income ($44,634) as do single mothers ($23,188). Also, while single fathers report more income from employment (wages

Table 1.	Demographic characteristics of single parents, Consumer Expenditure Interview Survey, 1998–99		
Variable	Single parents		t-statistic (absolute value)
	Men	Women	
Number of consumer units (sample size)	221	1,660	...
Characteristics of consumer units:			
Age of reference person	39.7	35.3	10.60
Average number per consumer unit:			
Persons	2.4	2.8	9.77
Children under age 18	1.4	1.8	9.77
Earners	1.2	1.0	5.80
Vehicles	2.1	.9	10.78
Automobiles	.9	.8	2.59
Other vehicles[1]	1.2	.2	9.59
Rooms other than bedrooms	3.2	2.8	4.33
Bedrooms	2.7	2.6	1.61
Bathrooms and half baths	1.6	1.5	2.68
Percent distribution:			
Marital status of reference person:			
Divorced	75.1	54.3	...
Widowed	6.3	6.4	...
Never married	18.6	39.3	...
Age of oldest child:			
Under 6 years	7.7	16.2	...
6 to 11 years	33.9	34.9	...
12 to 17 years	58.4	48.9	...
Housing relation:			
Homeowner	63.8	37.2	...
With mortgage	52.5	28.6	...
Without mortgage	11.3	8.6	...
Renter	36.2	62.9	...
Race of reference person:			
Black	13.1	30.7	...
Ethnic origin of reference person:			
Hispanic	5.4	13.7	...
Education of reference person:			
Less than high school graduate	10.0	16.5	...
High school graduate	29.0	34.8	...
Attended college (did not graduate)[2]	32.6	33.4	...
College graduate	28.5	15.2	...
Number of earners:			
No earners	1.8	14.9	...
One earner	82.4	74.6	...
Two or more earners	15.8	10.5	...
Earner composition:			
Reference person only	81.9	73.6	...
Reference person and at least one child	15.8	10.4	...
Child(ren) only	.5	1.0	...
No earners	1.8	14.9	...
Occupation of reference person:			
Wage and salary earners	85.5	80.6	...
Manager or professional	32.1	21.1	...
Technical/sales	17.2	33.3	...
Service	7.2	16.7	...
Laborer/operator	29.0	9.5	...
Self-employed	12.2	3.4	...
Not working	2.3	16.0	...
Taking care of home or family	.5	10.9	...
Retired, unemployed, and other not working	1.8	5.1	...
Region of residence:			
Northeast	20.8	14.5	...
Midwest	24.0	25.7	...
South	24.9	34.5	...
West	30.3	25.4	...
Degree of urbanization:			
Rural	8.6	6.4	...
At least one vehicle owned	91.4	72.1	...

[1] Includes truck or van; motorized, trailer-type, or attachable camper; motorcycle, motor scooter, or moped; boat, with or without motor; trailer (other than camper type); private plane; and other vehicles.

[2] Includes those who earned an associate-of-arts (AA) degree.

and salaries or self-employment) and savings and investment (interest, dividend, rental, and other property income), single mothers report much more income from assistance sources (for example, unemployment, workers' compensation, public assistance, alimony, and child support). Whereas, on average, about 1 percent of single fathers' total income comes from assistance sources, nearly 18 percent of single mothers' total income comes from these sources.

There are several factors that may explain these differences. First, as shown in table 1, although the average number of earners is similar for single fathers (1.2) and single mothers (1.0), the likelihood of having at least one earner is quite different: less than 2 percent of consumer units headed by single fathers have no earner, compared with 15 percent of consumer units headed by single mothers.[33] Also, families headed by single fathers are more likely to have multiple earners (16 percent) than are families headed by single mothers (11 percent).

Second, single fathers have a higher level of educational attainment than single mothers. About 61 percent of single fathers have at least attended college, compared with about 49 percent of single mothers. Similarly, 1 in 6 single mothers

has not graduated high school, compared with 1 in 10 single fathers. Lower levels of education may also explain lower incomes for single mothers.

Expenditure patterns. Given differences in income, it is not surprising that single fathers spend more each quarter on many items, such as shelter and utilities, than do single mothers. Even so, the two genders spend about the same on a large number of items.

According to table 3, single mothers spend a little bit less, on average, each quarter for food at home ($847) than do single fathers ($883).[34] However, this difference is not statistically significant. Similarly, for most apparel and services, both types of family spend about the same, on average. The lone exception is that single mothers spend significantly more ($44) for children's apparel than do single fathers. Expenditures for babysitting and day care are also similar by gender, and so are expenditures for public transportation, despite the fact that single mothers are less likely to have a vehicle than are single fathers, as noted earlier.

Levels of expenditure are not the only important measure of spending patterns: expenditure shares—the portion of the

Table 2.	Income sources of single parents, Consumer Expenditure Interview Survey, 1998–99			
		Single parents		*t*-statistic (absolute value)
Variable		Men	Women	
Number of consumer units (complete income reporters only)		177	1,347	...
Income distribution (percent in each quintile):				
Quintile 1		7.3	31.3	...
Quintile 2		18.1	31.6	...
Quintile 3		27.1	21.7	...
Quintile 4		29.9	12.1	...
Quintile 5		17.5	3.3	...
Income before taxes		$44,634	$23,188	7.36
Wages and salaries		37,796	17,835	7.98
Self-employment		6,135	965	2.38
Interest, dividend, rental, and other property income		203	115	.80
Unemployment, workers' compensation, and veterans' benefits		104	164	1.06
Public assistance, supplemental security income, and food stamps		87	1,499	14.86
Regular contributions for support (such as alimony and child support)		55	1,702	15.93
Other income		254	908	4.67
Share of total income before taxes (complete reporters only, percent)		100.0	100.0	...
Wages and salaries		84.7	76.9	...
Self-employment		13.7	4.2	...
Interest, dividend, rental, and other property income		.5	.5	...
Unemployment, workers' compensation, and veterans' benefits		.2	.7	...
Public assistance, supplemental security income, and food stamps		.2	6.5	...
Regular contributions for support (such as alimony and child support)		.1	7.3	...
Other income		.6	3.9	...
Percent reporting:[1]				
Wages and salaries		91.0	82.4	...
Self-employment		13.6	5.2	...
Interest, dividend, rental, and other property income		28.2	7.9	...
Unemployment, workers' compensation, and veterans' benefits		6.8	3.9	...
Public assistance, supplemental security income, and food stamps		4.5	29.5	...
Regular contributions for support (such as alimony and child support)		5.1	33.7	...
Other income		6.2	11.3	...

[1] Numbers add to more than 100 percent, because some families report more than one source of income.

Table 3. Average quarterly expenditures of single parents, Consumer Expenditure Interview Survey, 1998–99

Variable	Single parents		t-statistic (absolute value)
	Men	Women	
Average quarterly outlay	$9,435	$6,074	7.18
Food at home (less trips)	883	847	1.11
Shelter and utilities (less trips)	2,725	2,059	3.88
Apparel and services	295	315	.74
Adults' apparel (for members 16 years and older)	109	103	.39
Children's apparel (for members 15 years and younger)	85	129	3.93
Footwear	40	38	.44
Other apparel and services	61	45	1.34
Transportation (less trips)	1,558	766	3.39
New-car or -truck purchases	206	104	2.94
Used-car or -truck purchases	668	219	1.95
Other vehicle purchases	50	(¹)	...
Gasoline and motor oil	221	155	5.23
Other vehicle expenses (licenses, insurance, rentals, etc.)	400	272	3.47
Public transportation (local, less trips)	13	17	1.02
Health care	350	227	2.90
Health insurance	238	108	3.58
Medical services	85	86	.06
Prescription drugs	19	22	.62
Medical supplies	8	11	1.19
Entertainment and recreation	1,096	599	4.72
Local entertainment	858	474	4.85
Food away from home (less trips)	361	185	6.50
Fees and admissions (less trips)	96	51	3.80
Pets, toys, and playground equipment	55	57	.15
Other entertainment equipment and services (less trips)	322	161	2.35
Reading	24	21	1.18
Trips and travel	238	125	1.87
Miscellaneous child-related expenditures	191	226	1.12
Personal-care products and services	53	65	2.16
Babysitting and day care	138	161	.73
Personal insurance and pensions	920	415	8.35
Life and other insurance	70	39	3.47
Pensions and Social Security	850	377	7.96
All other outlays	1,417	620	3.44
Alcohol (less trips)	90	23	6.10
Housing upkeep	283	248	.64
Domestic services	11	27	3.64
Other household expenses	22	17	1.45
Household furnishings and equipment	249	204	.85
Education	98	77	.63
Tobacco and smoking supplies	97	53	3.72
Cash contributions (including alimony and child support)	568	52	2.53
Miscellaneous outlays	281	167	1.51

¹ No data reported.

average dollar allocated to a particular expenditure category—also are important. One of the most famous applications in economics is known today as *Engel's law*. In 1857, Prussian economist Ernst Engel found that as income increases, the share of income allocated to food decreases. The implication of this finding is straightforward: essentially, there are some goods and services that all persons must consume to survive, but the quantity needed is limited; therefore, as income increases, less and less of it needs to be allocated to these items, and more of it is available for spending on other items. Thus,

families that allocate larger portions of their income to basic items like food have less to spend on "electives" such as entertainment. With Engel's law in mind, shares analysis may give a more meaningful description of family expenditure patterns than can levels alone.

For example, as noted, families headed by single mothers spend less for food at home than do those headed by single fathers, although the difference is not statistically significant. However, the *share* of total outlays is greater for the single-mother families by nearly 5 percentage points.[35] (See table 4.)

Similarly, spending for children's apparel by families headed by single mothers exceeds spending by families headed by single fathers by about 52 percent; however, the share of total expenditures allocated to children's apparel in single-mother families is double (2 percent) the share spent in single-father families (1 percent). And again, despite similar levels allocated to babysitting and day care, families headed by single mothers allocate nearly double the share (2.7 percent) that families headed by single fathers allocate (1.5 percent). Finally, total spending for shelter and utilities by single fathers accounts for less than 3 of every 10 dollars spent, whereas shelter and utilities accounts for 3 of every 9 dollars spent (that is, one-third of total expenditures) by single mothers.

For goods and services that are more "discretionary" in nature, such as recreation, the reverse obtains: shares are closer, but expenditures by women are much smaller. For example, single fathers allocate 9 percent of their total expenditures to food away from home, compared with 8 percent by single mothers. However, single mothers actually spend about one-half ($185) of the amount that single fathers spend on this item ($361) each quarter. And the same holds true for fees and admissions: both groups allocate about 1 percent of their total expenditures to these items, but the households headed by women again spend about half ($51) of what those headed by men spend ($96).

Methodology: regression analysis

So far, several differences in expenditure patterns have been observed for single-father and single-mother families. But at the same time, several demographic differences have been observed. Perhaps more important, large differences in income and total spending are evident. Therefore, it is impossible to say how much of the difference in expenditure patterns is due to the difference in gender of the single parent and how much is due to other socioeconomic phenomena.

To help understand these relationships, regression analysis is often used. In regression analysis, comparisons can be made under "*ceteris paribus*" assumptions—that is, all characteristics are held equal except the one under study. In this article, then, regression analysis may help to uncover how single fathers and single mothers might allocate their expenditures, given the same total income, age, family size, and other factors.

In what follows, several items are selected for regression analysis. Some (for example, food at home; shelter and utilities; and apparel and services) are chosen because they represent basic goods and services that any family or individual needs to meet the essentials of existence. Others (for instance, transportation; and babysitting and day care), while not necessary for the preservation of life, are still goods and services that most families with children would find difficult to forego.[36]

Table 4.	Expenditure shares of single parents, Consumer Expenditure Interview Survey, 1998–99		
[In percent]			
		Single parents	
Variable		Men	Women
Average quarterly outlay		100.0	100.0
Food at home (less trips)		9.4	13.9
Shelter and utilities (less trips)		28.9	33.9
Apparel and services		3.1	5.2
Adults' apparel (for members 16 years and older)		1.2	1.7
Children's apparel (for members 15 years and younger)		.9	2.1
Footwear		.4	.6
Other apparel and services		.6	.7
Transportation (less trips)		16.5	12.6
New-car or -truck purchases		2.2	1.7
Used-car or -truck purchases		7.1	3.6
Other vehicle purchases		.5	(1)
Gasoline and motor oil		2.3	2.6
Other vehicle expenses (licenses, insurance, rentals, etc.)		4.2	4.5
Public transportation (local, less trips)		.1	.3
Health care		3.7	3.7
Health insurance		2.5	1.8
Medical services		.9	1.4
Prescription drugs		.2	.4
Medical supplies		.1	.2
Entertainment and recreation		11.6	9.9
Local entertainment		9.1	7.8
Food away from home (less trips)		3.8	3.0
Fees and admissions (less trips)		1.0	.8
Pets, toys, and playground equipment		.6	.9
Other entertainment equipment and services (less trips)		3.4	2.7
Reading		.3	.3
Trips and travel		2.5	2.1
Miscellaneous child-related expenditures		2.0	3.7
Personal-care products and services		.6	1.1
Babysitting and day care		1.5	2.7
Personal insurance and pensions		9.8	6.8
Life and other insurance		.7	.6
Pensions and Social Security		9.0	6.2
All other outlays		15.0	10.2
Alcohol (less trips)		1.0	.4
Housing upkeep		3.0	4.1
Domestic services		.1	.4
Other household expenses		.2	.3
Household furnishings and equipment		2.6	3.4
Education		1.0	1.3
Tobacco and smoking supplies		1.0	.9
Cash contributions (including alimony and child support)		6.0	.9
Miscellaneous outlays		3.0	2.7
1 No data reported.			

The remaining items (food away from home; fees and admissions; pets, toys, and playground equipment; and trips and travel) may not be necessary to sustain life or the basic daily functioning of the family, but they represent activities that are important for other reasons. For example, families may occasionally consume food away from home for reasons of conven-

ience. This category includes all food purchased at restaurants or carryouts, regardless of where it is consumed. A single parent who works long hours might find it more convenient, then, to purchase a pizza from a local establishment, rather than coming home and cooking (and thus delaying the children's meal even longer). Moreover, the availability of food away from home may allow the parent time to earn extra income to help purchase other goods and services for the family. Similarly, the other items tested are, arguably, important for a child's physical or mental and emotional development. For instance, a child may learn responsibility by caring for a pet, may obtain social skills by sharing games and toys with others, and may get exercise from using playground equipment. Finally, taking trips and traveling may be a means of relaxation for adults, but can be opportunities for children to learn about the world outside their neighborhoods.

In this analysis, one expenditure category that could easily be defined as "basic" has been purposely omitted: health care. The reason for this omission is that the results of such an analysis are not easily interpreted. In the Consumer Expenditure Survey, it is information on total out-of-pocket expenditures that is collected for health care items, rather than information on the actual amount of health care that is consumed. That is, if a child in an "insured" family receives the same inoculations and other treatments as a child in an "uninsured" family, the actual amount of health care consumed is the same. However, the insured family might report no expenditures for health care—other than, possibly, an insurance premium—while the uninsured family would report the amount paid to

the health care professional administering the services. Furthermore, differences in other kinds of health care expenditures may not be clearly ascribable. For example, two families may have identical health insurance policies, but one policy may be employer sponsored and the other may not. Therefore, the health care expenditure for the employer-assisted family will be lower than that for the unassisted family. In addition, some facts about the policy are not clear. For instance, information on the *number* of persons covered by the policy is collected in the survey, but information on the *identity* of each person covered is not. Thus, if one person in a single-parent family is covered by health insurance, it is not clear whether it is the parent or a child who is covered. Even if two or more persons are covered by different policies, it is possible that the policies all cover the same person. Because of these issues, a thorough examination of health care expenditures is beyond the scope of this article.

In what follows, two types of regression analysis are performed. The *method of ordinary least squares* is used to analyze all of the selected expenditure categories. That way, the basic relationships mentioned earlier (such as the relationship of expenditure to income) can be examined. The method of ordinary least squares works well enough for expenditures that are universally purchased, such as food at home or shelter and utilities. However, for other items, far less than 100 percent of families report the expenditure. (See table 5.) This can be for several reasons. For example, some items, such as clothing, are reasonably durable, and it may be that the family did not need to purchase those items during the previous 3

| Table 5. | Percent of single parents reporting selected expenditure categories, Consumer Expenditure Interview Survey, 1998–99 |

Variable	Single parents		
	Men	Women	Chi-square
Average quarterly outlay	100.0	100.0	(1)
Food at home (less trips)	100.0	99.6	(1)
Shelter and utilities (less trips)			
Homeowners	100.0	100.0	(1)
Renters	100.0	99.4	(1)
Apparel and services:			
Adults' apparel (for members 16 years and older)	54.3	58.0	1.07
Children's apparel (for members 15 years and younger)	50.2	67.9	[2]27.05
Transportation (less trips)	96.4	89.9	[2]9.72
Entertainment and recreation:			
Local entertainment:			
Food away from home (less trips)	91.4	81.7	[2]12.95
Fees and admissions (less trips)	66.5	47.8	[2]27.41
Pets, toys, and playground equipment	43.4	44.0	.02
Trips and travel	36.7	25.2	[2]13.01
Miscellaneous child-related expenditures			
Babysitting and day care	20.4	29.9	[2]8.72

[1] The chi-square test is invalid when 100 percent of at least one group reports the expenditure in question.
[2] The chi-square statistic is statistically significant at the 99-percent confidence level. Note that chi-square values between 3.84 and 6.63 are significant at the 95-percent confidence level. By coincidence, for this set of data, all chi-square statistics are significant either at the 99-percent level or not at all.

months. Other items, such as fees and admissions or food away from home, may be infrequently purchased due to the tastes and preferences of the family itself or because the family's income may be too low (temporarily or permanently) to afford those items on any but the rarest occasions. Whatever the reason, for several items, logistic regression, or "logit" is used to predict the probability of their purchase. The logit results are then used to weight the ordinary-least-squares results so that a more accurate picture of the family's spending patterns develops. If the aim is truly to measure the expected outcome for the average family, one needs to take into account the fact that the average family has a less-than-100-percent chance of purchasing several items, as well as the possibility that probability is influenced by demographics, just as the level of expenditure (once a decision is made to purchase something) may be so influenced. The resulting process is essentially a modified version of the Cragg model. (See Appendix A for more information on the methodology.) The expenditure category of shelter and utilities offers a special case. Homeowners are expected, a priori, to have different expenditures than renters have for shelter and utilities, even if the dwelling is the same size and at the same location. However, each group is expected to have *some* expenditure for this item. In this case, logit analysis is also used to predict the probability of renting the home. Then the method of ordinary least squares is employed in separate models for owners and renters, and the results are analyzed, comparing single mothers who own with single fathers who own and, similarly, single mothers who rent with single fathers who rent.

In addition, ordinary-least-squares regressions can be affected by problems such as heteroscedasticity, a condition in which the error produced in the regression is not random for the dependent variable, so that the observed values will not vary consistently around the regression line. One case in which heteroscedasticity appears is when the dependent variable is not normally distributed. However, if the underlying distribution is known, it is possible to convert the variable to something that is—or at least that approaches being—normally distributed. For example, if the data are lognormally distributed, then regressing the logarithm of the dependent variable on various characteristics should result in unbiased ordinary-least-squares estimators.[37] In the analysis to be presented here, a program was run to find the appropriate Box-Cox transformation of the data. The results showed that in all cases, the fourth root was an appropriate transformation of the data. (That is, before any regression was carried out, the square root of the square root of each dependent data point was obtained; then, that fourth root was subsequently used in the regression.)

The Box-Cox transformation is also used for total quarterly outlays, which are employed as a proxy for permanent income in this study. "Permanent" income is used in the regressions instead of current (that is, annual pretax) income because, ac-

cording to the "permanent-income hypothesis," expenditures are usually made with expectations of future earnings in mind.[38] In the present situation, the distinction is particularly interesting, because, as shown in table 2, the sources of income acquired by the two groups under study are quite different and may lead to very different expectations of future income. Other factors, such as homeownership, might also influence expectations in different ways, even if current incomes (and sources) are identical. (See the earlier section, "Demographic analysis," for some examples.) According to the permanent-income hypothesis, total outlays reflect rational decisions based on levels of wealth (rather than income alone) that are available to the consumer unit; therefore, such outlays serve as a better indicator of the consumer unit's tastes and preferences for particular goods and services than does income.

Most of the logit regressions contain identical independent variables, most of which are binary. These variables are used to estimate the relationship between the probability of purchasing a given item and various characteristics, including the age of the reference person[39] (35 to 44 years or 45 to 49 years); the reference person's marital status (widowed or never married); the number of children of the reference person (two children or three or more children); the age of the oldest child (under 6 years or 12 to 17 years); homeownership (homeowner with mortgage, homeowner without mortgage, or omitted from the regression for which the probability of renting is estimated); race of the reference person (black); ethnic origin of the reference person (Hispanic); educational attainment of the reference person (less than high school graduate, attended college, or college graduate); number and composition of earners (one child or children only earn, or reference person and at least one child earn); occupational status of the reference person (self-employed, taking care of home or family and so not working, or not working for some other reason); region of residence (Northeast, Midwest, or West); degree of urbanization of residence (family lives in a rural area); and gender of the reference person (male). (For an explanation of omitted categories in the preceding list, see "Control group," later in this section.) There is one continuous variable, as noted earlier: the fourth root of total outlays, used as a proxy for permanent income. Also included is an interaction term created by multiplying the binary variable "male" by the permanent-income proxy. This interaction term allows the probability of purchase of an item to change with income at a different rate for men and women. If the coefficient of the interaction term is statistically significant, then there is a difference in the income effect for single fathers compared with single mothers.

The same variables also are used in the ordinary-least-squares regressions. However, a few other variables are added. Some of these variables are model specific. For example, in the transportation model, a binary variable is added indicating that the con-

sumer unit owns no vehicles. Obviously, this would affect transportation expenditures by cutting costs, for example, for gasoline and driver's licenses, and possibly raising costs for public transportation, automobile rentals, and other, similar expenses. However, it is not clear a priori whether owning no vehicles would directly affect other expenditures. Similarly, in the model for shelter and utilities for homeowners, a binary variable is included indicating that the family owns its home with no mortgage. The shelter and utilities model also has variables that account for the size of the dwelling (total number of rooms and total number of bathrooms or half baths). Both expenditures for mortgages and expenditures for rents are expected to increase with the number and size of the rooms, as are expenditures for utilities, because, presumably, more fuel and electricity are required to manage a larger dwelling. (There is more of a need for temperature control, more space to vacuum, etc.). Some variables are excluded from specific models. For example, the binary variable for "renter" is removed from all shelter and utility ordinary-least-squares regressions, because, by definition, the value of that variable would be 0 for all families in the homeowner model and 1 for all families in the renter model. Similarly, the variable for homeowners with mortgage is excluded from both shelter and utilities regressions, as is the variable for homeowners with no mortgage from the renters-only model. Also, as it turns out, all families who reported trips and travel had a working reference person. Therefore, the binary variable indicating that only children work in the family is excluded from the associated regression. Finally, two sets of interaction terms are added to each of the models: male and marital status (widowers or bachelors); and male and age (men 35 to 44 years old or men 45 to 49 years old).

The selection of these variables was based on a combination of intuition and empiricism. First, variables were selected for general control of variance. For example, a priori, one can assume that characteristics such as the age of the reference person affect the tastes and preferences of the family decisionmaker. (This is because, presumably, the reference person *is* the family decisionmaker as far as expenditures are concerned.) And similarly, the location of the consumer unit (for example, the geographical region of the residence and the degree of urbanization of the surrounding area) may affect prices or the availability of goods and services, in which case they will also affect the probability of purchasing an item, as well as expenditure levels. At first, all binary variables were interacted with "male" to test whether any of them might be differently related to the expenditures of single fathers compared with single mothers (for example, to test whether single fathers in the Northeast spend money differently from single mothers in the Northeast). However, the coefficients for the interaction terms were rarely statistically significant, so, to reduce potential problems from multicollinearity or overspecification, these variables were dropped from the models. In the logit models, only the binary variable "male" and the male-income interaction term were retained (the former to control for "general" differences by gender, the latter, as noted, to test whether single fathers and single mothers respond differently to changes in permanent income). In the ordinary-least-squares model, the interactions for marital status, age, and number of children were retained because these variables had at least one statistically significant coefficient in several models. That is, in one model, only age 35 to 44 might have a statistically significant coefficient, and in another model, only age 45 and older might, but clearly, in either case age was an important factor.

Control group. As noted earlier, in order to make comparisons, it is important for "*ceteris paribus*" to hold; that is, "all other things" must be "held equal." Therefore, a control group is defined for the purposes of analysis. In this article, the control group consists of single mothers who are between 25 and 35 years old; are divorced; rent their homes; are neither black nor Hispanic; are high school graduates; are the sole earner in their consumer unit; work for a wage or salary; live in the urban South; own at least one vehicle; have average permanent income; and have an only child between 6 and 11 years old. These families are compared with single fathers with the same characteristics. In both cases, as regards shelter and utilities, renters are assumed to live in a dwelling containing five rooms (including bedrooms) and one bathroom, while owners are assumed to have a mortgage and live in a home with six rooms and two bathrooms if the household is headed by a woman and seven rooms and two bathrooms if the household is headed by a man.

Note that single fathers have a much larger permanent income, on average ($9,435), than single mothers have ($6,074) and that, for owners, the number of rooms differs by gender. This actually violates the *ceteris paribus* condition, in that it is not clear how much of the differences that are observed are due purely to gender and how much are due to differences in permanent income or the size of the dwelling. Indeed, these differences may be due to some of the underlying characteristics discussed earlier. (For example, on average, single fathers have higher levels of education than single mothers have, but perhaps those with identical education have the same permanent income.) Nonetheless, the results of the analysis are found with the use of these differences so that the "typical" family headed by a single father can be compared with the "typical" family headed by a single mother. Even though there may actually be no family with exactly the characteristics of the "typical" family, many may at least be close. (For the reader who is interested in pure *ceteris paribus* comparisons, such results are presented in tables B–1 and B–2 of Appendix B.)

Analysis of results

Probability of purchase. In examining the probability that a certain item will be purchased, one readily finds that there is

little difference between single fathers, on the one hand, and single mothers, on the other, with respect to the goods studied in this article. Some purchases may *appear* to be substantially different; for example, single fathers are predicted to be fairly likely to purchase fees and admissions (62-percent probability of doing so), while single mothers are predicted to have nearly even odds of purchase (53 percent). (See table 6.) Still, despite the 9-point difference in these probabilities, neither the binary variable "male" nor the interaction with permanent income has a statistically significant coefficient.[40] In other words, there is no "underlying" difference between single fathers and single mothers that causes a change in the probability of their purchasing an item, nor does a change in income affect their likelihoods of purchasing the item in any different way. In fact, in only one case examined is the difference in probability of purchase based on any statistically significant coefficients: for apparel and services for children, the male-permanent income interaction variable is statistically significant at the 95-percent confidence level. The results of the analysis show that single mothers are much more likely (63 percent) to have purchased apparel and services for children in the 3 months prior to the survey than are single fathers (48 percent).

Another set of logit results warrants analysis: probability of homeownership. As mentioned earlier, homeownership has implications for the economic well-being of the consumer unit. The regression results predict the probability of being a renter.

Several factors influence this probability for single parents. For example, the older the reference person is, the less likely the family is to rent.[41] This is probably because older parents have had the time to save for a downpayment on a home, to obtain (and maintain) secure employment, and other factors. They may also earn more income than their younger counterparts, but this condition is controlled for in the regression analysis. By contrast, having a large family substantially increases the probability of renting. For single fathers, the odds rise from about even (51 percent) for those with small families to probable (61 percent) for those with large families; for single mothers, the probability rises from 2 out of 3 (67 percent) for those with small families to 3 out of 4 (75 percent) for those with large families. These results are calculated for families that are identical to the control group, but that have at least three children. This is again probably a "savings" effect, although the data do not include information on how long the existing family structure has prevailed. Still, the presence of two (or more) additional children presumably adds to a family's expenditures, but not to its income.

Marital status also plays an important role. Single-parent widows and widowers are less likely to rent than divorcees, but those who have never been married are more likely to rent. This may be because in the first case, when there was a spouse present, the family decided to purchase a home. In the event of the death of the spouse, the family would presumably still live in the home (or purchase another, rather than permanently renting). However, those who were never married would not have had the potential for receiving extra income, for example, to help improve the chances that their request for a loan would be approved.

Education is also related to homeownership. For instance, college graduates are much less likely than others to rent their homes, and although the coefficient for those who did not graduate from college is not statistically significant, the coefficient for those who did not graduate from high school is large (about one-half the size of the three-or-more children coefficient, which has already been shown to have a profound effect on the probability of renting), and the coefficient for those who have had some college is fairly small, indicating little difference in the probability of renting (even if it were statistically significant). Assuming that the income of a hypothetical college graduate is the same as that of a nongraduate, it may be that the college graduate is more aware than the nongraduate is of issues such as tax benefits and the accumulation of assets that accrues to homeowners.

In addition, there is strong evidence pointing toward underlying differences between single fathers and single mothers in respect of the decision to own a home. Both the binary variable "male" and the male-permanent income interaction have statistically significant coefficients, albeit of opposite sign. The coefficient on "male" is negative, indicating that something inherent in single fathers makes them less likely to rent than single mothers. However, the male-income interaction effect is positive. When summed with the permanent-income "main effect" (that is, the coefficient on permanent income before any interaction has been performed), the income effect for men is found to be negative, but not statistically significantly different from zero, according to a chi-square test. This means that while there is a strong (negative) income effect for women

Table 6.	Probabilities of purchase		
		Single parents	
	Variable	Men	Women
Permanent income (quarterly outlays)		$9,435	$6,074
Probability of purchase (percent):			
Apparel and services (adults)		47.1	55.9
Apparel and services (children)		47.6	¹63.2
Transportation (less trips)		98.8	99.0
Food away from home (less trips)		98.3	95.2
Fees and admissions (less trips)		62.5	52.8
Pets, toys, and playground equipment ..		46.5	50.3
Trips and travel		37.1	31.0
Babysitting and day care		28.3	36.2

¹ Male-income interaction coefficient is statistically significant at the 95-percent confidence level.

regarding the probability of renting, the income effect for men may be negligible. To phrase it more simply, the data suggest that the probability of renting declines for single mothers as their income increases, and while the probability of renting also declines with income for single fathers, it does so at a lesser rate; in fact, for single fathers, the choice to own a home may be independent of their level of income. Put yet another way, because the coefficient of "male" is negative and significant, single fathers with low levels of income will have a lower probability of renting than will single mothers with the same income. However, because single mothers have a stronger (negative) income effect, eventually they will have a lower probability of renting than will single fathers with similar incomes. Given this finding, it is not surprising that if the "typical" single father and single mother are compared (that is, the fathers have higher permanent income ($9,435 versus $6,074, quarterly), but the other characteristics are held to be the same), the mothers have a much greater probability of renting, as noted earlier (67 percent, compared with 51 percent). However, it turns out that the probability functions cross at the level of permanent income associated with "typical" single-father families. That is, for single mothers with the same permanent income as "typical" single fathers ($9,435), the probability of

renting is, coincidentally, identical across the two genders. Nevertheless, if the men are compared with the women by reducing the men's family income so that it is equal to the women's family income ($6,074), then the men are still substantially less likely (55 percent) to rent than the women (67 percent). (See Appendix B, table B–3.) The two probability functions are shown in chart 1.

Ordinary-least-squares results.   Unlike the logit results, in which only one expenditure examined (apparel and services for children) was found to have a statistically significant difference for single fathers and single mothers, several items exhibit such differences when the predicted expenditures are examined.[42] One-third of the expenditure categories examined with the logit regression (food at home; apparel and services for adults; and pets, toys, and playground equipment) show statistically significant differences across genders in both the intercept and the income effect. For food away from home, the coefficient "male," but not the male-income interaction coefficient, is statistically significant. Further, when the separate housing regressions are examined, it turns out that expenditures for shelter and utilities do not differ by gender for owners, but do differ for renters. In each of these cases, including

Chart 1.   Predicted probability of renting, by income, single fathers and single mothers
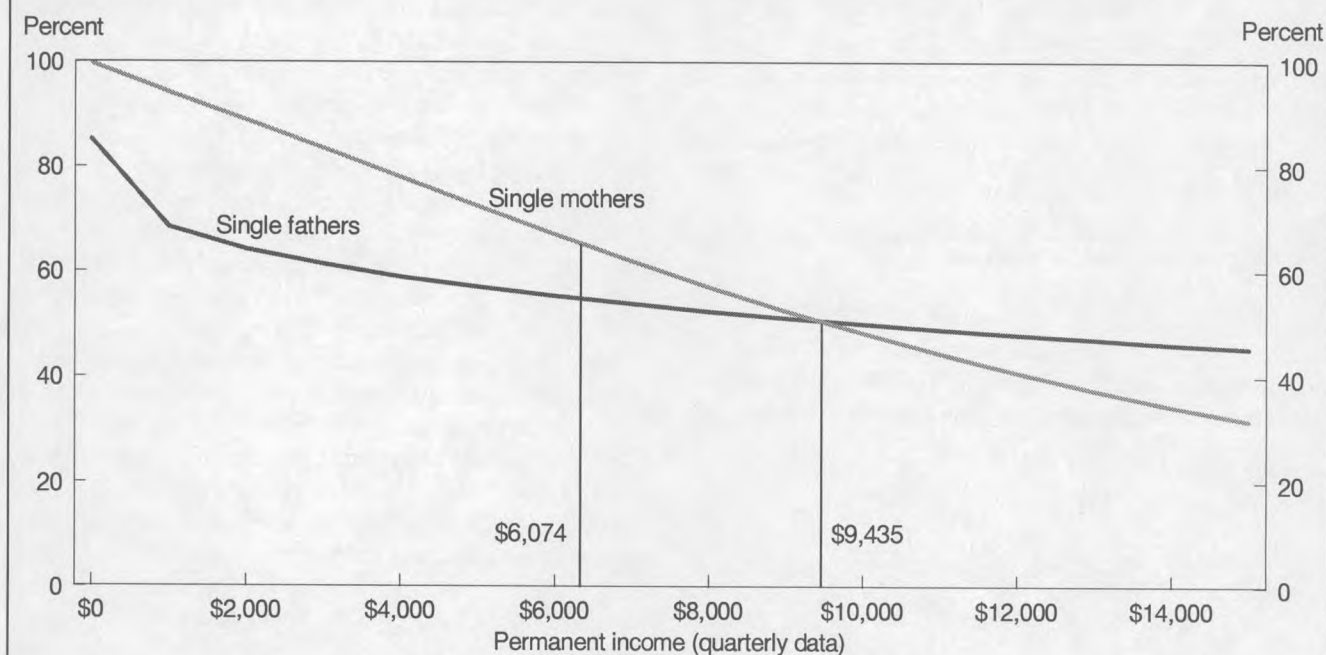
shelter and utilities for renters, the income effect is smaller for men than for women.

Despite the smaller income effect, single fathers are predicted to spend more than single mothers for all expenditures with a statistically significant difference in the income effect, except for rent. (The resulting expenditure for shelter and utilities is substantially smaller for single fathers, who are predicted to spend more than two-thirds—69 percent—as much as single mothers for that item.)

Marginal propensity to consume (MPC) and elasticity. Two important measures of tastes and preferences are the *marginal propensity to consume (MPC)* and the income elasticity of a particular good or service. The MPC describes how expenditures would change if a consumer unit's permanent income were to increase by 1 *dollar*; elasticity describes how expenditures would change if a consumer unit's permanent income were to increase by 1 *percent*.[43] These quantities can be more enlightening when one examines observed or predicted expenditure patterns, rather than actual levels of expenditures. The actual expenditure for a given item may differ by gender because of differences in income or other factors, as noted. Indeed, even the predicted expenditure for the item may differ by gender because of differences in income, at least in the tables examined here, for reasons described earlier. (However, the predicted expenditures, given true *ceteris paribus* conditions, are shown in Appendix B.) But the MPC and income elasticity measure how important a good is to consumers by showing how much more they would purchase if given the means to do so.

In the case of universally purchased goods (that is, food at home and shelter and utilities in this article), the calculation of the MPC and income elasticity is straightforward. However, for goods and services that are less frequently purchased, the probability of purchase must be taken into account in calculating these quantities. (See Appendix A for details in both cases.) The reason is that it is reasonable to assume that *whether* an expenditure takes place is a function of income, just as how much the purchase is for is a function of income. Therefore, the expected expenditure for a member of the control group is equal to the actual expenditure (if a purchase is made), weighted by the probability of incurring the expenditure. Accordingly, the tables showing MPC and elasticity calculations also show the predicted probability of purchase (which equals 100 percent in the case of universal expenditures).

For most expenditures with statistically significant income differences by gender, the MPC's are fairly small, ranging from 0.4 cent per additional dollar (for apparel and services for children, purchased by single fathers) to 4.5 cents per additional dollar (for apparel and services for adults, purchased by single mothers). (See table 7.) The exception is shelter and utilities for renters, for which, for single fathers, the MPC is 4.6 cents

Table 7.	Predicted expenditures, marginal propensities to consume (MPC's), and elasticities of "typical" single parents		
Variable		Men	Women
Permanent Income (*I*)		$9,435	$6,074
Food at home:			
Probability, percent (*P*)		100.0	100.0
P'		0	0
E(*Y*)		[1,2]$826	[1,2]$649
E' (*Y*)		.0237	.0405
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.024	.041
Elasticity = MPC × (*I*/*E*(*Y*))		.27	.38
Apparel and services (adults):			
P'		2.22E–05	4.09E–05
E(*Y*)		[1,2]$514	[1,2]$413
E' (*Y*)		.0216	.0500
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.022	.045
Elasticity = MPC × (*I*/*E*(*Y*))		.40	.66
Apparel and services (children):			
Probability, percent (*P*)		[2]47.6	[2]63.2
P'		9.80E–06	3.25E–05
E(*Y*)		$101	$94
E' *Y*)		.0073	.0120
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.004	.011
Elasticity = MPC × (*I*/*E*(*Y*))		.42	.69
Transportation (less trips):			
Probability, percent (*P*)		98.8	99.0
P'		1.70E–06	1.27E–06
E(*Y*)		$1,602	$788
E' (*Y*)		.1873	.1437
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.188	.143
Elasticity = MPC × (*I*/*E*(*Y*))		1.11	1.10
Food away from home (less trips):			
Probability, percent (*P*)		98.3	95.2
P'		4.35E–06	1.48E–05
E(*Y*)		[1]$1,217	[1]$572
E' *Y*)		.0523	.0510
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.057	.057
Elasticity = MPC × (*I*/*E*(*Y*))		.44	.61
Fees and admissions (less trips):			
Probability, percent (*P*)		62.5	52.8
P'		2.05E–05	4.78E–05
E(*Y*)		$389	$216
E' (*Y*)		.0202	.0246
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.021	.023
Elasticity = MPC × (*I*/*E*(*Y*))		.50	.66
Pets, toys, and playground equipment (less trips):			
Probability, percent (*P*)		46.5	50.3
P'		1.17E–05	2.64E–05
E(*Y*)		[1,2]$524	[1,2]$405
E' (*Y*)		.0033	.0388
MPC = *P'* *E*(*Y*) + *PE'* (*Y*)		.008	.030
Elasticity = MPC × (*I*/*E*(*Y*))		.14	.45
Trips and travel:			
Probability, percent (*P*)		37.1	31.0
P'		1.78E–05	3.88E–05

Table 7.	Continued—Predicted expenditures, marginal propensities to consume (MPC's), and elasticities of "typical" single parents		

Variable	Men	Women
E(Y)	$933	$619
E' (Y)	.0979	.0903
MPC = P' E(Y) + PE' (Y)	.053	.052
Elasticity = MPC × (I/E(Y))	.54	.51
Babysitting and day care:		
Probability, percent (P)	28.3	36.2
P'	1.16E–05	3.91E–05
E(Y)	$273	$365
E' (Y)	.0110	.0465
MPC = P' E(Y) + PE' (Y)	.006	.031
Elasticity = MPC × (I/E(Y))	.22	.52
Shelter and utilities (owners, with mortgage):[3]		
Probability, percent (P)	100.0	100.0
P'	0	0
E(Y)	$2,589	$2,258
E' (Y)	.1513	.2005
MPC = P' E(Y) + PE' (Y)	.151	.201
Elasticity = MPC × (I/E(Y))	.55	.54
Shelter and utilities (renters):[3]		
Probability, percent (P)	100.0	100.0
P'	0	0
E(Y)	[1,2]$1,248	[1,2]$1,807
E' (Y)	.0458	.2394
MPC = P' E(Y) + PE' (Y)	.046	.239
Elasticity = MPC × (I/E(Y))	.35	.80

[1] Binary variable used to calculate this value for men is statistically significant at the 95-percent confidence level.

[2] Men's income effect used to calculate this value is statistically significantly different from the women's income effect at the 95-percent confidence level.

[3] MPC's and elasticities for homeowners are calculated assuming that single fathers have seven rooms and two bathrooms or half baths and that single mothers have six rooms and two bathrooms or half baths. For renters, both types of parents are assumed to have six rooms and one bathroom or half bath.

NOTE: Values are calculated from detailed regression coefficients, with results rounded for presentation.

homes are more similar to each other with respect to housing decisions than they are to renters of the same gender. (That is, single fathers who are homeowners are different from single fathers who are renters, and single mothers who are homeowners are different from single mothers who are renters.) At the same time, single-parent renters differ substantially by gender in their expenditures.

The expenditure category with the largest income elasticity is transportation. For both single fathers and single mothers, the elasticity is about 1.1. This may at first be surprising, because other categories, such as trips and travel, with which one might associate high elasticities a priori have elasticities less than unity. In the terminology of economists, transportation is a "luxury" good, while trips and travel constitute a "necessity" good.[44] However, one must recall that the elasticity measured in this article is *total* elasticity; that is, it is not just the elasticity for persons who purchase the good, but rather, it is the elasticity for *all* consumers, whether they purchase or not, weighted by their probability of purchase. So as income rises, the increase affects purchases both indirectly (through a consumer unit's probability of purchase) and directly (through affordability for those who do purchase). Note that for both single fathers and single mothers, the MPC for trips and travel for purchasers only is estimated to be about double (10 cents for men and 9 cents for women) what it is for the overall group (about 5 cents each). Thus, for purchasers, the income elasticity for trips and travel would be about double what it is for the overall group, making it larger than unity (that is, a "luxury good") for both single mothers and single fathers.

Finally, one should not confuse the significance of the *difference* of the income effect with the significance of the income effect in general. If there is no significant difference in the income effect, it just means that there is no evidence to support the hypothesis that single fathers and single mothers have different MPC's, given the same level of income. However, it does not mean that the income effect is nonexistent for the good in question. To use a specific example, transportation shows no difference in the income effect across gender when either probabilities or expenditures are predicted. However, the MPC—19 cents for single fathers and 14 cents for single mothers—is significantly different from 0 cents. That is, given extra income, expenditures for transportation will increase for both genders, but not by a very different amount, *ceteris paribus*.

THIS ARTICLE HAS EXAMINED EXPENDITURE PATTERNS for single parents. To aid in the analysis presented, demographics were compared first, followed by expenditure levels and expenditure shares. Although many differences in the expenditures of single fathers and single mothers were found, they could be due to differences in demographic characteristics—especially income. To obtain more precise comparisons, two

per additional dollar. For single mothers, the MPC is 23.9 cents per additional dollar. In this example, the gap between the elasticities of single mothers and single fathers is also large: single fathers have an elasticity of 0.35, compared with 0.80 for single mothers. When single mothers are assumed to have the same level of permanent income as single fathers, the estimated elasticity for those of the mothers who rent actually increases slightly, to 0.82. For homeowners, the parameter estimate of income for single fathers is not significantly different from that for single mothers. For both genders, the estimated income elasticity is in the middle 0.50's. This suggests that both single fathers and single mothers who own

forms of regression analysis were performed: logistic (logit) regression, to estimate the probability of reporting certain items, and ordinary-least-squares regression, to estimate the marginal propensity to consume, income elasticity, and similar relationships of expenditure to various characteristics.

The logit regressions showed that, although some of the characteristics that were examined definitely account for differences *within* gender groups, there were not many differences *across* gender for single parents. That is, characteristics such as family size affect the probabilities of purchasing various goods and services equally for both families headed by single fathers and families headed by single mothers. However, some differences were found in the ordinary-least-squares analysis. For example, the income effect was frequently significantly different by gender, but the effects of marital status and age were also different in some models. In using ordinary-least-squares results to calculate some factors of interest, such as marginal propensities to consume and income elasticities, it was noted that some of the differences that were found may again be due to differences in income assumed to hold for the "typical" male-headed and female-headed single-parent family. However, table B–2 of Appendix B shows that even if single mothers are assumed to have the same income as single fathers, they would not substantially change the proportion of total income allocated to most goods and services, as evidenced through only minimal changes in their marginal propensity to consume or their income elasticity. (However, a hypothetical increase in income would increase their expected expenditures, and in some cases, they would exceed expected expenditures by single-father-headed households by a large amount.)

It may be surprising that more differences were not found in the analysis, especially in the coefficients for the interaction terms. That is, the results show that there are differences of some sort between families headed by single fathers and those headed by single mothers, but single-father-headed families in the Northeast are not significantly different from single-mother-headed families in the Northeast. The lack of *evidence* of differences, though, should not be interpreted to mean that there is a lack of *differences themselves*. It is important to remember that single fathers are still a small, but noticeable, portion of the single-parent population. Therefore, it may be that differences in certain characteristics of single mothers (such as their region of residence) are not pronounced enough to be readily seen at this time. Still, as noted earlier, single fathers are a rapidly growing group, and they have not yet been studied in great detail. Thus, further research into their expenditure patterns will be useful as their numbers increase both absolutely and relatively to the population of single mothers. □

Notes

[1] *Statistical Abstract of the United States: 2000* (U.S. Bureau of the Census, 2000), p. 58, table 68.

[2] *Ibid.* The precise numbers were 24,961,000 in 1980 and 25,066,000 in 1999, according to table 68.

[3] *Ibid.* The precise numbers were 6,061,000 in 1980 and 7,752,000 in 1999.

[4] *Ibid.*

[5] *Ibid.*, p. 51, table 53.

[6] *Ibid.*, p. 58, table 68.

[7] *Ibid.* The precise numbers were 5,445,000 in 1980 and 6,599,000 in 1999.

[8] *Ibid.*

[9] *Consumer Expenditures in 1998,* Report 940 (Bureau of Labor Statistics, February 2000), table 5.

[10] Douglas B. Downey, "The School Performance of Children From Single-Mother and Single-Father Families: Economic or Interpersonal Deprivation?" *Journal of Family Issues*, March 1994, pp. 129–47.

[11] *Ibid.*, p. 130.

[12] *Ibid.*, table 1, pp. 139–40.

[13] *Ibid.*, p. 144.

[14] *Ibid.*, pp. 129–30.

[15] Mark Lino, "Financial Status of Single-Parent Households," *Family Economics Review*, February 1989, pp. 2–7.

[16] Mark Lino, "Financial Status of Single-Parent Households Headed by a Never-Married, Divorced/Separated or Widowed Parent," in R. Walker (ed.), "Families in Transition: Structural Changes and Effects on Family Life," *Proceedings of the 1989 Pre-Conference Workshop of the Family Economics Home Management Section of the American Home Economics Association*, pp. 151–60.

[17] Divorced or separated parents and widowed parents each allocated 35 percent of their total expenditures to housing, whereas never-married parents allocated 40 percent of their total expenditures to that category. For comparison, the expenditure share for never-married parents for transportation, 11 percent, was about half that of divorced or separated parents (21 percent) and widowed parents (22 percent). Food at home also accounted for a larger share of the never-married parents' total expenditures. One in 5 dollars (20 percent) went to food at home for that group, compared with 1 in 7 dollars (14 percent) for divorced or separated parents and 1 in 8 dollars (12 percent) for widowed parents. Clothing, health care, entertainment, education, child care, and "other" expenditures all accounted for similar shares for each type of single parent. (See Lino, "Financial Status of Single-Parent Households," table 3, p. 160.)

[18] Mark Lino, "Factors Affecting Expenditures of Single-Parent Households," *Home Economics Research Journal*, March 1990, pp. 191–201.

[19] Mark Lino, "Expenditures on a Child by Single-Parent Families," *Family Economics Review*, March 1991, pp. 2–7.

[20] The lower income group included single parents reporting less than $29,900 in income before taxes; the upper group reported at least $29,900. Lino explains that the figures are based on 1987 data for husband-wife families, approximately one-third of which reported income less than $26,000. Although relatively few single parents (15 percent) reported incomes more than $26,000, Lino retained that dol-

lar amount to facilitate comparisons between single parents and husband-wife parents with similar income. The $29,900 was obtained from the Consumer Price Index for All Urban Consumers (CPI-U) in order to adjust the $26,000 from 1987 dollars to 1990 dollars. Apparently, Lino made this adjustment because, at the time he was writing, the 1987 data were the most recent available. (See Lino, "Expenditures on a Child," esp. pp. 2, 3, and 5.)

[21] *Ibid.*, table 1, p. 5.

[22] Sally E. Horton and Jeanne L. Hafstrom, "Income Elasticities for Selected Consumption Categories: Comparison of Single Female-Headed and Two-Parent Families," *Home Economics Research Journal*, March 1985, pp. 292–303.

[23] Current income was defined as income earned within a given designated "recent" period—for example, this week's income or this year's income. Permanent income was defined as current income plus expected future income.

[24] Specifically, they estimated that the increase in expenditures was 1.2 percent for single-parent women and 0.99 percent for married couples. However, they did not find this difference statistically significant.

[25] Lino, "Factors Affecting Expenditures."

[26] Maureen Boyle, "Spending patterns and income of single and married parents," *Monthly Labor Review*, March 1989, pp. 37–41.

[27] Mohamed Abdel-Ghany and F. N. Schwenk, "Differences in Consumption Patterns of Single-Parent and Two-Parent Families in the United States," *Journal of Family and Economic Issues*, winter, 1993, pp. 299–315.

[28] David J. Eggebeen and Anastasia R. Snyder, "Children in *Single-Father Families in Demographic Perspective*," *Journal of Family Issues*, July 1996, pp. 441–65.

[29] *Consumer Expenditure Survey, 1996–97*, Report 935 (Bureau of Labor Statistics, September 1999), p. 257.

[30] *Ibid.*, p. 256. The report indicates that the "Interview [component] collects detailed data on an estimated 60 to 70 percent of total household expenditures. In addition, global estimates, that is, expense patterns for a 3-month period, are obtained for food and other selected items. These global estimates account for an additional 20 to 25 percent of total expenditures."

[31] The categories defined as Hispanic in the survey are Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, Central and South American, and other Spanish.

[32] In general, complete reporters are those consumer units which provide a value for at least one major source of income, such as wages and salaries, self-employment, or Social Security. However, even complete reporters do not necessarily provide a full accounting of income from all sources.

[33] For the purposes of this study, a *consumer unit* is defined as members of the same household related by blood, marriage, adoption, or some other legal arrangement. Also, only single-parent consumer units— that is, those with one person aged 18 or older living with his or her own children and no other persons—are examined. For convenience, the terms "family" and "household" are used interchangeably with the term "consumer unit" throughout.

[34] The table lists this expenditure as "less trips." This is because food at home is included in the expenditure for "trips and travel." The term "food at home on trips" may sound self-contradictory, but in the Consumer Expenditure Survey the "at home" designation refers to the type of business from which the food was purchased; that is, it distinguishes purchases at restaurants and carryouts from purchases at supermarkets or similar establishments. Expenditures for "shelter and utilities on trips" refer to hotel or motel payments or payments for vacation homes. The other "on trips" expenditure categories are straightforward.

[35] In the standard BLS publications of Consumer Expenditure Survey

data, certain items, such as mortgage principal payments, are not included as expenditures. This is due to a technical definition whereby principal payments are considered an investment in housing rather than a payment for the consumption of housing services. (According to *Consumer Expenditure Survey, 1996–97* [pp. 250–51], "Mortgage principal repayments are payments of loans and are shown in *Other financial information*.") In contrast, the mortgage *interest* payment is considered an expenditure, because it is the price one pays for the ability to "invest" in the housing. Similarly, when vehicles are purchased, it is the total price of the vehicle, less its trade-in value, that is recorded in the survey results, rather than the amount of monthly payments made. In the standard published tables, this makes sense, because, on average, those who purchase a vehicle during the reference period will have a large expenditure recorded, while those who already own a car, but make payments on it, will have only the interest payments reported. Therefore, on average, recent purchasers' expenditures for new cars will balance out with payments made by those currently financing vehicles. However, in examining individual families, a large expenditure is shown for any family that purchases a new automobile, and a small expenditure is shown for any that make payments each month. In this study, the actual amount that leaves the family's hands, including payments for mortgages and regular payments for vehicles, is analyzed. Only "true" payments for assets or liabilities (such as investments in stocks and bonds) are omitted from the analysis. Technically, this is called a "total outlays" approach; however, for convenience, the terms "outlays" and "expenditures" will be used interchangeably throughout the article.

[36] Even a parent who does not leave home frequently may still occasionally have to hire a babysitter or day-care provider for an emergency or to enable him- or herself to hold a job.

[37] Sometimes, authors use a "double log" specification, in which case the dependent variable and a selected independent variable (frequently income in expenditure studies) are converted to logarithmic form before the regression is carried out. For example, Horton and Hafstrom use such a form. The "double log" specification has a dual advantage: in addition to reducing heteroscedasticity, it allows the coefficient on the transformed independent variable to be interpreted as a measure of elasticity. In other words, if the natural logarithm of expenditure X is regressed on the natural logarithm of income, and the income coefficient is 2.0, then, if the coefficient is statistically significant, the analyst can validly infer that a 1-percent increase in income is associated with a 2-percent increase in X.

[38] See Milton Friedman, *A Theory of the Consumption Function* (Princeton, NJ, Princeton University Press, 1957).

[39] The reference person is the first person identified when the respondent is asked who is responsible for owning or renting the home. In this article, the reference person is assumed to be the parent in all cases.

[40] See additional table, "Expenditure logit results," on the Internet at **http://www.bls.gov/cex/csxart.htm**

[41] See additional table, "Housing tenure logit parameter estimates," on the Internet at **http://www.bls.gov/cex/csxart.htm**

[42] See additional table, "Ordinary-least-squares results," on the Internet at **http://www.bls.gov/cex/csxart.htm**

[43] Horton and Hafstrom's findings in "Income Elasticities for Selected Consumption Categories" are examples of income elasticities. Their finding that a 1-percent increase in income yields a 0.59-percent increase in expenditures for shelter for married couples can be more simply stated by saying that, for married couples, the income elasticity for shelter is 0.59. Similarly, Horton and Hafstrom find that the income elasticity for single mothers is 0.25.

[44] Goods with an income elasticity of exactly unity are known as "unitary elastic." (For example, Horton and Hafstrom found income elasticities for recreation and reading to be unitary elastic.) Goods with elasticities greater than unity are "luxuries," because the increase in spending is disproportionately large compared with the increase in income. Goods with positive elasticities less than unity are "necessities,"

because the increase in expenditure is disproportionately small. All goods with positive elasticities are considered "normal" goods, because their expenditures increase with income. There are some goods for which the income elasticity is negative—the so-called inferior goods, because their expenditure actually decreases as income increases. An example is used goods: because most consumers prefer new products to used products (for example, automobiles, clothing, and furniture), but used goods usually have lower prices than new goods, it can be assumed that used goods will be purchased disproportionately by lower income consumers, compared with new goods. Thus, as income increases, fewer used goods are purchased.

APPENDIX A: Methods of analysis

Box-Cox transformations. Expenditure data are not often normally distributed, a situation that can cause bias in regression results.[1] However, expenditure data can be transformed so that they are approximately normally distributed. One method that has been used is the *Box-Cox transformation.*[2] Perhaps the most frequently cited version is

$$Y^* = (Y^\lambda - 1)/\lambda,$$

where

Y^* is the transformed version of the variable, Y denotes expenditures for a specific good or service (for example, food at home or apparel),

and

λ is a parameter used to normalize the data.

This version of the equation is most useful in demonstrating two special cases for the value of λ. That is, if λ is unity, then no transformation of the independent variable is necessary. (The net result is that Y^* equals $Y - 1$, and subtracting a constant from each observation of Y will not affect the distribution.) In contrast, if λ approaches zero, then Y^* is approximately equal to the natural logarithm of Y.

Although this specification is useful for deriving the value of Y^* when λ approaches zero, it does not yield an intuitive interpretation when λ takes on any other value.[3] However, in their original article,[4] Box and Cox point out that the equation can be simplified to

$$Y^* = Y^\lambda.$$

This leads to a simple interpretation of both λ and the equation as a whole. In the text of the current study, λ is found to be ¼, indicating that the transformed variable is then simply the fourth root of Y.

The obvious question raised is how the value of λ is found. Conventionally, this is done by trial and error. Several values for λ are used, and whichever yields the model with the lowest mean square error is the selected value. However, the method is extremely time consuming and is seen to be nearly impossible when one takes into account the fact that two variables (expenditures and permanent income) are being transformed over several models. In the text, λ is estimated through a maximum-likelihood procedure used by Scott and Rope in their study of Consumer Expenditure Survey data.[5]

Regression techniques. Some expenditures, such as food at home or shelter and utilities, are reported by virtually all participants in the Consumer Expenditure Survey. For these items, the choice of regression technique is straightforward: ordinary least squares. However, many expenditures are not universal and may not be made because of tastes and preferences (for example, tobacco and smoking supplies) or because the item is a durable good (for example, vehicles). In the study set out in the text, four such variables are examined. Three (food away from home, entertainment, and out-of-town trips) are probably examples of the first situation (tastes and preferences dissuade some consumers from purchasing the item), while the fourth (apparel) may be an example of the second situation (perhaps the consumer had sufficient amounts of apparel during the previous quarter or did not need services such as drycleaning or repair). These kinds of expenditures require special treatment.

One set of models designed to handle such situations is called the "double-hurdle" set. The models get their name because the consumer must first decide whether to purchase the item and, if so, then determine how much to purchase. In these models, the hurdles appear in two stages: stage one models the probability of purchase, stage two the level of purchase for those who buy the good. Results of the two stages are used together to predict the expenditure for a given consumer.

One popular form of double-hurdle model is the *Tobit model,* in which the hurdles are estimated with the same independent variables. The stages are estimated in such a way that a set of parameters is produced that can then be utilized to estimate the person's probability of purchasing a given item (using the cumulative density function, as with the probit technique) and marginal propensity to consume (as with ordinary least squares). The predicted expenditure is equivalent to the predicted expenditure for those who purchase the item, weighted by the probability of purchasing it.[6] However, a major drawback of Tobit is the restrictions it places on the results of the analysis. First, because one particular set of independent variables is used, the model is useful only when the exact same set of variables predicts both the probability of purchasing an item and the level of expenditure on the item. This is not always the case. For example, the probability of purchasing health insurance may depend on the size of one's family. However, if a particular policy charges one premium for "family" coverage, regardless of the number of members in the family, the Tobit model has a weakness in predicting expenditures for that policy. Furthermore, the Tobit model assumes that the "direction" of each variable is the same for the probability and for the level of consumption, which may not be true. For instance, an article describing wine consumption by U.S. men found that men who had at least a high school education were more likely to drink wine than men with lower levels of education; however, the article also found that men with at least a high school education drank less wine than those with lower levels of education.[7]

Other models also have been proposed to handle the "double-hurdle" situation. The models used in this article are based on a type described by John G. Cragg.[8] In Cragg's method, the probability of purchase is estimated separately from the level of expenditures. Cragg's approach has many advantages over the Tobit method. The ability to separate the probability-of-purchase and level-of-expenditure equations allows differences in variables and signs across the two stages of the analysis, providing Cragg's approach with a "considerable interpretational advantage" over the Tobit model.[9] In addition, not only does "Tobit...force zero

observations to represent corner solutions," but it also "presumes that the same set of variables and parameter estimates determine both the discrete probability of a nonzero outcome and the level of positive expenditures."[10]

Although Cragg's models use probit to predict probabilities of purchase, he notes that logit can be used instead.[11] Many standard econometrics textbooks point out that logit produces probability estimates that are nearly identical to probit estimates. However, logit results are much easier to use and interpret. The equation for predicting the probability of purchase (P) of an item is

$$P = \exp(\alpha + \beta X)/[1 + \exp(\alpha + \beta X)],$$

where

is the intercept of the logit equation,

is a vector of parameter estimates,

and

X is a vector of independent variables.

This formula can be entered into a standard spreadsheet to estimate probabilities of purchase for different consumers. Furthermore, the equation is easily differentiated to find the marginal relationship of probability to a particular variable. (For example, if income rises by $1, by how much does the probability of purchase change?) With probit, an equation must be estimated and the results looked up in a statistical table to find out the overall probability of an event's occurring, as well as the marginal effect on probability due to changing a variable.

In the version of the Cragg model used in the text of this article, the probability of purchasing an item is estimated as suggested with a logistic regression. Separately, the method of ordinary least squares is used to estimate expenditures for those who purchase the item.[12] To get the final results, the predicted probability of purchase obtained from the first stage is multiplied by the predicted expenditure for those who purchase the item. This calculation essentially produces an average predicted expenditure, weighted by the probability of purchase. To illustrate the intuition behind obtaining such a weighted-average predicted expenditure, suppose that a large sample of consumers is selected randomly. Suppose further that 25 percent of the participants purchased a particular item that sold for $100. Then the average expenditure for all consumers is $25, or 25 percent multiplied by $100. If a smaller sample is randomly selected from this large group, the expected value of the average of that smaller sample is also $25. The reason is that if a large number of random samples were pulled from the total sample, and each time the samples were pulled the average expenditure was recorded, then the "grand average" (that is, the average of the averages) is expected to be $25.

In estimating the marginal propensity to consume and the elasticity in Cragg models, the logit results are taken into account, because income is assumed to influence expenditures both directly (through the level of expenditure) and indirectly (by changing the probability of purchase). (The mathematical details behind this statement are provided in the next two subsections of this appendix.)

As a final point, there are some expenditures for which Tobit may be appropriate, in that the technique assumes that, given enough time, all consumers will eventually purchase the given item. For example, less than 100 percent of all consumer units report expenditures for apparel and services every quarter, but it is

reasonable to assume that, given enough time, 100 percent of consumer units will eventually purchase those items. However, Tobit still suffers the weaknesses described earlier, and for convenience as well, the Cragg model is used for all variables analyzed in this article.[13]

Marginal propensity to consume (MPC). The marginal propensity to consume (MPC) is defined as the change in expenditure, given a unit change in income. In this case, permanent income is the relevant variable for change.

In the ordinary-least-squares-only regressions described in the text (for food at home, shelter and utilities, and transportation), the equations have the form

$$E(Y^{1/4}) = a + bI^{1/4} + cX,$$

where

$E(Y^{1/4})$ is the predicted (or expected) value of the dependent variable,

a is the intercept,

b is a parameter estimate,

I denotes total outlays (the proxy for permanent income),
and

cX represents all other independent variables, multiplied by their regression coefficients.

In this case, the MPC is calculated by finding the change in the predicted expenditure, given a $1 increase in permanent income, or $\partial E(Y)/\partial I$. Although the model is specified to calculate $E(Y^{1/4})$, the desired result is easily obtained. To simplify the arithmetic, it is easiest to convert $E(Y^{1/4})$ to $E(Y)$:

$$E(Y) = E(Y^{1/4})^4 = (a + bI^{1/4} + cX)^4$$

$$\partial E(Y)/\partial I = 4(a + bI^{1/4} + cX)^3[(1/4)bI^{-3/4}] = [b(a + bI^{1/4} + cX)^3]/I^{3/4}$$

$$= (b/I^{3/4}) \times E(Y^{1/4})^3$$

$$= b[E(Y)/I]^{3/4}.$$

This result has an interesting property in that the MPC is a function of the expected budget share (that is, the specific outlay $E(Y)$, divided by the total outlays I).

The Cragg-based models have a more complicated specification, but they are nevertheless solvable for the MPC. Note that the MPC is still defined and represented mathematically in the same way; however, the initial formulation is more complicated. The desired result is actually

$$E_p(Y) = P \times [E(Y^{1/4})]^4,$$

where P is the probability of observing an expenditure.

To find $\partial E_p(Y)/\partial I$, the product rule of calculus is used. That is,

$$\partial E_p(Y)/\partial I = P' [E(Y)] + P [E'(Y)].$$

Now, recall that

$$P = \exp(\alpha + \beta I^{1/4} + \delta X)/[1 + \exp(\alpha + \beta I^{1/4} + \delta X)]),$$

where δX is a vector of all independent variables except income, each multiplied by their parameter estimates.

Therefore, to find P', the quotient rule is used. Thus,

$$P' = (f'g - fg')/g^2,$$

where

$$f = \exp(\alpha + \beta I^{1/4} + \delta X),$$

$$g = 1 + \exp(\alpha + \beta I^{1/4} + \delta X),$$

and

$$f' = g' = [(\frac{1}{4} \times \beta)/I^{3/4}] \times \exp(\alpha + \beta I^{1/4} + \delta X).$$

Because f' and g' are equal in this case, the foregoing equation simplifies algebraically to

$$P' = [f'(g - f)]/g^2;$$

and because g equals $f + 1$, the equation reduces even further to

$$P' = [f'(f + 1 - f)]/g^2 = f'/g^2.$$

Now, with the much simplified result, it can be shown that

$$P' = \{[(\frac{1}{4} \times \beta)/I^{3/4}] \times \exp(\alpha + \beta I^{1/4} + \delta X)\}/[1 + \exp(\alpha + \beta I^{1/4} + \delta X)]^2.$$

Again, by substitution, this reduces to

$$P \times \{[(\frac{1}{4} \times \beta)/I^{3/4}]/[1 + \exp(\alpha + \beta I^{1/4} + \delta X)]\}.$$

Therefore,

$$\text{MPC} = P \times \{[(\frac{1}{4} \times \beta)/I^{3/4}]/[1 + \exp(\alpha + \beta I^{1/4} + \delta X)]\} \times E(Y) + P \times b \times [E(Y)/I]^{3/4}.$$

Because the terms P and $E(Y)$ are common to both pieces of the complicated right-hand side of this equation, the MPC can be simplified mathematically by factoring these terms out and multiplying them by the sum of the remaining pieces. However, the formula is left the way it is for the moment, to illustrate an intuitive point: the MPC is derived from the predicted value of the expenditure for those who actually purchase, weighted by the probability of purchasing. Note that the second term on the right-hand side ($P \times b[E(Y)/I]^{3/4}$, is the same MPC as was found before, except that it is weighted by the probability of purchase. The remaining term on the right-hand side is a result of the fact that the predicted expenditure is affected indirectly because one's probability of purchasing something changes as a result of a change in income.

Elasticities. Income elasticity (or more properly in this case, permanent-income elasticity) is the percent change in expenditure for a specific good (such as food at home), given a 1-percent increase in (permanent) income. For example, for single fathers, the income elasticity for food at home is estimated to be 0.28, meaning that for every 1-percent increase in permanent income, these men are predicted to increase their food-at-home expenditures by more than one-quarter of 1 percent.

The equation for calculating the elasticity η is

$$\eta = \text{MPC} \times I/E(Y).$$

In the case of the ordinary-least-squares-only regressions, the elasticity is constant and equal to the parameter estimate for permanent income. To show this mathematically, recall that the MPC in this case is a function of the predicted expenditure share; that is, $\text{MPC} = b[E(Y)/I]^{3/4}$. Thus, multiplying the MPC by $I/E(Y)$ yields $b[E(Y)/I]^{-1/4}$, or $b[I/E(Y)]^{1/4}$. So while the MPC is a function of the expected budget share, elasticity is a function of the *inverse* of the budget share. Hence, as the budget share increases, so does the MPC, but elasticity declines.

For the Cragg-based models, the full formula is much more complicated, due to the complexity of the MPC equation. However, once the value of the MPC is obtained, multiplying that value by the inverse of the predicted expenditure share still yields the estimate of elasticity.

Notes to Appendix A

[1] Stuart Scott and Daniel J. Rope, "Distributions and Transformations for Family Expenditures," *1993 Proceedings of the Section on Social Statistics* (Washington, DC, American Statistical Association, 1993), pp. 741–46.

[2] G. E. P. Box and D. R. Cox, "An Analysis of Transformations," *Journal of the Royal Statistical Society*, Series B, 1964, pp. 211–43, esp. p. 214.

[3] Even if λ is unity, it is hard to imagine why Y is transformed to $Y - 1$.

[4] Box and Cox, "Analysis," p. 214.

[5] Scott and Rope, "Distributions and Transformations."

[6] See John McDonald and Robert A. Moffitt, "The Uses of Tobit Analysis," *Review of Economics and Statistics*, May 1980, pp. 318–21, esp. p. 318.

[7] J. R. Blaylock and W. N. Blisard, "Wine consumption by US men," *Applied Economics*, May 1993, pp. 645–51, esp. p. 649.

[8] John G. Cragg, "Some Statistical Models for Limited Dependent Variables with Application to the Demand for Durable Goods," *Econometrica*, September 1971, pp. 829–44.

[9] Mohamed Abdel-Ghany and J. Lew Silver, "Economic and Demographic Determinants of Canadian Households' Use of and Spending on Alcohol," *Family and Consumer Sciences Research Journal*, September 1998, pp. 62–90, esp. p. 65.

[10] Deanna L. Sharpe, Mohamed Abdel-Ghany, Hye-Yeon Kim, and Gong-Soog Hong, "Alcohol Consumption Decisions in Korea," *Journal of Family and Economic Issues*, Spring 2001, pp. 7–24, esp. p. 14.

[11] See Cragg, "Some Statistical Models," footnotes 5 (p. 830) and 6 (p. 832).

[12] To reduce heteroscedasticity, the ordinary-least-squares models used in this study actually predict the fourth root of the expenditure for those individuals with positive expenditures.

[13] Experiments run with the data presented in the text confirm that Tobit does not yield consistently plausible results for apparel and services. To test how Tobit and Cragg results compare in the present situation, expenditures for both apparel for adults and apparel for children were regressed on various characteristics, using a Tobit model. The first problem in doing so is that, as described earlier, the variables

differ in the first and second stages of the Cragg model. That is, several interaction terms for single fathers are included in the second stage that are not included in the first stage. To make the models consistent, these extra variables were excluded from the Tobit model. (In the second stages of the Cragg models, only two variables were found to be statistically significant: the variable denoting single fathers with two children was significant in both models, and the variable denoting single fathers aged 45 to 49 years was significant only for expenditures for children's apparel.) When the results of the Tobit model are used to predict the probability of purchase, however, they are not consistent with the results produced by the Cragg model, nor do they resemble values expected from the data themselves. For example, the actual percentage of single mothers in the sample who reported expenditures for adult apparel and services is 58 percent, and for children's apparel, the percentage is about 68 percent. (See table 5.) However, for each of these items, the Tobit model predicts virtual certainty of purchase (greater than 99 percent) in each case. This prediction is not consistent with the Cragg model's first-stage results, which are far more similar to the observed data. (Single mothers with average permanent income are predicted to have a 56-percent probability of purchasing apparel for adults and a 63-percent chance of purchasing children's apparel, according to the Cragg model.) When the results of the first and second stages of the Cragg models are compared, it is found that several variables change signs. However, only one sign-changing parameter estimate is statistically significant at the 95-percent confidence level in both stages: the intercept. In the first stage of the Cragg model, it is negative, whereas in the second, it is positive. The effect of the intercept in the first stage, then, is to lower the predicted probability of purchase in these models. However, in the second stage, the intercept acts as a "starting point" for expenditures. (In effect, it can be interpreted as saying, "Even if the control group has no permanent income, it is still predicted to spend at least this much on

apparel and services for children or adults.") As mentioned earlier, one of the weaknesses of Tobit is that the parameter cannot change signs across stages. Because the Tobit-derived intercept is "large" and positive, this forces the predicted probability of purchase to be extremely high for both types of apparel. In fact, even if a family's permanent income is zero, the predicted probability of purchasing apparel for children is nearly 96 percent! For single fathers (again, even those with zero permanent income), the predicted probability is slightly higher, at 98 percent. Similar results are observed for apparel for children: single mothers with zero permanent income have a predicted probability of purchase of 83 percent, and single fathers with zero permanent income have a predicted probability greater than 99 percent. In each case, when realistic permanent incomes are assumed, the predicted probability of purchase is greater than 99 percent. Given that the probability of purchase in these cases is strongly "upwardly biased," the probability-weighted estimates of both the marginal propensity to consume and permanent-income elasticity will undoubtedly also be biased. (The direction is impossible to know without any other measure by which to compare the intercepts. For example, if it is assumed that the probability intercept in Tobit is biased upward, it may be that the level-of-expenditure intercept is biased downward, because both events are measured in one parameter. Which effect dominates presumably determines in what direction the two parameters are also biased.) Hence, it is not surprising to find that the results for marginal propensities to consume and income elasticities obtained from the Tobit analyses in this experiment are, for the most part, not consistent with those obtained from the Cragg model. At any rate, this again demonstrates a weakness of Tobit—that is, that both events (probability and level of expenditure) are analyzed with the use of one set of parameter estimates. Thus, this article uses the Cragg model and leaves further examination of the Tobit model for future research.

APPENDIX B: *Ceteris Paribus* results

The tables in this appendix show how single mothers compare with single fathers, assuming the same permanent income and dwelling size. It is interesting to note that adding the extra permanent income to female-headed families—an increase of more than 55 percent— has a noticeable effect on those families' expected probabilities and levels of spending for most goods and services, but does little to change their expected marginal propensities to consume or their income elasticities.

Table B-1.	Expenditures of single parents on selected categories		
Variable		Men	Women
Permanent income (quarterly outlays, dollars)		$9,435	$9,435
Apparel and services (adults)		47.1	67.0
Apparel and services (children)[1]		47.6	71.8
Transportation (less trips)		98.8	99.3
Food away from home (less trips)		98.3	98.0
Fees and admissions (less trips)		62.5	65.8
Pets, toys, and playground equipment		46.5	57.7
Trips and travel		37.1	42.9
Babysitting and day care		28.3	47.8

[1] Male-income interaction coefficient is statistically significant at the 95-percent confidence level.

Variable	Men	Women
Permanent income (I)	$9,435	$9,435
Food at home:		
Probability, percent (P)	100.0	100.0
P'	0	0
$E(Y)$[1,2]	$826	$772
$E'(Y)$	.0237	.0332
MPC = $P'\,E(Y) + PE'(Y)$	.024	.033
Elasticity = MPC × $I/E(Y)$	.27	.41
Apparel and services (adults):		
Probability, percent (P)	47.1	67.0
P'	2.22E–05	2.64E–05
$E(Y)$[1,2]	$514	$574
$E'(Y)$	.0216	.0459
MPC = $P'\,E(Y) + PE'(Y)$	.022	.046
Elasticity = MPC × $(I/E(Y))$	.40	.75
Apparel and services (children):		
Probability, percent (P)	47.6	71.8
P'	9.80E–06	2.03E–05
$E(Y)$	$101	$133
$E'(Y)$	.0073	.0111
MPC = $P'\,E(Y) + PE'(Y)$	.004	.011
Elasticity = MPC × $(I/E(Y))$	.42	.76
Transportation (less trips):		
Probability, percent (P)	98.8	99.3
P'	1.70E–06	6.44E–07
$E(Y)$	$1,602	$1,280
$E'(Y)$	.1873	.1486
MPC = $P'\,E(Y) + PE'(Y)$	.188	.148
Elasticity = MPC × $(I/E(Y))$	1.11	1.09
Food away from home (less trips):		
Probability, percent (P)	98.3	98.0
P'	4.35E–06	4.50E–06
$E(Y)$[1]	$1,217	$731
$E'(Y)$	.0523	.0440
MPC = $P'\,E(Y) + PE'(Y)$	.057	.046
Elasticity = MPC × $(I/E(Y))$	.44	.60
Fees and admissions (less trips):		
Probability, percent (P)	62.5	65.8
P'	2.05E–05	3.10E–05
$E(Y)$	$389	$295
$E'(Y)$	.0202	.0223
MPC = $P'\,E(Y) + PE'(Y)$	.021	.024
Elasticity = MPC × $(I/E(Y))$	.50	.76
Pets, toys, and playground equipment (less trips):		
Probability, percent (P)	46.5	57.7
P'	1.17E–05	1.85E–05
$E(Y)$[1,2]	$524	$526
$E'(Y)$	.0033	.0339
MPC = $P'\,E(Y) + PE'\,Y$	.008	.029
Elasticity = MPC × $(I/E(Y))$	.14	.53
Trips and travel:		
Probability, percent (P)	37.1	42.9
P'	1.78E–05	3.20E–05
$E(Y)$	$933	$917
$E'(Y)$	.0979	.0872

Variable	Men	Women
MPC = $P'\,E(Y) + PE'(Y)$	.053	.067
Elasticity = MPC × $(I/E(Y))$	54	.69
Babysitting and day care:		
Probability, percent (P)	28.3	47.8
P'	1.16E–05	3.03E–05
$E(Y)$	$273	$515
$E'(Y)$	.0110	.0434
MPC = $P'\,E(Y) + PE'(Y)$	.006	.036
Elasticity = MPC × $(I/E(Y))$	.22	.67
Shelter and utilities (owners, with mortgage):[3]		
Probability, percent (P)	100.0	100.0
P'	0	0
$E(Y)$	$2,589	$2,880
$E'(Y)$	.1513	.1730
MPC = $P'\,E(Y) + PE'(Y)$	.151	.173
Elasticity = MPC × $(I/E(Y))$	.55	.57
Shelter and utilities (renters):[3]		
Probability, percent (P)	100.0	100.0
P'	0	0
$E(Y)$[1,2]	$1,248	$2,585
$E'(Y)$	.0458	.2251
MPC = $P'\,E(Y) + PE'(Y)$	.046	.225
Elasticity = MPC × $(I/E(Y))$	.35	.82

[1] Binary variable used to calculate this value for men is statistically significant at the 95-percent confidence level.

[2] Men's income effect used to calculate this value is statistically significantly different from the women's income effect at the 95-percent confidence level.

[3] MPC's and elasticities for homeowners are calculated assuming that single fathers have seven rooms and two bathrooms or half baths and that single mothers have six rooms and two bathrooms or half baths. For renters, both types of parents are assumed to have five rooms and one bathroom or half bath. For single mothers who are homeowners, the estimated expenditure $E(Y)$ increases to $2,943 when they are assumed to have seven rooms, and the MPC increases slightly, to 0.176. The elasticity estimate is unaffected by this "total" *ceteris paribus* assumption, falling to 0.56.

NOTE: Values are calculated from detailed regression coefficients, with results rounded.

Table B–3. Housing tenure, single parents

Variable	Men	Women
Probability of renting calculated by raising average permanent income of single mothers to match that of single fathers		
Permanent income (quarterly outlays, dollars)	$9,435	$9,435
Probability of outcome (renter, percent)	50.7	50.7
Probability of renting calculated by lowering average permanent income of single fathers to match that of single mothers		
Permanent income (quarterly outlays, dollars)	6,074	6,074
Probability of outcome (renter, percent)	55.2	66.7

Planning ahead: consumer expenditure patterns in retirement

*The 'graying' of the population creates
a need to examine the role
that retirement plays on expenditure decisions
of various demographic groups of retirees*

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The fastest growing segment of the U. S. population is composed of those aged 65 and older. The Bureau of the Census reported that in 1994, 1 in 8 Americans was in this age group, but projects that the ratio may be as high as 1 in 5 by 2050. Furthermore, with increases in life expectancy, today's adults will live an average of 17 additional years after reaching age 65.[1]

As this demographic pattern shifts, an increasing demand for research and data on the older population—specifically, on retired persons and their roles on consumers—is constantly in evidence: "baby boomers," "privatization of Social Security," "Medicare," and tips on financial planning are common topics of the daily print and video media. The sheer growth in numbers suggests that the spending patterns of this older population will also play an increasingly important role in the future economy, an assumption supported by recent trends in expenditure levels. A study of real (that is, inflation-adjusted) expenditures from 1984 to 1997 finds that "spending by older consumers has risen from 12.6 percent to 14.6 percent of all consumer spending."[2]

In addition to the concerns these issues may raise for policymakers, especially those involved with providing adequate care and protection for older consumers, the decision to retire has major implications for individuals and families. Understanding differences in spending patterns for preretired and retired consumers can help workers plan for the future.

Taken together, these items suggest that a study of expenditure patterns of retirees is warranted. Differences in expenditure patterns for preretirees and retirees are expected for many reasons. For example, income presumably will decline upon retirement. Given the relationship of income to expenditures, it is important to see how income differs—in level as well as in sources of receipt. Also, other demographic characteristics presumably play an important role in expenditure decisions, both before and after retirement. Therefore, examining the role these characteristics play is also important. In looking at spending patterns for families who are near retirement and comparing them with the patterns of those individuals who have actually exited from the workforce, this article provides valuable information about the impact of retirement on consumer spending.

Several issues are addressed here. First, background describing related research is presented. Second, data from the U.S. Consumer Expenditure Survey, which provide the basis for the analysis, are described. Third, demographic characteristics of "preretired" and "retired" consumers in this sample are presented and compared. Fourth, income and expenditure patterns are described for these groups. Finally, regression analysis is used to explore differences in expenditure patterns given that demographics and in-

come levels are different for preretired and retired consumers. (Logit and ordinary least squares results for the two groups are presented in a detailed appendix.)

Related research

Many previous studies related to the population aged 65 and older can be divided into two groups: those that focus on age, and those that focus on retirement. Both groups are important, and both have contributed to the analyses presented here.

Expenditure patterns by age. Rose Rubin and Kenneth Koelin examine how elderly households spend on necessities, compared with nonelderly households.[3] Using data from the 1980–81 and 1989–90 Consumer Expenditure Survey, they examine expenditures for housing, food at home, and healthcare, as well as income, demographics, and receipt of cash assistance (AFDC or SSI). The methodology used to examine the relationship between their variables of interest is based on the life cycle theory of consumption, with total expenditures acting as a proxy for permanent income. Rubin and Koelin's results indicate that, in general, older consumers spend a higher proportion of their budget on housing and healthcare than do the nonelderly, and that the receipt of financial assistance does play a role in the spending decisions of both age groups.

In a study of age groups within the older population, Mohammed Abdel-Ghany and Deanna Sharpe use Tobit analysis to determine whether tastes and preferences differ for those aged 65 to 74 and those aged 75 and older.[4] Using independent variables such as total expenditures (once again as a surrogate for permanent income), region of residence, education of reference person,[5] household size, race, and family type, the authors find differences between the "young-old" and "old-old" (as they term the groups) across all major categories of expense. Furthermore, the effect of the socioeconomic variables on spending patterns differed between the two age groups, and among spending categories.

Studies based on retirement status. Because this study compares retired households with those that have members nearing retirement, previous studies based on work status are discussed in more detail. Among the studies reviewed here, an article by Nancy E. Schwenk is unique in its focus on the levels and sources of income of retirees, using multiple government surveys as sources.[6] Schwenk provides some discussion of expenditures, specifically the fact that the allocation of total spending for retirement, pensions, and Social Security is significantly less for households in which the reference person has "reached retirement age (65 years or older)" than for those in which the reference person is aged 45 to 54. In terms of demographics, she notes that the majority of con-

sumers aged 65 years and older own their home, and that "of those who are homeowners, most owned their home free and clear (81 percent)." Finally, Schwenk finds that in 1991, income from dividends, interest, and rent provided about 20 percent of retirees' total income.[7]

An earlier article by Frankie N. Schwenk uses data from the 1987 Consumer Expenditure Survey to examine whether there are differences between those who opt for "early retirement" and those who continue to work beyond the age of 65.[8] In this study, F. Schwenk specifically compares the two groups in terms of family characteristics, asset levels, income, and expenditures. Using Probit analysis, the author finds that age, spouse's employment status, education, housing tenure, household size, marital status, and gender are significant factors in predicting the likelihood of being retired. Other comparisons show that "average dividend and interest [income] amounts were higher for retired than for working families," and that "health was the only category of expenditures for which households with a retired reference person spent more than those with an employed person."[9]

In a May 1990 article, Thomas Moehrle uses the Consumer Expenditure Survey to compare the average annual expenditures of elderly working and nonworking consumer units[10] across low, medium, and high income groups.[11] Moehrle finds that (1) "Nonworking elderly households spend more on food prepared at home than do working elderly households, regardless of income level," and (2) "Regardless of income level, nonworking elderly households spend more on health care than do working elderly households."[12] Note that Moehrle analyzes one age group, those with a reference person aged 62 to 74, and that the working status of the consumer unit is based solely on that of the reference person, regardless of whether any other members are working or not. Also, he does not specifically limit the nonworking households to those whose reference person is retired (for example, "nonworking" can mean the reference person is disabled, taking care of the home or family, or going to school). However, he finds that "79 percent [of the nonworking consumer units studied] had reference persons who classified themselves as retired."[13]

Rose Rubin and Michael Nieswiadomy compare demographic characteristics, income, and expenditures of retirees and nonretirees aged 50 or older from the 1986 and 1987 Consumer Expenditure Survey.[14] Their sample consists of complete income reporters only, with the retirement status based on that of the respondent.[15] Rubin and Nieswiadomy also divide their sample into three household types: single men, single women, and husband-wife couple households. Using Tobit regression analysis, they find "that the retired have a higher marginal propensity to spend (than the nonretired) for food, alcohol, housefurnishings, apparel, transportation, gas and motor oil, other vehicles, public transportation, health

care, entertainment, and cash gifts."[16] Also noteworthy is their conclusion that for both the retired and nonretired households, healthcare expenditures increase with educational attainment.

About the sample

This article uses data from the 1998 and 1999 Consumer Expenditure Interview Surveys. The Interview Survey is a rotating panel survey designed to collect information on major items of expense, household characteristics, and income. The questionnaire is administered to sample consumer units once per quarter for five consecutive quarters. The main goal of the initial household interview is to collect inventory information to be used for bounding purposes, that is, to ensure that expenditures reported in subsequent interviews took place during the appropriate reference period (in most cases, this will be the 3-month period prior to the interview date). While it is primarily designed to collect large (vehicles or appliances, for example) and recurring (such as, rent or utilities) expenditures that can be easily recalled on a quarterly basis, the Interview Survey captures up to 95 percent of all expenditures.[17]

In order to examine the effect of retirement on consumer spending patterns, the sample is divided into two groups: a preretired group and a retired group. Ultimately, it would be most useful to have data for the same family over some period of time to observe their expenditures both before and after retirement and compare them directly. Unfortunately, as discussed, the survey is not designed to follow families for extended time periods. Even using multiple years of data, it would be difficult to find families who are "working" in at least one quarter and then "retired" for the remaining quarter(s) of their participation. The results described here, then, must be interpreted cautiously, bearing this in mind. Nevertheless, the sample has been selected in such a way as to make these comparisons as appropriately as possible, given the data constraints.

To this end, a preretired consumer unit is defined as one whose reference person is aged 55 to 64, and is earning at least one type of labor income (that is, wage and salary income or self-employment income). This age group is chosen because, for many, it is the last stage of their working lives. Although some may choose to retire prior to reaching age 65, this study excludes any consumer unit from the "preretired" category in which there is a retired person (including a spouse). In contrast, a "retired" consumer unit is defined as one whose reference person is aged 65 to 74 and who is retired; that is, when asked about the occupation for which they received the most income, they report that they are not working due to retirement. Additionally, there are no earners in the "retired" households. Excluded from both groups (preretired and retired) are families in which the spouse (if present) is not

working either due to illness or disability, or due to unemployment. This omission is made because a consumer unit with a disabled member may have some vastly different spending patterns than an otherwise similar household, such as medical expenses. Furthermore, in the case of illness or disability, the decision not to work is not necessarily a voluntary one, but rather is the result of circumstances that make work impossible.[18] Similarly, an unemployed person presumably would like to work, and may eventually do so; therefore, these families may not display the same consumer expenditure patterns as those in which the spouse is not working for voluntary reasons (such as retirement or taking care of the home or family).[19] The age groups are chosen to compare those on the verge of retirement with those consumer units who have recently retired, allowing these analyses to focus on the effect of retirement as a single discrete event. Furthermore, previous research has shown that there are significant differences between those aged 65 to 74 and those aged 75 and older in terms of household characteristics, income, and expenditures.[20] Therefore, the consumer units whose reference person is aged 75 or older are removed from the retired sample in order to eliminate this age effect.[21]

To facilitate the analysis, the sample for this study is limited in scope. First, the sample is limited to three types of households: single men, single women, and husband-and-wife couples. These groups are selected in order to reduce the effect of family size on expenditure patterns. Additionally, the effects of other family member characteristics on expenditures are eliminated. For example, preretired families with children may be spending differently than those without children, because they may be expecting to send the children to college soon. Retired families with children may be supported by these children.[22] In either case, expenditures would be different from those who have children of different age, future plans, and so forth.[23] Even so, families with children are presumably the exception, rather than the rule for these families, especially those who are retired.

The separation of single men and single women is done in order to examine the effect of gender-related differences on spending patterns. For example, in terms of income, the lifetime earnings of men and women are expected to be quite different, especially given the generation being examined. Also, marital status is affected by differences in life expectancy (that is, there are more widowed single women than there are male widowers, as shown in table 1). These factors presumably will have an influence on spending patterns.

The type of household is determined by two pieces of information: the number of family members and the marital status of the reference person. For husband-and-wife couples, the values for these variables are obvious: that is, there are two persons in the consumer unit (one of which, by definition, must be the reference person) and the marital status of

Table 1.	Demographics of preretirees and retirees, by composition of consumer unit, Consumer Expenditure Interview Survey, 1998–99								

Characteristic	Single men			Single women			Married couples		
	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]
Number of consumer units	260	222	–	547	725	–	1,325	1,220	–
Age of reference person	59	70	41.976	59	70	73.192	59	70	99.809
Average number of:									
Rooms:									
Renter	4.0	3.0	4.590	4.4	3.9	3.396	4.8	4.6	.795
Homeowner	5.8	5.9	.650	5.7	5.8	.823	6.9	6.4	7.494
Bathrooms (including halfbaths):									
Renter	1.1	1.1	.102	1.3	1.2	1.458	1.4	1.6	2.307
Homeowner	1.7	1.7	.113	1.8	1.7	1.261	2.2	2.0	5.020
Vehicles	1.9	1.9	.272	1.2	1.2	1.961	2.7	2.3	6.384
Automobiles	1.3	1.2	2.397	1.1	1.1	2.053	1.6	1.4	6.501
Other vehicles	.6	.7	.859	.1	.1	1.159	1.1	.9	3.419
Percent									
Housing tenure:									
Homeowner:									
With mortgage	31.9	7.7	–	40.0	11.5	–	51.6	16.6	–
With no mortgage	29.6	64.0	–	35.8	68.3	–	41.0	78.2	–
Renter	38.5	28.4	–	24.1	20.3	–	7.4	5.3	–
Occupation of reference person:									
Working for wage or salary	91.1	0	–	94.1	0	–	85.6	0	–
Self-employed	8.9	0	–	5.9	0	–	14.4	0	.–
Retired	0	100.0	–	0	100.0	–	0	100.0	–
Marital status of reference person:									
Married	3.5	6.3	–	4.6	4.0	–	100.0	100.0	–
Widowed	11.9	43.2	–	27.4	71.7	–	0	0	–
Divorced	56.2	32.9	–	53.0	17.2	–	0	0	–
Separated	7.7	3.6	–	3.1	.7	–	0	0	–
Single (never married)	20.8	14.0	–	11.9	6.3	–	0	0	–
Race/ethnicity of reference person:									
Black	12.7	13.5	–	13.2	7.6	–	5.3	4.3	–
Hispanic	4.6	3.2	–	2.2	1.5	–	3.0	1.8	–
White and other	82.7	83.3	–	84.6	90.9	–	91.7	93.9	–
Education of reference person:									
Did not graduate high school	10.8	30.6	–	11.3	20.0	–	9.2	18.8	–
High school graduate	30.8	27.5	–	29.6	38.6	–	33.0	33.0	–
Some college									
(including A.A. degree)	23.5	16.2	–	33.6	24.7	–	26.9	22.3	–
College graduate (B.A. degree,									
and so forth)	22.3	15.3	–	14.6	10.9	–	16.2	17.9	–
Graduate/professional degree	12.7	10.4	–	10.8	5.9	–	14.7	8.1	–
Degree urbanization:									
Rural	6.9	9.5	–	10.8	11.6	–	13.2	13.9	–
Urban	93.1	90.5	–	89.2	88.4	–	86.8	86.1	–
Region of residence:									
Northeast	18.8	23.0	–	13.2	20.3	–	18.2	20.6	–
Midwest	17.3	28.8	–	24.5	23.2	–	29.9	25.3	–
South	39.2	22.1	–	39.3	36.3	–	33.4	33.5	–
West	24.6	26.1	–	23.0	20.3	–	18.6	20.6	–
Income distribution:									
1st quintile	10.2	36.4	–	17.1	50.2	–	4.1	9.2	–
2nd quintile	20.4	35.8	–	33.1	35.0	–	6.4	46.0	–
3rd quintile	27.3	13.9	–	26.3	12.1	–	16.6	28.6	–
4th quintile	26.9	8.1	–	16.7	2.2	–	26.9	12.4	–
5th quintile	15.3	5.8	–	6.8	.5	–	46.2	3.8	–

[1] Absolute values are displayed.

the reference person is married. For single-member consumer units, however, there are a variety of possible values for the marital status variable. A single man or woman may be widowed, divorced, separated, never married, or in a small number of cases, married. Even though a "married single person" seems oxymoronic, some plausible explanations exist. Considering that the household type is determined at the time of the interview, a married person whose spouse is living elsewhere (perhaps on a long-term work assignment, such as a military tour of duty) may be counted as a single person consumer unit. It could also be that some of these "married singles" are actually separated, though perhaps not legally so. In that case, the respondent may identify himself or herself as married, rather than separated. Either way, the spending patterns of a married person living alone for an extended period are assumed to mirror the spending patterns of a "true" single person more closely than those of a married couple.

The sample also includes only those consumer units that report ownership of at least one automobile, so that expenditures will be more comparable. The most obvious effect of automobile ownership is on transportation expenditures. Presumably, some retirees choose to sell or give away their automobiles due to a lack of need for personal transportation (for example, they are no longer going out to work every day). Maintaining an automobile can add many dollars of expenditure to the household budget. Not only are there costs for gasoline, motor oil, and the occasional repair, but automobile insurance may be expensive, and may increase as the driver grows older. Age-related health reasons may also play a part in this decision. Whatever the reason, lack of automobile ownership presumably limits mobility, and thus may affect other expenditures, such as those for food away from home, entertainment, and vacation and travel.

The above qualifications result in the following sample sizes: 260 preretired single men and 222 retired single men; 547 preretired single women and 725 retired single women; and 1,325 preretired couples and 1,220 retired couples. Note that these data are not weighted to reflect the population.

First, this article compares demographics, income, and quarterly expenditures of preretired and retired consumer units, within each household type examined (that is, single person or married couple). Some of the results of these comparisons may be expected based on the parameters set for each group. For example, the lower income levels reported for retirees are not surprising given that no one is earning labor income in those households. Thus, an important question is how retirement *itself* affects expenditure patterns: that is, whether tastes and preferences change in retirement, even if incomes are held constant. To this end, regression analysis is performed (using ordinary least squares and a modified Cragg method where necessary) to examine differences in marginal propensity to consume and income elasticity. These analyses help to establish whether or not differences in expenditure patterns are related to retirement, per se, or to an income effect associated with retirement.

Demographics

As previously noted, some of the household characteristics are determined by the sample selection criteria. For example, the average age of the reference person is constrained to be within the allowed ranges for the preretired group (55 to 64) and retired group (65 to 74). Across the three household types studied, the average age for preretired reference persons is 59 years, and that for retired reference persons is 70 years. (See table 1.) Additionally, because automobile ownership is a condition of the sample selection process, the average number of vehicles is greater than one in each case.

However, some findings are not so predictable. For example, contrary to the popular notion that "everyone" moves to Florida (or at least the "Sunbelt") upon retirement, single preretirees are more likely to be located in the South than single retirees. This difference is most pronounced for single men: 39 percent of preretirees live in the South, compared with 22 percent of retirees. For single women, the difference is less pronounced: 39 percent of preretirees live in the South, compared with 36 percent of retirees. However, for married couples, almost no difference exists; about one-third of married couples studied live in the South both before and after retirement.

Single men. Single retired men are more likely to be homeowners (72 percent) than are single preretired men (62 percent). The difference is even more pronounced if the homeowner holds no mortgage against his property: 64 percent of single male retirees own their homes outright, compared with only 30 percent of the preretired. Regardless of work status, more than 90 percent of single men live in urban areas. Additionally, despite the large plurality of preretired single men in the South (39 percent), after retirement, single men have the most even distribution of the study sample. Ironically, the South has the lowest percentage of retired men—22 percent. It is the Midwest that claims the highest percentage of single retired men (29 percent).

There is little difference between single male retirees and single male preretirees in terms of race or ethnicity. More than 80 percent of both groups have reference persons who are white (or other race, including Asian, Pacific Islander, and others), and the least represented race for both groups is Hispanic (3 percent of retired and 5 percent of preretired single men).

For single retired men, the distributions among levels of education and among income quintiles follow the same nega-

tive slope. For example, the largest percentage of single retired men (31 percent) has attained the least education, that is, they did not graduate from high school. Similarly, the largest proportion of single male retirees are also in the lowest income quintile (36 percent). Furthermore, the highest category of educational attainment (graduate or professional degree) accounts for the smallest proportion of single retired men (10 percent), and the highest income quintile contains the smallest proportion of single retired men (6 percent). Given the expected correlation between income and education, this pattern is not surprising. The correlation also appears to hold for single preretired men, although the ordering of categories is reversed: single preretired men are more likely to have at least a high school degree than are single retired men, and they are also more likely to be in one of the top three quintiles than are single retired men. This may reflect a generational effect, as educational opportunities have become more available and more socially and economically valuable for each successive generation.

Single women. The housing tenure and degree of urbanization for single women follow the same patterns as those described for single men, that is, retirees are more likely to be homeowners without a mortgage than are preretirees, and regardless of work status the majority of the sample resides in urban rather than rural areas. However, unlike single men, a higher percentage of single women, both retired and working, live in the South (36 percent of single retired women and 39 percent of single preretired women) compared with other regions. It is also interesting to note that the largest difference in the proportion of retired and preretired single female residents is in the Northeast. Only 13 percent of (or about one in eight) single female preretirees live in this region, compared with 20 percent of (or one in five) single female retirees.

In terms of race, again, white and other is the predominant group for both single female retirees (91 percent) and single female preretirees (85 percent). There is, however, a notable difference in the proportion of single female retirees who are black (8 percent) and single female preretirees who are black (13 percent). Roughly 2 percent of both groups of single women are Hispanic.

Unlike single retired men, the largest percentage of single retired women have completed high school (39 percent), compared with other levels of education, but only 6 percent have obtained a graduate or professional degree. Again, those in the preretired group are more likely than retirees to have at least attended college. While the income distribution for single retired women is similar to that of single retired men, the disparity between the lowest and highest quintiles is much greater for single women. In fact, half of all single retired women fall into the lowest quintile, and less than 1 percent fall into the

highest quintile. More single preretired women are in the second income quintile (33 percent) than are in any other quintile, and a much higher percentage of preretirees (7 percent) than retirees fall into the highest income quintile.

Husband-and-wife couples. Once again, homeownership is more likely in the retired sample than in the preretired sample of married couples. Furthermore, there is a lower percentage of renters in the married couple sample (5 percent of retirees and 7 percent of the preretired households) than in the singles samples. Roughly one-third of husband-and-wife consumer units live in the South, regardless of work status, and the Midwest is the only region in which the proportion of retired married couples (25 percent) is smaller than that of preretired married couples (30 percent).

There is little difference between retired married couples and preretired married couples in the percentage of reference persons who are white or other races, which is once again the most represented category in the sample.

Approximately one-third of the reference persons in both retired and preretired husband/wife consumer units are high school graduates. The largest differences between the two groups are found at the lowest and highest levels of educational attainment. While 19 percent of the retirees in this sample did not graduate from high school, the same is true for only 9 percent of the preretired married couples. At the other end of the scale, only 8 percent of reference persons in retired couples have earned a graduate or professional degree, compared with 15 percent of preretired couples.

The comparison of income distribution among retired and preretired married couples is different from that of single men and that of single women. First, the highest percentage of married retirees (46 percent) fall into the second quintile, not the first quintile as is the case for single male and single female retirees. In fact, only 9 percent of retired husband-and-wife households are in the lowest quintile. For the preretired married couples, the income distribution is more concentrated, that is, only 4 percent of the sample are in the lowest quintile and 46 percent are in the highest income quintile.

Income

Before discussing the comparative results, it is important to provide a more detailed definition of some of the income sources examined in this study. For example, with income as with demographics, there are some results that are determined by the sample selection criteria. Specifically, no retired households have labor income, including wages and salaries and self-employment income. For this reason, a new income category is created in order to make the total income for retirees and preretirees more comparable (income before taxes, which

is commonly used as a measure of total income, includes labor income). The components of comparable income are those income sources that are available to both retired and preretired consumer units: that is, comparable income includes interest and property income, unemployment insurance and workers' compensation, public assistance, and several other sources, but it excludes wages and salaries, self-employment income, or income from Social Security, and private and government retirement. It should be noted that more than 20 percent of preretirees in all three household types report some retirement income, which could be explained by early retirement. (See table 2.) Specifically, some persons may choose to retire from a career before age 65, but continue to earn some labor income from another job; in this event, they are classified as

preretired in this study.[24] Even so, retirement income is not included in the comparable measure, because it may be a supplemental source for the preretired, but it is the main (or perhaps sole) source of income for retirees, and thus it is not comparable. Another important consideration regarding the income analysis is that the figures presented are for average annual income per consumer unit. To ensure more meaningful comparisons, only incomes from complete income reporters are shown.

Single men. Not surprisingly, single male retirees have significantly lower *total* incomes ($24,738) than do preretired single men ($42,033). Approximately 77 percent of the preretirees' income is from wages and salaries ($32,196), while

Table 2. Percent reporting and average annual income, preretirees and retirees, by composition of consumer unit, Consumer Expenditure Interview Survey, 1998–99 (complete income reporters only)

Category	Single men			Single women			Married couples		
	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]
Percent reporting income source:									
Income before taxes	100.0	100.0	–	100.0	100.0	–	99.9	100.0	–
Wages and salaries	89.4	0	–	92.7	0	–	94.1	0	–
Self-employment income	14.8	0	–	6.1	0	–	19.9	0	–
Social Security, private, and government retirement	25.9	98.3	–	22.8	99.3	–	25.1	100.0	–
Interest, dividends, rental income, and other property income	37.5	35.3	–	31.2	27.4	–	32.3	36.9	–
Unemployment, workers' compensation, and veterans' benefits	5.6	3.5	–	3.8	.3	–	3.1	2.7	–
Public assistance, supplemental security income, and food stamps	.5	6.4	–	1.2	5.2	–	.8	1.7	–
Regular contributions for support (including child support and alimony)	.5	0	–	2.8	2.1	–	.2	.3	–
Other income	3.2	1.7	–	.2	.2	–	1.6	.8	–
Comparable income[2]	42.6	41.6	–	36.4	34.3	–	36.0	39.8	–
Annual means:									
Income before taxes	$42,033	$24,738	5.137	$30,443	$15,690	10.919	$74,816	$27,570	15.669
Wages and salaries	32,196	0	14.929	25,376	0	21.736	59,068	0	30.893
Self-employment income[3]	–	0	3.833	–	0	3.453	–	0	4.232
Social Security, private, and government retirement	3,482	17,815	10.722	2,177	13,758	24.149	4,533	25,038	33.288
Interest, dividends, rental income, and other property income	1,321	5,813	3.127	840	1,678	2.164	1,939	2,285	.878
Unemployment, workers' compensation, and veterans' benefits	392	172	.817	106	37	1.574	62	80	.607
Public assistance, supplemental security income, and food stamps	2	106	2.027	14	60	2.243	44	94	0.888
Regular contributions for support (including child support and alimony)	5	0	1.000	425	156	1.553	57	51	.093
Other income	1,894	832	.929	0	1	.948	40	21	1.157
Comparable income[2]	3,614	6,923	1.662	1,386	1,932	1.285	2,142	2,532	.961

[1] Absolute values are displayed.
[2] Income before taxes less wages and salaries; self-employment income; and Social Security, private and government retirement income.
[3] Mean incomes from this source are less than $1.

retirement income ($17,815) contributes 72 percent of the retirees' income. However, when considering only *comparable* income sources, the relationship between preretired and retired single men reverses. From those sources that are available to both groups, retirees earn more ($6,923) than do preretirees ($3,614). Yet, the percentage of single men reporting these sources of comparable income is similar for the retired sample (42 percent) and the preretired sample (43 percent). Nevertheless, this "reversal of fortune" can be at least partially explained by the higher income earned by retired single men from dividends, interest, rental and other property— $5,813 compared with $1,321 earned by preretired single men. In fact, the average member of the single-male-retiree group earns more income from this source than does any other demographic group in the study. Interestingly, there is no great difference in the percent reporting this source of income (35 percent of single retired men and 37 percent of preretired single men). Presumably, the retirees have had their investments longer and are thus enjoying the time value of money. In addition, retirees may have different types of investments than preretirees based on their needs and goals: income generating investments versus growth funds, for example. Finally, retired single men are much more likely to receive public assistance, which includes supplemental security income and food stamps (6 percent report income from this source), than are preretired single men (less than 1 percent receive this type of income).

Single women. As with single male households, *total* income before taxes is significantly higher for the preretired single women ($30,443) than for the single retired women ($15,690), but *comparable* income is higher, albeit less so, for retirees: $1,932 compared with $1,386. Also, a higher percentage of retired single women report income from public assistance (5 percent) than do preretired single women (1 percent). Single women in both groups derive a higher proportion of their income from one primary source than do single men. In the case of female retirees, 88 percent of their income comes from retirement sources, while 83 percent of preretirees' earnings come from wages and salaries. In addition, single women, regardless of work status, are the only household type of which more than 1 percent of the sample reports income from alimony and child support.

Husband-and-wife couples. Income before taxes is $74,816 for preretired married couples and $27,570 for retired married couples. Wages and salaries account for 79 percent of the preretirees' income, while 91 percent of retirees' income comes from retirement sources. The figures for comparable income show the same inverse relationship as those in the single households discussed above. Married couples, however, differ from the singles in that the difference between the re-

tired and preretired couples' income from interest and dividends is not significant. Another difference is that where the percent reporting income from public assistance is substantially higher for retirees in the single samples, 2 percent of retired couples and 1 percent of preretired couples report this source of income.

Outlays

As with the analysis of income, there are some important methodological distinctions that should be discussed before the comparison of outlays is presented. First and foremost is the decision to use an outlays approach, which differs from the average annual expenditures shown in the standard Bureau of Labor Statistics publications of the Consumer Expenditure Survey data. Specifically, in these publications, certain items of expense are excluded, such as mortgage principal which is listed as a reduction of liabilities, not an expenditure. The housing expenditures do include the mortgage interest paid by the consumer unit. The same is true for vehicle payments made during the reference period on financed vehicles (only the interest is included as an expenditure). However, if a vehicle is purchased during the reference period, the total price (less any trade-in value) is recorded as an expenditure. As a result of this approach, the mean vehicle expenditure value will approximate the average annual payments made by those who finance their vehicles because, presumably, there will be a relatively small number of actual vehicle purchases during any one quarter, and these will balance out vehicle payments for those individuals who are still making them. However, this method is not suitable when regression analysis involving outlays is employed, as it is in this study. The reason is that those consumer units that happened to purchase during the interview period will have a huge expenditure imputed to them, even if they financed the automobile. Those who are still making payments on their automobile will have their expenditures artificially deflated, because the principal payments will not be counted as expenditures. Therefore, in this study, the actual amounts paid out by consumer units are examined, including regular mortgage and vehicle principal payments. Although, technically, this may be called an "outlays approach," in this text, the terms "outlay" and "expenditure" are used interchangeably for convenience.

For these analyses, it is particularly important to include mortgage principal payments in the comparison of housing expenditures. As previously noted in the demographics section, the majority of retirees in all three household types are homeowners without mortgages, while a higher proportion of preretirees are still making payments on their homes. Therefore, in order to allow for an accurate comparison of housing expenditures in pre- and post-retirement families, the "true" housing payment must be examined. In addition, the outlay

for housing in this study is comprised of shelter (mortgage principal and interest, rental payments, property taxes, and maintenance and repair) and utilities. Presumably, some renters may have utility costs included in their regular rental payment. Therefore, utilities are included so that homeowners and renters have comparable housing expenses.

In addition to housing, some other spending categories have been modified from their standard publication formats to better fit this study. For instance, marketers and advertisers often promote the notion that travel is a popular pastime for retired persons. Presumably this is because of the free time that retirees would have spent working, and perhaps because they now have fewer familial and financial obligations (for example, any children they have are grown, and any home mortgage is likely to be paid off). In order to capture these vacation and trip outlays, a new category is created, which includes such items as housing expenses for a vacation property, and food, alcoholic beverages, lodging and transportation on trips.

Also, it is important to note that expenditures for pensions and Social Security (that is, payroll deductions and other deposits to government, railroad, or private retirement plans) are excluded from this analysis. This omission allows for a more comparable measure of total outlays, as these expenditures are negligible for post-retirement households. The reason is that for preretirees, these "expenditures" are actually a form of "savings," which are then a source of "dissavings" for retirees. That is, rather than contributing to a pension fund, a retiree is more likely to "draw it down." In other words, the same pension plans to which a family contributes *prior* to retirement will likely be the main source of income for that family *after* retirement. In addition, no other forms of savings are included as "expenditures" in this analysis.[25] Therefore, for the same reason that retirement sources are omitted from "comparable" income (as previously discussed), contributions to pension plans are omitted as a category of expenditure. Finally, note that the analyses presented here use average quarterly outlays per consumer unit.

In general, the results indicate that the preretired and retired households do spend differently, across all family types examined. (See table 3.) For the majority of spending categories within each household type (single male, single female, and married couple), the differences are statistically significant. In fact, the following categories are significant for all three groups: total quarterly outlays, food away from home, shelter and utilities, total transportation, private transportation, apparel and services, total healthcare, health insurance, prescription drugs, education, alcoholic beverages, tobacco, and life and other insurance. Many of these differences are easily intuited: for instance, one expects significant differences in total outlays due to the significant differences in total income (as measured by income before taxes). Also,

given the homeownership rates and mortgage status comparisons, it is not surprising that preretired consumer units spend more than retirees on shelter and utilities. Additionally, private transportation (expenses for the consumer unit's owned vehicles) is significantly higher for preretired singles and couples than for retirees. Even though the sample has been restricted to those households who own at least one vehicle, retirees may have paid off their vehicles, and may have lower maintenance and gasoline expenditures due to less use of the vehicle than preretirees, who may be driving to work every weekday.

Single men. Preretired single men spend more overall ($6,804)—and for most categories of interest—than do single male retirees ($5,050 total quarterly outlays). The only exceptions are healthcare, for which retirees spend almost twice as much ($560) as the preretired households spend ($293), and cash contributions, for which retired men spend $649 compared with $268 spent by preretirees. Within the category of healthcare, outlays are higher by retirees for each component, but are only significantly so for insurance and prescription drugs.

Interestingly, expenditures for food at home are not significantly different for retired and preretired single men, but preretirees spend significantly more for food away from home ($372) than retired single men spend ($224). Concomitantly, retired single men (73 percent) report food-away-from-home purchases less frequently than preretirees (90 percent). Thus, even the average expenditure for retired single men who purchase food away from home is substantially smaller ($305) than the average expenditure for similar preretired single men ($415).[26] The most obvious explanation is, once again, the difference in income for these groups. But perhaps this is a mobility issue, as retirees are older and may have health-related barriers to going out. This would seem to be supported by their significantly smaller outlays for vacations and trips, contrary to the proposed notion of increased leisure and travel after retirement. Furthermore, retirees spend significantly less on entertainment items and services ($178) than do preretirees ($311)—entertainment expenditures also include some items related to mobility, such as tickets to sporting and cultural events (theater, concerts, and so forth).

Outlays for apparel and services are also significantly lower in the post-retirement single male households: $123 compared with $208 spent by preretirees. Presumably, at least part of the preretired male's purchases will be for work clothing, a cost no longer applicable to the retirees. Also, deductions for employer-sponsored plans may account for some of the relatively higher outlays for life insurance by the preretired sample—$94 compared with $40 spent by retired single men.

| Table 3. | Quarterly outlays and t-values, preretirees and retirees, by composition of consumer unit, Consumer Expenditure Interview Survey, 1998–99 | | | | | | | | |

Item	Single men			Single women			Married couples		
	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]	Preretired	Retired	t-value[1]
Total quarterly outlays	$6,804	$5,050	2.941	$6,222	$4,911	3.941	$10,482	$7,705	8.471
Food at home	580	536	1.139	513	559	2.384	961	880	3.448
Food away from home	372	224	4.249	182	110	6.357	449	245	5.770
Shelter and utilities	2,250	1,286	7.795	2,283	1,496	6.730	3,082	1,831	10.592
Transportation	1,145	643	2.666	809	530	3.916	1,700	1,131	4.478
Private transportation	1,135	639	2.640	802	528	3.855	1,685	1,130	4.373
Public transportation	9	4	1.241	7	2	2.565	15	2	5.682
Vacation/trips	387	212	2.219	271	211	1.485	623	577	.791
Apparel and services	208	123	2.973	297	217	2.613	428	231	9.195
Healthcare	293	560	3.214	333	542	6.986	617	970	8.453
Health insurance	149	271	5.337	132	294	11.340	293	542	14.735
Medical services	100	201	1.340	123	127	.177	206	204	.046
Prescription drugs	33	58	2.284	61	101	4.537	89	187	8.626
Medical supplies	12	31	1.140	17	21	.765	30	37	1.033
Entertainment	311	178	3.910	238	196	2.325	572	435	1.146
All other outlays	940	1,050	.255	917	721	.976	1,331	947	2.915
Housing while attending school[2]	–	–	1.409	–	–	1.635	25	1	2.881
Personal care	33	30	.845	70	65	.874	98	84	4.169
Reading	36	28	1.661	45	43	.514	67	55	4.074
Education	123	6	2.453	108	17	2.239	155	17	3.742
Alcoholic beverages	86	46	3.347	37	20	3.156	90	51	6.394
Tobacco	91	58	2.622	49	30	3.424	83	39	7.795
Cash contibutions	268	649	.948	365	328	.220	428	484	.514
Life and other insurance	94	40	3.649	79	36	3.266	201	120	5.517
Miiscellaneous expenditures[3]	244	222	.253	209	224	0.221	275	153	2.110

[1] Absolute values are displayed.
[2] Mean outlays for this category are less than $1.
[3] Includes legal fees; accounting fees; miscellaneous fees, parimutuel losses; funeral expenses; cemetery lots, vaults, maintenance fees; safe deposit box rental; checking accounts, other bank service charges; finance charges excluding mortgage and vehicle; credit card memberships; miscellaneous personal services; occupational expenses; expenses for other property; interest paid, home equity line of credit (other property);

Single women. The comparisons of outlays by pre- and post-retirement women are similar to those of men described above. Preretired single women spend significantly more than retired women on food away from home, shelter and utilities, transportation (both private and public), apparel and services, entertainment, education, alcoholic beverages, tobacco, and life and other insurance. Retirees, on the other hand, generally have higher outlays for healthcare.

Unlike in the analysis of single men, however, single female retirees spend significantly more than their preretired counterparts for food at home—$559 versus $513, and they spend less for cash contributions (although this difference is not statistically significant). Also notable is the lack of significance in the difference between vacation spending by female retirees ($211) and that spent by female preretirees ($271).

Husband-and-wife couples. The analysis of outlays by married couples yields some interesting results that are different than the previous discussions of single men and women. For example, the difference in entertainment spending is not significant, with preretired couples spending $572 and retired couples spending $435. There are also a few categories of outlays for which the differences are significant in the couples sample, but are not so in the singles samples, namely, all other outlays and its components—housing while attending school, personal care, reading, and miscellaneous expenditures. It is also interesting to note that like the single female results, spending by married retirees for food at home is significantly different from that spent by preretired consumer units. However, in the case of married couples, preretirees spend more ($961) than do retirees ($880), the opposite as is seen in the single female comparison.

Outlay category	Single men		Single women		Married couples	
	Preretired	Retired	Preretired	Retired	Preretired	Retired
Food at home	99.2	100.0	99.8	99.9	99.9	99.9
Food away from home	89.6	73.4	80.1	73.1	89.4	80.7
Shelter and utilities (owners)	100.0	100.0	100.0	100.0	100.0	100.0
Shelter and utilities (renters)	100.0	100.0	100.0	100.0	99.0	100.0
Apparel and services	81.5	68.5	86.3	77.0	88.3	79.5
Healthcare less insurance[1]	49.6	60.4	73.1	75.0	80.1	84.8
Transportation	98.9	98.7	99.8	97.7	99.6	99.5
Entertainment	89.6	73.9	88.1	84.7	95.3	90.8
Out-of-town trips	40.8	32.4	41.7	36.4	55.6	48.0

Table 4. Percent reporting expenditures that are analyzed using regression analysis

NOTE: These figures are calculated from the full sample. Therefore, the values for percent reporting may differ slightly from those observations actually used in the regression. Missing values for some independent variables cause a few observations to be removed from the regressions, as described in the main text.

[1] Percent reporting positive values only. Those reporting net reimbursements—that is, negative values—and those reporting no expenditure are treated as "nonexpenditures." Reimbursements are rare, however. The largest percentage occurs for retired single males, and accounts for 3.6 percent of the group. Reimbursements are reported for 1.5 percent of preretired single males, and 1.4 percent of preretired married couples. For all others, reimbursements account for percentages greater than 0.9 but less than 1.0 percent.

Regression analysis and results

Thus far, the results presented have examined differences between the preretired and retired groups in general ways. For example, retirees may spend differently on certain goods or services than might preretirees. But how much of this effect is due to the lifestyle differences (such as additional free time) that accompany retirement, and how much is due to other differences, such as lower income or other factors? To help discern the effect that retirement has, regression analysis is useful.

In this study, two types of regressions are performed: logistic regressions, or "logits," and ordinary least squares (OLS) regressions.[27] Each has a different purpose. The logits are used to ascertain the probability that an event (such as a particular expenditure) will occur, given characteristics of the consumer unit. The logits are only necessary for expenditures that are not universally made. The OLS regressions describe how expenditure levels are related to certain characteristics. (For example, most expenditures are expected to increase with income, but by how much?) Table 4 shows the percent reporting expenditures that are used for regression analysis, and table 5 shows the number of observations used for ordinary least squares regressions.

The expenditures selected for study are either those that are basic goods and services (food at home, shelter and utilities, apparel and services, healthcare less insurance, and transportation) or items that might be expected *a priori* to differ with retirement (food away from home, entertainment, and out-of-town trips) due to the increased availability of leisure time. All categories are examined using OLS. Of the basic goods, only apparel and services requires a logit analysis. However, the "leisure" expenditures all require logit analysis.

Healthcare is the one basic expenditure group that requires special consideration. Only the "out-of-pocket" expenditures for actual medical goods and services are examined, because the quality of health insurance coverage can differ so much for these groups. Presumably, all the retirees in our sample are eligible for Medicare coverage. This is not true of the preretirees. Thus, the utility of comparing probability of coverage is limited. However, even if one only examines expenditures for actual drugs, medical supplies, and services, the results are still unclear: if the expenditures for "noninsurance" healthcare are higher for retirees, is this due to health reasons, or to less adequate coverage? The analysis in this study shall not attempt to answer these questions; even so, because healthcare is an important factor in maintaining quality of life, the results are reported for those who may find its inclusion useful (such as those who only want to see the "bottom line"—that is, the expected difference in spending associated with retirement, whatever the reason may be).

The independent variables for each of the regression models are similar. For the logistic regressions, the independent variables used describe occupation of the reference person (retired or preretired, self-employed); marital status for singles (divorced, separated, or never married); race (black) and ethnicity (Hispanic) of the reference person; educational attainment of the reference person (high school graduate, some college, college graduate, attended graduate school); degree of urbanization for the consumer unit (that is, urban or rural location); region of residence of the consumer unit; housing tenure (home owned without mortgage or renter); and total outlays that are used as a proxy for "permanent" income. (Also, an interaction term is included to see if the relationship of expenditure to "permanent" income differs in retirement.) This study uses "permanent" instead of "current" (that is,

| Table 5. | Number of observations for ordinary least squares regressions | | |

Outlay category	Single men	Single women	Married couples
Food at home	480	1,270	2,542
Food away from home	396	968	2,168
Shelter and utilities (owners)	317	985	2,354
Shelter and utilities (renters)	160	279	153
Apparel and services	364	1,030	2,139
Healthcare, less insurance	263	944	2,096
Transportation	476	1,254	2,532
Entertainment	397	1,096	2,370
Out-of-town trips	161	467	1,206

NOTE: The married couple regressions are missing one observation due to one negative observation for permanent income; presumably, this couple had a relatively large reimbursement for healthcare that overwhelmed their other expenditures in the quarter in which it was received.

annual) income because, according to the "permanent income hypothesis," expenditures are often made with expectations of future earnings in mind.[28] In this study, it is particularly important to use "permanent income" as opposed to "current income," because table 2 shows current income is vastly different for the preretired and retired groups. This is because the retiree by definition has ceased working, and so he or she must live off of savings and other assets that have been accumulated. Any income received will presumably be based on these assets (such as interest or dividends), or will be from some source related to previous labor (such as Social Security or pension income). Even so, these income sources by themselves may not be enough to sustain a comfortable living situation for most consumers (retired or otherwise), and would be an unrealistic measure of the consumer unit's actual economic status.[29] Expenditures reflect rational decisions based on levels of wealth (rather than income alone) that are available to the consumer unit, and therefore serve as a better indicator of the consumer unit's tastes and preferences for particular goods and services. (Additionally, by using "permanent income" instead of "current income," there is no need to distinguish "complete" and "incomplete" reporters, as virtually all respondents provide some information on outlays.)

The purpose of regressions, as noted earlier, is to allow "ceteris paribus" comparisons. That is, given that two consumer units are identical except for the issue in question (in this case, retirement), how does this issue influence the expected outcome for the affected consumer? To aid comparisons, a control group is selected, and its characteristics are used with the regression coefficients to predict the outcomes for each consumer unit (that is, preretired or retired). In this study, the control group consists of consumer units who are: currently working for a wage or salary; widowed (if single); neither black nor Hispanic; lacking a high school degree; living in an urban area of the South; and homeowners with a mortgage. In a few of the OLS regressions, additional controls are applied. For example, it is assumed that single homeowners

live in a dwelling with six rooms (including bedrooms) and two bathrooms (including half baths), compared to four rooms and one bathroom for single renters. For couples, owners are assumed to have seven rooms and two bathrooms, while renters are assumed to have five rooms and one bathroom. It is also assumed for all consumer units that they own one automobile and no other vehicles. These characteristics play roles in different models; for example, outlays for shelter and utilities will obviously vary with the size of the dwelling; transportation outlays will depend on number of vehicles owned (automobile or otherwise). Some other outlays, such as entertainment, may also depend on numbers of vehicles. One entertainment expenditure category specifically accounts for expenditures on vehicles like boats or motorcycles. In some cases, the consumer unit owns these vehicles (such as a boat) specifically for recreational purposes; in other cases, having access to certain vehicles (such as motorcycles) may make access to certain areas a greater possibility, and the opportunity may drive the expenditure.

Also, before performing the regressions, all expenditure values (including permanent income) were transformed by taking their natural log. This was done to minimize heteroscedasticity, which can be a problem in regression models. However, it has a convenient side-effect in that the marginal propensities to consume (MPC) and income elasticities have special properties: For all the basic goods (except apparel and services), the MPC becomes proportional to the expected budget share for the item under study; the elasticities simply equal the coefficient on natural log of permanent income. (For more information, see the appendix.)

Before examining the results, two caveats are in order: First, for the "ceteris paribus" analysis, note that average total outlays are used as the "control" amount, and that the average for preretired consumers is the operative value. This may not seem realistic, since the tables clearly show that outlays decline with retirement. There are several reasons for this: Even if tastes and preferences do not change in retirement, retirees are more likely to have paid off their mortgage, which would substantially reduce outlays. Additionally, as noted earlier, because the Consumer Expenditure Survey is not longitudinal, it is impossible to obtain a large sample whereby the act of retirement may be observed, let alone one where several years (or at least time periods) of expenditures both prior to and after retirement may be observed. Given the method used to define the sample, then, it could be that some selection bias is introduced into the data; that is, perhaps a substantial amount of the "preretirees" are consumers who plan to continue to work during retirement, though not necessarily at their original career job. These consumers may have different characteristics (including tastes) than those who retire completely, and thus they "select" themselves out of the retiree sample. However, assuming this problem is minimal, the issue still remains that

expenditures decline in retirement for those in the sample. The "ceteris paribus" results are concerned with the effect of the retirement decision itself, so in this discussion there is no problem. (See tables 6 and 7.) However, some readers may be interested in learning how expenditures differ in reality as a total result of retirement and its concomitant decisions that result in lower total outlays. For that purpose, tables are included in Appendix A that show the "total effect" of retirement. (That is, most characteristics, such as region of residence, are held constant, but permanent income is allowed to decrease.)

Second, one other factor cannot be separated out from the retirement decision: by definition, the retirees in this sample are older than the preretirees. Therefore, some of the retirement effect may be increased or decreased by an age effect. (This may be especially true for an expenditure such as healthcare less insurance.)

Finally, the number of observations differs from the full sample size in a few cases. This is generally due to missing data; for example, occasionally a consumer unit does not provide information on number of rooms or bathrooms in the household, and those records are deleted from the regression. Also, in the case of healthcare less insurance, the expenditure can be reported as negative because of reimbursements made by insurance companies. If a consumer unit made an expenditure for healthcare in one quarter and received reimbursement in a subsequent quarter, the healthcare expenditure during the "reimbursement" quarter will appear as a negative value. Although on average the reimbursements and the expenditures will cancel each other out, in the

regression results they can be problematic.[30] Fortunately, these occurrences are infrequent.

Table 5 shows the total number of observations used in the OLS regressions.[31] For apparel and services and the "leisure" regressions, observations are less than the total sample size because only those who had positive outlays are included in the OLS stage, as explained in the appendix.

Single men. In the case of single men, retirement status appears to play an indirect role in expenditure patterns. Although MPCs and elasticities appear to differ in several of the "basic" goods cases, none of these is associated with a statistically significant retirement effect, either for retirement in general or for the interaction of retirement and income, except for transportation. In this case, the predicted expenditure is significantly related both to the "event" of retirement and to a change in the income/expenditure relationship. Outlays are predicted to drop significantly both in economic and statistical terms. (The difference is $265 per quarter.) The MPC declines substantially—from less than $0.18 to more than $0.09. The decrease in elasticity indicates that this good falls from "luxury" status for preretirees to "necessity" status for retirees. This may indicate that before retirement, single men, if given more income, will buy vehicles more frequently or more expensive vehicles than they would upon retirement. Again, retirees may also have less need to drive (therefore, they pay less for gasoline and other travel expenditures), as they do not have to go to work every day. (Note that single women and married couples also experience declines in predicted expenditures for transportation in retirement, although in those cases the difference is not statistically significant.)

As for the "leisure" goods tested, two show a difference related to the probability of purchase. In the first case, food away from home, the overall difference in predicted probability is not meaningful—falling from less than 95 percent for preretirees to 93 percent for retirees; the bottom line is most single men are predicted to purchase food away from home at least once every few months in retirement. Nor is the effect on MPC meaningful; it remains under $0.02 regardless of retirement status. However, for out-of-town trips, the results are more interesting. The probability of purchase declines 3 percentage points, due both to the retirement effect and a difference in the income/probability relationship after retirement. The predicted expenditure for actual buyers

Table 6.	Predicted probabilities, "ceteris paribus"				
[In percent]					
Ceteris paribus criteria	Probability of purchase		Significance indicator		
	Preretired	Retired	Retirement	Income	
Single men:					
Food away from home	94.6	93.0	(¹)	–	
Apparel and services	60.6	70.3	–	–	
Healthcare	39.8	71.6	–	–	
Entertainment	90.7	88.2	–	–	
Out-of-town trips	33.2	29.6	–	–	
Single women:					
Food away from home	81.4	83.6	–	–	
Apparel and services	82.0	74.1	–	–	
Healthcare	84.2	87.8	–	–	
Entertainment	92.8	90.2	–	–	
Out-of-town trips	33.8	27.5	–	–	
Married couples:					
Food away from home	92.7	86.9	–	–	
Apparel and services	90.5	85.6	–	–	
Healthcare	89.1	93.4	–	–	
Entertainment	96.7	93.8	–	–	
Out-of-town trips	45.4	46.6	–	–	

¹ Significant at the 95-percent confidence level.
Dash indicates result not significant at the 95-percent confidence level.

Table 7. **Elasticities, and so forth under "ceteris paribus"**

[Probabilities in percent]

Ceteris paribus criteria	Single men		Single women		Married couples	
	Preretired	Retired	Preretired	Retired	Preretired	Retired
Variables:						
Permanent income	$6,804	$6,804	$6,222	$6,222	$10,482	$10,482
Log income	8.825266	8.825266	8.735847	8.735847	9.257415	9.257415
Owners:						
Rooms/bedrooms	6	6	6	6	7	7
Bathrooms/halfbaths	2	2	2	2	2	2
Renters:						
Rooms/bedrooms	4	4	4	4	5	5
Bathrooms/halfbaths	1	1	1	1	1	1
Food at home:						
Probability of purchase	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure (buyers only)	$536	$503	$470	[1,2]$546	$897	$878
Marginal propensity to consume	.014	.024	.019	.034	.020	.022
Elasticity	.18	.32	.26	.39	.24	.27
Food away from home:						
Probability of purchase	94.6	[1]93.0	81.4	83.6	92.7	86.9
Predicted expenditure (buyers only)	$193	$162	$169	$119	$305	[1,2]$252
Marginal propensity to consume	.013	.015	.017	.012	.022	.014
Elasticity	.45	.65	.64	.63	.76	.57
Shelter and utilities (owners):						
Probability of purchase	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure (buyers only)	$2,509	$2,005	$2,185	$1,947	$3,090	$2,972
Marginal propensity to consume	.216	.137	.246	.206	.166	.148
Elasticity	.59	.46	.70	.66	.56	.52
Shelter and utilities (renters):						
Probability of purchase	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure (buyers only)	$1,523	$1,769	$2,088	$1,923	$1,992	$1,570
Marginal propensity to consume	.096	.147	.240	.248	.103	.068
Elasticity	.43	.57	.71	.80	.54	.45
Apparel and services:						
Probability of purchase	60.6	70.3	82.0	74.1	90.5	85.6
Predicted expenditure (buyers only)	$111	$99	$142	[2]$99	$253	[1,2]$183
Marginal propensity to consume	.012	.013	.024	.013	.024	.015
Elasticity	.73	.92	1.08	.83	1.00	.83
Healthcare (less insurance):						
Probability of purchase	39.8	71.6	84.2	87.8	89.1	93.4
Predicted expenditure (buyers only)	$226	$370	$158	[1,2]$218	$228	$336
Marginal propensity to consume	.012	.045	.014	.033	.016	.020
Elasticity	.35	.82	.55	.95	.72	.61
Transportation:						
Probability of purchase	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure (buyers only)	$1,018	[1,2]$753	$476	$373	$1,197	$889
Marginal propensity to consume	.175	.094	.052	.043	.110	.083
Elasticity	1.17	.85	.68	.71	.96	.98
Entertainment:						
Probability of purchase	90.7	88.2	92.8	90.2	96.7	93.8
Predicted expenditure (buyers only)	$188	$155	$139	$134	$284	$236
Marginal propensity to consume	.021	.014	.015	.015	.026	.021
Elasticity	.76	.63	.67	.69	.95	.91
Out-of-town trips:						
Probability of purchase	33.2	29.6	33.8	27.5	45.4	46.6
Predicted expenditure (buyers only)	$98	$96	$157	[1,2]$155	$435	$530
Marginal propensity to consume	.012	.006	.012	.012	.030	.047
Elasticity	.82	.43	.48	.49	.73	.92

[1] Retirement coefficient is statistically significant at the 95-percent confidence level.
[2] Coefficient for retired income term is statistically significant at the 95-percent confidence level.

does not differ much, but the MPC is cut in half—from $0.012 to $0.006, as is the income elasticity—from 0.82 to 0.43.[32]

Single women. The probabilities of purchase are not significantly affected by retirement for single women, according to the logit results. However, in several cases, retirement is directly and indirectly related to differences in expenditures for those who purchase. Food at home, healthcare (less insurance), and out-of-town trips all exhibit such differences, and apparel and services exhibits an indirect difference (that is, the income coefficient is statistically significant, but not the retirement variable itself). For food at home, a sizable increase in expenditures is predicted—about $76 per quarter. Although not statistically significant, food away from home also shows a decline in predicted expenditure for single female retirees ($50). It is interesting to note that the table in the appendix, in which retirees are assumed to have lower permanent incomes than preretirees, shows that the situation reverses. Although food-at-home expenditures are predicted to rise (by $28), the difference is less than the predicted decrease in food-away-from-home expenditures ($65).

An interesting difference occurs for apparel and services for this group. After retirement, the MPC for this item is cut in half. As a result, the elasticity falls substantially as well. Before retirement, apparel and services are treated as "luxury" goods for single women; afterward, they become "necessity" goods, although they still have a higher elasticity than most of the other expenditure items. It is also interesting to note that although preretired single women are predicted to spend more ($142) than preretired single men ($111) each quarter, male and female retirees have the same predicted expenditure ($99) for apparel and services. This is also roughly true when incomes are assumed to decline for retirees—both single male and female retirees are predicted to spend about $80 on apparel and services. (See appendix.)

Married couples. As with singles, married couples appear to have some substantial differences either in probability of purchase or level of purchase, but not many are statistically significant. The only two expenditures that show significant differences are food away from home and apparel and services. Both show decreases in the predicted expenditure due to the direct retirement effect and changes in the income effect. The apparent difference in probability for food away from home is the largest of the three groups studied, falling nearly 13 percentage points. Similarly, the expenditure for those who report purchases falls by $85 per quarter. Nevertheless, the difference in MPC is not even noticed when rounded to the full cent (that is, $0.02 before and after retirement). The elasticity declines somewhat, from 0.76 to 0.62, but still remains in the moderately high level of inelastic expenditures.

Apparel and services, though, show a pattern very similar to single women. Although all groups show declines in predicted expenditures, probably because of less need for work attire or uniforms as noted before, apparel and services fall from unitary elasticity for preretired couples to inelasticity (0.83) for retirees. The MPC is also substantially reduced (from $0.024 to $0.015). Predicted expenditures fall by $70 for this group.

THIS STUDY HAS ANALYZED EXPENDITURE PATTERNS BY PRERETIREES AND RETIREES to help understand how expenditure patterns differ upon retirement for single men, single women, and married couples. Many differences have been found. Some of these are undoubtedly due to differences that are to be expected upon retirement. For example, retirees have lower incomes than preretirees, and therefore would naturally be expected to spend less on many items. However, preretirees are found to have different demographic characteristics than retirees, even when examining carefully selected groups (single men, single women, and married couples with no children). Again, some of these are expected; age is by definition greater for retirees than preretirees, and retirees are more likely to own their home outright (that is, the mortgage is paid off) than are preretirees. Others are not necessarily predictable *a priori*, such as differences in proportions of each group that are located in various regions of the country. Nevertheless, each of these characteristics could have an effect on expenditure patterns. To control for these differences, and to attempt to ascertain whether income differences are solely responsible for expenditure differences or whether tastes and preferences differ in retirement, regression analyses are performed.

From the regression results, it is difficult to draw general conclusions about the role of retirement in expenditure decisions. For example, the results for single men showed few statistically significant differences in probability of reporting expenditures or in the predicted outlay for items. However, more were significant for single women and married couples. Nevertheless, some interesting findings are presented. For example, in each group studied, both the probability of purchase and predicted expenditure for food away from home are lower for retirees than preretirees. Because these results are calculated assuming income is equal for the pre- and post-retirees, it may indicate that the "utilitarian" purpose of food away from home outweighs the "recreational" purpose of food away from home. That is, the preretirees may be purchasing more food away from home more frequently because they do not have the same amount of leisure time as the retirees. However, given the lack of statistical significance of many of the parameters used to compute these results, this interpretation should be viewed with caution.

Retirement is a major event in a working person's life, accompanied by many lifestyle changes, such as a reduc-

tion in labor income and an increase in leisure time. This article documents some of the potential consequences of these changes. These issues are particularly important today with the "graying" of the population; it is only a few years until the "baby boomers" reach retirement age. This analysis should be useful not only to professionals and policymakers who study the effects of changing demographics on the economy at large, but also to retirement planners and counselors, as well as to those who plan to retire soon themselves. □

Notes

NOTE: Additional tables can be obtained on the Internet version of this article at **http://www.bls.gov/cex/csxart.htm**

[1] See *65+ in the United States,* Current Population Reports, Special Studies (U.S. Bureau of the Census, 1996), pp 23–190.

[2] Geoffrey D. Paulin, "Expenditure patterns of older Americans, 1984–97," *Monthly Labor Review,* May 2000, pp. 3–28.

[3] Rose M. Rubin and Kenneth Koelin, "Elderly and nonelderly expenditures on necessities in the 1980s," *Monthly Labor Review,* September 1996, pp. 24–31.

[4] Mohammed Abdel-Ghany and Deanna L. Sharpe, "Consumption Patterns Among the Young-Old and Old-Old," *Journal of Consumer Affairs,* Summer 1997, pp. 90–112.

[5] The reference person is the first person mentioned by the survey respondent when asked: "Start with the name of the person or one of the persons who owns or rents this home."

[6] Nancy E. Schwenk, "Trends in the Economic Status of Retired People," *Family Economic Review,* 1994, 7(2), pp. 19–27.

[7] Ibid., pp. 24–25.

[8] Frankie N. Schwenk, "A Comparison of Households Headed by Persons 55 to 65 Years of Age: Retired and Employed," *Family Economic Review,* 1990, 3(3), pp. 19–25.

[9] Ibid., pp. 22, 24.

[10] A consumer unit is defined as members of a household related by blood, marriage, adoption, or other legal arrangement; a single person living alone or sharing a household with others but who is financially independent; or two or more persons living together who share responsibility for at least two out of three major types of expenses—food, housing, and other expenses. In this article, *consumer unit* and *household* are used interchangeably.

[11] Thomas Moehrle, "Expenditure patterns of the elderly: workers and nonworkers," *Monthly Labor Review,* May 1990, pp. 34–41.

[12] Ibid., p. 34.

[13] Ibid., p. 36.

[14] Rose M. Rubin and Michael Nieswiadomy, "Expenditure patterns of retired and nonretired persons," *Monthly Labor Review,* April 1994, pp. 10–21.

[15] A complete income reporter is a consumer unit that provides values for at least one of the major sources of its income, such as wages and salaries, self-employment income, and Social Security income. A complete reporter may not provide a full accounting of all income from all sources, however.

[16] Rubin and Nieswiadomy, "Expenditure patterns...," p. 36.

[17] The 1996–97 Consumer Expenditure Survey 2-year report notes that the "Interview survey collects detailed data on an estimated 60 to 70 percent of total household expenditures. In addition, global estimates—that is, expense patterns for a 3-month period—are obtained for food and other select items. These global estimates account for an additional 20 to 25 percent of total expenditures." Source: Bureau of Labor Statistics, *Consumer Expenditure Survey, 1996–97,* Report 935 (U.S. Department of Labor, September 1999), p. 256.

[18] It is important to note that some retirees in our sample may be "retired due to disability." However, in the Consumer Expenditure Survey, there is no way to identify those who are both retired and disabled.

Respondents may select only one of the categories—"retired" or "not working due to disability."

[19] The other possible occupational statuses for the spouse are "working without pay" or "not working" because they are either going to school or doing something else (that is, not working for a reason not already described).

[20] Beth Harrison highlights the differences in expenditure levels and shares between these two age groups from the 1984 Consumer Expenditure Interview Survey, finding them to be distinct in most major categories. (See "Spending patterns of older persons revealed in expenditure survey," *Monthly Labor Review,* October 1986, p. 15–17.) In addition, in a study following up on Harrison's findings, Pamela Hitschler (p. 3) finds that "consumer units in the younger group spent, on average, a significantly larger amount on every major expenditure category except housing and healthcare in both years [1980 and 1990 are compared]." ("Spending by older consumers: 1980 and 1990 compared," *Monthly Labor Review,* May 1993, pp. 3–13.)

[21] This "age effect" is assumed to include differences by age in health status. Although health status can be an important influence on the expenditures of older consumers, there are no concrete measures of health status available in the Consumer Expenditure Survey.

[22] As described previously, the definition of "preretired" and "retired" depends on the occupational status of the reference person and spouse, in the case of married couples. It is possible that one of the parents owns the home, and is therefore the reference person, but the child moves back in with them to provide economic support.

[23] Even eliminating families with children does not guarantee that the couple is childless. College students, when living in university-sponsored housing, are considered to be separate consumer units from their parents. Additionally, children may have reached the age of majority, and may have moved out to establish consumer units of their own. However, the survey does not collect information in such a way as to allow the selection of singles or couples who do not have children at all. Therefore, although it is possible that some of these families purchase items for their children that those without children would not, it is not possible to identify those families with the possibility of such additional spending.

[24] Recall that the definition of retirement in this study is based on the self-reported occupation of the reference person. Thus, it is possible to retire from one's life-long work and to pursue other avenues of employment. The "retiree" may choose to work for pay in a field that was previously a hobby, or perhaps may seek a low-wage job to keep active, but not for income, *per se.*

[25] While it is true that some "expenditures," such as mortgage principal, may be considered an "investment" in some cases, most homeowners do not own their home solely for investment purposes, as they might a stock or bond; they also consume the housing services the home provides. Similarly, some consumers may own life insurance policies that pay annuities at some point; however, the policy is not merely a savings vehicle; it is primarily a purchase of protection of one's estate in case of unexpected events.

[26] Calculated by dividing the average expenditure for the whole group ($372 for preretirees, and $224 for retirees) by the percent reporting, shown in table 6 (89.6 percent for preretirees, and 73.4 percent for retirees).

[27] See the Technical Notes section for a detailed explanation of the regression methodology, including the model specifications.

[28] See Milton Friedman, *A Theory of the Consumption Function* (Princeton, NJ: Princeton University Press, 1957).

[29] There are also empirical reasons for using "permanent" income in this case. Respondents do not always provide information on "current" income, and even those who do may not provide a full accounting of all income from all sources. Furthermore, data regarding assets and liabilities are only collected on a limited basis in the Interview survey. However, the primary goal of the Interview Survey is to collect expenditures.

[30] One possible solution is to use four complete quarters for each consumer unit, rather than treat each quarter independently as is done in this article. However, even this solution does not provide a balanced treatment of medical expenditures and reimbursements. For example, a reimbursement reported in the second interview (the first interview during which these data are collected) will have no matching expenditure because that expense would have been incurred by the consumer unit prior to its participation in the survey. Likewise, a medical expenditure reported in the fifth and final interview may very well be reimbursed afterward, when the consumer unit is no longer a survey participant. There is no way to capture these prior expenses or future reimbursements.

[31] Because the logit models share the same specification, and because they predict the probability of an expenditure occurring, nearly all of them have the same number of observations as the sample size for the group under study. The exception is the set of healthcare less insurance models. The logit models have fewer observations than the sample for the group under study in this case, because the negative

healthcare outlays are omitted from the sample before running the regression. (For single men, the total is 470 observations; for single women, it is 1,260 observations; and for married couples, it is 2,515 observations.)

[32] At first glance, the predicted value for out-of-town trips may appear low, but there are at least two reasons for this. First, out-of-town trips are defined in the survey either as trips that last at least overnight for recreation purposes, or "day trips" in which the participant travels at least 75 miles from home. Therefore, they may be short in duration and not costly. Second, this phenomenon may be due to the econometrics underlying the model. The specification may be inaccurate due to omitted variables, improper transformation of the dependent or independent variables, or other reasons. However, the standard errors of the relative coefficients are wide enough to encompass an extremely large range of predicted values. This is because, as noted, $E(lnY)$ is the predicted value resulting from the regression, and $exp[E(lnY)]$ is the predicted value for the expenditure. A very small deviation in $E(lnY)$ can lead to a very large difference in $exp[E(lnY)]$. For example, as shown in the table, the current predicted value for preretirees is $98. This is based on $E(lnY)$ of approximately 4.58. However, if $E(lnY)$ increases by 1 to 5.58, $exp[E(lnY)]$ increases to $265. Even at the 90-percent confidence level, an estimate of 5.58 is plausible; if all relevant parameters are evaluated at the lowest level in the 90-percent confidence interval, $E(lnY)$ is approximately −3.88; if all are evaluated at the highest level in the 90-percent confidence interval, $E(lnY)$ is approximately 12.99. The same reasoning applies to travel expenditures for single women. Applying the confidence intervals to their parameters yields an estimated range from 0.51 to 9.59 for $E(lnY)$.

APPENDIX A: Results of regression analysis

In tables 6 and 7, results were shown assuming "ceteris paribus." That is, all characteristics (including permanent income) except retirement were assumed to be constant for the groups compared and the results were computed on that basis. In reality, permanent income declines substantially in retirement. For the reader's convenience, the following

tables show the "full effect" of retirement as estimated from the regressions discussed in the text. Only characteristics that are not explicitly related to retirement (such as whether one lives in an urban or rural area) are held constant. However, permanent income is evaluated at its mean for retirees in the following calculations. (See tables A-1 and A-2.)

Table A-1.	Probabilities of purchasing selected goods and services for preretired and retired consumers, allowing full retirement" effect, 1998–99				
[In percent]					
Consumer type	Probability of purchase		Significance indicator		
	Pre-retired	Retired	Retirement	Income	
Single men:					
Food away from home	94.6	89.3	[1]	–	
Apparel and services	60.6	57.3	–	–	
Healthcare (less insurance) .	39.8	63.6	–	–	
Entertainment	90.7	83.2	–	–	
Out-of-town trips	33.2	23.7	–	–	
Single women:					
Food away from home	81.4	79.9	–	–	
Apparel and services	82.0	68.6	–	–	
Healthcare (less insurance) .	84.2	86.1	–	–	
Entertainment	92.8	87.6	–	–	
Out-of-town trips	33.8	23.2	–	–	
Couples:					
Food away from home	92.7	80.1	–	–	
Apparel and services	90.5	77.9	–	–	
Healthcare (less insurance) .	89.1	89.7	–	–	
Entertainment	96.7	89.3	–	–	
Out-of-town trips	45.4	34.9	–	–	

[1] Significant at the 95-percent confidence level.
Dash indicates result not significant at the 95-percent confidence level.

Table A-2. Predicted outcomes given full retirement effect					
	Single men		Single women		Couples	
Variables	Preretired	Retired	Preretired	Retired	Preretired	Retired
Variables:						
Permanent income	$6,804	$5,050	$6,222	$4,911	$10,482	$7,705
Log income	8.825266	8.527144	8.735847	8.499233	9.257415	8.949625
Owners:						
Rooms/bedrooms	6	6	6	6	7	7
Bathrooms/halfbaths	2	2	2	2	2	2
Renters:						
Rooms/bedrooms	4	4	4	4	5	5
Bathrooms/halfbaths	1	1	1	1	1	1
Food at home:						
Probability of purchase (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure	$536	$457	$470	[1,2] $498	$897	$809
Marginal propensity to consume	0.014	0.029	0.019	0.040	0.020	0.028
Elasticity	0.18	0.32	0.26	0.39	0.24	0.27
Food away from home:						
Probability of purchase (percent)	94.6	[2] 89.3	81.4	79.9	92.7	80.1
Predicted expenditure (buyers only)	$193	$136	$169	$104	$305	[1,2] $220
Marginal propensity to consume	0.013	0.018	0.017	0.013	0.022	0.018
Elasticity	0.45	0.68	0.64	0.63	0.76	0.62
Shelter and utilities (owners):						
Probability of purchase (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure	$2,509	$1,746	$2,185	$1,666	$3,090	$2,531
Marginal propensity to consume	0.216	0.161	0.246	0.223	0.166	0.171
Elasticity	0.59	0.46	0.70	0.66	0.56	0.52
Shelter and utilities (renters):						
Probability of purchase (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure	$1,523	$1,494	$2,088	$1,591	$1,992	$1,365
Marginal propensity to consume	0.096	0.167	0.240	0.260	0.103	0.081
Elasticity	0.43	0.57	0.71	0.80	0.54	0.45
Apparel and services:						
Probability of purchase (percent)	60.6	57.3	82.0	68.6	90.5	77.9
Predicted expenditure (buyers only)	$111	$79	$142	[2] $81	$253	[1,2] $146
Marginal propensity to consume	0.012	0.014	0.024	0.013	0.024	0.016
Elasticity	0.73	0.89	1.08	0.81	1.00	0.86
Healthcare less insurance:						
Probability of purchase (percent)	39.8	63.6	84.2	86.1	89.1	89.7
Predicted expenditure (buyers only)	$226	$292	$158	[1,2] $172	$228	$284
Marginal propensity to consume	0.012	0.046	0.014	0.033	0.016	0.023
Elasticity	0.35	0.79	0.55	0.94	0.72	0.64
Transportation:						
Probability of purchase (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Predicted expenditure	$1,018	[1,2] $584	$476	$316	$1,197	$659
Marginal propensity to consume	0.175	0.098	0.052	0.046	0.110	0.083
Elasticity	1.17	0.85	0.68	0.71	0.96	0.98
Entertainment:						
Probability of purchase (percent)	90.7	83.2	92.8	87.6	96.7	89.3
Predicted expenditure (buyers only)	$188	$132	$139	$115	$284	$182
Marginal propensity to consume	0.021	0.017	0.015	0.016	0.026	0.022
Elasticity	0.76	0.65	0.67	0.69	0.95	0.95
Out-of-town trips:						
Probability of purchase (percent)	33.2	[1,2] 23.7	33.8	23.2	45.4	34.9
Predicted expenditure (buyers only)	$98	$77	$157	[1,2] $120	$435	$373
Marginal propensity to consume	0.012	0.005	0.012	0.010	0.030	0.037
Elasticity	0.82	0.35	0.48	0.42	0.73	0.76

[1] Coefficient for retired income term is statistically significant at the 95-percent confidence level; retirement coefficient is statistically significant at the 95-percent confidence level.
[2] Retirement coefficient is statistically significant at the 95-percent confidence level.

APPENDIX B. Regression techniques

Some expenditures, such as food at home, or shelter and utilities, are reported by virtually all participants in the Consumer Expenditure Survey. For these items, the choice of regression technique is straight-forward: Ordinary least squares (OLS) suits them well. However, many expenditures are not universal. These purchases may not be made because of tastes and preferences (for example, tobacco and smoking supplies) or because of durability of the item (for example, vehicle purchases). In this study, four such variables are examined. Three (food away from home, entertainment, and out-of-town trips) are probably examples of the first situation (tastes and preferences dissuade some consumers from purchase) while the fourth may be an example of the second situation (perhaps the consumer had suffi-cient amounts of apparel during the last quarter, and did not need services, such as dry cleaning or repair). These kinds of expenditures require special treatment in their analysis.

One set of models designed to handle these situations is called the "double hurdle" set of models. The set gets its name because the consumer must first decide whether to purchase the item, and then how much to purchase. In these models, the hurdles are modeled in two stages: stage one models the probability of purchase; and stage two models the level of purchase for those who buy the good. Re-sults of the two stages are used together to predict the expenditure for a given consumer.

One popular form of double hurdle model is the Tobit model. In this model, the "hurdles" are estimated with the same independent variables. The stages are estimated in such a way that one set of parameter estimates is produced, and these parameters can be used to estimate probability of purchase (using the cumulative density function, as with probit) and the marginal propensity to consume (as with OLS). The predicted expenditure is equivalent to the predicted expenditure for those who purchase weighted by the probability of purchase.[1] However, a major drawback of Tobit is the restrictions it makes on the results. First, because one set of independent variables is used, the model is only useful when the exact same set of variables predicts both the probability of purchase and the level of expendi-ture. This is not always the case. For example, the probability of purchasing health insurance may depend on the size of one's family. However, if a particular policy charges one premium for "family" coverage, regardless of the number of members of the family, the Tobit model has a weakness in predicting expenditures for that policy. Furthermore, the Tobit model assumes that the "direction" of each variable is the same for the probability and for the level of consump-tion. This may not be true. For example, an article describing wine consumption by U.S. men finds that those who have at least a high school education are more likely to drink wine than men who have lower levels of education; however, they also find that men with at least a high school education drink less wine than those who have lower levels of education.[2]

Other models have been proposed, however, to handle the "double hurdle" situation. The models used in this study are based on a type described by John G. Cragg.[3] In Cragg's method, the probability of purchase is estimated separately from the level of expenditures. Cragg's approach has many advantages over the Tobit. The ability to separate the probability of purchase and level of expenditure equa-tions allows differences in variables and signs across the two stages of the analysis, providing Cragg's approach with a "considerable interpretational advantage" over the Tobit model, according to Mohamed Abdel-Ghany and J. Lew Silver.[4] Additionally, "Tobit … forces zero observations to represent corner solutions," according to other researchers, who go on to discuss a weakness in Tobit already

addressed—namely, that it "presumes that the same set of variables and parameter estimates determine both the discrete probability of a nonzero outcome and the level of positive expenditures…."[5]

Although Cragg's models use probit to predict the probability of purchase, he notes that logit can be used instead.[6] Many standard econometric textbooks point out that logit, when applied, produces probability estimates that are nearly identical to probit estimates. However, logit is much easier to use and interpret. The equation for predicting probability of purchase *(P)* is:

$$P = exp(a + bX)/[1 + exp(a + bX)]$$
where
a is the intercept of the logit equation
b is a vector of parameter estimates
X is a vector of independent variables.

The formula can be entered into a standard spreadsheet to estimate probabilities of purchase for different consumers. Furthermore, the equation is easily differentiated to find the marginal relationship of probability to a particular variable. (For example, if income rises by $1, how much does the probability of purchase change?) With probit, an equation must be estimated, and the results must be looked up in a statistical table to find out the overall probability of an event occuring, as well as the marginal effect on probability from changing a variable.

In the version of the Cragg model used in this paper, the probabil-ity of purchase is estimated as suggested with a logistic regression. Separately, OLS is used to estimate expenditures for those who pur-chase the item.[7] To get the final results, the predicted probability of purchase obtained from the first stage is multiplied by the predicted expenditure for those who purchase. This essentially produces an average predicted expenditure, weighted by the probability of pur-chase. To illustrate the intuition behind obtaining this weighted aver-age predicted expenditure, suppose that a large sample of consumers is selected randomly. Suppose that 25 percent of the participants purchased a particular item. Suppose that this item sold for $100. The average expenditure for all consumers is then $25, or 25 percent multiplied by $100. If a smaller sample is randomly selected from this large group, the expected value of the average of that smaller sample is also $25. This is because if a large number of random samples were pulled from the total sample, and each time the average expenditure was recorded, then the "grand average" (that is, the aver-age of the averages) is expected to be $25.

When estimating the marginal propensity to consume and elastic-ity for the Cragg models, the logit results are taken into account. This is because income is assumed to influence expenditures both directly (through level of expenditure) and indirectly (by changing the prob-ability of purchase). The mathematical details are provided in the following sections ("Marginal Propensity to Consume (MPC)" and "Elasticities.")

As a final point, there are some expenditures for which Tobit may be appropriate, in that this technique assumes that, given enough time, all consumers will eventually purchase the given item. For example, less than 100 percent of all consumer units report expendi-tures for apparel and services every quarter, but given enough time, it is reasonable to assume that 100 percent will eventually purchase some. However, Tobit still suffers the weaknesses described earlier, and for convenience, the Cragg model is used for all variables ana-lyzed in this study. Further examination of the Tobit model will be left for future research.

Marginal Propensity to Consume (MPC). The marginal propensity to consume (MPC) is defined as the change in expenditure given a unit change in income. In this case, "permanent income" is the relevant variable for change.

The "OLS only" regressions described in the text (for food at home; shelter and utilities; and transportation) have the following specification:

$$E(lnY) = a + blnI + cX$$
where
$E(lnY)$ is the predicted (or "expected") value of the dependent variable
a is the intercept
b is a parameter estimate
lnI is the natural log of permanent income
cX represents all other independent variables multiplied by their regression coefficients.

In this case, the MPC is calculated by finding the change in the predicted expenditure given a \$1 increase in permanent income, or $\partial E(Y)/\partial I$. Although the model is specified to calculate $E(lnY)$, the desired result is easily obtained:

$$\partial E(lnY)/\partial I = \partial(a + blnI + cX)/\partial I$$
$$1/[E(Y)]*\partial E(Y)/\partial I = b*(1/I) = b/I$$
$$\partial E(Y)/\partial I = b*[E(Y)/I]$$

This result has an interesting property in that the MPC is proportional to the budget share (that is, specific outlay divided by total outlays), with the proportion equal to the parameter estimate for lnI.

This still leaves one question: If the model predicts $E(lnY)$, what is $E(Y)$? This also is easily solved, in that:

$$E(Y) = exp[E(lnY)]$$

Using this formulation, one need only select a group of interest, use the regression results to determine $E(lnY)$, and then follow the procedures indicated. In this study, the "group of interest" is the control group described in the text.

The Cragg-based models have a more complicated specification, but it is nevertheless solvable to yield the MPC. The MPC is still defined the same way and is still represented the same way mathematically; that is,

$$MPC = \partial E(Y)/\partial I.$$

However, the initial formulation is more complicated. The desired result is actually

$$E(Y) = P*exp[E(lnY)]$$
where P is the probability of observing an expenditure.

To find $\partial E(Y)/\partial I$, the product rule of calculus is used. That is:

$$\partial E(Y)/\partial I = P'exp[E(lnY)] + Pexp'[E(lnY)]$$

Recall that:

$$P = exp(\alpha + \beta lnI + \lambda X)/[1 + exp(\alpha + \beta lnI + \lambda X)])$$
where
λX is a vector of all independent variables except income, each multiplied by their parameter estimates.

Therefore, to find P', the quotient rule is used:

$$P' = (f'g - fg')/g^2$$
where
$f = exp(\alpha + \beta lnI + \lambda X)$
$g = 1 + exp(\alpha + \beta lnI + \lambda X)$
$f' = g' = (\beta/I)exp(\alpha + \beta lnI + \lambda X)$

Because f' and g' are equal in this case, this simplifies algebraically to:

$$P' = [f'(g - f)]/g^2;$$

and, because g equals $(f + 1)$, this reduces even further to:

$$P' = [f'(f + 1 - f)]/g^2 = f'/g^2.$$

Now, with the much simplified result, it can be shown that:

$$P' = [(\beta/I)exp(\alpha + \beta lnI + \lambda X)]/[1 + exp(\alpha + \beta lnI + \lambda X)]^2.$$

Again, by substitution, this reduces to:

$$P*\{[\beta/I]/[1 + exp(\alpha + \beta lnI + \lambda X)]\}.$$

Therefore,

$$MPC = P*\{[\beta/I]/[1 + exp(\alpha + \beta lnI + \lambda X)]\}*exp[E(lnY)] + Pexp'[E(lnY)];$$
$$exp'[E(lnY)] = exp[E(lnY)]*E'(lnY);$$
$$exp[E(lnY)] = E(Y);$$
$$E'(lnY) = \partial E(lnY)/\partial I = 1/E(Y)*\partial E(Y)/\partial I = 1/E(Y)*[b*E(Y)/I] = b/I;$$

Alternatively, because $E(lnY)$ equals $a + blnI + cX$,

$$E'(lnY) = \partial E(lnY)/\partial I = \partial(a + blnI + cX)/\partial I = b*(1/I) = b/I;$$
$$\therefore MPC = P*\{[\beta/I]/[1 + exp(\alpha + \beta lnI + \lambda X)]\}*E(Y) + P*[E(Y)*(b/I)];$$
or
$$MPC = P*E(Y)*\{[\beta/I]/[1 + exp(\alpha + \beta lnI + \lambda X)]\} + P*b[E(Y)/I]$$

Because the terms P and $E(Y)$ are common to both pieces of the complicated right-hand side of this equation, mathematically, the MPC can be simplified by factoring these terms out, and multiplying them by the sum of the remaining pieces. However, the formula is left in this form for the moment, to illustrate an intuitive point: Note that the MPC is derived from the predicted value of the expenditure for those who purchase as weighted by the probability of purchase. Note that the second term on the right-hand side, that is, $P*b[E(Y)/I]$, is the same MPC as was found before, except that it is weighted by the probability of purchase. The remaining term is a result of the fact that the predicted expenditure is affected indirectly because probability of purchase changes as a result of income change.

Elasticities. Income elasticity (or more properly in this case, permanent income elasticity) is the percent change in expenditure for a specific good (such as food at home) given a 1-percent increase in (permanent) income. For example, for retired single males, the income elasticity for food at home is estimated to be 0.32, meaning that for every 1-percent increase in permanent income, these men are predicted to increase food-at-home expenditures by about one-third of 1 percent.

The equation for calculating elasticity (η) is:

$$\eta = MPC*I/E(Y)$$

In the case of the "OLS only" regressions, the elasticity in this case is constant, and equal to the parameter estimate for permanent income. To show this mathematically, recall that MPC in this case is proportional to the predicted expenditure share; that is, MPC equals $b[E(Y)/I]$. It is easy to see that multiplying MPC by $I/E(Y)$ yields b, which is the parameter estimate for log of income, as stated.

For the Cragg-based models, the full formula is much more complicated, due to the complexity of the MPC equation. However, once the value of the MPC is obtained, multiplying this value by the inverse of the predicted expenditure share still yields the elasticity estimate. Recall that part of the MPC equation involved the probability-weighted expenditure share. The elasticity will also be similar to the "OLS only" results in that, if the formula is specified, it contains the probability-weighted income coefficient. That is,

$$MPC*[I/E(Y)] = P*\{\beta/[1 + exp(\alpha + \beta lnI + \lambda X)]\} + P*b$$

The second term on the right-hand side, $P*b$, is the probability-weighted coefficient just mentioned.

Footnotes to APPENDIX B

[1] See John McDonald and Robert A. Moffitt, "The Uses of Tobit Analysis," *The Review of Economics and Statistics*, May 1980, pp. 318–21, especially p. 318.

[2] J.R. Blaylock and W.N. Blisard, "Wine consumption by US men," *Applied Economics*, May 1993, pp. 645–51, especially p. 649.

[3] John G. Cragg, "Some Statistical Models for Limited Dependent Varibles with Application to the Demand for Durable Goods," *Econometrica*, September 1971, pp. 829–44.

[4] Mohamed Abdel-Ghany and J. Lew Silver, "Economic and Demographic Determinants of Canadian Households' Use of and Spending on Alcohol," Family and Consumer Sciences Research Journal, September 1998, pp. 62–90, especially p. 65.

[5] Deanna L. Sharpe, Mohamed Abdel-Ghany, Hye-Yeon Kim, and Gong-Soog Hong, "Alcohol Consumption Decisions in Korea," Journal of Family and Economic Issues, Spring 2001, pp. 7–24, especially. p. 14.

[6] See footnotes 5 (p. 830) and 6 (p. 832).

[7] To reduce heteroscedasticity, the OLS model actually predicts the natural log of the expenditure for those with positive expenditures. Coincidentally, Cragg shows this as one of the possible specifications for the second stage model. (See Cragg, p. 831, eq. 10.)

Contingent "new economy" jobs?

Are "new economy" jobs more likely to involve contingent or alternative employment relationships? Before that question can be answered, "new economy" jobs need to be identified. David Neumark and Deborah Reed, in "Employment Relationships in the New Economy" (*NBER Working Paper 8910*), show that this is no easy task.

Neumark, of Michigan State University and NBER, and Reed, of the Public Policy Institute of California, operationalized the concept of "new economy" workers in three ways for their analysis. One way is to look at workers in high-tech industries; for this, they used a classification from an article by Daniel Hecker that appeared in this *Review* a few years back (see "High-technology employment: a broader view," June 1999). A second way is to define "new economy" workers as those who reside in high-tech cities—the authors based this classification on a recent Brookings Institution study. The third approach used by Neumark and Reed is to look at workers in the fastest-growing industries.

After defining "new economy" jobs in these three different ways, Neumark and Reed compared the nature of such jobs to other jobs using the Contingent and Alternative Employment Arrangement Supplements of the Current Population Survey. These Supplements are from surveys conducted in February of 1995, 1997, 1999, and 2001.

The results obtained by Neumark and Reed depend on the definition of "new economy" workers. With the first definition, employment in high-tech industries, the authors did not find greater use of nontraditional employment relationships. Based on the second definition, residence in high-tech cities, there is evidence that contingent and alternative employment relationships are more common in the new economy. Finally with the third definition, jobs in the fastest-growing industries, "new economy" workers are much more likely to have contingent or alternative employment relationships, with much of the difference driven by employment in construction and personnel supply services; it may be that employment in these two particular industries is inherently contingent or alternative.

Neumark and Reed do emphasize the "provisional nature" of their conclusions. They indicate that their paper may do more to raise questions and stimulate research than to supply definitive answers.

Pollution and discrimination

Although less so than in the past, occupations are still segregated by sex. In a recent paper, Claudia Goldin of Harvard University develops a "pollution" theory of discrimination in an attempt to explain such segregation ("A Pollution Theory of Discrimination: Male and Female Differences in Occupations and Earnings," *NBER Working Paper 8985*).

In Goldin's model, discrimination is treated as "the consequence of a desire by men to maintain their occupational status or prestige, distinct from the desire to maintain their earnings." The notion is that the prestige of an occupation can be "polluted" by entry into the occupation of a person whose qualifications are judged based on the average of the group that the individual belongs to, rather than on individual merits.

Therefore, men in an all-male occupation might exhibit hostility towards permitting a woman to enter their occupation, even if a particular woman meets the entry qualifications. Her entry could be perceived in the wider society as a signal that the occupation has been altered. A key aspect of this model is informational asymmetry—in the model, women know what their own levels of qualifications are, and so do their employers, but only their average or median level is widely known.

Goldin notes that a "mechanism that increases information, such as the credentialization of occupations, will foster integration." In addition, the visibility of successful women "may help shatter old stereotypes and increase knowledge about the true distribution of female attributes."

California's minimum wage workers

There were just over a million workers in California who in 2000 were earning somewhere between that year's State minimum wage of $5.75 and the new State minimum wage of $6.25 enacted in 2001 according to a report, *Minimum Wages: The Economic Impact of the 2001 California Minimum Wage Increase*, from the California Department of Industrial Relations.

The author, Jeffrey G. Woods, describes the typical minimum wage worker: "She is a teenage, foreign-born Hispanic without U.S. citizenship. Having never been married, she has no more than a high school education. She is less likely to be a member of a labor union and her total family income is less than $20,000 per year."

Retirement and well-being

The raw correlation between retirement status and subjective well-being is generally negative. Correlation is not causation, however, as a recent *NBER Working Paper,* "Is Retirement Depressing? Labor Force Inactivity and Psychological Well-Being in Later Life," by Kerwin Kofi Charles, reminds us. In the case of retirement and well-being, Charles attempts to account for the fact that the two are simultaneously determined. "In particular, people with idiosyncratically low well-being, or people facing transitory shocks which adversely affect well-being might disproportionately select into retirement." Once such factors are taken into account, Charles finds that retired men tend to report lower scores on measures of depression and loneliness.

Cost-of-living, price indexes

At What Price? Conceptualizing and Measuring Cost-of-Living and Price Indexes. By the National Research Council. Washington, DC, National Academy Press, 2002, 332 pp., $49.95/hardcover.

At What Price? Conceptualizing and Measuring Cost-of-Living and Price Indexes is the product of an 11-member panel convened by the Committee of National Statistics (CNS) and sponsored by the Bureau of Labor Statistics (BLS). BLS requested the panel to analyze the development of a cost-of-living index (COLI) and evaluate the proper use of consumer price indexes for Federal programs such as Social Security, food stamps, and Federal Government wages.

Discussion of the COLI dates back to 1961 when the Stigler Committee of The National Bureau of Economic Research summarized the differences between a consumer price index (CPI) based on a cost-of-goods index (COGI) and an index that measures the cost of living. The Stigler Committee recommended that BLS conduct long-term research to improve the CPI by transforming it into a better approximation of a COLI. In 1995, the Senate Finance Committee appointed the Boskin Commission to evaluate biases in the CPI. The Senate reasoned that upward bias caused overcompensation to Social Security recipients. The Boskin Commission determined that the CPI overstates inflation by 1.1 percentage points per year and recommended that BLS change the CPI methodology from a COGI, or fixed market basket framework, to a COLI.

The CNS panel promotes the COLI, similar to the previous commissioned reports, but it diverges from the Boskin Commission conclusions by highlighting the relevance of the COGI. Katharine Abraham, former Commissioner of the Bureau of Labor Statistics, supported the production of both indexes. "An index that is good for one purpose will not always be good for another … Each purpose leads to a somewhat different conceptual framework." The panel concurs with the former commissioner by recognizing the importance of the COGI as an indicator of the level of prices, and the COLI as a measure of the change in the cost of living.

Specifically, the panel defines COLI as a measurement of "the percentage change in expenditures a household would have to make in order to hold constant some specified standard of living." According to economic theory, when prices change, consumers generally shift their purchases toward goods with relatively lower prices. For example, if the price of beef increases relative to chicken, consumers will tend to purchase more chicken relative to beef. Therefore, an advantage of the COLI compared to the COGI is how it accounts for substitution between items, while maintaining an equivalent standard of living between two time periods. The COGI is markedly different from the COLI because it does not account for substitution that may occur between items.

At What Price? contains 18 recommendations from the panel. These range from the development of a conditional COLI to conducting research on issues like quality change and data collection. The panel supports a conditional COLI where private goods and services are accounted for, but environmental factors are held constant. Accounting for nonmarket prices presents numerous conceptual problems such as measuring price in changes to the environment, quality of life, and public goods. The panel uses temperature as an example. When it is extremely hot or cold, people tend to spend more money on heat or air conditioning. If the price for heat and air conditioning remains constant throughout the shift in temperatures, then the price index should not move regardless of the change in consumption.

The panel recognizes that BLS currently evaluates what percent of a price change is caused by quality and what percent is caused by 'real' price change. BLS is currently investigating a hedonically adjusted price change, where statistical regressions are applied to monetary values based on changes in product characteristics. The panel is cautious about completely integrating hedonics into the entire CPI market basket and recommends further research.

Another area of research recommended by the panel is the exploration of new methods of data collection. Currently, the Consumer Expenditure Survey accounts for the level of expenditures across items. Given the high degree of aggregation, BLS is unable to measure living costs for specific commodities or demographic groups. One means of disaggregating, or collecting household level expenditures, is with handheld computers and scanners. In addition to new survey techniques, the panel recommends researching the feasibility of integrating expenditure weights from the personal consumption expenditure (PCE) survey prepared by the Bureau of Economic Analysis.

BLS initiated the production of the Chained Consumer Price Index (C-CPI-U) in August of 2002; this new index is based on a COLI framework. Successful implementation, however, may depend on understanding the methodology behind the COLI and COGI, and specific uses for each index. *At What Price?* serves as a good resource for business analysts and economists to social science researchers and policymakers.

—Joshua Klick

Division of Consumer Prices
and Price Indexes,
Bureau of Labor Statistics

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 past experience. 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, 16–17, 43, and 47. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2002 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2002 *Review* and reflect the experience through March 2002. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 49 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

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

Sources of information

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

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

http://www.bls.gov/cps/

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

http://www.bls.gov/ces/

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

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

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

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

http://www.bls.gov/lpc/

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS 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-to-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 compensa-

tion 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; 4–24)

Household survey data

Description of the series

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

Definitions

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

Unemployed persons are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look

for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

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

Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

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 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual.* 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 manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups 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 exclud-

ing 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. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 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 latest adjustment, which incorporated March 2001 benchmarks, was made with the release of May 2002 data, published in the July issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 2000 forward and seasonally adjusted data from January 1997 forward were revised with the release of the May 2002 data.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2002 data, the first estimates for the transportation and public utilities; retail trade; and finance, insurance, and real estate industries were published from a new probability-based sample design. These industries are the third group to convert to a probability-based sample under a 4-year phase-in plan of a sample redesign project. The completion of the phase-in for the redesign, in June 2003 for the services industry, will coincide with the conversion of national establishment survey series from industry coding based on the 1987 Standard Industrial Classification (SIC) system to the North American Industry Classification System (NAICS). For additional

information, see the the June 2002 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2002 data.

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. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

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

Unemployment data by State

Description of the series

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

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

Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures

established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

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

Covered employment and wage data (ES–202)

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 Covered Employment and Wages 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, ES-202 monthly employment data represent the number of **covered workers** who worked during, or received pay for, the pay period that included the 12th day of the month. **Covered private industry employment** includes most corporate officials, executives, supervisory personnel, professionals, clerical workers, wage earners, piece workers, and part-time workers. It excludes proprietors, the unincorporated self-employed, unpaid family members, and certain farm and domestic workers. Certain types of nonprofit employers, such as religious organizations, are given a choice of coverage or exclusion in a number of States. Workers in these organizations are, therefore, reported to a limited degree.

Persons on paid sick leave, paid holiday, paid vacation, and the like, are included. Persons on the payroll of more than one firm during the period are counted by each UI-subject employer if they meet the employment definition

noted earlier. The employment count excludes workers who earned no wages during the entire applicable pay period because of work stoppages, temporary layoffs, illness, or unpaid vacations.

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

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

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 em-

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

Notes on the data

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.

The 1999 county data used to calculate the 1999–2000 changes were adjusted for changes in industry and county classification to make them comparable to data for 2000. As a result, the adjusted 1999 data differ to some extent from the data available on the Internet at:

http://www.bls.gov/cew/home.htm.

County definitions are assigned according to Federal Information Processing Standards Publications as issued by the National Institute of Standards and Technology. Areas shown as counties include those designated

as independent cities in some jurisdictions and, in Alaska, those areas designated by the Census Bureau where counties have not been created. County data also are presented for the New England States for comparative purposes, even though townships are the more common designation used in New England (and New Jersey).

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

Compensation and Wage Data

(Tables 1–3; 25–31)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

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 uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, 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 bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation 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 Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://www.bls.gov/ect/

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202)

691–6199.

Employee Benefits Survey

Description of the series

Employee benefits data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

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 and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

Participants are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

Defined benefit pension plans use pre-

determined 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

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet: **http://www.bls.gov/ebs/**

Work stoppages

Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

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.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:
http:/www.bls.gov/cba/

Price Data

(Tables 2; 32–42)

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— 1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

Consumer Price Indexes

Description of the series

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

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

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 33. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership 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 on consumer prices, contact the Division of Consumer 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 Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

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 on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

International Price Indexes

Description of the series

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

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

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products, the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification, the three-digit level for the Standard Industrial Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by coun-try 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 on international prices, contact the Division of International Prices: (202) 691–7155.

Productivity Data

(Tables 2; 43–46)

Business sector and major sectors

Description of the series

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

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

Definitions

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

Compensation per hour is total compensation divided by hours at work. Total

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

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

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

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

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

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

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

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

Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value

of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 43–46 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 data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. In addition to labor productivity, the industry data also include annual measures of compensation and unit labor costs for three-digit industries and measures of multifactor productivity for three-digit manufacturing industries and railroad transportation. 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 consist of the hours of all employees (production workers and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

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 the combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate purchases. The measure of **capital input** used 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 Bureau of the Census, with additional data supplied by other government agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some trade and services industries, indexes of output per hour of all persons (including self-employed) are

constructed. For some transportation industries, only indexes of output per employee are prepared.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

International Comparisons

(Tables 47–49)

Labor force and unemployment

Description of the series

Tables 47 and 48 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country. For further information on adjustments and comparability issues, see Constance Sorrentino, "International unemployment rates: how comparable are they?" *Monthly Labor Review*, June 2000, pp. 3-20.

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 adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. An exception to this rule is that the Canadian statistics for 1976 onward are adjusted to cover ages 16 and older,

whereas the age at which compulsory schooling ends remains at 15. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998, 1999, 2000), Canada (1976) France (1992), Germany (1991), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were introduced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

BLS recently introduced a new adjusted series for Canada. Beginning with the data for 1976, Canadian data are adjusted to more closely approximate U.S. concepts. Adjustments are made to the unemployed and labor force to exclude: (1) 15-year-olds; (2) passive jobseekers (persons only reading newspaper ads as their method of job search); (3) persons waiting to start a new job who did not seek work in the past 4 weeks; and (4) persons unavailable for work due to personal or family responsibilities. An adjustment is

made to include full-tine students looking for full-time work. The impact of the adjustments was to lower the annual average unemployment rate by 0.1–0.4 percentage point in the 1980s and 0.4–1.0 percentage point in the 1990s.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Germany, the data for 1991 onward refer to unified Germany. Data prior to 1991 relate to the former West Germany. The impact of including the former East Germany was to increase the unemployment rate from 4.3 to 5.6 percent in 1991.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Manufacturing productivity and labor costs

Description of the series

Table 49 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

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) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

Definitions

Output, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

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 for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 43 and 45 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 labor hours refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. 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. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

Total compensation (labor cost) 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. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For 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 hourly compensation is equal to the average for wage and salary employees.

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 (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

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

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

Occupational Injury and Illness Data

(Tables 50–51)

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 dis-

continued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

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

Notes on the data

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

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

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

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

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

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

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

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

http://www.bls.gov/iip/

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: **http://www.bls.gov/iip/**

LABSTAT available via World Wide Web

LABSTAT, the Bureau of Labor Statistics public database, provides current and historical data for many BLS surveys as well as numerous news releases.

LABSTAT Public Access has introduced a new production Internet service over the World Wide Web. BLS and regional offices programs are described using hypertext pages. Access to LABSTAT data and news releases is provided by a link to the BLS gopher server. The URL is:

http://www.bls.gov/blshome.html

If you have questions or comments regarding the LABSTAT system on the Internet, address e-mail to: labstat.helpdesk@bls.gov

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1. Labor market indicators

Selected indicators	2000	2001	2000				2001				2002
			I	II	III	IV	I	II	III	IV	I
Employment data											
Employment status of the civilian noninstitutionalized population (household survey):[1]											
Labor force participation rate	67.2	66.9	67.3	67.3	67.0	67.1	67.2	66.9	66.8	66.9	66.5
Employment-population ratio	64.5	63.8	64.6	64.6	64.3	64.4	64.4	63.9	63.6	63.1	62.8
Unemployment rate	4.0	4.8	4.0	4.0	4.1	4.0	4.2	4.5	4.8	5.6	5.6
Men	3.9	4.8	3.9	3.9	3.9	4.0	4.2	4.6	4.9	5.7	5.7
16 to 24 years	9.7	11.4	9.7	9.7	9.8	9.6	10.6	11.2	11.5	12.7	12.9
25 years and over	2.8	3.6	2.8	2.8	2.8	2.9	3.1	3.4	3.7	4.4	4.5
Women	4.1	4.7	4.2	4.1	4.2	4.0	4.1	4.3	4.8	5.5	5.5
16 to 24 years	8.9	9.7	9.5	9.0	8.5	8.4	8.7	9.2	10.0	10.6	11.0
25 years and over	3.2	3.7	3.1	3.2	3.3	3.0	3.3	3.4	3.7	4.4	4.4
Employment, nonfarm (payroll data), in thousands:[1]											
Total	131,720	131,922	130,995	131,819	131,876	132,185	132,559	132,193	131,943	131,130	130,759
Private sector	111,018	110,989	110,461	110,860	111,219	111,551	111,687	111,332	110,939	110,035	109,594
Goods-producing	25,649	24,949	25,701	25,690	25,681	25,626	25,493	25,136	24,786	24,375	24,049
Manufacturing	18,473	17,695	18,502	18,510	18,494	18,400	18,196	17,872	17,538	17,174	16,883
Service-producing	106,051	106,978	105,293	106,129	106,195	106,559	106,941	107,057	107,157	106,755	106,711
Average hours:											
Private sector	34.5	34.2	34.5	34.4	34.4	34.3	34.3	34.2	34.1	34.1	34.2
Manufacturing	41.6	40.7	41.8	41.8	41.5	41.1	41.0	40.8	40.7	40.5	40.8
Overtime	4.6	3.9	4.8	4.7	4.5	4.4	4.1	3.9	3.9	3.8	4.0
Employment Cost Index[2]											
Percent change in the ECI, compensation:											
All workers (excluding farm, household and Federal workers)	4.1	4.1	1.3	1.0	1.0	.7	1.3	.9	1.2	.8	1.0
Private industry workers	4.4	4.2	1.5	1.2	.9	.7	1.4	1.0	.9	.8	1.1
Goods-producing[3]	4.4	3.8	1.6	1.2	.9	.6	1.3	.9	.7	.8	1.2
Service-producing[3]	4.4	4.3	1.4	1.2	1.0	.7	1.4	1.0	1.0	.8	1.1
State and local government workers	3.0	4.2	.6	.3	1.3	.7	.9	.6	2.1	.6	.6
Workers by bargaining status (private industry):											
Union	4.0	4.2	1.3	1.0	1.2	.5	.7	1.1	1.0	1.4	1.1
Nonunion	4.4	4.1	1.5	1.2	1.0	.7	1.5	1.0	.9	.7	1.1

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

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

Selected measures	2000	2001	2000 I	2000 II	2000 III	2000 IV	2001 I	2001 II	2001 III	2001 IV	2002 I
Compensation data[1,2]											
Employment Cost Index—compensation (wages, salaries, benefits):											
Civilian nonfarm...	4.1	4.1	1.3	1.0	1.0	0.7	1.3	0.9	1.2	0.8	1.0
Private nonfarm..................................	4.4	4.2	1.5	1.2	.9	.7	1.4	1.0	.9	.8	1.1
Employment Cost Index—wages and salaries:											
Civilian nonfarm..................................	3.8	3.7	1.1	1.0	1.1	.6	1.1	.9	1.0	.7	.9
Private nonfarm..............................	3.9	3.8	1.2	1.0	1.0	.6	1,2	1.0	.8	.8	.9
Price data[1]											
Consumer Price Index (All Urban Consumers): All Items......	1.6	3.4	1.7	.7	.8	.2	1.3	1.0	.2	−.9	.7
Producer Price Index:											
Finished goods...	3.5	−1.8	1.5	1.8	.6	.4	.9	.8	−.3	−3.2	1.1
Finished consumer goods.........................	4.3	−2.4	1.9	1.3	.8	.1	1.2	1.0	−.3	−4.3	1.5
Capital equipment.............................	1.2	1.0	.1	.1	−7.2	1.1	−.1	−7.1	−.1	.1	2.9
Intermediate materials, supplies, and components............	4.0	−.2	1.8	1.4	1.0	−.3	.2	.6	−1.0	−3.6	.9
Crude materials.......................................	31.1	−8.8	9.0	−6.0	2.1	9.4	−3.5	−6.6	−12.0	−12.2	8.0
Productivity data[3]											
Output per hour of all persons:											
Business sector...	3.0	1.1	.3	6.7	.4	2.1	−1.5	−.2	1.8	7.6	8.3
Nonfarm business sector...............................	2.9	1.1	.2	6.0	.6	1.7	−1.5	−.1	2.1	7.3	8.6
Nonfinancial corporations[4].....................	2.1	1.0	5.3	.3	2.6	−.7	−2.6	2.3	3.2	10.8	5.1

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

[4] Output per hour of all employees.

3. Alternative measures of wage and compensation changes

Components	Quarterly average 2001 I	Quarterly average 2001 II	Quarterly average 2001 III	Quarterly average 2001 IV	Quarterly average 2002 I	Four quarters ending 2001 I	Four quarters ending 2001 II	Four quarters ending 2001 III	Four quarters ending 2001 IV	Four quarters ending 2002 I
Average hourly compensation:[1]										
All persons, business sector............................	3.1	0.5	0.9	1.4	3.8	4.5	3.9	2.0	1.5	1.6
All persons, nonfarm business sector...........................	2.8	.1	1.0	1.5	3.6	4.2	3.6	1.8	1.4	1.6
Employment Cost Index—compensation:										
Civilian nonfarm[2]	1.3	.9	1.2	.8	1.0	4.1	3.9	4.1	4.1	3.9
Private nonfarm..	1.4	1.0	.9	.8	1.1	4.2	4.0	4.0	4.2	3.9
Union..	.7	1.1	1.0	1.4	1.1	3.4	3.5	3.4	4.2	4.7
Nonunion..	1.5	1.0	.9	.7	1.1	4.3	4.2	4.1	4.1	3.8
State and local governments........................	.9	.6	2.1	.6	.6	3.3	3.6	4.4	4.2	3.9
Employment Cost Index—wages and salaries:										
Civilian nonfarm[2]	1.1	.9	1.0	.7	.9	3.8	3.7	3.6	3.7	3.5
Private nonfarm..	1.2	1.0	.8	.8	.9	3.8	3.8	3.6	3.8	3.5
Union..	.6	1.1	1.0	1.6	.7	3.6	3.8	3.6	4.4	4.4
Nonunion..	1.2	.9	.8	.7	1.0	3.9	3.7	3.6	3.6	3.4
State and local governments........................	.7	.5	1.9	.5	.5	3.5	3.7	3.9	3.6	3.4

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

[2] Excludes Federal and 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 2000	Annual average 2001	2001 May	2001 June	2001 July	2001 Aug.	2001 Sept	2001 Oct.	2001 Nov.	2001 Dec.	2002 Jan.	2002 Feb.	2002 Mar.	2002 Apr.	2002 May
TOTAL															
Civilian noninstitutional population[1]	209,699	211,864	211,525	211,725	211,921	212,135	212,357	212,581	212,767	212,927	213,089	213,306	213,334	213,492	213,658
Civilian labor force	140,863	141,815	141,445	141,468	141,651	141,380	142,068	142,280	142,279	141,390	141,390	142,211	142,005	142,570	142,769
Participation rate	67.2	66.9	66.9	66.8	66.8	66.6	66.9	66.9	66.9	66.8	66.4	66.7	66.6	66.8	66.8
Employed	135,208	135,073	135,235	135,003	135,106	134,408	135,004	134,615	134,253	134,055	133,468	134,319	133,894	133,976	134,417
Employment-population ratio[2]	64.5	63.8	63.9	63.8	63.8	63.4	63.6	63.3	63.1	63.0	62.6	63.0	62.8	62.8	62.9
Unemployed	5,665	6,742	6,210	6,465	6,545	6,972	7,064	7,665	8,026	8,259	7,922	7,891	8,111	8,594	8,351
Unemployment rate	4.0	4.8	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0	5.8
Not in the labor force	68,836	70,050	70,080	70,257	70,270	70,755	70,289	70,301	70,488	70,613	71,699	70,995	71,329	70,922	70,889
Men, 20 years and over															
Civilian noninstitutional population[1]	92,580	93,659	93,541	93,616	93,708	93,810	93,917	94,015	94,077	94,161	94,228	94,262	94,315	94,414	94,479
Civilian labor force	70,930	71,590	71,468	71,429	71,500	71,523	71,805	71,940	71,935	71,988	71,534	71,718	71,723	72,098	72,428
Participation rate	76.6	76.4	76.3	76.3	76.3	76.2	76.5	76.5	76.5	76.5	75.9	76.1	76.0	76.4	76.7
Employed	68,580	68,587	68,698	68,535	68,610	68,388	68,696	68,486	68,204	68,276	67,818	68,157	68,013	68,193	68,647
Employment-population ratio[2]	74.1	73.2	73.4	73.2	73.2	72.9	83.1	72.8	72.5	72.5	72.0	72.3	72.1	72.2	72.7
Agriculture	2,252	2,102	2,168	2,057	2,035	2,129	2,138	2,132	2,082	2,141	2,207	2,185	2,084	2,213	2,125
Nonagricultural industries	66,328	66,485	66,530	66,478	66,575	66,259	66,558	66,354	66,122	66,135	65,611	65,973	65,929	65,980	66,522
Unemployed	2,350	3,003	2,770	2,894	2,890	3,135	3,109	3,454	3,731	3,712	3,716	3,560	3,710	3,905	3,781
Unemployment rate	3.3	4.2	3.9	4.1	4.0	4.4	4.3	4.8	5.2	5.2	5.2	5.0	5.2	5.4	5.2
Women, 20 years and over															
Civilian noninstitutional population[1]	101,078	102,060	101,938	102,023	102,067	102,165	102,277	102,371	102,438	102,492	102,550	102,651	102,728	102,847	102,936
Civilian labor force	61,565	62,148	62,068	61,961	62,103	62,142	62,222	62,269	62,321	62,481	62,056	62,703	62,320	62,724	62,597
Participation rate	60.9	60.9	60.9	60.7	60.8	60.8	60.8	60.8	60.8	61.0	60.5	61.1	60.7	61.0	60.8
Employed	59,352	59,596	59,716	59,555	59,640	59,526	59,463	59,302	59,288	59,205	59,102	59,588	59,227	59,333	59,337
Employment-population ratio[2]	58.7	58.4	58.6	58.4	58.4	58.3	58.1	57.9	57.9	57.8	57.6	58.0	57.7	57.7	57.6
Agriculture	818	82	816	772	784	781	823	842	852	859	824	829	804	732	760
Nonagricultural industries	58,535	58,779	58,900	58,783	58,856	58,745	58,640	58,460	58,436	58,346	58,277	58,759	58,423	58,602	58,577
Unemployed	2,212	2,551	2,352	2,406	2,463	2,616	2,759	2,967	3,303	3,276	2,954	3,116	3,093	3,391	3,260
Unemployment rate	3.6	4.1	3.8	3.9	4.0	4.2	4.4	3.8	4.9	5.2	4.8	5.0	5.0	5.4	5.2
Both sexes, 16 to 19 years															
Civilian noninstitutional population[1]	16,042	16,146	16,046	16,086	16,145	16,161	16,163	16,195	16,252	16,275	16,310	16,293	16,292	16,231	16,243
Civilian labor force	8,369	8,077	7,909	8,078	8,048	7,715	8,041	8,071	8,023	7,845	7,800	7,790	7,962	7,748	7,744
Participation rate	52.2	50.0	49.3	50.2	49.8	47.7	49.7	49.8	49.4	48.2	47.8	47.8	48.9	47.7	47.7
Employed	7,276	6,889	6,821	6,913	6,856	6,494	6,845	6,827	6,761	6,574	6,548	6,575	6,655	6,450	6,434
Employment-population ratio[2]	45.4	42.7	42.5	43.0	42.5	40.2	42.3	42.2	41.6	40.4	40.1	40.4	40.8	39.7	39.6
Agriculture	235	225	209	215	236	216	220	229	220	246	241	233	239	209	213
Nonagricultural industries	7,041	6,664	6,612	6,698	6,620	6,278	6,625	6,598	6,541	6,328	6,307	6,342	6,416	6,240	6,221
Unemployed	1,093	1,187	1,088	1,165	1,192	1,221	1,106	1,244	1,262	1,271	1,252	1,215	1,308	1,298	1,310
Unemployment rate	13.1	14.7	13.8	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.8	16.9
White															
Civilian noninstitutional population[1]	174,428	175,888	175,653	175,789	175,924	176,069	176,220	176,372	176,500	176,607	176,713	176,783	176,866	176,972	177,087
Civilian labor force	117,574	118,144	117,714	117,854	117,986	117,813	118,274	118,506	118,566	118,403	117,759	118,472	118,159	118,661	118,742
Participation rate	67.4	67.2	67.0	67.0	67.1	66.9	67.1	67.2	67.2	67.0	66.6	67.0	66.8	67.1	67.1
Employed	113,475	113,220	113,185	113,037	113,237	112,703	113,147	112,878	112,652	112,388	111,876	112,632	112,286	112,426	112,563
Employment-population ratio[2]	65.1	64.4	64.4	64.4	64.3	64.0	64.2	64.0	63.8	63.6	63.3	63.7	63.3	63.5	53.6
Unemployed	4,099	4,923	4,541	4,728	4,810	5,073	5,127	5,628	5,914	6,015	5,883	5,840	5,873	6,236	6,179
Unemployment rate	3.5	4.2	3.9	4.0	4.1	4.3	4.3	4.7	5.0	5.1	5.0	4.9	5.0	5.3	5.2
Black															
Civilian noninstitutional population[1]	25,218	25,559	25,501	25,533	25,565	25,604	25,644	25,686	25,720	25,752	25,785	25,813	25,839	25,868	25,898
Civilian labor force	16,603	16,719	16,644	16,739	16,685	16,720	16,827	16,748	16,687	16,833	16,769	16,747	16,758	16,941	16,887
Participation rate	65.8	65.4	65.3	65.6	65.3	65.3	65.6	65.2	64.9	65.4	65.0	64.9	64.9	65.5	65.2
Employed	15,334	15,270	15,311	15,330	15,337	15,210	15,339	15,144	15,040	15,122	15,119	15,131	14,969	15,045	15,168
Employment-population ratio[2]	60.8	59.7	60.0	60.0	60.0	59.4	59.8	59.0	58.5	58.7	58.6	58.6	57.9	58.2	58.6
Unemployed	1,269	1,450	1,333	1,409	1,348	1,510	1,488	1,604	1,647	1,711	1,650	1,616	1,789	1,896	1,718
Unemployment rate	7.6	8.7	8.0	8.4	8.1	9.0	8.8	9.6	9.9	10.2	9.8	9.6	10.7	11.2	10.2

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		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Hispanic origin															
Civilian noninstitutional population[1]	22,393	23,122	23,021	23,090	23,157	23,222	23,288	23,351	23,417	23,478	23,542	23,604	23,664	23,732	23,797
Civilian labor force	15,368	15,751	15,656	15,602	15,753	15,788	15,811	15,956	15,932	16,013	15,988	16,011	15,908	16,156	16,085
Participation rate	68.6	68.1	68.0	67.6	68.0	68.0	67.9	68.3	68.0	68.2	67.9	67.8	67.2	68.1	67.6
Employed	14,492	14,714	14,684	14,574	14,776	14,771	14,785	14,824	14,751	14,753	14,700	14,867	14,743	14,877	14,963
Employment-population ratio[2]	64.7	63.6	63.8	63.1	63.8	63.6	63.5	63.5	63.0	62.8	62.4	63.0	62.3	62.7	62.9
Unemployed	876	1,037	972	1,028	977	1,017	1,026	1,132	1,181	1,260	1,288	1,143	1,165	1,279	1,122
Unemployment rate	5.7	6.6	6.2	6.6	6.2	6.4	6.5	7.1	7.4	7.9	8.1	7.1	7.3	7.9	7.0

[1] The population figures are not seasonally adjusted.

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

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals becausedata for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

Selected categories	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Characteristic															
Employed, 16 years and over	135,208	135,073	135,235	135,003	145,106	134,408	135,004	134,615	134,253	134,055	133,468	134,319	133,894	133,976	134,417
Men	72,293	72,080	72,131	72,012	72,093	71,705	72,177	71,871	71,570	71,577	71,114	71,457	71,299	71,397	71,894
Women	62,915	62,992	63,104	62,991	63,013	62,703	62,827	62,744	62,683	62,478	62,354	62,862	62,595	62,579	62,524
Married men, spouse present	43,368	43,243	43,633	43,357	43,264	43,143	43,099	42,983	42,861	42,772	42,823	43,275	43,317	43,167	43,548
Married women, spouse present	33,708	33,613	33,692	33,466	33,571	33,685	33,604	33,227	33,330	33,209	33,174	33,703	33,552	33,446	33,371
Women who maintain families	8,387	8,364	8,335	2,513	1,558	8,328	8,274	8,256	8,331	8,458	8,396	8,417	8,320	8,266	8,397
Class of worker															
Agriculture:															
Wage and salary workers	2,034	1,884	1,957	1,803	1,798	1,852	1,882	1,898	1,865	1,879	1,917	1,930	1,825	1,896	1,911
Self-employed workers	1,233	1,233	1,208	1,193	'152	1,239	1,278	1,290	1,276	1,313	1,311	1,293	1,264	1,216	1,156
Unpaid family workers	38	27	34	32	23	29	24	26	12	27	49	21	29	34	4
Nonagricultural industries:															
Wage and salary workers	123,128	123,235	123,530	123,069	123,204	122,685	123,186	122,710	122,507	122,196	122,145	122,770	122,545	122,366	123,071
Government	19,053	19,127	19,068	18,934	18,999	19,150	19,290	19,223	19,172	19,183	19,047	19,286	19,218	19,347	19,811
Private industries	104,076	104,108	10,442	104,135	104,205	103,535	103,896	103,487	103,335	103,013	103,098	103,485	103,327	103,019	103,260
Private households	890	803	795	760	790	814	804	867	790	736	725	709	677	791	775
Other	103,186	103,305	103,667	103,375	103,415	102,721	103,092	102,620	102,545	102,277	102,373	102,775	102,650	102,228	102,485
Self-employed workers	8,674	8,594	8,540	8,720	8,568	8,503	8,556	8,505	8,507	8,524	8,213	8,257	8,200	8,234	8,305
Unpaid family workers	101	101	111	102	98	111	101	95	77	92	97	86	89	103	105
Persons at work part time[1]															
All industries:															
Part time for economic reasons	3,190	3,672	3,388	3,649	3,571	3,389	4,148	4,329	4,206	4,267	3,973	4,228	3,997	4,151	3,996
Slack work or business conditions	1,927	2,355	2,205	2,276	2,174	2,115	2,796	2,983	2,796	2,809	2,549	2,755	2,721	2,690	2,626
Could only find part-time work	944	1,007	921	1,008	1,011	952	1,064	1,108	1,121	1,161	1,089	1,120	1,021	1,131	1,064
Part time for noneconomic reasons	18,722	18,707	18,634	18,482	18,812	19,011	18,798	18,644	18,587	18,540	18,201	18,395	18,530	18,793	18,887
Nonagricultural industries:															
Part time for economic reasons	3,045	3,529	3,231	3,556	3,425	3,246	4,015	4,222	4,017	4,119	3,781	3,998	3,848	4,009	3,818
Slack work or business conditions	1,835	2,266	2,101	2,215	2,111	2,025	2,704	2,898	2,679	2,717	2,448	2,615	2,605	2,587	2,515
Could only find part-time work	924	989	899	990	993	927	1,045	1,082	1,096	1,138	1,068	1,089	1,001	1,122	1,033
Part time for noneconomic reasons	18,165	18,177	18,097	18,066	18,283	18,485	18,232	18,065	18,007	17,960	17,717	17,886	18,004	18,274	16,350

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

6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

Selected categories	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Characteristic															
Total, 16 years and over	4.0	4.8	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0	5.8
Both sexes, 16 to 19 years	13.1	14.7	13.8	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.8	16.9
Men, 20 years and over	3.3	4.2	3.9	4.1	4.0	4.4	4.3	4.8	5.2	5.2	5.2	5.0	5.2	5.4	5.2
Women, 20 years and over	3.6	4.1	3.8	3.9	4.0	4.2	4.4	4.8	4.9	5.2	4.8	5.0	5.0	5.4	5.2
White, total	3.5	4.2	3.9	4.0	4.1	4.3	4.3	4.7	5.0	5.1	5.0	4.9	5.0	5.3	5.3
Both sexes, 16 to 19 years	11.4	12.7	12.0	12.7	13.2	13.8	12.7	23.1	13.5	13.7	14.2	14.0	14.5	14.0	14.8
Men, 16 to 19 years	12.3	13.8	13.3	14.3	13.8	15.1	13.6	14.7	15.8	14.6	13.7	15.4	16.3	15.4	15.4
Women, 16 to 19 years	10.4	11.4	10.7	11.0	12.6	12.4	11.7	11.5	11.1	12.8	14.6	12.6	12.7	12.5	14.2
Men, 20 years and over	2.8	3.7	3.4	3.6	3.5	3.8	3.8	4.4	4.7	4.6	4.7	4.4	4.5	4.8	4.8
Women, 20 years and over	3.1	3.6	3.4	3.4	3.5	3.6	3.8	4.1	4.2	4.5	4.2	4.4	4.3	4.6	4.5
Black, total	7.6	8.7	8.0	8.4	8.1	9.0	8.8	9.6	9.9	10.2	9.8	9.6	10.7	11.2	10.2
Both sexes, 16 to 19 years	24.7	29.0	25.7	28.0	26.6	30.1	28.5	30.2	32.1	33.4	30.7	27.9	31.0	35.4	30.2
Men, 16 to 19 years	26.4	30.5	30.0	30.5	28.1	31.4	30.8	31.2	31.6	32.0	32.1	30.0	36.9	37.3	36.8
Women, 16 to 19 years	23.0	27.5	21.5	25.7	25.2	28.7	26.1	29.1	32.6	34.8	29.0	25.6	44.7	33.5	22.3
Men, 20 years and over	7.0	8.0	7.6	7.8	7.9	8.8	7.8	8.2	8.7	9.1	8.9	8.7	10.1	9.3	8.6
Women, 20 years and over	6.3	7.0	6.4	6.7	6.2	7.0	7.7	8.5	8.4	8.7	8.4	8.5	9.0	10.2	9.5
Hispanic origin, total	5.7	6.6	6.2	6.6	6.2	6.4	6.5	7.1	7.4	7.9	8.1	7.1	7.3	7.9	7.0
Married men, spouse present	2.0	2.7	2.6	2.6	2.7	2.8	2.8	3.1	3.3	3.4	3.5	3.4	3.4	3.9	3.6
Married women, spouse present	2.7	3.1	2.9	3.0	2.9	3.1	3.3	3.6	3.6	3.7	3.4	3.8	3.7	3.9	3.9
Women who maintain families	5.9	6.6	6.2	6.3	6.3	6.8	7.1	6.8	8.0	8.0	8.9	8.0	7.3	8.6	8.1
Full-time workers	3.9	4.7	4.3	4.5	4.5	4.8	5.0	5.4	5.6	5.8	5.7	5.7	5.8	6.2	5.9
Part-time workers	4.8	5.1	4.8	5.2	5.1	5.4	4.6	5.5	5.6	5.6	5.2	4.8	5.2	5.2	5.6
Industry															
Nonagricultural wage and salary workers	4.1	5.1	4.3	4.8	4.8	5.1	5.0	5.4	5.7	5.8	6.9	6.6	6.5	6.3	6.0
Mining	3.9	4.7	4.9	4.9	3.3	4.8	4.2	5.9	3.8	5.9	8.7	6.4	6.4	5.6	4.3
Construction	6.4	7.3	5.7	5.4	4.9	6.0	5.9	6.3	8.0	9.5	13.9	12.3	11.9	9.9	7.5
Manufacturing	3.6	5.2	4.7	4.9	5.5	5.6	5.5	5.6	6.1	6.6	7.1	7.0	7.3	7.0	6.6
Durable goods	3.4	5.3	4.8	4.9	5.4	5.9	5.6	6.0	6.6	7.2	7.8	7.6	7.5	7.3	6.3
Nondurable goods	4.0	5.1	4.5	4.8	5.7	5.3	5.3	5.1	5.3	5.7	6.1	6.1	6.9	6.6	7.0
Transportation and public utilities	3.1	4.1	3.3	3.8	3.8	3.9	3.9	5.4	5.4	5.7	7.0	6.3	5.7	5.9	5.3
Wholesale and retail trade	5.0	5.6	5.1	5.6	5.2	5.4	5.7	5.8	6.0	6.3	7.1	7.2	7.2	7.0	6.8
Finance, insurance, and real estate	2.3	2.8	2.1	2.4	3.1	2.8	2.9	2.9	3.6	2.8	2.4	3.0	3.0	3.1	3.6
Services	3.8	4.6	4.0	4.6	4.6	5.1	4.8	5.2	5.3	4.9	5.9	5.7	5.5	5.3	5.4
Government workers	2.1	2.2	1.8	2.6	2.8	2.7	2.2	2.1	2.1	2.1	2.4	2.5	2.3	2.1	2.4
Agricultural wage and salary workers	7.5	9.7	6.1	7.2	7.8	7.5	5.5	7.3	10.4	13.2	15.2	14.0	16.8	8.0	6.6
Educational attainment[1]															
Less than a high school diploma	6.4	7.3	5.8	6.3	6.4	6.6	7.1	7.1	7.9	9.0	10.1	9.7	9.4	8.6	7.4
High school graduates, no college	3.5	4.2	3.6	3.7	4.1	4.3	4.0	4.3	4.8	4.8	6.2	6.0	5.9	5.5	5.1
Some college, less than a bachelor's degree	2.7	3.3	2.8	3.0	3.2	3.4	3.3	3.8	4.0	4.0	4.6	4.5	4.5	4.6	4.5
College graduates	1.7	2.3	1.9	2.3	2.4	2.7	2.5	2.5	2.7	2.8	3.0	2.9	2.7	2.7	2.7

[1] Data refer to persons 25 years and over.

7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Less than 5 weeks	2,543	2,833	2,714	2,809	2,647	2,955	2,807	3,084	3,090	3,024	2,978	2,828	3,078	2,793	2,876
5 to 14 weeks	1,803	2,163	2,021	2,098	2,170	2,152	2,366	2,522	2,573	2,724	2,586	2,515	2,411	2,818	2,531
15 weeks and over	1,309	1,746	1,503	1,571	1,630	1,798	1,907	2,042	2,317	2,410	2,546	2,561	2,688	2,854	2,952
15 to 26 weeks	665	949	862	843	948	980	1,084	1,136	1,207	1,295	1,418	1,383	1,355	1,360	1,316
27 weeks and over	644	787	641	728	682	818	823	906	1,110	1,115	1,127	1,178	1,333	1,494	1,636
Mean duration, in weeks	12.6	13.2	12.4	12.9	12.7	13.2	13.3	13.0	14.4	14.5	14.6	15.0	15.4	16.6	17.1
Median duration, in weeks	5.9	6.8	6.4	6.3	6.7	6.6	7.3	7.4	7.6	8.2	8.8	8.1	8.1	8.9	9.8

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

[Numbers in thousands]

Reason for unemployment	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Job losers[1]	2,492	3,428	3,132	3,249	3,294	3,438	3,595	4,297	4,501	4,492	4,354	4,326	4,370	4,525	4,598
On temporary layoff	842	1,044	1,055	990	1,020	1,071	1,114	1,288	1,157	1,107	1,124	1,106	1,066	1,095	1,091
Not on temporary layoff	1,650	2,379	2,077	2,259	2,274	2,367	2,481	3,009	3,344	3,385	3,231	3,220	3,204	3,430	3,506
Job leavers	775	832	818	807	791	877	819	880	848	908	879	877	862	1,017	902
Reentrants	1,957	2,029	1,827	1,921	1,948	2,162	2,102	2,113	2,197	2,361	2,191	2,268	2,471	2,450	2,433
New entrants	431	453	467	470	442	488	466	466	497	495	479	485	557	519	499
Percent of unemployed															
Job losers[1]	44.1	50.8	50.2	50.4	50.9	49.4	51.5	55.4	56.0	54.4	55.1	54.4	52.3	53.2	54.5
On temporary layoff	14.9	15.6	16.9	15.4	15.8	15.4	16.0	16.6	14.4	13.4	14.2	13.9	13.1	12.9	12.9
Not on temporary layoff	29.2	35.3	33.3	35.0	35.1	34.0	35.5	38.8	41.6	41.0	40.9	40.5	39.3	40.3	41.6
Job leavers	13.7	12.3	13.1	12.5	12.2	12.6	11.7	11.3	10.5	11.0	11.1	11.0	10.6	12.0	10.7
Reentrants	34.6	30.1	29.3	29.8	30.1	31.0	30.1	27.2	27.3	28.6	27.7	28.5	30.3	28.8	28.9
New entrants	7.6	6.7	7.5	7.3	6.8	7.0	6.7	6.0	6.2	6.0	6.1	6.1	6.8	6.1	5.9
Percent of civilian labor force															
Job losers[1]	1.8	2.4	2.2	2.3	2.3	2.4	2.5	3.0	3.2	3.2	3.1	3.0	3.0	3.2	3.2
Job leavers	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.7	.6
Reentrants	1.4	1.4	1.3	1.4	1.4	1.5	1.5	1.5	1.5	1.7	1.5	1.6	1.7	1.7	1.7
New entrants	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3

[1] Includes persons who completed temporary jobs.

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

[Civilian workers]

Sex and age	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Total, 16 years and over	4.0	4.8	4.4	4.6	4.6	4.9	5.0	5.4	5.6	5.8	5.6	5.5	5.7	6.0	5.8
16 to 24 years	9.3	10.6	10.0	10.4	10.2	11.3	10.8	11.5	11.7	11.9	11.9	11.6	12.5	12.3	11.6
16 to 19 years	13.1	14.7	13.8	14.4	14.8	15.8	14.9	15.4	15.7	16.2	16.1	15.6	16.4	16.8	16.9
16 to 17 years	15.4	17.1	15.8	16.5	19.0	18.6	16.6	17.4	17.5	18.8	17.0	16.5	16.5	19.4	20.7
18 to 19 years	11.5	13.2	12.5	13.0	12.4	14.4	13.9	14.2	14.8	14.8	15.2	14.7	15.1	15.1	14.8
20 to 24 years	7.1	8.3	7.9	8.2	7.7	8.9	8.6	9.3	9.5	9.6	9.7	9.5	10.3	10.0	8.9
25 years and over	3.0	3.7	3.4	3.5	3.5	3.8	3.8	4.2	4.4	4.5	4.4	4.5	4.5	4.9	4.8
25 to 54 years	3.1	3.8	3.5	3.6	3.7	3.9	3.9	4.4	4.6	4.7	4.7	4.6	4.7	5.0	5.0
55 years and over	2.6	3.0	2.6	2.8	2.9	3.1	3.2	3.4	3.5	4.0	3.5	3.8	3.5	4.0	4.2
Men, 16 years and over	3.9	4.8	4.5	4.7	4.7	5.1	5.0	5.5	5.9	5.8	5.8	5.6	5.9	6.1	5.9
16 to 24 years	9.7	11.4	11.0	11.6	10.7	12.3	1.5	12.4	13.0	12.8	12.5	12.4	13.7	13.0	12.5
16 to 19 years	14.0	15.9	15.4	15.8	15.6	17.4	16.0	17.2	17.7	17.2	16.3	16.8	18.5	18.1	18.6
16 to 17 years	16.8	18.8	17.9	18.5	19.1	21.9	18.7	20.3	20.4	20.0	17.6	19.6	20.8	19.6	23.7
18 to 19 years	12.2	14.1	13.9	14.2	13.4	15.0	14.5	15.1	16.2	15.6	15.1	15.4	16.7	17.2	15.6
20 to 24 years	7.3	8.9	8.7	9.3	8.1	9.5	9.1	9.8	10.5	10.5	10.6	10.2	11.1	10.3	9.4
25 years and over	2.8	3.6	3.3	3.4	3.6	3.8	3.7	4.2	4.5	4.5	4.5	4.4	4.5	4.8	4.8
25 to 54 years	2.9	3.7	3.4	3.5	3.6	3.9	3.8	4.3	4.6	4.5	4.7	4.5	4.7	4.9	4.9
55 years and over	2.7	3.3	2.9	3.0	3.1	3.3	3.3	3.7	4.1	4.2	3.8	4.1	3.6	4.3	4.5
Women, 16 years and over	4.1	4.7	4.3	4.4	4.6	4.8	5.0	5.3	5.4	5.8	5.4	5.5	5.5	6.0	5.8
16 to 24 years	8.9	9.7	8.8	9.2	9.7	10.3	10.1	10.5	10.3	11.0	11.3	10.7	11.2	11.6	10.7
16 to 19 years	12.1	13.4	12.1	13.0	14.0	14.1	13.6	13.6	13.7	15.1	15.8	14.3	14.3	15.4	15.2
16 to 17 years	14.0	15.3	13.8	14.4	18.8	15.4	14.3	14.5	14.5	17.6	16.4	13.6	15.3	19.2	17.4
18 to 19 years	10.8	12.2	11.0	11.8	11.3	13.7	13.3	13.3	13.3	14.0	15.2	13.9	13.4	12.9	14.1
20 to 24 years	7.0	7.5	7.0	7.0	7.3	8.2	8.1	8.7	8.3	8.7	8.7	8.7	9.4	9.6	8.3
25 years and over	3.2	3.7	3.4	3.5	3.5	3.8	4.0	4.2	4.4	4.6	4.3	4.6	4.4	5.0	4.8
25 to 54 years	3.3	3.8	3.6	3.7	3.7	3.9	4.0	4.4	4.7	4.8	4.6	4.7	4.6	5.1	5.1
55 years and over	2.6	2.7	2.4	2.6	2.6	2.8	3.2	3.2	2.8	3.7	3.0	3.5	3.4	3.7	3.7

10. Unemployment rates by State, seasonally adjusted

State	Apr. 2001	Mar. 2002[p]	Apr. 2002[p]	State	Apr. 2001	Mar. 2002[p]	Apr. 2002[p]
Alabama	5.0	6.0	5.6	Missouri	4.6	5.2	5.2
Alaska	6.3	6.3	6.6	Montana	4.6	4.6	4.6
Arizona	4.2	5.9	5.7	Nebraska	3.1	3.6	3.9
Arkansas	5.0	5.3	5.3	Nevada	4.8	5.8	5.5
California	5.0	6.5	6.5	New Hampshire	3.3	4.1	4.0
Colorado	3.2	5.6	5.3	New Jersey	4.0	5.6	5.6
Connecticut	2.9	3.5	3.8	New Mexico	4.7	6.1	6.0
Delaware	3.5	3.8	4.2	New York	4.5	5.9	6.1
District of Columbia	6.2	6.7	6.4	North Carolina	5.1	6.6	6.9
Florida	4.3	5.4	5.3	North Dakota	3.0	3.1	3.6
Georgia	3.8	4.6	4.6	Ohio	4.1	5.8	5.8
Hawaii	4.5	4.6	4.3	Oklahoma	3.4	4.2	4.4
Idaho	4.9	5.5	5.2	Oregon	5.8	7.9	7.5
Illinois	5.2	6.1	6.4	Pennsylvania	4.6	5.6	5.4
Indiana	3.9	4.9	5.1	Rhode Island	4.7	4.2	4.6
Iowa	3.3	3.4	3.6	South Carolina	5.2	6.0	5.8
Kansas	4.2	4.4	4.5	South Dakota	3.2	3.2	3.4
Kentucky	5.2	5.3	5.3	Tennessee	4.3	5.7	5.3
Louisiana	5.8	5.6	5.8	Texas	4.5	5.8	6.2
Maine	3.9	4.1	4.0	Utah	4.1	5.4	5.4
Maryland	3.9	5.3	5.4	Vermont	3.4	3.9	3.9
Massachusetts	3.3	4.3	4.7	Virginia	3.0	4.2	4.6
Michigan	4.9	6.0	6.1	Washington	6.0	6.8	7.2
Minnesota	3.7	4.4	4.3	West Virginia	5.1	5.9	6.0
Mississippi	5.1	6.6	7.1	Wisconsin	4.5	5.7	5.4
				Wyoming	3.9	3.9	4.4

[p] = preliminary

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

[In thousands]

State	Apr. 2001	Mar. 2002[p]	Apr. 2002	State	Apr. 2001	Mar. 2002[p]	Apr. 2002
Alabama	1,919.2	1,899.9	1,899.1	Missouri	2,747.6	2,691.1	2,693.1
Alaska	288.3	291.7	290.6	Montana	392.3	393.2	394.5
Arizona	2,273.8	2,243.4	2,243.4	Nebraska	908.8	911.8	911.0
Arkansas	1,160.0	1,155.7	1,152.8	Nevada	1,056.2	1,066.3	1,068.6
California	14,720.7	14,672.0	14,667.7	New Hampshire	628.1	626.5	627.4
Colorado	2,241.4	2,190.1	2,195.6	New Jersey	4,026.8	4,014.6	4,010.7
Connecticut	1,685.8	1,673.3	1,673.6	New Mexico	756.6	763.0	760.9
Delaware	421.5	416.6	414.6	New York	8,645.6	8,541.3	8,534.5
District of Columbia	649.5	649.2	651.6	North Carolina	3,897.9	3,882.3	3,877.2
Florida	7,200.4	7,178.8	7,191.6	North Dakota	331.0	330.5	329.6
Georgia	3,987.9	3,867.7	3,880.2	Ohio	5,581.5	5,534.9	5,520.9
Hawaii	555.9	549.0	544.8	Oklahoma	1,510.7	1,518.6	1,520.6
Idaho	569.9	568.3	569.8	Oregon	1,605.9	1,575.7	1,576.6
Illinois	6,032.4	5,922.3	5,916.3	Pennsylvania	5,713.8	5,650.8	5,645.1
Indiana	2,947.3	2,910.5	2,902.6	Rhode Island	479.7	480.3	483.3
Iowa	1,472.1	1,461.3	1,461.4	South Carolina	1,834.4	1,827.1	1,828.6
Kansas	1,352.8	1,362.1	1,358.1	South Dakota	379.2	375.4	378.1
Kentucky	1,815.8	1,823.0	1,823.6	Tennessee	2,715.4	2,717.2	2,707.5
Louisiana	1,928.0	1,923.3	1,930.4	Texas	9,550.5	9,455.7	9,458.7
Maine	608.8	609.0	609.9	Utah	1,083.6	1,072.4	1,069.2
Maryland	2,464.0	2,456.5	2,454.2	Vermont	299.5	296.1	295.6
Massachusetts	3,350.6	3,395.6	3,299.2	Virginia	3,537.0	3,497.4	3,494.8
Michigan	4,602.7	4,562.6	4,554.4	Washington	1,714.2	2,651.6	2,648.3
Minnesota	2,689.8	2,659.9	2,655.7	West Virginia	737.6	736.7	734.2
Mississippi	1,134.4	1,133.1	1,131.4	Wisconsin	2,834.0	2,816.6	2,821.8
				Wyoming	244.4	248.9	247.2

[p] = preliminary.

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

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

[In thousands]

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.P	MayP
TOTAL	131,739	131,922	132,229	132,108	132,045	131,966	131,819	131,414	131,087	130,890	130,871	130,706	130,701	130,680	130,702
PRIVATE SECTOR	111,079	110,989	111,375	111,204	111,074	110,968	110,776	110,349	109,987	109,768	109,734	109,544	109,505	109,495	109,496
GOODS-PRODUCING	25,709	24,944	25,147	25,012	24,907	24,776	24,675	24,511	24,353	24,261	24,130	24,041	23,975	23,905	23,870
Mining	543	565	566	567	570	571	571	566	566	565	568	564	560	564	558
Metal mining	41	36	37	35	35	35	35	34	34	33	33	32	32	32	32
Oil and gas extraction	311	338	340	341	342	343	343	340	340	339	342	339	336	339	334
Nonmetallic minerals, except fuels	114	111	111	111	112	111	111	110	110	111	111	111	111	112	112
Construction	6,698	6,685	6,714	6,697	6,680	6,679	6,674	6,643	6,629	6,634	6,615	6,597	6,593	6,541	6,541
General building contractors	1,528	1,462	1,465	1,462	1,457	1,461	1,462	1,456	1,454	1,459	1,459	1,458	1,462	1,452	1,454
Heavy construction, except building	901	922	921	921	925	925	924	922	925	924	919	914	908	901	908
Special trades contractors	4,269	4,300	4,328	4,314	4,298	4,293	4,288	4,265	4,250	4,251	4,237	4,225	4,223	4,188	4,179
Manufacturing	18,469	17,695	17,867	17,748	17,657	17,526	17,430	17,302	17,158	17,062	16,947	16,880	16,822	16,800	16,758
Production workers	12,628	11,933	12,065	11,971	11,901	11,797	11,719	11,620	11,513	11,437	11,362	11,305	11,264	11,250	11,245
Durable goods	11,138	10,636	10,769	10,684	10,606	10,516	10,445	10,343	10,237	10,166	10,070	10,023	9,976	9,976	9,963
Production workers	7,591	7,126	7,230	7,162	7,101	6,026	6,971	6,889	6,809	6,753	6,690	6,653	6,625	6,620	6,619
Lumber and wood products	832	786	788	788	786	783	784	777	772	770	771	771	769	767	770
Furniture and fixtures	558	519	529	524	519	513	507	500	495	494	492	491	491	497	494
Stone, clay, and glass products	579	571	574	572	569	568	566	564	561	558	555	551	550	551	549
Primary metal industries	698	656	666	660	665	649	643	637	625	617	607	601	596	598	597
Fabricated metal products	1,537	1,483	1,493	1,482	1,478	1,471	1,465	1,455	1,438	1,437	1,427	1,425	1,422	1,425	1,428
Industrial machinery and equipment	2,120	2,010	2,049	2,025	2,003	1,976	1,957	1,935	1,909	1,887	1,868	1,855	1,846	1,842	1,826
Computer and office equipment	361	343	353	347	341	336	331	328	325	322	317	315	315	313	308
Electronic and other electrical equipment	1,719	1,631	1,672	1642'	1,611	1,586	1,565	1,542	1,520	1,499	1,478	1,459	1,445	1,443	1,437
Electronic components and accessories	682	661	684	667	652	635	628	616	605	595	582	571	566	566	567
Transportation equipment	1,849	1,760	1,771	1,765	1,763	1,760	1,750	1,729	1,720	1,709	1,680	1,682	1,674	1,671	1,675
Motor vehicles and equipment	1,013	947	952	948	950	945	937	921	921	920	902	913	915	912	914
Aircraft and parts	465	461	464	464	464	463	463	458	452	449	437	427	419	416	416
Instruments and related products	852	830	845	844	842	837	832	829	825	822	818	816	813	811	807
Miscellaneous manufacturing industries	394	380	382	382	380	373	376	375	372	373	374	372	370	371	372
Nondurable goods	7,331	7,059	7,098	7,064	7,051	5,010	6,985	6,959	6,921	6,896	6,877	6,857	6,846	6,824	6,808
Production workers	5,038	4,808	4,835	4,809	4,800	4,771	4,748	4,731	4,704	4,684	4,672	4,652	4,639	4,630	4,626
Food and kindred products	1,684	1,691	1,691	1,691	1,689	1,685	1,690	1,690	1,690	1,685	1,686	1,686	1,685	1,689	1,687
Tobacco products	34	34	34	34	34	35	34	34	34	34	34	33	34	33	34
Textile mill products	528	478	485	478	475	469	464	459	451	448	444	441	440	436	434
Apparel and other textile products	633	566	575	566	566	555	551	546	537	537	536	531	527	523	520
Paper and allied products	657	834	636	635	632	630	628	627	626	624	622	621	620	615	612
Printing and publishing	1,547	1,490	1,503	1,494	1,487	1,480	1,471	1,463	1,453	1,444	1,437	1,428	1,419	1,413	1,407
Chemicals and allied products	1,038	1,022	1,022	1,021	1,024	1,022	1,019	1,018	1,015	1,012	1,008	1,011	1,010	1,008	1,006
Petroleum and coal products	127	126	125	126	126	126	126	127	127	126	126	126	126	125	125
Rubber and miscellaneous plastics products	1,011	958	964	959	959	950	945	939	932	930	928	924	929	927	928
Leather and leather products	71	60	61	60	59	58	57	56	56	56	56	56	56	55	55
SERVICE-PRODUCING	106,050	106,978	107,082	107,096	107,138	107,190	107,144	106,903	106,734	106,629	106,741	106,665	106,726	106,775	106,832
Transportation and public utilities	7,019	7,065	7,131	7,121	7,110	7,088	7,044	6,974	6,907	6,856	6,850	6,837	6,814	6,799	6,793
Transportation	4,529	4,497	4,546	4,540	4,535	4,522	4,487	4,427	4,367	4,332	4,343	4,341	4,330	4,330	4,328
Railroad transportation	236	234	235	234	233	233	232	232	232	233	235	234	233	230	228
Local and interurban passenger transit	476	480	480	477	484	480	477	478	480	481	481	479	478	476	475
Trucking and warehousing	1,856	1,848	1,856	1,855	1,850	1,845	1,841	1,831	1,831	1,827	1,824	1,826	1,819	1,830	1,827
Water transportation	196	192	192	195	196	194	192	193	189	188	188	187	186	190	193
Transportation by air	1,281	1,266	1,295	1,291	1,288	1,291	1,268	1,236	1,187	1,159	1,171	1,171	1,172	1,162	1,165
Pipelines, except natural gas	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Transportation services	471	462	473	473	469	463	462	442	433	429	429	429	427	427	425
Communications and public utilities	2,490	2,570	2,585	2,581	2,575	2,566	2,557	2,547	2,540	2,524	2,507	2,496	2,484	2,469	2,465
Communications	1,639	1,716	1,732	1,726	1,721	1,714	1,706	1,696	1,689	1,679	1,660	1,652	1,643	1,628	1,626
Electric, gas, and sanitary services	851	852	853	855	854	852	851	851	851	845	847	844	841	841	839
Wholesale trade	7,024	6,776	6,794	6,781	6,773	6,762	6,747	6,728	6,693	6,702	6,702	6,689	6,681	6,678	6,681
Retail trade	23,307	23,522	23,566	23,581	23,577	23,553	23,509	23,470	23,449	23,318	23,396	23,331	23,332	23,345	23,327
Building materials and garden supplies	1,016	1,044	1,041	1,054	1,047	1,049	1,051	1,052	1,049	1,050	1,049	1,048	1,053	1,061	1,068
General merchandise stores	2,837	2,897	2,916	2,917	2,911	2,901	2,902	2,888	2,877	2,853	2,856	2,892	2,901	2,915	2,897
Department stores	2,491	2,559	2,577	2,579	2,574	2,566	2,567	2,552	2,540	2,520	2,520	2,550	2,560	2,575	2,560

See footnotes at end of table.

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

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.P	MayP
Food stores.............................	3,521	3,541	3,453	3,448	3,439	3,432	3,438	3,442	3,448	3,430	3,421	3,402	3,392	3,392	3,397
Automotive dealers and															
service stations.....................	2,412	2,425	2,421	2,425	2,426	2,438	2,434	2,426	2,434	2,438	2,436	2,430	2,426	2,429	2,434
New and used car dealers.......	1,114	1,121	1,118	1,120	1,119	1,123	1,123	1,123	1,126	1,131	1,133	1,134	1,131	1,129	1,133
Apparel and accessory stores....	1,193	1,189	1,199	1,195	1,191	1,196	1,188	1,177	1,173	1,163	1,187	1,172	1,175	1,170	1,169
Furniture and home furnishings															
stores.................................	1,134	1,141	1,135	1,135	1,131	1,137	1,141	1,136	1,156	1,156	1,138	1,143	1,143	1,141	1,146
Eating and drinking places.........	8,114	8,256	8,270	8,277	8,304	8,272	8,234	8,239	8,224	8,190	8,238	8,161	8,154	8,152	8,130
Miscellaneous retail															
establishments....................	3,080	317	3,131	3,130	3,128	3,128	3,121	3,110	3,086	3,038	3,069	3,083	3,088	3,085	3,086
Finance, insurance, and															
real estate.........................	7,560	7,712	7,719	7,719	7,718	7,728	7,739	7,743	7,751	7,748	7,748	7,745	7,740	7,743	7,732
Finance.................................	3,710	3,800	3,807	3,812	3,803	3,809	3,813	3,812	3,821	3,818	3,819	3,812	3,809	3,813	3,813
Depository institutions..............	2,029	2,053	2,052	2,059	2,056	2,059	2,061	2,061	2,068	2,070	2,070	2,072	2,074	2,075	2,075
Commercial banks..................	1,430	1,434	1,433	1,437	1,434	1,435	1,437	1,439	1,442	1,444	1,450	1,446	1,447	1,446	1,446
Savings institutions................	253	256	255	256	255	256	258	257	260	261	262	263	264	264	264
Nondepository institutions........	681	720	713	720	724	728	733	740	747	752	755	754	753	756	756
Security and commodity															
brokers.............................	748	769	785	777	765	763	758	750	745	734	729	726	722	723	723
Holding and other investment															
offices..............................	251	257	257	256	258	259	261	261	261	262	259	260	260	259	261
Insurance..............................	2,346	2,369	2,367	2,369	2,369	2,371	2,375	2,379	2,377	2,372	2,372	2,376	2,375	2,374	2,369
Insurance carriers..................	1,589	1,595	1,596	1,596	1,597	1,599	1,598	1,600	1,597	1,594	1,594	1,593	1,591	1,989	1,583
Insurance agents, brokers,															
and service.........................	757	773	771	773	772	772	777	779	780	778	778	783	784	785	786
Real estate[1].........................	1,504	1,544	1,545	1,538	1,546	1,548	1,551	1,552	1,553	1,558	1,557	1,557	1,556	1,556	1,550
Services[1]..............................	40,460	40,970	41,018	40,990	40,989	41,061	41,062	40,923	40,834	40,883	10,908	40,901	40,963	41,025	41,093
Agricultural services................	832	849	848	850	852	854	857	859	860	865	865	868	872	857	856
Hotels and other lodging places.	1,914	1,870	1,889	1,876	1,874	1,866	1,852	1,814	1,810	1,805	1,811	1,811	1,811	1,796	1,789
Personal services....................	1,251	1,269	1,267	1,271	1,272	1,273	1,274	1,272	1,266	1,284	1,290	1,282	1,289	1,286	1,279
Business services....................	9,858	9,572	9,646	9,590	9,528	9,537	9,522	9,393	9,277	9,265	9,231	9,207	9,237	9,312	9,330
Services to buildings..............	994	1,016	1,021	1,020	1,016	1,018	1,020	1,022	1,025	1,025	1,022	1,018	121	1,027	1,023
Personnel supply services......	3,887	3,446	3,519	3,457	3,400	3,412	3,383	3,249	3,126	3,107	3,080	3,070	3,107	3,175	3,198
Help supply services..............	3,487	3,084	3,146	3,092	3,041	3,050	3,029	2,906	2,799	2,782	2,761	2,758	2,795	2,857	2,888
Computer and data															
processing services..............	2,095	2,225	2,232	2,237	2,237	2,230	2,233	2,232	2,221	2,219	2,213	2,208	2,198	2,190	2,190
Auto repair services															
and parking........................	1,248	1,257	1,262	1,259	1,265	1,262	1,261	1,253	1,259	1,259	1,262	1,262	1,260	1,261	1,262
Miscellaneous repair services....	366	374	374	373	372	374	375	375	375	376	376	379	377	377	375
Motion pictures.......................	594	583	578	588	585	583	580	575	577	574	581	574	572	574	578
Amusement and recreation															
services..............................	1,728	1,721	1,747	1,724	1,722	1,714	1,700	1,702	1,685	1,680	1,699	1,649	1,635	1,611	1,621
Health services.......................	10,197	10,381	10,333	10,365	10,393	10,424	10,452	10,476	10,502	10,530	10,551	10,575	10,602	10,611	10,626
Offices and clinics of medical															
doctors................................	1,924	2,002	1,995	2,003	2,006	2,012	2,016	3,018	2,025	2,029	2,033	3,041	2,046	2,044	2,050
Nursing and personal care															
facilities..............................	1,795	1,847	1,837	1,845	1,848	1,852	1,858	1,862	1,866	1,871	1,876	1,875	1,879	1,883	1,886
Hospitals...............................	3,990	4,096	4,072	4,087	4,101	4,117	4,129	4,141	4,153	4,164	4,174	4,184	4,193	4,199	4,207
Home health care services......	643	636	633	635	634	637	639	639	640	641	643	642	643	643	644
Legal services........................	1,010	1,037	1,036	1,035	1,038	1,041	1,046	1,047	1,049	1,051	1,053	1,054	1,056	1,059	1,066
Educational services................	2,325	2,433	2,450	2,434	2,439	2,449	2,452	2,454	2,458	2,463	2,473	2,485	2,489	2,501	2,518
Social services.......................	2,903	307	3,036	3,054	3,076	3,094	3,097	3,110	3,121	3,135	3,149	3,155	3,162	3,167	3,164
Child day care services...........	712	716	713	719	723	727	722	721	721	723	723	722	723	925	722
Residential care.....................	806	864	857	863	868	873	878	884	888	891	896	899	902	903	901
Museums and botanical and															
zoological gardens................	106	110	110	111	111	111	111	110	109	110	110	109	109	109	108
Membership organizations.........	2,475	2,468	2,466	2,471	2,464	2,473	2,479	2,474	2,473	2,473	2,471	2,471	2,470	2,477	2,480
Engineering and management															
services..............................	3,419	3,593	3,582	3,595	3,604	3,612	3,610	3,616	3,620	3,621	3,624	3,629	3,631	3,636	3,649
Engineering and architectural															
services..............................	1,017	1,053	1,054	1,056	1,057	1,058	1,057	1,056	1,051	1,048	1,047	1,044	1,044	1,041	1,042
Management and public															
relations..............................	1,090	1,166	1,160	1,165	1,166	1,171	1,175	1,178	1,182	1,184	1,192	1,193	1,191	1,202	1,209
Government............................	20,681	20,933	20,854	20,904	20,971	20,998	21,043	21,065	21,100	21,122	21,137	21,162	21,196	21,185	21,206
Federal..................................	2,777	2,616	2,612	2,617	2,622	2,624	2,622	2,622	2,622	2,616	2,615	2,609	2,608	2,611	2,600
Federal, except Postal															
Service...............................	1,917	1,767	1,755	1,769	1,770	1,771	1,774	1,778	1,776	1,776	1,776	1,777	1,782	1,784	1,777
State.....................................	4,785	4,885	4,866	4,884	4,912	4,910	4,938	4,925	4,925	4,932	4,935	4,937	4,940	4,942	4,945
Education...............................	2,032	2,096	2,081	2,096	2,120	2,116	2,140	2,118	2,121	2,124	2,127	2,130	2,133	2,135	2,141
Other State government...........	2,753	2,789	2,785	2,788	2,792	2,794	2,798	2,807	2,804	2,808	2,808	2,807	2,807	2,807	2,804
Local.....................................	13,119	13,432	13,376	13,376	13,403	13,437	13,464	13,483	13,518	13,559	13,575	13,593	13,617	13,645	13,661
Education...............................	7,440	7,646	7,607	7,621	7,644	7,668	7,679	7,693	7,710	7,723	7,732	7,746	7,767	7,754	7,770
Other local government............	5,679	5,786	5,769	5,782	5,793	5,796	5,804	5,825	5,849	5,852	5,861	5,871	5,878	5,879	5,891

[1] Includes other industries not shown separately.

P = preliminary.

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

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

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.ᵖ	Mayᵖ
PRIVATE SECTOR.............................	34.5	34.2	34.2	34.2	34.2	34.1	34.1	34.0	34.1	34.1	34.1	34.2	34.2	34.2	34.2
GOODS-PRODUCING...........................	41.0	40.4	40.5	40.4	40.4	40.3	40.3	40.1	40.2	40.2	40.3	40.4	40.5	40.4	40.3
MINING..	43.1	43.5	43.8	43.5	43.4	43.5	43.6	43.0	43.5	43.8	43.0	43.4	43.3	42.4	43.0
MANUFACTURING.............................	41.6	40.7	40.8	40.7	40.8	40.7	40.6	40.5	40.4	40.8	40.6	40.7	41.0	40.9	40.9
Overtime hours................................	4.6	3.9	3.9	3.9	3.9	4.0	3.9	3.8	3.8	3.8	3.9	3.9	4.1	4.2	4.2
Durable goods.................................	42.1	41.0	41.1	41.0	41.1	41.0	40.9	40.7	40.6	40.9	41.0	41.1	41.3	41.4	41.3
Overtime hours.............................	4.7	3.9	3.9	3.9	3.9	3.9	3.8	3.7	3.7	3.8	3.9	3.9	4.1	4.1	4.1
Lumber and wood products................	41.0	40.6	40.6	40.5	40.9	40.8	41.2	30.7	40.7	41.0	40.5	40.9	41.1	40.8	40.8
Furniture and fixtures........................	40.0	39.0	38.7	38.5	39.7	39.7	39.1	38.6	38.8	39.2	40.1	40.3	40.6	40.8	40.4
Stone, clay, and glass products..........	43.1	43.6	43.8	43.9	43.8	43.7	43.9	43.6	43.6	43.4	43.8	44.1	43.8	43.4	43.4
Primary metal industries....................	44.9	43.6	43.5	43.7	43.8	43.6	43.7	43.4	43.0	43.7	43.6	43.8	44.4	44.3	44.1
Blast furnaces and basic steel products.................................	46.0	44.6	44.5	44.8	44.6	44.6	45.3	44.5	43.9	44.4	44.5	44.8	45.5	45.1	45.6
Fabricated metal products...............	42.6	41.4	41.5	41.3	41.5	41.4	41.2	41.1	41.0	41.3	41.3	41.6	41.7	41.6	41.9
Industrial machinery and equipment...	42.2	40.6	40.8	40.5	40.6	40.3	40.3	40.2	39.9	40.1	40.1	40.1	40.5	40.6	40.7
Electronic and other electrical equipment..................................	41.1	39.4	39.2	39.3	39.1	39.1	39.1	39.0	39.0	39.4	38.7	38.9	39.4	39.5	39.4
Transportation equipment..................	43.4	41.9	42.3	42.0	42.1	42.2	41.5	41.5	41.6	41.9	42.7	42.3	42.4	42.6	42.3
Motor vehicles and equipment.........	44.4	42.7	43.2	42.9	42.9	43.6	42.4	42.4	42.5	43.2	44.3	43.7	43.9	44.4	44.2
Instruments and related products.......	41.3	40.9	41.0	40.9	40.8	40.6	41.1	40.7	40.6	40.6	40.5	40.4	40.6	40.4	40.4
Miscellaneous manufacturing.............	39.0	37.9	37.9	38.3	38.2	38.1	37.7	37.3	37.4	38.0	38.2	38.4	38.8	38.8	38.8
Nondurable goods.............................	40.8	40.3	40.3	40.3	40.3	40.2	40.2	40.1	40.1	40.1	40.0	40.2	40.4	40.3	40.4
Overtime hours.............................	4.4	4.0	3.9	4.0	4.0	4.1	4.1	4.0	3.9	3.9	4.0	3.9	4.2	4.3	4.3
Food and kindred products................	41.7	41.1	41.1	41.1	40.9	41.1	41.0	41.2	41.0	40.9	41.0	41.0	41.4	41.2	41.2
Textile mill products.........................	41.2	39.9	40.2	40.1	39.7	39.8	39.8	39.4	39.3	40.0	40.2	40.9	41.4	41.5	41.4
Apparel and other textile products......	37.8	37.3	37.7	37.4	37.4	37.1	36.9	36.6	36.9	36.9	36.7	36.7	37.4	37.1	37.0
Paper and allied products..................	42.5	41.6	41.6	41.7	41.8	41.3	41.7	41.4	41.3	41.3	41.1	41.5	41.5	41.6	41.9
Printing and publishing......................	38.3	38.1	38.1	38.0	38.3	38.0	38.0	37.9	37.8	37.8	37.3	37.4	37.5	37.2	37.5
Chemicals and allied products............	42.5	42.3	42.4	42.2	42.5	42.2	42.1	42.0	41.9	41.9	41.9	41.9	42.0	41.8	42.3
Rubber and miscellaneous plastics products...........................	41.4	40.7	40.6	40.7	40.7	40.6	40.8	40.5	40.7	40.8	40.5	40.9	41.1	41.6	41.2
Leather and leather products.............	37.5	36.3	36.1	36.3	36.0	36.3	36.4	36.2	36.6	36.9	37.0	37.2	37.3	37.5	36.7
SERVICE-PRODUCING........................	32.8	32.7	32.7	32.7	32.7	32.7	32.7	32.6	32.6	32.7	32.7	32.7	32.8	32.7	32.8
TRANSPORTATION AND PUBLIC UTILITIES...........................	38.6	38.2	38.2	38.2	38.1	38.1	37.9	38.0	38.9	38.2	38.1	38.2	38.2	38.3	38.4
WHOLESALE TRADE.........................	38.5	38.2	38.3	38.2	38.2	38.3	38.3	38.0	38.2	38.3	38.2	38.3	38.4	38.3	38.3
RETAIL TRADE.................................	28.9	28.9	28.8	28.8	28.8	28.8	28.8	28.8	28.8	28.9	28.9	29.0	29.1	29.0	29.1

ᵖ = preliminary.

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

14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.ᴾ	Mayᴾ
PRIVATE SECTOR (in current dollars)..	$13.75	$14.32	$14.24	$14.29	$14.33	$14.38	$14.43	$14.46	$14.52	$14.56	$14.59	$14.62	$14.65	$14.68	$14.70
Goods-producing.............................	15.40	15.92	15.85	15.89	15.92	15.99	16.02	16.05	16.11	16.18	16.24	16.28	16.29	16.32	16.35
Mining...	17.24	17.56	17.49	17.62	17.63	17.62	17.62	17.70	17.68	17.51	17.69	17.66	17.72	17.63	17.87
Construction..	17.88	18.34	18.23	18.30	18.29	18.37	18.39	18.40	18.47	18.60	18.65	18.68	18.74	18.83	18.77
Manufacturing.....................................	14.38	14.83	14.78	14.81	14.86	14.91	14.95	14.99	15.03	15.08	15.13	15.17	15.19	15.19	15.27
Excluding overtime.........................	13.62	14.15	14.09	14.13	14.19	14.22	14.28	14.31	14.36	14.39	14.42	14.46	14.45	14.43	14.53
Service-producing............................	13.24	13.85	13.76	13.82	13.86	13.91	13.97	14.00	14.06	14.10	14.11	14.14	14.18	14.21	14.24
Transportation and public utilities........	16.22	16.79	16.71	16.77	16.81	16.81	16.87	16.96	17.03	17.09	17.13	17.16	17.26	17.26	17.31
Wholesale trade.................................	15.20	15.86	15.75	15.89	15.87	15.88	15.99	15.97	15.98	16.07	16.10	16.19	16.23	16.11	16.12
Retail trade...	9.46	9.77	9.69	9.75	9.77	9.79	9.81	9.84	9.90	9.89	9.90	9.92	9.95	9.97	9.99
Finance, insurance, and real estate....	15.07	15.80	15.71	15.78	15.85	15.88	15.93	15.97	16.00	16.00	16.06	16.08	16.14	16.18	16.17
Services...	13.91	14.67	14.56	14.61	14.68	14.76	14.83	14.88	14.94	14.98	15.01	15.04	15.08	15.13	15.16
PRIVATE SECTOR (in constant (1982) dollars)...	7.86	8.00	7.93	7.94	7.99	8.02	8.01	8.06	8.10	8.14	8.14	8.14	8.13	8.10	8.12

ᴾ = preliminary. Dash indicates data not available.

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

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

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.P	MayP
PRIVATE SECTOR..............................	$13.76	$14.32	$14.21	$14.20	$14.26	$14.26	$14.50	$14.49	$14.54	$14.62	$14.65	$14.67	$14.67	$14.69	$14.67
MINING..	17.22	17.56	17.42	17.53	17.61	17.47	17.61	17.72	17.61	17.58	17.89	17.76	17.73	17.70	17.74
CONSTRUCTION................................	17.88	18.34	18.18	18.22	18.33	18.44	18.51	18.57	18.54	18.69	18.56	18.62	18.66	18.70	18.67
MANUFACTURING.............................	14.37	14.83	14.75	14.79	14.84	14.89	15.01	14.97	15.07	15.17	15.15	15.16	15.16	15.20	15.23
Durable goods.................................	14.82	15.28	15.19	15.24	15.26	15.38	15.49	15.46	15.55	15.66	15.61	15.63	15.63	15.66	15.68
Lumber and wood products.................	11.94	12.26	12.16	12.19	12.32	12.37	12.44	12.37	12.40	12.42	12.38	12.39	12.35	12.33	12.43
Furniture and fixtures.........................	11.74	12.24	12.13	12.19	12.27	12.33	12.39	12.42	12.45	12.56	12.61	12.59	12.57	12.54	12.59
Stone, clay, and glass products..........	14.53	15.00	15.01	15.11	15.10	15.16	15.21	15.09	15.13	15.10	15.12	15.17	15.12	15.35	15.43
Primary metal industries....................	16.41	16.92	16.78	16.93	17.07	17.02	17.23	17.08	17.24	17.19	17.15	17.15	17.20	17.25	17.36
Blast furnaces and basic steel products...	19.82	20.41	20.26	20.39	20.48	20.62	20.90	20.52	20.66	20.53	20.53	20.63	20.66	20.69	20.81
Fabricated metal products..................	13.87	14.25	14.22	14.25	14.26	14.34	14.42	14.33	14.42	14.56	14.57	14.51	14.60	14.66	14.64
Industrial machinery and equipment...	15.55	15.89	15.76	15.79	15.88	15.93	16.01	16.07	16.16	16.23	16.31	16.33	16.31	16.30	16.35
Electronic and other electrical equipment......................................	13.79	14.51	14.36	14.49	14.56	14.70	14.82	14.78	14.88	14.97	14.86	14.90	14.93	14.87	14.91
Transportation equipment..................	18.46	19.06	18.88	18.96	18.85	19.13	19.36	19.41	19.54	19.71	19.57	19.69	19.65	19.68	19.65
Motor vehicles and equipment..........	18.80	19.40	19.23	19.31	19.09	19.43	19.73	19.83	19.96	20.19	19.99	20.05	20.09	20.22	20.17
Instruments and related products.......	14.41	14.81	14.67	14.74	14.91	14.93	15.00	14.97	14.98	15.09	15.09	15.10	15.12	15.11	15.11
Miscellaneous manufacturing.............	11.63	12.16	12.11	12.07	12.12	12.23	12.38	12.24	12.35	12.39	12.46	12.42	12.39	12.36	12.37
Nondurable goods...........................	13.68	14.16	14.06	14.11	14.21	14.16	14.30	14.26	14.36	14.45	14.47	14.47	14.46	14.53	14.55
Food and kindred products.................	12.51	12.89	12.85	12.89	12.95	12.89	12.97	12.89	13.10	13.17	13.14	13.08	13.10	13.18	13.25
Tobacco products.............................	21.34	21.50	22.39	22.59	22.97	20.97	20.71	20.71	21.46	31.37	21.21	21.71	22.47	22.80	23.09
Textile mill products..........................	11.16	11.35	11.30	11.32	11.37	11.39	11.40	11.34	11.40	11.53	11.66	11.64	11.65	11.65	11.73
Apparel and other textile products.......	9.29	9.43	9.36	9.42	9.38	9.41	9.54	9.44	9.49	9.60	9.72	9.77	9.82	9.93	9.93
Paper and allied products..................	16.25	16.87	16.72	16.89	16.98	16.87	17.11	17.14	17.19	17.26	17.19	17.17	17.25	17.33	17.51
Printing and publishing......................	14.40	14.82	14.76	14.75	14.84	14.88	15.01	14.93	14.91	15.04	15.01	15.06	15.12	15.11	15.05
Chemicals and allied products............	18.15	18.61	18.52	18.55	18.68	18.54	18.85	18.74	18.83	18.88	18.87	18.95	18.93	19.01	18.96
Petroleum and coal products..............	21.99	22.08	21.81	21.77	22.01	22.19	22.24	22.23	22.38	22.19	22.10	22.45	22.39	22.39	22.02
Rubber and miscellaneous plastics products.............................	12.85	13.39	13.29	13.29	13.37	13.43	13.50	13.53	13.57	13.69	13.71	13.65	13.61	13.68	13.69
Leather and leather products..............	10.17	10.31	10.24	10.27	10.24	10.33	10.24	10.24	10.20	10.29	10.31	10.35	10.40	10.39	10.43
TRANSPORTATION AND PUBLIC UTILITIES............................	16.21	16.79	16.65	16.69	16L.81	16.78	16.91	16.98	17.05	17.11	17.18	17.18	17.24	17.31	17.24
WHOLESALE TRADE...........................	15.22	15.86	15.71	15.81	15.92	15.80	16.08	15.95	15.96	16.21	16.11	16.21	16.13	16.11	16.08
RETAIL TRADE...................................	9.46	9.77	9.67	9.70	9.70	9.71	9.86	9.87	9.91	9.89	9.96	9.95	9.98	10.00	9.98
FINANCE, INSURANCE, AND REAL ESTATE.........................	15.14	15,80	15.72	15.68	15.82	15.77	15.96	15.91	15.97	16.14	16.07	16.13	16.17	16.23	16.26
SERVICES...	13.93	14.67	14.52	14.45	14.52	14.52	14.85	14.87	14.99	15.15	15.14	15.17	15.16	15.16	15.12

P = preliminary.

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

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

Industry	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.[p]	May[p]
PRIVATE SECTOR															
Current dollars...............	$474.38	$489.74	$484.56	$488.48	$494.82	$491.97	$498.80	$492.66	$494.36	$502.93	$492.24	$497.31	$497.31	$497.99	$500,25
Seasonally adjusted.............	–	–	487.01	488.72	490.09	490.36	492.06	491.64	495.13	496.50	497.52	500.00	501.03	502.06	502.74
Constant (1982) dollars............	272.16	273.45	269.20	271.08	275,82	274.23	276.50	274.31	275.72	281.91	275.46	277.36	275.82	274.53	275.77
MINING................................	743.04	763.86	768.22	767.81	769.56	761.69	774.84	772.59	.764.27	771.76	754.96	761.90	757.07	750.48.	766.37
CONSTRUCTION......................	702.68	720.76	730.84	730.62	740.53	741.29	738.55	737.23	724.91	719.57	714.56	716.87	716.54	723.69	728.13
MANUFACTURING															
Current dollars...............	598.21	603.58	600.33	603.43	599.54	609.00	616.91	607.78	613.35	625.00	612.06	610.95	620.04	620.16	622.91
Constant (1982) dollars............	343.21	337.01	333.52	334.87	334.19	338.46	341.97	338.41	342.08	350.34	342.51	340.74	343.89	341.87	343.39
Durable goods........................	623.92	626.48	624.31	626.36	619.56	633.66	639.74	632.31	636.00	651.46	636.89	637.70	645.52	646.76	649.15
Lumber and wood products......	489.13	497.76	497.34	498.57	502.66	509.64	517.50	507.17	507.16	507.98	493.96	495.60	503.88	504.30	510.87
Furniture and fixtures...............	469.20	477.36	463.37	471.75	483.44	494.43	491.88	481.90	485.55	501.14	504.40	501.08	509.09	506 31/50	504 43/50
Stone, clay, and glass products...............	626.24	654.00	664.94	670.88	668.93	676.14	685.97	666.98	662.69	649.30	645.62	646.24	645.62	667.73	675.83
Primary metal industries...........	737.26	737.71	729.93	741.53	739.13	740.37	763.29	739.56	748.22	763.24	746.03	746.03	758.52	762.45	767.31
Blast furnaces and basic steel products.................	911.72	910.29	899.54	919.59	919.55	919.65	959.31	906.98	915.24	909.48	907.43	915.97	933.83	937.26	951.02
Fabricated metal products.......	590.86	589.95	588.71	589.85	581.81	595.11	598.43	591.83	596.99	614.43	600.28	597.81	607.36	606.92	611.95
Industrial machinery and equipment................	656.21	645.13	643.01	639.50	639.96	638.79	646.80	646.01	648.02	667.49	657.29	658.10	663.82	660.15	665.45
Electronic and other electrical equipment................	567.18	571.69	560.04	569.46	559.10	576.24	583.91	580.85	587.76	603.29	573.60	576.63	588.24	581.42	582.98
Transportation equipment.........	800.73	798.61	806.18	802.01	767.20	816.85	811.18	809.40	818.73	841.62	827.81	825.01	835.13	844.27	842.99
Motor vehicles and equipment................	834.28	828.38	842.27	841.92	782.69	860.75	846.42	844.76	856.28	892.40	871.56	868.17	883.96	907.88	905.63
Instruments and related products.................	595.96	605.73	600.00	599.92	#######	604.67	618.00	607.78	611.18	623.22	612.65	611.55	616.90	607.42	607.42
Miscellaneous manufacturing....	453.57	460.86	458.97	463.49	459.35	468.41	467.96	457.78	461.89	477.02	469.74	473.20	483.21	479.57	479.96
Nondurable goods.....................	558.55	570.65	563.81	568.63	569.82	572.06	582.01	574.68	580.14	588.12	575.91	574.46	581.29	582.65	586.37
Food and kindred products........	521.25	529.78	523.00	529.78	529.66	536.22	546.04	538.80	544.96	546.56	533.48	523.20	533.17	533.79	543.25
Tobacco products.....................	877.90	851.40	870.97	923.93	914.21	832.51	836.68	834.61	862.69	880.44	854.76	881.43	912.28	932.52	962.85
Textile mill products.................	459.79	452.87	454.26	457.33	444.57	456.74	458.28	445.66	450.30	465.87	465.23	471.41	483.48	485.81	486.80
Apparel and other textile products.................	351.54	351.74	355.68	356.08	348.94	349.11	350.12	344.56	351.13	358.08	350.89	357.58	368.25	369.40	369.40
Paper and allied products.........	690.63	701.79	690.54	702.62	708.07	695.04	722.04	714.74	718.54	724.92	709.95	705.69	713.43	717.46	728.42
Printing and publishing.............	551.52	564.64	556.45	557.55	563.92	568.42	577.89	568.83	572.54	576.02	555.37	558.73	568.51	560.58	559.86
Chemicals and allied products..	771.38	787.20	783.40	782.81	790.16	780.53	797.36	787.08	793.74	800.51	790.65	790.22	793.17	794.62	800.11
Petroleum and coal products.....	932.80	945.02	911.66	933.93	953.03	954.17	954.10	926.99	939.96	934.20	932.78	938.41	920.23	900.23	887.41
Rubber and miscellaneous plastics products.................	531.99	544.97	539.57	543.56	534.80	543.92	556.20	549.32	553.66	568.14	555.26	556.92	559.37	564.98	564.03
Leather and leather products.....	381.75	374.25	370.69	377.94	361.47	379.11	376.83	372.74	376.38	380.73	378.38	380.88	386.88	388.59	382.78
TRANSPORTATION AND PUBLIC UTILITIES.................	626.09	641.38	634.37	640.90	650.55	644.35	645.96	645.24	646.20	660.45	647.69	751.12	655.12	657.78	660.29
WHOLESALE TRADE..................	585.20	605.85	#######	603.94	612.92	605.14	620.69	606.10	611.27	627.33	608.96	615.98	614.55	615.40	615.86
RETAIL TRADE.............................	273.39	282.35	277.53	283.24	288.09	285.47	284.95	282.28	282.44	289.78	279.88	284.57	286.43	287.00	289.42
FINANCE, INSURANCE, AND REAL ESTATE.................	547.04	570.38	559.63	567.62	579.01	567.72	585.73	569.58	573.32	592.34	575.31	582.29	580.50	581.03	577.63
SERVICES...............................	454.86	479.71	471.90	473.96	480.61	477.71	487.08	483.28	487.18	498.44	487.51	493.03	492.70	491.18	489.89

[p] = preliminary.

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

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, 356 industries											
Over 1-month span:												
1998	62.4	57.5	59.1	60.2	57.5	56.8	54.6	59.1	57.2	53.0	57.9	56.8
1999	55.3	58.6	53.6	58.4	55.5	57.8	57.1	54.8	57.1	57.2	60.4	58.1
2000	55.9	57.5	57.9	51.2	50.1	55.8	57.8	51.4	52.4	52.4	53.2	52.7
2001	49.4	45.7	50.3	42.4	47.3	43.2	44.5	42.5	42.4	40.5	39.3	44.1
2002	47.3	41.4	49.7	49.7	50.6	–	–	–	–	–	–	–
Over 3-month span:												
1998	65.3	66.3	65.3	65.9	62.7	58.2	58.9	59.1	59.8	57.9	57.1	58.8
1999	59.2	57.6	59.5	55.2	60.2	57.2	59.4	59.2	59.7	58.9	61.2	60.7
2000	60.4	61.4	59.4	53.2	52.4	55.5	56.6	56.2	51.2	51.0	53.2	51.6
2001	45.5	46.1	40.8	43.4	37.8	43.2	39.3	38.0	35.3	33.7	36.3	38.9
2002	40.1	43.2	43.9	43.9	–	–	–	–	–	–	–	–
Over 6-month span:												
1998	70.4	67.4	65.0	62.5	63.6	60.5	59.2	58.6	57.5	60.2	59.2	58.4
1999	59.8	59.8	58.2	60.3	56.7	59.2	61.8	60.8	62.7	61.8	61.2	62.8
2000	63.5	60.6	62.6	63.7	61.5	55.5	56.1	58.6	52.4	48.7	45.7	46.5
2001	52.0	50.6	48.6	45.3	44.1	38.5	37.1	35.6	34.3	33.1	34.1	35.6
2002	37.8	–	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1998	69.7	67.6	67.4	66.0	64.0	62.7	61.9	62.0	60.8	59.4	60.8	58.9
1999	61.2	60.2	58.2	60.8	60.8	61.6	62.2	61.3	63.8	62.2	59.7	60.5
2000	62.5	63.0	61.8	59.5	58.4	56.8	55.7	56.5	47.7	45.2	44.5	42.9
2001	49.6	47.7	45.0	43.1	40.5	39.8	38.4	36.8	34.4	34.3	32.9	–
2002	–	–	–	–	–	–	–	–	–	–	–	–
	Manufacturing payrolls, 139 industries											
Over 1-month span:												
1998	57.0	52.6	52.2	52.9	44.9	47.4	38.2	52.9	44.9	38.6	42.3	41.5
1999	47.4	41.2	42.6	46.0	46.3	43.4	50.0	42.6	46.0	45.6	51.5	49.3
2000	44.9	52.2	49.3	46.0	49.3	50.7	57.4	36.8	39.0	42.3	47.1	40.8
2001	34.9	26.8	38.2	29.0	28.3	30.5	34.9	25.7	31.6	31.3	25.0	30.9
2002	35.3	37.9	40.4	47.1	46.7	–	–	–	–	–	–	–
Over 3-month span:												
1998	59.2	57.0	54.8	51.8	48.2	38.2	41.9	43.0	43.0	38.2	32.7	40.4
1999	39.3	39.3	39.7	40.1	41.2	43.8	44.1	46.3	42.3	44.1	47.8	45.2
2000	48.2	48.9	48.9	44.5	46.7	52.2	46.0	38.6	29.0	34.2	39.0	36.0
2001	21.3	21.3	18.4	23.5	19.9	23.2	17.3	19.1	16.2	18.0	18.4	18.0
2002	24.6	30.1	37.9	39.7	–	–	–	–	–	–	–	–
Over 6-month span:												
1998	60.7	54.4	49.3	40.1	45.2	39.0	39.0	38.2	34.6	41.2	35.7	33.1
1999	36.4	36.0	37.5	40.4	37.5	43.0	43.0	44.5	48.2	43.0	44.5	47.4
2000	47.6	45.2	44.5	50.0	41.9	36.0	36.0	35.3	32.4	26.1	21.3	21.7
2001	20.2	16.9	14.0	16.2	16.5	14.7	14.7	11.8	14.0	13.2	17.6	16.5
2002	20.2	26.1	–	–	–	–	–	–	–	–	–	–
Over 12-month span:												
1998	54.8	52.2	51.8	46.7	40.4	38.2	38.2	37.5	36.4	34.6	35.7	34.2
1999	38.5	34.6	32.4	36.0	37.9	44.5	40.1	40.4	44.5	44.5	43.4	44.5
2000	49.3	44.1	41.2	36.8	35.3	35.3	33.8	28.7	22.1	19.1	17.6	14.0
2001	13.6	13.6	14.7	15.4	12.1	11.8	11.0	11.0	12.9	13.6	13.6	–
2002	–	–	–	–	–	–	–	–	–	–	–	–

Dash indicates data not available.

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 inceasing and decreasing employment.

Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

18. Establishment size and employment covered under UI, private ownership, by major industry division, first quarter 2000

Industry, establishments, and employment	Total	Size of establishments								
		Fewer than 5 workers[1]	5 to 9 workers	10 to 19 workers	20 to 49 workers	50 to 99 workers	100 to 249 workers	250 to 499 workers	500 to 999 workers	1,000 or more workers
Total, all industries[2]										
Establishments, first quarter	7,531,330	4,413,181	1,302,488	850,411	590,662	206,415	119,172	31,311	11,713	5,977
Employment, March	108,195,174	6,831,146	8,615,974	11,471,927	17,878,154	14,212,796	17,895,603	10,658,780	7,965,372	12,665,422
Agriculture, forestry, and fishing										
Establishments, first quarter	200,289	123,880	37,646	22,736	11,179	2,875	1,473	370	106	24
Employment, March	1,702,493	179,158	248,989	302,599	326,510	196,681	216,628	126,181	69,476	36,271
Mining										
Establishments, first quarter	27,284	14,102	4,323	3,728	3,202	1,023	591	214	76	25
Employment, March	524,514	22,082	28,959	51,183	97,241	69,762	89,714	74,836	52,916	37,821
Construction										
Establishments, first quarter	747,563	477,549	126,844	76,253	46,543	13,242	5,748	1,053	272	59
Employment, March	6,310,456	703,310	831,405	1,024,819	1,389,870	898,785	846,893	347,400	182,357	85,617
Manufacturing										
Establishments, first quarter	405,838	147,029	67,385	61,150	61,487	30,568	24,264	8,646	3,598	1,711
Employment, March	18,433,795	251,154	453,397	842,691	1,922,360	2,144,676	3,739,308	2,977,743	2,446,323	3,656,143
Transportation and public utilities										
Establishments, first quarter	315,413	174,645	49,173	36,475	30,720	12,952	7,913	2,127	892	516
Employment, March	6,678,516	272,380	325,334	498,572	945,800	895,012	1,190,459	726,615	618,630	1,205,714
Wholesale trade										
Establishments, first quarter	664,094	400,335	110,091	77,321	52,153	15,187	7,019	1,478	414	96
Employment, March	6,947,770	621,924	729,753	1,046,983	1,565,359	1,035,060	1,035,170	496,350	274,988	142,183
Retail trade										
Establishments, first quarter	1,458,626	623,529	329,260	235,941	179,053	57,988	26,380	4,982	1,169	324
Employment, March	22,807,395	1,154,942	2,204,569	3,190,042	5,437,335	3,943,391	3,880,016	1,659,975	764,056	573,069
Finance, insurance, and real estate										
Establishments, first quarter	671,294	438,402	114,349	62,141	35,549	11,618	6,025	1,799	898	513
Employment, March	7,379,831	714,292	751,197	826,817	1,065,116	797,168	912,396	621,570	615,246	1,076,029
Services										
Establishments, first quarter	2,890,313	1,879,338	451,715	271,168	169,867	60,864	39,727	10,640	4,286	2,708
Employment, March	37,110,557	2,772,133	2,967,673	3,643,823	5,102,854	4,225,937	5,980,102	3,627,319	2,939,641	5,851,075

[1] Includes establishments that reported no workers in March 2000.

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

NOTE: Detail may not add to totals due to rounding.

19. Annual data: establishments, employment, and wages covered under UI and UCFE by ownership

Year	Average establishments	Average annual employment	Total annual wages (in thousands)	Average annual wages per employee	Average weekly wage
Total covered (UI and UCFE)					
1991	6,382,523	106,884,831	$2,626,972,030	$24,578	$473
1992	6,532,608	107,413,728	2,781,676,477	25,897	498
1993	6,679,934	109,422,571	2,884,472,282	26,361	507
1994	6,826,677	112,611,287	3,033,676,678	26,939	518
1995	7,040,677	115,487,841	3,215,921,236	27,846	536
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
UI covered					
1991	6,336,151	103,755,832	$2,524,937,018	$24,335	$468
1992	6,485,473	104,288,324	2,672,081,827	25,622	493
1993	6,632,221	106,351,431	2,771,023,411	26,055	501
1994	6,778,300	109,588,189	2,918,684,128	26,633	512
1995	6,990,594	112,539,795	3,102,353,355	27,567	530
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
Private industry covered					
1991	6,162,684	89,007,096	$2,152,021,705	$24,178	$465
1992	6,308,719	89,349,803	2,282,598,431	25,547	491
1993	6,454,381	91,202,971	2,365,301,493	25,934	499
1994	6,596,158	94,146,344	2,494,458,555	26,496	510
1995	6,803,454	96,894,844	2,658,927,216	27,441	528
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
State government covered					
1991	58,499	4,005,321	$108,672,127	$27,132	$522
1992	58,801	4,044,914	112,405,340	27,789	534
1993	59,185	4,088,075	117,095,062	28,643	551
1994	60,686	4,162,944	122,879,977	29,518	568
1995	60,763	4,201,836	128,143,491	30,497	586
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
Local government covered					
1991	114,936	10,742,558	$264,215,610	$24,595	$473
1992	117,923	10,892,697	277,045,557	25,434	489
1993	118,626	11,059,500	288,594,697	26,095	502
1994	121,425	11,278,080	301,315,857	26,717	514
1995	126,342	11,442,238	315,252,346	27,552	530
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
Federal Government covered (UCFE)					
1991	46,372	3,128,999	$102,035,012	$32,609	$627
1992	47,136	3,125,404	109,594,650	35,066	674
1993	47,714	3,071,140	113,448,871	36,940	710
1994	48,377	3,023,098	114,992,550	38,038	731
1995	50,083	2,948,046	113,567,881	38,523	741
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

NOTE: Detail may not add to totals due to rounding.

20. Annual data: establishments, employment, and wages covered under UI and UCFE, by State

State	Average establishments		Average annual employment		Total annual wages (in thousands)		Average weekly wage	
	2000	1999-2000 change	2000	1999-2000 change	2000	1999-2000 change	2000	1999-2000 change
Total United States	7,879,116	58,256	129,877,063	2,834,781	$4,587,708,584	$352,129,380	$679	$38
Alabama	112,328	454	1,877,963	6,911	54,538,027	1,970,401	558	18
Alaska	18,820	32	275,607	6,674	9,685,341	532,709	676	22
Arizona	115,171	2,589	2,220,712	70,174	72,417,033	6,772,271	627	40
Arkansas	72,240	406	1,130,891	17,750	29,761,939	1,520,062	506	18
California	1,026,568	-33,271	14,867,006	472,932	612,318,313	71,430,084	792	69
Colorado	148,479	6,278	2,186,656	81,404	81,273,035	9,292,033	715	57
Connecticut	107,787	1,696	1,674,728	22,363	76,176,856	5,650,414	875	54
Delaware	24,751	584	406,350	4,210	14,845,185	707,255	703	27
District of Columbia	28,409	1,474	637,292	21,588	33,753,742	2,423,907	1,019	40
Florida	444,731	9,134	7,060,986	216,337	215,780,400	17,731,492	588	32
Georgia	225,040	6,628	3,883,005	88,250	132,853,189	10,161,751	658	36
Hawaii	34,027	1,564	553,185	15,440	16,942,944	921,218	589	16
Idaho	45,399	1,128	563,193	20,785	15,600,825	1,474,196	533	32
Illinois	322,324	2,721	5,940,772	90,253	226,012,936	13,664,320	732	34
Indiana	152,846	-1,089	2,936,634	29,778	91,086,141	3,800,930	596	19
Iowa	97,091	2,479	1,443,394	12,412	40,312,331	1,743,623	537	19
Kansas	80,477	1,036	1,313,742	14,945	38,571,763	2,164,568	565	26
Kentucky	107,740	2,403	1,762,949	31,482	50,774,667	2,669,580	554	20
Louisiana	118,216	1,549	1,869,219	21,317	52,131,235	1,838,194	536	13
Maine	44,865	956	590,818	17,005	16,344,365	916,386	532	15
Maryland	146,559	1,117	2,405,510	58,631	87,548,876	6,606,334	700	37
Massachusetts	187,391	344	3,275,135	83,493	145,184,150	16,396,342	852	76
Michigan	260,885	2,244	4,585,211	82,445	169,702,272	8,726,750	712	24
Minnesota	155,711	4,932	2,608,543	57,751	92,377,120	6,959,859	681	37
Mississippi	63,970	229	1,137,304	-1,880	28,665,889	879,567	485	16
Missouri	163,080	2,303	2,677,110	31,687	84,020,093	4,745,993	604	28
Montana	38,349	1,585	379,094	7,855	9,202,211	567,364	467	20
Nebraska	51,838	4	882,918	16,308	24,449,709	1,370,028	533	21
Nevada	48,126	194	1,017,902	41,975	32,853,744	2,392,271	621	21
New Hampshire	45,924	494	606,543	15,318	21,069,920	2,067,493	668	50
New Jersey	270,384	-15,337	3,877,572	85,195	169,355,641	13,725,235	840	51
New Mexico	47,987	693	717,243	16,339	19,722,105	1,311,285	529	24
New York	529,103	4,797	8,471,416	178,874	384,241,451	34,472,229	872	61
North Carolina	222,234	7,270	3,862,782	58,413	120,007,446	7,922,007	597	30
North Dakota	23,297	240	309,223	3,263	7,632,602	365,713	475	18
Ohio	280,988	1,073	5,513,217	62,090	179,218,763	8,080,924	625	21
Oklahoma	89,298	1,368	1,452,166	29,357	39,191,626	2,464,854	519	23
Oregon	109,050	-1,296	1,608,069	32,067	52,703,467	4,049,166	630	36
Pennsylvania	315,284	13,267	5,558,076	98,602	189,058,210	10,557,733	654	25
Rhode Island	33,327	621	467,602	10,766	15,250,760	1,011,495	627	28
South Carolina	109,370	-1,993	1,820,138	27,993	51,289,516	2,664,765	542	20
South Dakota	27,145	437	364,119	8,334	9,030,727	574,920	477	20
Tennessee	125,247	-51	2,667,230	40,186	81,495,110	4,055,765	588	21
Texas	489,795	8,425	9,289,286	272,645	324,579,638	27,952,132	672	39
Utah	66,144	2,282	1,044,143	26,519	30,518,822	2,131,853	562	26
Vermont	23,870	805	296,462	8,473	8,571,976	624,326	556	25
Virginia	192,745	3,212	3,427,954	100,832	120,567,926	10,689,950	676	41
Washington	221,150	9,010	2,706,462	62,732	100,381,521	5,904,038	713	26
West Virginia	46,830	21	686,622	6,014	18,461,154	752,890	517	17
Wisconsin	145,871	977	2,736,054	44,603	83,980,263	4,294,806	590	21
Wyoming	20,861	238	230,857	5,892	6,195,607	425,897	516	23
Puerto Rico	52,371	202	1,026,175	23,785	19,306,364	709,126	362	5
Virgin Islands	3,255	32	42,349	1,411	1,173,955	104,996	533	31

NOTE: Detail may not add to totals due to rounding.

21. Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
United States[4]	129,877,063	2.2	–	35,323	5.9
Jefferson, AL	384,662	.6	256	34,026	3.9
Madison, AL	154,356	1.7	186	35,837	5.0
Mobile, AL	169,469	-.1	291	28,623	2.4
Montgomery, AL	131,988	.2	285	28,894	3.2
Tuscaloosa, AL	76,499	.8	244	29,064	2.5
Anchorage, AK	129,700	2.0	164	36,659	2.7
Maricopa, AZ	1,544,971	3.6	48	35,110	7.8
Pima, AZ	328,426	3.1	77	29,194	3.5
Pulaski, AR	243,157	.4	272	30,799	3.8
Sebastian, AR	75,197	1.1	228	27,011	4.8
Washington, AR	80,045	3.3	61	26,408	3.8
Alameda, CA	696,242	3.0	84	45,091	9.8
Contra Costa, CA	336,691	3.1	78	42,318	3.7
Fresno, CA	322,759	1.9	169	26,162	4.8
Kern, CA	238,250	2.1	153	28,572	5.7
Los Angeles, CA	4,098,154	1.7	187	39,651	4.9
Marin, CA	111,645	2.1	154	42,600	8.5
Monterey, CA	164,646	2.5	118	29,962	5.1
Orange, CA	1,394,414	3.6	49	39,247	4.8
Placer, CA	107,182	8.9	3	33,386	5.3
Riverside, CA	469,467	5.3	12	29,136	4.7
Sacramento, CA	573,942	2.6	107	37,732	7.2
San Bernardino, CA	528,437	3.0	85	29,901	3.8
San Diego, CA	1,195,116	3.0	86	37,535	8.1
San Francisco, CA	609,138	3.7	43	57,532	12.0
San Joaquin, CA	201,070	3.1	79	29,237	4.7
San Luis Obispo, CA	94,883	3.6	50	28,096	6.2
San Mateo, CA	378,494	5.3	13	67,051	30.4
Santa Barbara, CA	176,901	3.0	87	32,566	8.2
Santa Clara, CA	1,030,633	6.1	9	76,213	24.7
Santa Cruz, CA	101,833	3.3	62	35,819	15.5
Solano, CA	117,217	3.7	44	31,670	8.4
Sonoma, CA	190,946	3.1	80	35,715	11.3
Stanislaus, CA	160,948	1.7	188	28,201	4.4
Tulare, CA	132,986	3.6	51	23,750	4.6
Ventura, CA	287,611	3.4	57	37,069	9.1
Yolo, CA	84,565	1.5	201	33,438	3.3
Adams, CO	144,806	3.6	52	33,428	4.8
Arapahoe, CO	284,236	3.9	38	46,254	7.8
Boulder, CO	179,719	8.2	4	45,564	13.9
Denver, CO	469,137	3.2	69	44,343	11.6
El Paso, CO	237,739	3.4	58	33,039	7.7
Jefferson, CO	210,519	2.6	108	36,195	5.2
Larimer, CO	119,155	5.1	16	32,394	7.9
Fairfield, CT	427,557	1.1	229	61,156	8.5
Hartford, CT	501,562	1.1	230	43,656	6.2
New Haven, CT	367,343	1.1	231	38,355	5.4
New London, CT	123,039	.6	257	36,757	3.8
New Castle, DE	281,920	-.7	301	40,491	4.5
Washington, DC	637,292	3.5	54	52,964	4.1
Alachua, FL	117,658	2.5	119	26,155	3.9
Brevard, FL	181,314	3.3	63	32,101	7.2
Broward, FL	644,192	3.3	64	33,234	6.5
Collier, FL	103,264	6.9	6	29,962	6.9
Duval, FL	434,219	4.1	32	32,777	4.6
Escambia, FL	125,666	1.0	235	26,709	4.5
Hillsborough, FL	588,792	2.5	120	31,707	4.8
Lee, FL	162,304	4.4	25	28,148	6.4
Leon, FL	141,978	2.2	142	29,249	4.1
Manatee, FL	(5)	(5)	(5)	(5)	(5)
Marion, FL	83,319	1.7	189	24,953	3.3
Miami-Dade, FL	980,394	2.3	135	33,333	3.9
Orange, FL	611,469	3.2	70	31,123	4.6
Palm Beach, FL	481,395	4.1	33	35,233	7.3
Pinellas, FL	436,390	4.2	29	31,263	5.4
Polk, FL	183,222	2.6	109	27,881	3.5
Sarasota, FL	(5)	(5)	(5)	(5)	(5)
Seminole, FL	139,610	4.6	23	30,835	6.9
Volusia, FL	141,652	1.4	207	25,079	5.5
Bibb, GA	88,790	-1.2	308	29,299	3.2
Chatham, GA	122,785	1.3	214	29,650	1.9
Clayton, GA	116,368	-.6	296	36,774	6.7
Cobb, GA	301,183	1.3	215	38,792	5.4

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Dekalb, GA	310,659	-.6	297	38,614	4.9
Fulton, GA	754,368	2.7	103	47,060	8.5
Gwinnett, GA	281,654	4.1	34	39,051	6.0
Muscogee, GA	98,315	-.1	292	27,744	3.7
Richmond, GA	106,260	-.6	298	28,592	3.6
Honolulu, HI	407,935	2.6	110	31,874	2.8
Ada, ID	177,741	6.5	8	34,460	10.0
Champaign, IL	90,429	2.8	96	29,183	4.2
Cook, IL	2,687,795	1.3	216	42,898	5.8
Du Page, IL	582,352	1.7	190	42,570	3.6
Kane, IL	193,410	2.9	91	32,173	.1
Lake, IL	310,689	3.1	81	42,620	6.7
McHenry, IL	87,258	1.9	170	32,007	2.0
McLean, IL	84,324	.6	258	34,254	4.1
Madison, IL	94,550	.4	273	28,974	2.9
Peoria, IL	102,801	.1	287	31,387	1.6
Rock Island, IL	80,273	.8	245	33,525	4.5
St. Clair, IL	89,963	2.2	143	26,878	2.6
Sangamon, IL	144,286	4.4	26	34,764	1.7
Will, IL	142,355	3.5	55	32,313	2.1
Winnebago, IL	143,760	.5	265	31,499	2.0
Allen, IN	189,425	.3	281	32,279	3.0
Elkhart, IN	122,468	.6	259	30,339	2.3
Hamilton, IN	77,452	3.0	88	37,931	7.9
Lake, IN	199,421	-.6	299	31,564	4.0
Marion, IN	605,903	1.6	194	36,473	3.2
St. Joseph, IN	129,558	.5	266	29,657	3.5
Tippecanoe, IN	77,377	1.1	232	31,083	4.0
Vanderburgh, IN	109,904	.7	251	29,569	3.2
Linn, IA	121,968	2.1	155	34,097	4.9
Polk, IA	263,940	1.3	217	33,666	2.5
Scott, IA	87,113	-.4	295	29,067	3.9
Johnson, KS	287,797	2.8	97	37,247	6.7
Sedgwick, KS	249,846	.0	289	32,696	2.9
Shawnee, KS	100,223	2.4	130	29,375	3.2
Wyandotte, KS	79,746	1.8	177	34,592	2.9
Fayette, KY	172,031	1.8	178	30,713	3.8
Jefferson, KY	439,103	1.4	208	33,334	3.9
Caddo, LA	119,449	.3	282	28,767	3.2
Calcasieu, LA	83,976	.1	288	28,226	.9
East Baton Rouge, LA	246,434	2.7	104	29,257	1.6
Jefferson, LA	214,680	-.7	302	28,051	2.1
Lafayette, LA	114,059	2.3	136	29,911	5.5
Orleans, LA	263,551	1.9	171	31,694	1.3
Cumberland, ME	166,757	3.7	45	30,752	1.1
Anne Arundel, MD	194,018	5.3	14	35,461	7.3
Baltimore, MD	358,117	1.2	222	34,119	4.7
Frederick, MD	77,323	4.9	22	30,847	5.9
Howard, MD	128,678	3.2	71	37,897	5.1
Montgomery, MD	447,314	5.0	20	43,708	5.8
Prince Georges, MD	303,262	3.3	65	37,060	6.9
Baltimore City, MD	386,411	.8	246	38,579	4.5
Barnstable, MA	88,589	3.7	46	29,726	.0
Bristol, MA	221,539	1.3	218	30,785	4.6
Essex, MA	305,382	2.5	121	39,154	8.8
Hampden, MA	204,303	1.9	172	32,220	4.8
Middlesex, MA	846,931	3.1	82	52,091	11.8
Norfolk, MA	325,018	2.4	131	43,368	10.4
Plymouth, MA	166,482	1.3	219	33,931	6.3
Suffolk, MA	608,285	3.3	66	56,699	11.6
Worcester, MA	321,131	2.5	122	37,657	10.8
Genesee, MI	165,297	-1.4	313	36,324	1.4
Ingham, MI	174,315	2.0	165	34,963	5.6
Kalamazoo, MI	118,342	-.1	293	32,675	2.3
Kent, MI	347,707	1.6	195	33,996	2.6
Macomb, MI	337,504	.3	283	40,904	3.5
Oakland, MI	768,629	1.0	236	44,500	4.2
Ottawa, MI	118,711	1.8	179	31,947	3.5
Saginaw, MI	95,474	-.8	304	34,672	2.5
Washtenaw, MI	195,624	.5	267	40,182	5.3
Wayne, MI	866,282	1.2	223	42,440	3.5
Anoka, MN	108,989	3.8	40	33,928	4.5
Dakota, MN	153,364	2.6	111	34,362	4.7
Hennepin, MN	874,693	2.1	156	43,816	7.1
Olmsted, MN	82,670	3.9	39	36,104	3.1

See footnotes at end of table.

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21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Ramsey, MN	332,929	1.6	196	39,069	5.8
St. Louis, MN	94,926	1.4	209	28,903	4.6
Stearns, MN	76,292	3.1	83	27,584	4.2
Harrison, MS	89,745	.4	274	25,442	4.8
Hinds, MS	136,949	-1.2	309	30,578	4.6
Boone, MO	75,785	2.8	98	27,361	3.1
Clay, MO	84,159	.0	290	32,207	6.4
Greene, MO	142,508	2.4	132	26,971	3.2
Jackson, MO	393,761	.4	275	36,056	6.2
St. Charles, MO	95,799	3.2	72	29,515	3.8
St. Louis, MO	646,858	.8	247	38,145	5.6
St. Louis City, MO	250,878	.4	276	38,612	4.1
Douglas, NE	330,128	2.1	157	32,356	4.1
Lancaster, NE	146,433	1.8	180	28,511	3.9
Clark, NV	697,575	5.3	15	32,131	3.4
Washoe, NV	189,102	3.2	73	32,748	4.4
Hillsborough, NH	193,796	2.7	105	39,212	9.1
Rockingham, NH	129,494	4.1	35	35,823	9.8
Atlantic, NJ	140,141	-.2	294	31,068	3.4
Bergen, NJ	448,513	.5	268	46,306	7.0
Burlington, NJ	180,165	.8	248	37,597	4.7
Camden, NJ	199,768	-1.1	307	35,130	3.2
Essex, NJ	363,942	1.6	197	44,653	3.5
Gloucester, NJ	86,667	.7	252	32,055	2.8
Hudson, NJ	238,388	3.4	59	47,427	10.2
Mercer, NJ	210,031	3.3	67	44,658	5.2
Middlesex, NJ	392,427	.6	260	46,487	5.8
Monmouth, NJ	233,285	2.5	123	39,695	5.4
Morris, NJ	275,499	2.8	99	60,487	19.0
Ocean, NJ	129,093	2.5	124	30,447	4.6
Passaic, NJ	177,364	.6	261	37,759	2.0
Somerset, NJ	173,571	4.1	36	54,781	5.1
Union, NJ	237,176	2.2	144	45,282	4.9
Bernalillo, NM	307,705	2.6	112	30,184	4.1
Albany, NY	230,962	1.4	210	35,795	6.1
Bronx, NY	212,982	2.2	145	32,850	2.7
Broome, NY	99,613	1.2	224	29,658	3.6
Dutchess, NY	109,949	1.9	173	36,065	2.2
Erie, NY	459,828	1.0	237	31,489	3.0
Kings, NY	441,916	2.3	137	30,760	3.7
Monroe, NY	399,602	.9	242	35,423	1.8
Nassau, NY	598,538	1.6	198	40,023	4.4
New York, NY	2,382,175	3.2	74	72,572	10.3
Niagara, NY	78,186	.2	286	31,112	3.7
Oneida, NY	110,684	1.4	211	27,300	3.4
Onondaga, NY	252,476	.7	253	32,499	3.4
Orange, NY	119,571	1.6	199	29,357	4.6
Queens, NY	480,676	1.3	220	34,986	4.4
Richmond, NY	88,245	1.9	174	32,149	4.2
Rockland, NY	106,361	1.4	212	37,264	4.3
Suffolk, NY	578,401	2.3	138	37,862	6.6
Westchester, NY	405,440	2.3	139	47,066	8.3
Buncombe, NC	106,036	.5	269	27,652	3.8
Catawba, NC	101,321	2.6	113	28,210	4.0
Cumberland, NC	109,858	1.2	225	26,112	3.9
Durham, NC	167,191	2.9	92	49,359	12.6
Forsyth, NC	181,619	1.8	181	34,011	6.3
Gaston, NC	77,176	-3.6	314	28,335	4.0
Guilford, NC	279,889	.6	262	32,216	2.5
Mecklenburg, NC	514,223	3.8	41	40,538	5.4
New Hanover, NC	87,019	.4	277	28,560	4.3
Wake, NC	383,705	3.3	68	35,377	7.4
Cass, ND	81,823	2.2	146	27,801	4.1
Butler, OH	126,189	2.6	114	31,502	1.7
Cuyahoga, OH	817,572	.9	243	36,520	4.2
Franklin, OH	701,913	2.2	147	34,970	4.6
Hamilton, OH	566,965	.8	249	37,598	3.9
Lake, OH	102,320	1.5	202	30,735	2.1
Lorain, OH	105,988	2.3	140	32,013	1.9
Lucas, OH	238,450	.6	263	32,255	2.3
Mahoning, OH	112,531	-.6	300	25,966	3.0
Montgomery, OH	303,352	.4	278	34,532	2.6
Stark, OH	175,535	1.7	191	28,505	2.1
Summit, OH	266,001	.4	279	32,735	4.2

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Trumbull, OH	94,382	-1.3	311	32,785	1.0
Oklahoma, OK	414,239	2.9	93	29,216	4.6
Tulsa, OK	340,671	2.5	125	31,157	3.7
Clackamas, OR	133,065	2.2	148	32,482	4.0
Lane, OR	139,710	1.1	233	27,877	3.5
Marion, OR	127,558	2.0	166	28,116	2.9
Multnomah, OR	453,274	2.1	158	36,796	6.2
Washington, OR	224,033	4.3	27	44,459	13.4
Allegheny, PA	711,068	1.2	226	36,727	2.5
Berks, PA	168,068	1.8	182	32,007	3.3
Bucks, PA	244,317	2.5	126	34,059	3.4
Chester, PA	216,777	2.5	127	43,762	6.9
Cumberland, PA	123,998	-1.3	312	32,811	3.2
Dauphin, PA	172,465	2.1	159	33,680	2.2
Delaware, PA	212,540	1.0	238	36,828	5.5
Erie, PA	131,700	2.5	128	28,368	1.8
Lackawanna, PA	98,383	-.7	303	27,663	7.5
Lancaster, PA	218,280	1.8	183	30,809	4.6
Lehigh, PA	171,175	2.0	167	35,274	2.5
Luzerne, PA	143,066	2.2	149	27,855	2.7
Montgomery, PA	481,011	2.3	141	43,810	6.5
Northampton, PA	87,846	3.0	89	30,767	3.1
Philadelphia, PA	668,793	1.5	203	39,700	4.5
Westmoreland, PA	134,436	1.0	239	27,992	1.3
York, PA	167,757	2.2	150	30,926	3.3
Providence, RI	290,809	1.7	192	33,410	4.0
Charleston, SC	182,793	1.3	221	27,680	4.8
Greenville, SC	233,062	2.6	115	31,281	4.0
Horry, SC	99,124	1.7	193	22,883	5.4
Lexington, SC	81,341	2.0	168	27,505	3.5
Richland, SC	207,508	.6	264	29,627	4.1
Spartanburg, SC	119,791	.5	270	30,596	3.4
Minnehaha, SD	105,837	3.2	75	28,212	3.7
Davidson, TN	434,901	1.5	204	34,863	5.4
Hamilton, TN	188,161	1.8	184	30,574	4.0
Knox, TN	202,688	3.4	60	30,090	4.1
Rutherford, TN	76,993	2.5	129	31,132	3.6
Shelby, TN	500,255	1.0	240	34,357	2.5
Bell, TX	87,850	2.1	160	25,193	4.1
Bexar, TX	648,942	2.2	151	29,923	5.2
Brazoria, TX	75,417	2.8	100	34,367	3.3
Cameron, TX	109,115	5.4	11	21,553	2.6
Collin, TX	167,956	5.9	10	40,509	5.8
Dallas, TX	1,567,626	4.2	30	44,381	7.7
Denton, TX	119,722	3.7	47	29,298	4.0
El Paso, TX	251,557	1.5	205	25,069	3.2
Fort Bend, TX	87,763	2.4	133	35,801	5.1
Galveston, TX	86,844	-1.0	306	29,518	4.0
Harris, TX	1,840,442	2.8	101	41,869	7.7
Hidalgo, TX	163,443	7.1	5	21,671	2.7
Jefferson, TX	120,815	1.1	234	31,277	.8
Lubbock, TX	115,422	1.9	175	26,297	6.3
Mc Lennan, TX	98,076	1.0	241	27,034	2.1
Montgomery, TX	76,865	5.0	21	32,119	9.7
Nueces, TX	142,309	.8	250	28,187	4.7
Potter, TX	75,572	.7	254	26,552	2.8
Smith, TX	83,353	2.8	102	29,509	3.6
Tarrant, TX	703,025	3.5	56	35,438	5.0
Travis, TX	538,193	5.1	17	41,332	7.0
Williamson, TX	76,588	9.5	2	50,415	-4.5
Davis, UT	84,640	3.2	76	27,711	7.2
Salt Lake, UT	531,240	2.6	116	32,192	5.0
Utah, UT	142,369	4.5	24	27,891	5.0
Weber, UT	86,404	.4	280	26,644	2.5
Chittenden, VT	95,343	5.1	18	34,288	4.2
Arlington, VA	157,906	4.1	37	52,846	7.1
Chesterfield, VA	107,932	2.1	161	31,880	3.5
Fairfax, VA	537,647	6.7	7	51,576	10.3
Henrico, VA	165,617	2.4	134	36,138	5.8
Loudoun, VA	87,265	11.9	1	54,141	3.6
Prince William, VA	78,209	4.3	28	28,986	5.5
Alexandria, VA	91,818	5.1	19	42,101	6.1
Chesapeake, VA	81,294	2.1	162	26,069	4.2
Newport News, VA	93,607	1.8	185	30,261	5.4
Norfolk, VA	145,197	.3	284	32,179	4.9

See footnotes at end of table.

21. Continued—Annual data: Employment and average annual pay for all workers covered under UI and UCFE in the 316 largest U.S. counties

County[1]	Employment			Average annual pay	
	2000	Percent change, 1999-2000[2]	Ranked by percent change, 1999-2000[3]	2000	Percent change, 1999-2000[2]
Richmond, VA	166,923	1.4	213	38,635	5.1
Roanoke City, VA	75,894	3.0	90	29,487	4.6
Virginia Beach, VA	165,610	3.6	53	25,414	4.4
Clark, WA	113,910	1.5	206	32,163	6.0
King, WA	1,162,290	2.7	106	47,459	3.0
Pierce, WA	241,654	4.2	31	29,854	4.2
Snohomish, WA	209,557	-1.2	310	35,091	3.6
Spokane, WA	188,843	2.9	94	29,760	7.9
Thurston, WA	84,277	1.6	200	31,745	6.9
Yakima, WA	94,233	1.9	176	23,237	3.7
Kanawha, WV	112,920	.7	255	30,156	3.1
Brown, WI	142,359	2.1	163	31,538	2.9
Dane, WI	274,353	2.6	117	32,817	5.5
Milwaukee, WI	528,837	.5	271	34,744	3.1
Outagamie, WI	94,364	2.9	95	30,769	4.4
Racine, WI	79,160	-.9	305	32,536	-.6
Waukesha, WI	222,877	1.2	227	35,767	5.2
Winnebago, WI	90,256	2.2	152	33,622	2.7
San Juan, PR	327,187	3.8	42	21,312	3.5

[1] Includes areas not officially designated as counties. See Notes on Current Labor Statistics.

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

[3] Rankings for percent change in employment are based on the 314 counties that are comparable over the year.

[4] Totals for the United States do not include data for Puerto Rico.

[5] Data are not available for release.

Note: Data pertain to workers covered by Unemployment Insurance (UI) and Unemployment Compensation for Federal Employees (UCFE) programs. The 315 U.S. counties comprise 70.8 percent of the total covered workers in the United States

22. Annual data: Employment status of the population

[Numbers in thousands]

Employment status	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Civilian noninstitutional population...........	192,805	194,838	196,814	198,584	200,591	203,133	205,220	207,753	209,699	211,864
Civilian labor force...............................	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863	141,815
Labor force participation rate..............	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2	66.9
Employed.......................................	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208	135,073
Employment-population ratio..........	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5	63.8
Agriculture.................................	3,247	3,115	3,409	3,440	3,443	3,399	3,378	3,281	3,305	3,144
Nonagricultural industries............	115,245	117,144	119,651	121,460	123,264	126,159	128,085	130,207	131,903	131,929
Unemployed..................................	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655	6,742
Unemployment rate.......................	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.8
Not in the labor force........................	64,700	65,638	65,758	66,280	66,647	66,837	67,547	68,385	68,836	70,050

23. Annual data: Employment levels by industry

[In thousands]

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total employment...............................	108,601	110,713	114,163	117,191	119,608	122,690	125,865	128,916	131,759	132,213
Private sector....................................	89,956	91,872	95,036	97,885	100,189	103,133	106,042	108,709	111,079	111,341
Goods-producing..............................	23,231	23,352	23,908	24,265	24,493	24,962	25,414	25,507	25,709	25,122
Mining..	635	610	601	581	580	596	590	539	543	563
Construction.................................	4,492	4,668	4,986	5,160	5,418	5,691	6,020	6,415	6,698	6,861
Manufacturing..............................	18,104	18,075	18,321	18,524	18,495	18,675	18,805	18,552	18,469	17,698
Service-producing..........................	85,370	87,361	90,256	92,925	95,115	97,727	100,451	103,409	106,050	107,092
Transportation and public utilities........	5,718	5,811	5,984	6,132	6,253	6,408	6,611	6,834	7,019	7,070
Wholesale trade............................	5,997	5,981	6,162	6,378	6,482	6,648	6,800	6,911	7,024	7,014
Retail trade..................................	19,356	19,773	20,507	21,187	21,597	21,966	22,295	22,848	23,307	23,488
Finance, insurance, and real estate....	6,602	6,757	6,896	6,806	6,911	7,109	7,389	7,555	7,560	7,624
Services......................................	29,052	30,197	31,579	33,117	34,454	36,040	37,533	39,055	40,460	41,024
Government...................................	18,645	18,841	19,128	19,305	19,419	19,557	19,823	20,206	20,681	20,873
Federal..	2,969	2,915	2,870	2,822	2,757	2,699	2,686	2,669	2,777	2,616
State...	4,408	4,488	4,576	4,635	4,606	4,582	4,612	4,709	4,785	4,880
Local...	11,267	11,438	11,682	11,849	12,056	12,276	12,525	12,829	13,119	13,377

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

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

Industry	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Private sector:										
Average weekly hours...............................	34.4	34.5	34.7	34.5	34.4	34.6	34.6	34.5	34.5	34.2
Average hourly earnings (in dollars).........................	10.57	10.83	11.12	11.43	11.82	12.28	12.78	13.24	13.75	14.33
Average weekly earnings (in dollars).....................	363.61	373.64	385.86	394.34	406.61	424.89	442.19	456.78	474.38	490.09
Mining:										
Average weekly hours...............................	43.9	44.3	44.8	44.7	45.3	45.4	43.9	43.2	43.1	43.4
Average hourly earnings (in dollars).........................	14.54	14.60	14.88	15.30	15.62	16.15	16.91	17.05	17.24	17.65
Average weekly earnings (in dollars).....................	638.31	646.78	666.62	683.91	707.59	733.21	742.35	736.56	743.04	766.01
Construction:										
Average weekly hours...............................	38.0	38.5	38.9	38.9	39.0	39.0	38.9	39.1	39.3	39.2
Average hourly earnings (in dollars).........................	14.15	14.38	14.73	15.09	15.47	16.04	16.61	17.19	17.88	18.33
Average weekly earnings (in dollars).....................	537.70	553.63	573.00	587.00	603.33	625.56	646.13	672.13	702.68	718.54
Manufacturing:										
Average weekly hours...............................	41.0	41.4	42.0	41.6	41.6	42.0	41.7	41.7	41.6	40.7
Average hourly earnings (in dollars).........................	11.46	11.74	12.07	12.37	12.77	13.17	13.49	13.90	14.38	14.84
Average weekly earnings (in dollars).....................	469.86	486.04	506.94	514.59	531.23	553.14	562.53	579.63	598.21	603.99
Transportation and public utilities:										
Average weekly hours...............................	38.3	39.3	39.7	39.4	39.6	39.7	39.5	38.7	38.6	38.1
Average hourly earnings (in dollars).........................	13.43	13.55	13.78	14.13	14.45	14.92	15.31	15.69	16.22	16.89
Average weekly earnings (in dollars).....................	514.37	532.52	547.07	556.72	572.22	592.32	604.75	607.20	626.09	643.51
Wholesale trade:										
Average weekly hours...............................	38.2	38.2	38.4	38.3	38.3	38.4	38.3	38.3	38.5	38.2
Average hourly earnings (in dollars).........................	11.39	11.74	12.06	12.43	12.87	13.45	14.07	14.58	15.20	15.80
Average weekly earnings (in dollars).....................	435.10	448.47	463.10	476.07	492.92	516.48	538.88	558.80	585.20	603.56
Retail trade:										
Average weekly hours...............................	28.8	28.8	28.9	28.8	28.8	28.9	29.0	29.0	28.9	28.8
Average hourly earnings (in dollars).........................	7.12	7.29	7.49	7.69	7.99	8.33	8.74	9.09	9.46	9.82
Average weekly earnings (in dollars).....................	205.06	209.95	216.46	221.47	230.11	240.74	253.46	263.61	273.39	282.82
Finance, insurance, and real estate:										
Average weekly hours...............................	35.8	35.8	35.8	35.9	35.9	36.1	36.4	36.2	36.3	36.3
Average hourly earnings (in dollars).........................	10.82	11.35	11.83	12.32	12.80	13.34	14.07	14.62	15.07	15.83
Average weekly earnings (in dollars).....................	387.36	406.33	423.51	442.29	459.52	481.57	512.15	529.24	547.04	574.63
Services:										
Average weekly hours...............................	32.5	32.5	32.5	32.4	32.4	32.6	32.6	32.6	32.7	32.7
Average hourly earnings (in dollars).........................	10.54	10.78	11.04	11.39	11.79	12.28	12.84	13.37	13.91	14.61
Average weekly earnings (in dollars).....................	342.55	350.35	358.80	369.04	382.00	400.33	418.58	435.86	454.86	477.75

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

[June 1989 = 100]

Series	2000 Mar.	June	Sept.	Dec.	2001 Mar.	June	Sept.	Dec.	2002 Mar.	Percent change 3 months ended Mar. 2002	12 months ended Mar. 2002
Civilian workers[2]..................................	146.5	148.0	149.5	150.6	152.5	153.8	155.6	156.8	158.4	1.0	3.9
Workers, by occupational group:											
White-collar workers................................	148.4	149.9	151.5	152.5	154.4	156.0	157.7	158.9	160.5	1.0	4.0
Professional specialty and technical............	146.7	148.3	150.0	151.3	153.2	154.3	156.7	157.5	158.5	.6	3.5
Executive, adminitrative, and managerial........	150.5	151.9	153.7	154.6	156.6	158.6	159.6	161.2	163.7	1.6	4.5
Administrative support, including clerical.........	148.6	150.1	151.8	152.8	155.3	156.8	158.8	160.0	162.0	1.3	4.3
Blue-collar workers...................................	142.7	144.1	145.6	146.5	148.2	149.3	151.1	152.0	153.7	1.1	3.7
Service occupations.................................	146.0	147.1	148.5	150.0	152.0	153.3	155.0	156.9	158.4	1.0	4.2
Workers, by industry division:											
Goods-producing....................................	144.9	146.6	148.0	148.8	150.7	152.2	153.3	154.4	156.3	1.2	3.7
Manufacturing......................................	146.0	147.5	148.7	149.3	151.3	152.6	153.3	154.6	156.6	1.3	3.5
Service-producing.................................	147.1	148.4	150.1	151.1	153.0	155.4	156.4	157.6	159.1	1.0	4.0
Services...	148.0	149.3	151.2	152.4	154.3	155.4	158.1	159.0	160.2	.8	3.8
Health services..................................	145.9	147.5	149.0	150.7	152.5	154.6	156.7	158.3	160.5	1.4	5.2
Hospitals..	146.3	147.7	149.5	151.3	153.2	155.6	158.2	160.0	162.3	1.4	5.9
Educational services..........................	146.5	146.8	149.7	150.6	151.7	152.2	156.1	156.6	157.1	.3	3.6
Public administration[3].........................	145.7	146.1	146.9	148.3	150.6	151.9	153.8	155.2	156.5	.8	3.9
Nonmanufacturing.................................	146.6	148.0	149.6	150.7	152.6	154.0	156.0	157.2	158.7	1.0	4.0
Private industry workers...........................	146.8	148.5	149.9	150.9	153.0	154.5	155.9	157.2	158.9	1.1	3.9
Excluding sales occupations........................	146.5	148.2	149.8	150.9	153.0	154.4	156.0	160.9	159.0	1.1	3.9
Workers, by occupational group:											
White-collar workers................................	149.3	151.1	152.6	153.6	155.7	157.4	158.7	160.1	161.9	1.1	4.0
Excluding sales occupations......................	149.4	151.3	152.9	154.1	156.5	158.1	159.6	160.9	162.8	1.2	4.0
Professional specialty and technical occupations..........	148.4	150.7	152.2	153.7	156.3	157.5	159.2	160.3	161.5	.7	3.3
Executive, adminitrative, and managerial occupations..	151.1	152.7	154.4	155.3	157.3	159.4	160.2	161.8	164.4	1.6	4.5
Sales occupations.................................	148.9	150.3	151.2	151.4	152.3	154.5	155.0	156.7	157.7	.6	3.5
Administrative support occupations, including clerical...	149.0	150.6	152.3	153.4	156.1	157.7	159.5	160.8	162.8	1.2	4.3
Blue-collar workers.................................	142.6	144.1	145.5	146.4	148.2	149.3	151.0	151.9	153.6	1.1	3.6
Precision production, craft, and repair occupations........	142.3	144.1	145.8	146.7	148.7	149.7	151.8	152.5	153.7	.8	3.4
Machine operators, assemblers, and inspectors............	144.0	145.0	146.0	146.8	148.3	149.1	150.4	151.5	153.6	1.4	3.6
Transportation and material moving occupations...........	137.5	138.6	139.9	141.1	142.6	143.9	145.6	146.3	148.7	1.6	4.3
Handlers, equipment cleaners, helpers, and laborers....	146.4	148.1	149.4	150.4	152.2	153.4	154.9	156.5	158.7	1.4	4.3
Service occupations...............................	143.9	145.4	146.6	148.1	150.0	151.3	152.6	154.8	156.4	1.0	4.3
Production and nonsupervisory occupations[4].................	145.3	146.9	148.4	149.5	151.4	152.7	154.3	155.5	157.1	1.0	3.8
Workers, by industry division:											
Goods-producing....................................	144.8	146.6	147.9	148.8	150.7	152.1	153.1	154.4	156.2	1.2	3.6
Excluding sales occupations....................	144.2	145.9	147.2	148.2	150.1	151.5	152.5	153.7	155.5	1.2	3.6
White-collar occupations.......................	148.1	150.1	151.3	151.9	154.5	156.5	156.8	158.1	160.1	1.3	3.6
Excluding sales occupations.................	146.5	148.4	149.6	150.5	153.0	155.0	155.3	156.5	158.4	1.2	3.5
Blue-collar occupations........................	142.8	144.4	145.8	146.8	148.2	149.3	150.8	151.9	153.6	1.1	3.6
Construction......................................	140.8	143.2	145.1	146.7	148.2	150.3	151.7	153.0	154.1	.7	4.0
Manufacturing....................................	146.0	147.5	148.7	149.3	151.3	152.6	152.2	154.6	156.6	1.3	3.5
White-collar occupations......................	148.2	150.2	151.4	151.5	154.2	156.0	156.0	156.9	159.1	1.4	3.2
Excluding sales occupations.................	146.2	148.2	149.3	149.7	152.2	154.0	153.8	154.5	156.7	1.3	3.0
Blue-collar occupations........................	144.4	145.6	146.7	147.8	149.1	150.0	151.3	152.7	154.6	1.2	3.7
Durables...	146.5	148.3	149.4	150.1	151.8	153.1	154.0	155.3	156.9	1.0	3.4
Nondurables.......................................	144.9	146.0	147.5	147.7	150.4	151.6	152.0	153.2	156.0	1.8	3.7
Service-producing.................................	147.4	149.1	150.6	151.7	153.8	155.3	156.9	158.2	159.9	1.1	4.0
Excluding sales occupations....................	147.7	149.4	151.1	152.2	154.6	156.0	157.8	159.0	160.9	1.2	4.1
White-collar occupations.......................	149.3	151.0	152.6	153.7	155.8	157.4	159.0	160.3	162.1	1.1	4.0
Excluding sales occupations.................	150.3	152.1	153.9	155.1	157.5	159.1	160.9	162.2	164.1	1.2	4.2
Blue-collar occupations........................	141.8	143.1	144.5	145.3	147.7	148.7	150.9	151.0	153.2	1.2	3.7
Service occupations...........................	143.6	145.1	146.3	147.9	149.6	150.8	152.2	154.2	155.9	1.1	4.2
Transportation and public utilities..................	143.9	145.7	147.4	148.3	150.5	152.4	153.5	155.5	157.3	1.2	4.5
Transportation..................................	140.4	141.8	142.8	143.9	145.4	146.9	148.2	151.1	152.5	.9	4.9
Public utilities.................................	148.6	150.9	153.5	154.1	157.3	159.8	160.7	161.5	163.9	1.5	4.2
Communications..............................	148.4	150.9	153.9	154.7	158.3	161.1	162.8	163.4	166.0	1.6	4.9
Electric, gas, and sanitary services........................	148.9	151.0	152.9	153.4	156.0	158.1	158.1	159.1	161.3	1.4	3.4
Wholesale and retail trade........................	145.6	147.3	148.3	149.4	151.0	152.6	153.7	155.5	156.5	.6	3.6
Excluding sales occupations....................	146.4	148.1	149.6	150.6	152.6	153.9	155.4	–	–	–	–
Wholesale trade..............................	150.0	151.8	152.1	154.4	155.1	157.8	158.6	159.5	161.9	1.5	4.4
Excluding sales occupations.................	149.6	151.1	152.7	154.9	156.9	158.5	160.0	160.6	162.3	1.1	3.4
Retail trade...................................	143.2	144.8	146.2	146.6	148.7	149.7	150.9	153.2	153.5	.2	3.2
General merchandise stores....................	139.7	141.0	142.2	144.4	147.3	149.4	149.7	150.9	152.4	1.0	3.5
Food stores.................................	140.1	142.5	143.4	144.5	146.1	148.2	149.7	151.7	152.9	.8	4.7

See footnotes at end of table.

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

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	Mar. 2002
Finance, insurance, and real estate............................	152.0	153.1	155.2	155.7	157.9	159.5	160.9	161.3	165.2	2.4	4.6
Excluding sales occupations....................................	154.2	155.5	157.4	158.4	161.2	163.1	164.7	165.0	169.8	2.9	5.3
Banking, savings and loan, and other credit agencies.	162.7	164.2	165.8	166.5	170.8	172.7	175.4	174.5	182.1	4.5	6.6
Insurance..	149.9	151.3	154.8	155.2	157.6	159.3	159.9	161.3	164.0	1.7	4.1
Services...	149.4	151.2	152.9	154.1	156.5	157.8	160.0	161.0	162.6	1.0	3.9
Business services..	154.2	156.3	157.5	158.4	160.5	163.0	165.2	166.2	166.3	.1	3.6
Health services...	145.8	147.5	149.0	150.6	152.7	154.7	156.8	158.4	160.6	1.4	5.2
Hospitals..	145.8	147.5	149.2	151.1	153.5	155.9	158.4	160.3	162.8	1.6	6.1
Educational services...	154.0	154.9	158.8	159.9	162.3	162.6	166.4	167.6	168.5	.5	3.8
Colleges and universities......................................	154.6	155.5	158.6	159.2	162.2	162.6	166.2	167.5	168.1	.4	3.6
Nonmanufacturing...	146.7	148.4	150.0	151.1	153.1	154.7	156.3	157.6	159.3	1.1	4.0
White-collar workers...	149.2	151.0	152.6	153.7	155.8	157.5	159.0	160.5	162.2	1.1	4.1
Excluding sales occupations....................................	150.2	152.0	153.8	155.1	157.5	159.1	160.9	162.3	164.2	1.2	4.3
Blue-collar occupations..	140.6	142.3	143.9	144.8	146.9	148.1	150.2	150.6	152.2	1.1	3.6
Service occupations...	143.5	145.1	146.3	147.8	149.5	150.7	152.1	154.1	155.9	1.2	4.3
State and local government workers............................	145.5	145.9	147.8	148.9	150.3	151.2	154.3	155.2	156.1	.6	3.9
Workers, by occupational group:											
White-collar workers...	144.9	145.3	147.3	148.3	149.5	150.4	153.7	154.4	155.2	.5	3.8
Professional specialty and technical.............................	144.1	144.5	146.6	147.4	148.4	149.2	152.8	153.2	153.6	.3	3.5
Executive, administrative, and managerial...................	147.0	147.2	149.2	150.7	152.4	153.7	156.4	157.6	159.5	1.2	4.7
Administrative support, including clerical......................	145.9	146.5	148.3	149.4	150.7	151.6	154.2	155.6	156.9	.8	4.1
Blue-collar workers..	143.7	144.2	145.9	147.2	148.6	149.0	151.5	153.2	154.0	.5	3.6
Workers, by industry division:											
Services...	145.2	145.5	148.0	148.9	149.9	150.6	154.4	154.9	155.5	.4	3.7
Services excluding schools[5]..	145.2	145.8	147.6	148.8	150.1	151.9	154.5	156.1	157.9	1.2	5.2
Health services...	147.3	147.9	150.0	151.6	152.1	154.4	157.1	158.5	160.4	1.1	5.5
Hospitals..	147.9	148.4	150.7	152.0	152.2	154.7	157.4	159.1	160.7	1.0	5.6
Educational services...	145.0	145.2	147.9	148.7	149.6	150.1	154.1	154.5	154.8	.2	3.5
Schools...	145.3	145.5	148.2	149.0	149.9	150.5	154.4	154.8	155.1	.2	3.5
Elementary and secondary.....................................	144.5	144.7	147.3	148.1	148.5	149.0	152.8	153.1	153.4	.2	3.3
Colleges and universities.......................................	147.4	147.6	150.5	151.7	153.7	154.3	153.8	159.6	160.0	.3	4.1
Public administration[3]..	145.7	146.1	146.9	148.3	150.6	151.9	151.9	155.2	156.5	.8	3.9

[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.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

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

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Civilian workers[1]	144.0	145.4	147.0	147.9	149.5	150.8	152.3	153.4	154.8	0.9	3.5
Workers, by occupational group:											
White-collar workers	146.2	147.6	149.2	150.2	151.7	153.1	154.5	155.6	157.0	.9	3.5
Professional specialty and technical	144.9	146.4	148.3	149.6	151.1	152.-	154.2	155.1	155.6	.3	3.0
Executive, adminitrative, and managerial	148.6	149.9	151.6	152.4	154.0	155.8	156.7	158.1	160.7	1.6	4.4
Administrative support, including clerical	145.5	146.9	148.5	149.6	151.6	152.7	154.6	155.7	157.3	1.0	3.8
Blue-collar workers	139.2	140.6	142.0	142.9	144.7	146.0	147.6	148.5	149.7	.8	3.5
Service occupations	143.0	144.0	145.7	147.1	148.6	149.7	151.2	153.0	154.2	.8	3.8
Workers, by industry division:											
Goods-producing	141.3	143.0	144.3	145.3	147.0	147.6	149.5	150.5	151.8	.9	3.3
Manufacturing	142.9	144.4	145.7	146.5	148.5	150.0	150.7	151.7	153.1	.9	3.1
Service-producing	145.0	146.3	148.0	148.9	150.5	151.7	153.4	154.5	155.9	.9	3.6
Services	146.6	147.9	149.9	151.0	152.6	153.6	156.2	157.1	158.1	.6	3.6
Health services	143.8	145.3	146.7	148.3	149.8	151.8	153.7	155.5	157.3	1.2	5.0
Hospitals	142.6	143.8	145.6	147.3	148.8	151.2	15.5	155.5	157.2	1.1	5.6
Educational services	145.3	145.6	148.9	149.6	150.5	151.0	154.6	155.1	155.3	.1	3.2
Public administration[2]	142.5	142.9	144.6	146.1	147.6	148.7	150.3	151.6	152.5	.6	3.3
Nonmanufacturing	144.2	145.5	147.2	148.1	149.7	149.7	152.6	153.8	155.0	.8	3.5
Private industry workers	143.9	145.4	146.8	147.7	149.4	150.9	152.1	153.3	154.7	.9	3.5
Excluding sales occupations	143.5	145.1	146.5	147.6	149.5	150.8	152.2	153.3	154.9	1.0	3.6
Workers, by occupational group:											
White-collar workers	146.6	148.3	149.7	150.6	152.3	153.8	154.8	156.1	157.7	1.0	3.5
Excluding sales occupations	146.7	148.5	149.9	151.1	153.0	154.4	155.7	156.9	158.6	1.1	3.7
Professional specialty and technical occupations	145.1	147.3	148.6	150.2	152.1	153.2	154.8	155.9	156.7	.5	3.0
Executive, adminitrative, and managerial occupations	149.2	150.7	152.3	153.0	154.7	156.5	157.2	158.6	161.3	1.7	4.3
Sales occupations	146.7	147.9	149.0	148.7	149.2	151.5	151.2	152.6	153.6	.7	2.9
Administrative support occupations, including clerical	146.0	147.5	149.1	150.1	152.3	153.6	155.3	156.5	158.2	1.1	3.9
Blue-collar workers	139.1	140.5	141.9	142.8	144.6	145.9	147.5	148.3	149.6	.9	3.5
Precision production, craft, and repair occupations	138.9	140.6	142.0	142.8	144.6	145.7	147.7	148,4	149.2	.5	3.2
Machine operators, assemblers, and inspectors	140.7	141.6	142.9	143.7	145.6	146.9	148.1	149.0	150.5	1.0	3.4
Transportation and material moving occupations	134.1	135.2	136.5	137.6	139.5	140.7	142.1	142.8	144.8	1.4	3.8
Handlers, equipment cleaners, helpers, and laborers	141.8	143.6	145.0	146.2	148.0	149.8	151.0	152.4	154.2	1.2	4.2
Service occupations	141.0	142.5	143.5	144.9	146.4	147.5	148.7	150.6	152.0	.9	3.8
Production and nonsupervisory occupations[3]	142.1	143.7	145.0	146.0	147.7	149.0	150.3	151.5	152.7	.8	3.4
Workers, by industry division:											
Goods-producing	141.3	143.0	144.3	145.2	147.0	148.6	149.5	150.5	151.7	.8	3.2
Excluding sales occupations	140.5	142.1	143.4	144.6	146.3	147.8	148.7	149.7	150.9	.8	3.1
White-collar occupations	145.0	146.8	147.9	148.7	150.5	152.3	152.6	153.6	155.0	.9	3.0
Excluding sales occupations	143.2	144.9	146.0	147.2	148.9	150.5	150.8	151.7	152.9	.8	2.7
Blue-collar occupations	139.0	140.5	142.0	143.1	144.7	146.1	147.4	148.4	149.6	.8	3.4
Construction	136.0	138.0	139.4	140.7	142.1	143.9	145.1	146.3	147.0	.5	3.4
Manufacturing	142.9	144.4	145.7	146.5	148.5	150.0	150.7	151.7	153.1	.9	3.1
White-collar occupations	145.8	147.7	148.7	149.2	151.1	152.7	152.8	153.3	154.9	1.0	2.5
Excluding sales occupations	143.7	145.6	146.6	147.5	149.9	150.5	150.5	151.0	152.3	.9	2.1
Blue-collar occupations	140.8	142.0	143.4	144.6	146.4	147.8	149.1	150.3	151.7	.9	3.6
Durables	143.0	144.7	146.1	147.3	149.0	150.5	151.5	151.7	153.9	.9	3.3
Nondurables	142.7	143.9	145.0	145.4	147.5	149.0	149.3	153.9	151.9	1.1	3.0
Service-producing	145.0	146.5	147.9	148.9	150.5	151.9	153.2	151.9	156.1	1.0	3.7
Excluding sales occupations	145.3	146.9	148.3	149.4	151.3	152.6	154.2	156.1	157.2	1.1	3.9
White-collar occupations	146.9	148.5	150.0	150.9	152.5	154.0	155.2	157.2	158.2	1.1	3.7
Excluding sales occupations	147.8	149.6	151.2	152.3	154.3	155.6	157.2	158.2	160.4	1.1	4.0
Blue-collar occupations	139.1	140.3	141.6	142.2	144.3	145.3	147.5	148.1	149.4	.9	3.5
Service occupations	141.1	142.5	143.5	144.8	146.1	147.2	148.4	149.4	151.6	.9	3.8
Transportation and public utilities	138.5	140.0	141.3	142.3	143.7	145.7	146.7	149.2	150.5	.9	4.7
Transportation	134.9	136.2	137.4	138.6	139.8	141.6	142.6	145.7	147.4	1.2	5.4
Public utilities	143.2	144.9	146.4	147.1	148.7	151.0	152.0	153.6	154.3	.5	3.8
Communications	143.4	145.0	146.7	147.4	149.2	151.8	153.3	155.2	155.3	.1	4.1
Electric, gas, and sanitary services	143.0	144.7	145.9	146.6	148.1	149.9	150.4	151.7	153.0	.9	3.3
Wholesale and retail trade	143.8	145.5	146.4	147.4	148.4	150.1	150.6	152.1	153.0	.6	3.1
Excluding sales occupations	145.2	146.8	148.2	149.0	150.7	151.9	153.1	–	–	–	–
Wholesale trade	147.4	149.4	149.6	151.6	151.6	154.5	154.1	154.8	157.2	1.6	3.7
Excluding sales occupations	147.9	149.7	151.3	153.2	154.9	156.5	157.4	157.9	159.4	.9	2.9
Retail trade	142.1	143.5	144.8	145.2	146.9	147.8	148.8	150.7	150.9	.1	2.7
General merchandise stores	137.8	138.5	139.7	142.2	143.8	145.5	145.7	146.5	147.9	1.0	2.9
Food stores	136.7	139.5	140.2	141.6	143.3	144.5	145.7	146.7	148.0	.9	3.3

See footnotes at end of table.

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

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Finance, insurance, and real estate............................	148.7	149.5	151.7	151.7	153.9	154.6	155.8	156.0	160.3	2.8	4.2
Excluding sales occupations.....................................	150.2	151.5	153.3	154.1	156.6	157.6	159.1	159.1	164.5	3.4	5.0
Banking, savings and loan, and other credit agencies.	162.0	163.3	165.0	165.7	169.4	170.8	173.2	171.7	181.2	5.5	7.0
Insurance..	145.5	146.6	150.7	150.8	152.4	153.3	153.6	155.0	157.1	1.4	3.1
Services..	147.4	149.1	150.6	151.8	153.8	155.0	157.1	158.2	159.5	.8	3.7
Business services..	152.0	154.1	155.3	156.0	158.2	160.8	162.8	163.7	164.0	.2	3.7
Health services...	143.5	145.3	146.6	148.1	149.8	151.8	153.6	155.4	157.3	1.2	5.0
Hospitals..	141.8	143.3	144.9	146.8	148.5	151.0	153.3	155.4	157.1	1.1	5.8
Educational services...	148.9	149.6	153.4	154.3	155.4	156.1	159.6	160.5	161.2	.4	3.7
Colleges and universities....................................	148.9	149.4	152.5	152.9	154.1	155.0	158.4	159.6	159.9	.2	3.8
Nonmanufacturing..	143.9	145.5	146.9	147.9	149.5	150.9	152.2	153.5	155.0	1.0	3.7
White-collar workers..	146.5	148.2	149.6	150.6	152.3	153.8	155.0	156.4	158.0	1.0	3.7
Excluding sales occupations..............................	147.4	149.1	150.7	151.9	153.9	155.3	156.9	158.3	160.1	1.1	4.0
Blue-collar occupations..	137.4	138.9	140.3	140.9	142.8	143.9	145.8	146.4	147.5	.8	3.3
Service occupations..	140.9	142.4	143.4	144.7	146.0	147.1	148.2	150.1	151.4	.9	3.7
State and local government workers.............................	144.3	144.7	147.2	148.3	150.2	151.2	154.3	155.2	156.1	.5	3.4
Workers, by occupational group:											
White-collar workers..	144.1	144.5	147.1	148.0	149.0	149.8	152.7	153.3	153.9	.4	3.3
Professional specialty and technical.....................	144.3	144.7	147.4	148.2	149.1	149.8	153.0	153.4	153.6	.1	3.0
Executive, administrative, and managerial...................	144.9	145.1	147.3	148.8	150.1	151.5	153.9	155.1	156.6	1.0	4.3
Administrative support, including clerical....................	142.4	143.0	145.0	146.2	147.0	147.6	149.8	150.9	151.9	.7	3.3
Blue-collar workers..	141.5	142.1	143.9	145.1	146.0	146.5	149.1	150.8	151.6	.5	3.8
Workers, by industry division:											
Services..	144.6	144.9	147.9	148.7	149.5	150.2	153.7	154.2	154.6	.3	3.4
Services excluding schools[4]................................	144.3	144.8	146.7	147.9	149.1	150.7	153.2	154.9	156.7	1.2	5.1
Health services...	145.3	145.7	147.7	149.3	149.9	151.9	154.2	155.8	157.8	1.3	5.3
Hospitals..	145.3	145.6	147.7	149.2	149.5	151.8	154.2	155.7	157.7	1.3	5.5
Educational services...	144.5	144.8	148.0	148.7	149.5	150.0	153.6	154.0	154.2	.1	3.1
Schools...	144.7	144.9	148.1	148.9	149.7	150.2	153.8	154.1	154.3	.1	3.1
Elementary and secondary..................................	144.5	144.6	147.9	148.5	149.0	149.5	152.8	153.1	153.4	.2	3.0
Colleges and universities....................................	144.9	145.6	148.3	149.5	151.4	151.8	156.5	156.7	156.8	.1	3.6
Public administration[2]..	142.5	142.9	144.6	146.1	147.6	148.7	150.3	151.6	152.5	.6	3.3

[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.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

27. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
										3 months ended	12 months ended
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	Mar. 2002	
Private industry workers..	153.8	155.7	157.5	158.6	161.5	163.2	165.2	166.7	169.3	1.6	4.8
Workers, by occupational group:											
White-collar workers..	156.3	158.5	160.4	161.5	165.2	167.4	169.5	171.2	173.5	1.3	5.0
Blue-collar workers..	150.0	151.6	153.1	154.1	155.7	156.7	158.3	159.2	162.2	1.9	4.2
Workers, by industry division:											
Goods-producing..	152.3	154.2	155.7	156.2	158.5	159.6	160.8	162.6	165.8	2.0	4.6
Service-producing...	154.0	156.0	157.9	159.4	162.6	164.6	167.1	168.4	170.7	1.4	5.0
Manufacturing...	152.3	153.9	154.9	154.8	157.1	157.9	158.5	160.4	163.7	2.1	4.2
Nonmanufacturing...	154.0	156.1	158.1	159.7	162.9	164.9	167.4	168.6	171.1	1.4	5.0

28. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

Series	2000				2001				2002	Percent change	
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.	3 months ended Mar. 2002	12 months ended Mar. 2002
COMPENSATION											
Workers, by bargaining status[1]											
Union.........	143.0	144.4	146.1	146.9	147.9	149.5	151.0	153.1	154.8	1.1	4.7
Goods-producing.........	143.3	144.8	146.8	147.3	147.9	149.3	150.6	151.6	153.4	1.1	3.7
Service-producing.........	142.5	143.9	145.2	146.4	147.6	149.5	151.2	154.2	156.0	1.2	5.7
Manufacturing.........	144.5	145.4	147.1	147.4	147.9	148.8	149.9	151.4	153.4	1.3	3.7
Nonmanufacturing.........	141.7	143.4	145.0	146.2	147.3	149.4	151.1	153.5	155.0	1.0	5.2
Nonunion.........	147.4	149.1	150.6	151.6	153.8	155.3	156.7	157.8	159.6	1.1	3.8
Goods-producing.........	145.4	147.2	148.4	149.3	151.6	153.1	154.0	155.3	157.2	1.2	3.7
Service-producing.........	148.0	149.6	151.2	152.3	154.4	155.9	157.5	158.6	160.3	1.1	3.8
Manufacturing.........	146.5	148.2	149.2	149.9	152.4	153.7	154.4	155.5	157.6	1.4	3.4
Nonmanufacturing.........	147.4	149.1	150.7	151.8	153.9	155.4	157.0	158.2	159.9	1.1	3.9
Workers, by region[1]											
Northeast.........	146.3	147.6	149.3	150.3	151.6	153.7	155.2	156.3	158.3	1.3	4.4
South.........	145.0	146.7	147.6	148.6	151.1	152.3	153.5	154.6	156.2	1.0	3.4
Midwest (formerly North Central).........	148.9	150.7	152.2	153.3	154.8	156.0	157.4	158.6	161.1	1.6	4.1
West.........	147.0	148.8	150.8	151.8	154.3	156.0	157.6	159.4	160.4	.6	4.0
Workers, by area size[1]											
Metropolitan areas.........	146.9	148.6	150.1	151.0	153.1	154.6	156.0	157.4	159.1	1.1	3.9
Other areas.........	146.0	147.7	148.8	150.3	152.1	153.7	154.8	155.6	157.5	1.2	3.6
WAGES AND SALARIES											
Workers, by bargaining status[1]											
Union.........	137.2	138.5	140.0	141.2	142.1	143.7	145.1	147.4	148.4	.7	4.4
Goods-producing.........	137.2	138.4	140.2	141.3	142.4	144.2	145.3	146.3	147.2	.6	3.4
Service-producing.........	137.6	138.9	140.1	141.5	142.2	143.7	145.4	148.9	150.0	.7	5.5
Manufacturing.........	138.8	139.7	141.4	142.6	143.9	145.5	146.7	148.0	149.0	.7	3.5
Nonmanufacturing.........	136.4	137.8	139.2	140.4	141.1	142.7	144.3	147.1	148.1	.7	5.0
Nonunion.........	145.1	146.7	148.1	149.0	150.8	152.2	153.4	154.4	155.9	1.0	3.4
Goods-producing.........	142.9	144.7	145.8	146.8	148.8	150.3	151.1	152.1	153.5	.9	3.2
Service-producing.........	145.8	147.3	148.7	149.6	151.4	152.7	154.1	155.1	156.7	1.0	3.5
Manufacturing.........	144.4	146.1	147.2	148.0	150.1	151.6	152.2	153.1	154.7	1.0	3.1
Nonmanufacturing.........	145.0	146.6	148.0	148.9	150.7	152.0	153.3	154.4	155.9	1.0	3.5
Workers, by region[1]											
Northeast.........	142.3	143.7	145.3	146.0	147.3	149.2	150.6	151.7	153.5	1.2	4.2
South.........	143.0	144.6	145.3	146.3	148.3	149.3	150.2	151.2	152.5	.9	2.8
Midwest (formerly North Central).........	145.3	147.1	148.6	149.6	150.9	152.3	153.6	154.7	157.1	1.6	4.1
West.........	144.7	146.3	148.2	149.2	151.3	152.9	154.3	156.0	156.4	.3	3.4
Workers, by area size[1]											
Metropolitan areas.........	144.1	145.7	147.1	148.0	149.8	151.2	152.4	153.7	155.1	.9	3.5
Other areas.........	142.2	143.7	144.7	146.0	147.4	148.8	149.7	150.5	151.7	.8	2.9

[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.

29. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

Item	1980	1982	1984	1986	1988	1989	1991	1993	1995	1997
Scope of survey (in 000's).....................................	21,352	21,043	21,013	21,303	31,059	32,428	31,163	28,728	33,374	38,409
Number of employees (in 000's):										
With medical care...	20,711	20,412	20,383	20,238	27,953	29,834	25,865	23,519	25,546	29,340
With life insurance...	20,498	20,201	20,172	20,451	28,574	30,482	29,293	26,175	29,078	33,495
With defined benefit plan...................................	17,936	17,676	17,231	16,190	19,567	20,430	18,386	16,015	17,417	19,202
Time-off plans										
Participants with:										
Paid lunch time...	10	9	9	10	11	10	8	9	–	–
Average minutes per day...............................	–	25	26	27	29	26	30	29	–	–
Paid rest time..........	75	76	73	72	72	71	67	68	–	–
Average minutes per day...............................	–	25	26	26	26	26	28	26	–	–
Paid funeral leave..	–	–	–	88	85	84	80	83	80	81
Average days per occurrence.........................	–	–	–	3.2	3.2	3.3	3.3	3.0	3.3	3.7
Paid holidays...	99	99	99	99	96	97	92	91	89	89
Average days per year....................................	10.1	10.0	9.8	10.0	9.4	9.2	10.2	9.4	9.1	9.3
Paid personal leave..	20	24	23	25	24	22	21	21	22	20
Average days per year....................................	–	3.8	3.6	3.7	3.3	3.1	3.3	3.1	3.3	3.5
Paid vacations..	100	99	99	100	98	97	96	97	96	95
Paid sick leave [1]...	62	67	67	70	69	68	67	65	58	56
Unpaid maternity leave......................................	–	–	–	–	33	37	37	60	–	–
Unpaid paternity leave......................................	–	–	–	–	16	18	26	53	–	–
Unpaid family leave	–	–	–	–	–	–	–	–	84	93
Insurance plans										
Participants in medical care plans.......................	97	97	97	95	90	92	83	82	77	76
Percent of participants with coverage for:										
Home health care...	–	–	46	66	76	75	81	86	78	85
Extended care facilities.....................................	58	62	62	70	79	80	80	82	73	78
Physical exam..	–	–	8	18	28	28	30	42	56	63
Percent of participants with employee contribution required for:										
Self coverage...	26	27	36	43	44	47	51	61	67	69
Average monthly contribution........................	–	–	$11.93	$12.80	$19.29	$25.31	$26.60	$31.55	$33.92	$39.14
Family coverage...	46	51	58	63	64	66	69	76	78	80
Average monthly contribution........................	–	–	$35.93	$41.40	$60.07	$72.10	$96.97	$107.42	$118.33	$130.07
Participants in life insurance plans.....................	96	96	96	96	92	94	94	91	87	87
Percent of participants with:										
Accidental death and dismemberment insurance..	69	72	74	72	78	71	71	76	77	74
Survivor income benefits...................................	–	–	–	10	8	7	6	5	7	6
Retiree protection available..............................	–	64	64	59	49	42	44	41	37	33
Participants in long-term disability insurance plans...	40	43	47	48	42	45	40	41	42	43
Participants in sickness and accident insurance plans...	54	51	51	49	46	43	45	44	–	–
Participants in short-term disability plans [1].............	–	–	–	–	–	–	–	–	53	55
Retirement plans										
Participants in defined benefit pension plans..........	84	84	82	76	63	63	59	56	52	50
Percent of participants with:										
Normal retirement prior to age 65.....................	55	58	63	64	59	62	55	52	52	52
Early retirement available.................................	98	97	97	98	98	97	98	95	96	95
Ad hoc pension increase in last 5 years...............	–	–	47	35	26	22	7	6	4	10
Terminal earnings formula.................................	53	52	54	57	55	64	56	61	58	56
Benefit coordinated with Social Security..............	45	45	56	62	62	63	54	48	51	49
Participants in defined contribution plans................	–	–	–	60	45	48	48	49	55	57
Participants in plans with tax-deferred savings arrangements..	–	–	–	33	36	41	44	43	54	55
Other benefits										
Employees eligible for:										
Flexible benefits plans.......................................	–	–	–	2	5	9	10	12	12	13
Reimbursement accounts [2]..............................	–	–	–	5	12	23	36	52	38	32
Premium conversion plans................................	–	–	–	–	–	–	–	–	5	7

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability bene-fits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

30. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

Item	Small private establishments				State and local governments			
	1990	**1992**	**1994**	**1996**	**1987**	**1990**	**1992**	**1994**
Scope of survey (in 000's).................................	32,466	34,360	35,910	39,816	10,321	12,972	12,466	12,907
Number of employees (in 000's):								
With medical care..	22,402	24,396	23,536	25,599	9,599	12,064	11,219	11,192
With life insurance...	20,778	21,990	21,955	24,635	8,773	11,415	11,095	11,194
With defined benefit plan....................................	6,493	7,559	5,480	5,883	9,599	11,675	10,845	11,708
Time-off plans								
Participants with:								
Paid lunch time..	8	9	–	–	17	11	10	–
Average minutes per day...............................	37	37	–	–	34	36	34	–
Paid rest time..	48	49	–	–	58	56	53	–
Average minutes per day...............................	27	26	–	–	29	29	29	–
Paid funeral leave....................................	47	50	50	51	56	63	65	62
Average days per occurrence.....................	2.9	3.0	3.1	3.0	3.7	3.7	3.7	3.7
Paid holidays..	84	82	82	80	81	74	75	73
Average days per year[1]..............................	9.5	9.2	7.5	7.6	10.9	13.6	14.2	11.5
Paid personal leave..................................	11	12	13	14	38	39	38	38
Average days per year...............................	2.8	2.6	2.6	3.0	2.7	2.9	2.9	3.0
Paid vacations...	88	88	88	86	72	67	67	66
Paid sick leave[2].......................................	47	53	50	50	97	95	95	94
Unpaid leave..	17	18	–	–	57	51	59	–
Unpaid paternity leave.............................	8	7	–	–	30	33	44	–
Unpaid family leave..................................	–	–	47	48	–	–	–	93
Insurance plans								
Participants in medical care plans..........................	69	71	66	64	93	93	90	87
Percent of participants with coverage for:								
Home health care......................................	79	80	–	–	76	82	87	84
Extended care facilities.............................	83	84	–	–	78	79	84	81
Physical exam..	26	28	–	–	36	36	47	55
Percent of participants with employee contribution required for:								
Self coverage..	42	47	52	52	35	38	43	47
Average monthly contribution......................	$25.13	$36.51	$40.97	$42.63	$15.74	$25.53	$28.97	$30.20
Family coverage.......................................	67	73	76	75	71	65	72	71
Average monthly contribution......................	$109.34	$150.54	$159.63	$181.53	$71.89	$117.59	$139.23	$149.70
Participants in life insurance plans..........................	64	64	61	62	85	88	89	87
Percent of participants with:								
Accidental death and dismemberment insurance...	78	76	79	77	67	67	74	64
Survivor income benefits...............................	1	1	2	1	1	1	1	2
Retiree protection available...........................	19	25	20	13	55	45	46	46
Participants in long-term disability insurance plans...	19	23	20	22	31	27	28	30
Participants in sickness and accident insurance plans...	6	26	26	–	14	21	22	21
Participants in short-term disability plans[2]..............	–	–	–	29	–	–	–	–
Retirement plans								
Participants in defined benefit pension plans..........	20	22	15	15	93	90	87	91
Percent of participants with:								
Normal retirement prior to age 65......................	54	50	–	47	92	89	92	92
Early retirement available...............................	95	95	–	92	90	88	89	87
Ad hoc pension increase in last 5 years..............	7	4	–	–	33	16	10	13
Terminal earnings formula...............................	58	54	–	53	100	100	100	99
Benefit coordinated with Social Security.............	49	46	–	44	18	8	10	49
Participants in defined contribution plans...............	31	33	34	38	9	9	9	9
Participants in plans with tax-deferred savings arrangements...	17	24	23	28	28	45	45	24
Other benefits								
Employees eligible for:								
Flexible benefits plans.................................	1	2	3	4	5	5	5	5
Reimbursement accounts[3]............................	8	14	19	12	5	31	50	64
Premium conversion plans	–	–	–	7	–	–	–	–

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave.

Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

31. Work stoppages involving 1,000 workers or more

Measure	Annual totals		2001								2002[p]				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar	Apr	May
Number of stoppages:															
Beginning in period............................	39	29	7	3	2	3	2	1	0	2	0	1	1	2	3
In effect during period........................	40	30	8	5	3	4	3	4	1	2	1	2	1	3	5
Workers involved:															
Beginning in period (in thousands).....	394	99	22.1	4.7	2.2	5.8	3.0	24.9	.0	6.0	.0	1.5	2.9	4.1	5.1
In effect during period (in thousands).	397	102	23.4	9.0	3.3	6.9	4.1	29.0	1.6	6.0	1.0	2.5	2.9	7.0	9.2
Days idle:															
Number (in thousands).......................	20,419	1,151	201.6	73.2	62.1	71.5	55.7	316.4	11.2	55.0	21.0	9.0	43.5	80.7	138.2
Percent of estimated working time[1]....	.06	.00	.01	(²)	(²)	(²)	(²)	.01	(²)	(²)	.00	.00	.00	.00	.00

[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.

[p] = preliminary.

NOTE: Dash indicates data not available.

32. 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		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS															
All items...	172.2	177.1	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	177.8	178.8	179.8	179.8
All items (1967 = 100)................................	515.8	530.4	532.2	533.3	531.6	531.8	534.0	532.2	531.3	5292.0	530.6	532.7	535.5	538.6	538.5
Food and beverages....................................	168.4	173.6	172.9	173.4	174.0	174.4	174.6	175.3	175.2	175.2	176.2	176.4	176.6	176.7	176.4
Food..	167.8	173.1	172.5	173.0	173.5	173.9	174.1	174.9	174.6	174.7	175.8	175.9	176.1	176.2	175.8
Food at home..	167.9	173.4	172.8	173.3	173.9	174.2	174.3	175.2	174.7	174.7	176.2	176.0	176.3	176.4	175.5
Cereals and bakery products..................	188.3	193.8	193.2	194.2	194.9	195.9	195.1	195.2	194.9	195.3	196.7	197.6	197.0	198.1	198.2
Meats, poultry, fish, and eggs...............	154.5	161.3	160.8	161.7	162.3	162.4	162.4	163.5	162.7	162.0	162.1	161.8	162.8	162.5	162.4
Dairy and related products[1]...................	160.7	167.1	164.7	166.9	168.3	168.9	169.4	170.8	171.2	170.8	169.9	170.1	169.4	168.7	169.0
Fruits and vegetables............................	204.6	212.2	213.1	211.8	210.7	208.8	212.1	213.5	212.9	214.4	224.8	223.3	225.8	223.4	221.0
Nonalcoholic beverages and beverage materials..	137.8	139.2	138.1	138.6	138.9	140.0	139.2	139.9	139.5	18.5	139.5	140.0	140.1	140.1	138.0
Other foods at home.............................	155.6	159.6	159.6	159.5	160.4	161.0	160.2	160.9	160.3	160.9	161.3	160.4	159.9	161.5	160.0
Sugar and sweets.............................	154.0	155.7	155.8	155.7	156.1	156.1	156.6	156.4	154.9	156.1	158.4	158.5	157.2	159.6	157.9
Fats and oils....................................	147.4	155.7	154.7	156.7	157.8	158.5	158.5	159.5	155.6	156.9	158.3	157.2	156.4	156.5	155.9
Other foods......................................	172.2	176.0	176.4	175.7	176.8	177.6	176.2	177.0	177.6	177.9	177.4	176.3	175.9	177.8	176.1
Other miscellaneous foods[1,2].........	107.5	108.9	108.8	107.7	109.6	109.5	108.9	108.9	110.6	108.5	108.9	108.0	107.8	108.0	108.9
Food away from home[1]........................	169.0	173.9	173.1	173.6	174.1	174.7	175.1	175.6	175.8	176.0	176.4	177.0	177.1	177.2	177.6
Other food away from home[1,2]............	109.0	113.4	112.4	112.6	113.8	114.3	115.3	115.4	115.5	115.5	115.5	115.8	116.3	116.9	117.1
Alcoholic beverages...............................	174.7	179.3	178.5	179.1	179.7	180.0	180.4	180.8	181.2	180.9	181.8	182.6	182.5	182.9	183.3
Housing...	169.6	176.4	175.9	177.3	177.6	178.0	177.4	176.7	176.9	176.9	177.6	178.5	179.1	179.5	179.7
Shelter..	193.4	200.6	199.6	200.7	201.4	202.4	202.0	202.4	202.9	203.2	204.5	206.1	207.0	207.5	207.5
Rent of primary residence......................	183.9	192.1	191.0	191.6	192.3	193.1	193.9	194.7	195.5	196.4	197.0	197.7	198.2	198.5	198.8
Lodging away from home........................	117.5	118.6	120.0	123.7	124.0	125.2	116.8	114.5	111.6	108.0	113.1	119.3	121.9	122.1	120.1
Owners' equivalent rent of primary residence[3]....	198.7	206.3	204.9	205.7	206.3	207.3	208.1	209.0	210.1	210.9	211.6	212.2	212.8	213.3	213.7
Tenants' and household insurance[1,2].......	103.7	106.2	106.8	107.0	106.6	106.6	106.7	106.9	106.9	106.3	106.4	106.8	106.8	107.2	107.6
Fuels and utilities...................................	137.9	150.2	151.3	155.7	154.8	152.7	150.6	144.6	143.5	142.2	141.5	140.0	140.2	140.3	141.5
Fuels...	122.8	135.4	136.8	141.6	140.5	138.0	135.7	129.1	127.8	126.2	125.3	123.7	123.8	123.8	125.1
Fuel oil and other fuels.....................	129.7	129.3	131.9	129.6	123.8	122.1	125.3	121.5	118.3	112.7	112.9	112.3	112.8	115.1	114.4
Gas (piped) and electricity.................	128.0	142.4	143.8	149.4	148.6	146.0	143.1	135.9	134.7	133.5	132.4	130.6	130.7	130.6	132.1
Household furnishings and operations..............	128.2	129.1	128.9	129.2	129.2	129.1	129.4	129.0	129.1	128.9	128.7	128.6	128.7	128.9	128.9
Apparel...	129.6	127.3	129.8	126.3	122.6	122.6	126.8	129.5	128.0	123.7	120.4	123.5	128.2	128.8	127.1
Men's and boys' apparel.........................	129.7	125.7	129.1	125.8	122.5	121.4	123.7	127.5	127.4	122.8	120.8	122.0	125.2	125.6	124.3
Women's and girls' apparel.....................	121.5	119.3	122.3	117.5	111.6	112.1	120.3	122.1	119.4	114.8	109.7	115.3	121.3	122.2	229.4
Infants' and toddlers' apparel[1]...............	130.6	129.2	130.6	127.3	124.5	126.3	129.3	131.5	132.4	128.5	125.0	127.2	129.9	198.9	127.4
Footwear..	123.8	123.0	124.4	122.1	121.3	121.9	122.9	124.9	123.7	120.6	117.1	119.5	123.5	124.5	124.5
Transportation...	153.3	154.3	159.2	158.3	154.4	153.3	155.5	152.3	150.2	148.5	148.6	148.4	150.5	153.7	153.8
Private transportation..............................	149.1	150.0	155.3	154.0	149.9	148.8	151.2	148.1	146.1	144.3	144.4	144.1	146.3	149.6	149.5
New and used motor vehicles[2]...............	100.8	101.3	101.4	101.1	100.8	100.5	100.2	100.6	101.3	101.6	101.0	100.1	99.6	99.3	99.1
New vehicles......................................	142.8	142.1	142.3	141.7	141.2	140.3	140.2	141.0	142.6	143.5	142.7	141.2	140.7	140.4	139.8
Used cars and trucks[1].........................	155.8	158.7	159.1	158.9	158.3	158.0	157.3	157.8	157.4	157.2	156.5	153.9	152.1	152.8	151.8
Motor fuel..	129.3	124.7	146.8	142.0	125.6	121.9	131.4	116.3	104.5	96.1	97.9	98.2	107.7	121.4	121.4
Gasoline (all types)............................	128.6	124.0	146.0	141.3	124.9	121.2	130.7	115.6	103.8	95.4	97.2	97.6	107.1	120.8	120.8
Motor vehicle parts and equipment........	101.5	104.8	104.4	104.4	105.1	104.9	105.2	105.5	105.8	105.8	106.2	106.1	106.5	106.8	106.8
Motor vehicle maintenance and repair.............	177.3	183.5	182.5	182.7	183.4	184.0	185.1	186.0	186.4	186.4	187.1	188.0	188.5	189.0	189.9
Public transportation..............................	209.6	210.6	209.3	216.3	216.1	213.7	212.7	209.1	205.1	204.8	205.8	207.3	207.9	209.7	211.3
Medical care..	260.8	272.8	271.4	272.5	273.1	274.4	275.0	275.9	276.7	277.3	279.6	281.0	282.0	283.2	284.1
Medical care commodities........................	238.1	247.6	246.6	248.1	248.5	249.1	249.6	250.2	250.6	251.6	252.6	253.7	254.1	254.8	255.4
Medical care services..............................	266.0	278.8	277.3	278.3	278.9	280.5	281.0	282.0	283.0	283.5	286.2	287.7	288.9	290.2	291.2
Professional services..........................	237.7	246.5	245.8	246.5	246.8	247.7	247.9	248.4	248.8	248.9	250.6	251.4	251.9	252.5	252.9
Hospital and related services................	317.3	338.3	335.1	336.6	337.9	341.2	342.6	344.8	347.1	348.3	353.1	356.4	359.4	362.4	364.5
Recreation[2]..	103.3	104.9	105.0	104.8	105.0	105.1	105.2	105.3	105.5	105.3	105.7	105.9	106.1	106.5	106.4
Video and audio[1,2].................................	101.0	101.5	101.6	101.3	101.7	101.7	101.3	101.3	101.4	101.2	102.1	102.9	102.9	102.9	103.1
Education and communication[2]...................	102.5	105.2	104.0	104.4	104.8	105.8	106.6	107.1	107.0	106.9	107.2	107.3	106.6	106.2	106.6
Education[2]..	112.5	118.5	116.4	116.9	117.2	119.5	121.7	122.2	122.3	122.0	122.6	123.2	123.3	123.3	123.5
Educational books and supplies.............	279.9	295.9	290.7	293.9	295.1	298.0	305.4	307.2	304.7	294.7	303.0	314.4	314.2	314.4	315.6
Tuition, other school fees, and child care........	324.0	341.1	335.0	336.2	337.2	343.9	350.0	351.5	352.0	352.2	353.2	353.9	354.1	354.1	354.6
Communication[1,2]..................................	93.6	93.3	92.9	93.1	93.6	93.5	93.1	93.6	93.3	93.4	93.4	93.1	92.0	91.2	91.9
Information and information processing[1,2]...	92.8	92.3	91.8	92.1	92.5	92.4	92.0	92.5	92.2	92.3	92.2	92.0	90.8	90.0	90.7
Telephone services[1,2].........................	98.5	99.3	98.7	99.0	99.6	99.6	99.2	99.9	99.6	99.6	100.3	100.3	99.1	98.2	99.3
Information and information processing other than telephone services[1,4].......	25.9	21.3	21.7	21.4	21.3	20.7	20.3	20.2	20.0	19.8	19.4	19.0	18.8	18.6	18.5
Personal computers and peripheral equipment[1,2]...............................	41.1	29.5	30.4	29.8	29.3	27.8	26.7	26.4	25.8	25.3	24.6	23.8	23.1	22.9	23.0
Other goods and services............................	271.1	282.6	281.3	281.2	285.8	283.3	287.8	285.6	289.2	286.4	287.2	290.2	288.5	292.9	291.5
Tobacco and smoking products.................	394.9	425.2	418.7	421.0	441.2	424.6	444.0	429.9	446.7	431.7	432.8	449.3	433.4	461.4	449.0
Personal care[1].......................................	165.6	170.5	169.5	170.0	170.7	171.2	171.9	172.3	172.6	172.6	173.2	173.7	174.1	174.4	174.7
Personal care products[1]......................	153.7	155.1	153.2	154.6	155.1	154.7	155.5	155.4	155.4	155.4	155.2	155.5	155.1	155.4	154.8
Personal care services[1].......................	178.1	184.3	184.1	184.1	184.8	185.2	185.5	185.9	186.8	186.4	186.3	186.4	187.3	187.9	188.3

See footnotes at end of table.

32. 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		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Miscellaneous personal services....................	252.3	263.1	261.0	261.8	263.2	265.5	266.4	267.3	268.0	268.5	270.4	271.8	272.9	273.2	274.2
Commodity and service group:															
Commodities....................	149.2	150.7	152.9	152.1	150.4	149.8	151.5	150.5	149.5	147.9	147.8	148.1	149.4	151.0	150.5
Food and beverages.....................	168.4	173.6	172.9	173.4	174.0	174.4	174.6	175.3	175.2	175.2	176.2	176.4	176.6	176.7	176.4
Commodities less food and beverages............	137.7	137.2	140.8	139.4	136.5	135.4	138.0	136.1	134.6	132.3	131.6	132.1	133.7	136.0	135.4
Nondurables less food and beverages...........	147.4	147.1	153.5	151.3	146.3	144.8	149.6	146.0	142.8	138.4	137.9	139.6	143.6	148.4	147.4
Apparel	129.6	127.3	129.8	126.3	122.6	122.6	126.8	129.5	128.0	123.7	120.4	123.5	128.2	128.8	127.1
Nondurables less food, beverages, and apparel.................	162.5	163.4	172.0	170.4	164.5	162.1	167.5	160.4	156.2	151.6	152.6	153.6	157.3	164.7	164.1
Durables....................	125.4	124.6	124.9	124.5	124.2	123.6	123.4	123.6	124.2	124.3	123.6	122.7	122.1	121.9	121.7
Services........................	195.3	203.4	202.5	204.0	204.5	205.2	204.9	204.7	205.1	205.3	206.3	207.3	208.0	208.4	208.8
Rent of shelter[3].....................	201.3	208.9	207.8	209.0	209.7	210.8	210.3	210.8	211.3	211.7	213.0	214.7	215.6	216.1	216.1
Transporatation services....................	196.1	201.9	200.4	202.0	202.6	202.7	202.8	203.4	204.2	204.5	205.2	206.5	207.3	207.9	208.9
Other services.....................	229.9	238.0	236.4	236.7	237.7	239.4	240.6	241.4	241.9	241.9	242.9	243.5	243.6	243.8	244.5
Special indexes:															
All items less food.....................	173.0	177.8	178.6	179.0	178.2	178.2	179.0	178.2	177.8	177.0	177.4	178.2	179.2	180.4	180.4
All items less shelter.....................	165.7	169.7	170.9	171.0	170.0	169.7	170.9	169.9	169.3	168.2	168.4	168.7	169.7	170.9	170.9
All items less medical care....................	167.3	171.9	172.6	172.9	172.3	172.3	173.0	172.4	172.0	171.3	171.7	172.4	173.3	174.3	174.2
Commodities less food.....................	139.2	138.9	142.4	141.0	138.2	137.2	139.7	137.8	136.4	134.1	133.5	133.9	135.6	137.8	137.3
Nondurables less food.....................	149.1	149.1	155.1	153.1	148.3	146.9	151.5	148.1	145.1	140.9	140.5	142.2	145.9	150.4	149.5
Nondurables less food and apparel..............	162.9	164.1	172.0	170.6	165.2	163.0	168.0	161.5	157.7	153.4	154.5	155.4	158.7	165.5	165.0
Nondurables.....................	158.2	160.6	163.6	162.7	160.3	159.7	162.3	160.8	159.1	156.8	157.0	158.0	160.2	162.7	216.0
Services less rent of shelter[3].....................	202.9	212.3	211.4	213.3	213.7	214.0	213.9	213.0	213.3	213.2	213.9	214.3	214.8	215.1	201.6
Services less medical care services..............	188.9	196.6	195.7	197.2	197.8	198.4	198.1	197.8	198.2	198.3	199.2	200.2	200.8	201.2	201.6
Energy.................................	124.6	129.3	140.1	140.5	132.4	129.4	132.5	122.1	116.0	111.4	111.7	111.0	115.6	122.2	122.9
All items less energy.....................	178.6	183.5	182.9	183.3	183.6	184.1	184.5	185.1	185.4	185.2	185.7	186.5	187.1	187.5	187.4
All items less food and energy.....................	181.3	186.1	185.5	185.9	186.2	186.6	187.1	187.6	188.1	187.8	188.2	189.2	189.8	190.3	190.2
Commodities less food and energy...........	144.9	145.3	145.7	144.9	144.4	143.8	145.2	145.6	146.0	144.7	143.7	144.2	144.6	145.1	144.4
Energy commodities.....................	129.5	125.2	145.6	141.1	125.6	122.0	131.0	116.9	105.8	97.6	99.3	99.5	108.6	121.6	121.6
Services less energy.....................	202.1	209.6	208.4	209.4	210.1	211.2	211.2	211.7	212.3	212.6	213.8	215.1	215.9	216.3	216.6
CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS															
All items.....................	163.2	173.5	174.4	174.6	173.8	173.8	174.8	174.0	173.7	172.9	173.2	173.7	174.7	175.8	175.8
All items (1967 = 100).....................	486.2	516.8	519.4	520.0	517.8	517.6	520.6	518.3	517.3	515.0	515.0	517.5	520.2	523.7	523.6
Food and beverages.....................	163.8	173.0	172.3	172.8	173.4	173.8	174.0	174.8	174.5	174.6	175.7	175.8	176.1	176.1	175.7
Food.....................	163.4	172.5	171.9	172.4	173.0	173.4	173.5	174.3	174.1	174.1	175.2	175.3	175.6	175.5	175.1
Food at home.....................	163.0	172.4	171.8	172.4	173.0	173.3	173.4	174.3	173.7	173.7	175.3	175.1	175.5	175.3	174.4
Cereals and bakery products.....................	184.7	193.6	192.9	193.9	194.5	195.6	194.8	195.1	194.7	195.1	196.7	197.5	197.0	197.9	198.2
Meats, poultry, fish, and eggs.....................	147.6	161.2	160.6	161.4	162.1	162.0	162.3	163.2	162.6	161.8	162.0	161.6	162.7	162.1	162.1
Dairy and related products[1].....................	159.4	167.1	164.7	166.9	168.3	168.9	169.4	170.8	171.2	170.6	169.7	170.0	169.2	168.7	168.7
Fruits and vegetables.....................	201.8	210.8	211.5	210.5	209.5	208.0	211.0	212.2	211.5	212.8	223.2	222.2	224.9	222.0	219.1
Nonalcoholic beverages and beverage materials.....................	133.2	138.4	137.2	137.8	138.0	139.3	138.4	139.2	138.7	137.7	138.8	139.5	139.7	139.4	137.3
Other foods at home.....................	152.8	159.1	159.1	159.1	160.0	160.5	159.8	160.4	159.7	160.5	161.0	160.1	159.6	161.0	159.7
Sugar and sweets.....................	152.2	155.6	155.8	155.5	156.0	156.1	156.2	156.2	154.7	155.9	158.5	158.5	157.1	153.4	157.6
Fats and oils.....................	147.9	155.4	154.3	156.4	157.4	158.0	158.1	159.1	155.1	156.5	158.0	157.0	156.3	156.2	155.7
Other foods.....................	168.8	176.3	176.5	176.0	177.2	177.9	176.5	177.3	177.8	178.3	177.9	176.8	176.5	178.2	176.7
Other miscellaneous foods[1,2].....................	104.6	109.1	108.7	108.0	109.3	109.7	109.2	109.5	110.8	109.0	109.3	108.5	108.3	108.5	109.5
Food away from home[1].....................	165.0	173.8	173.1	173.5	174.0	174.7	175.0	175.6	175.8	176.0	176.4	176.9	177.0	177.1	177.5
Other food away from home[1,2].....................	105.1	113.6	112.5	112.8	114.0	114.4	115.6	115.7	115.8	115.8	115.8	116.0	116.8	117.4	117.7
Alcoholic beverages.....................	168.8	178.8	178.0	178.4	179.2	179.7	180.1	180.5	180.8	180.5	181.4	182.1	182.2	182.8	183.1
Housing.....................	160.0	172.1	171.7	173.0	173.3	173.5	173.2	172.5	172.8	172.9	173.4	173.9	174.4	174.8	175.1
Shelter.....................	181.6	194.5	193.5	194.4	195.0	195.9	196.0	196.6	197.2	197.7	198.7	199.8	200.6	201.0	201.2
Rent of primary residence.....................	177.1	191.5	190.4	191.0	191.7	192.4	193.3	194.0	194.9	195.7	196.3	197.0	197.5	197.8	98.1
Lodging away from home[2].....................	122.2	118.4	119.9	123.2	123.7	124.4	116.8	114.8	111.8	108.8	113.2	119.4	122.2	122.0	120.7
Owners' equivalent rent of primary residence[3].....................	175.7	187.6	186.3	187.0	187.5	188.5	189.2	190.0	190.9	191.7	192.3	192.9	193.3	193.9	194.2
Tenants' and household insurance[1,2].....................	101.6	106.4	106.9	107.2	106.7	106.8	106.8	107.0	107.1	106.3	106.4	106.8	106.9	107.5	107.6
Fuels and utilities.....................	128.7	149.5	150.8	155.2	154.4	152.2	150.1	144.0	142.8	141.5	140.8	139.4	139.6	139.6	140.7
Fuels.....................	113.0	134.2	135.7	140.5	139.5	137.0	134.7	127.9	126.7	125.2	124.2	122.7	122.8	122.7	123.9
Fuel oil and other fuels.....................	91.7	129.2	131.5	129.2	123.1	121.5	125.3	121.4	118.5	112.7	113.0	112.4	112.7	114.7	114.0
Gas (piped) and electricity.....................	120.4	141.5	142.9	148.5	147.8	145.2	142.2	135.0	133.7	132.5	131.4	129.7	129.8	129.6	131.0
Household furnishings and operations...............	124.7	125.8	125.7	125.9	125.8	125.7	126.0	125.5	125.6	125.4	125.0	124.9	124.9	125.1	125.0
Apparel.....................	130.1	126.1	128.5	125.2	121.9	121.6	125.6	128.3	127.2	123.0	119.6	122.4	126.9	127.9	126.2
Men's and boys' apparel.....................	131.2	125.8	129.2	126.3	122.9	121.6	123.7	127.3	127.3	122.7	121.0	122.2	125.2	125.8	124.6
Women's and girls' apparel.....................	121.3	117.3	120.2	115.6	110.2	110.1	118.3	120.2	118.0	113.5	108.5	113.8	119.7	120.9	118.2
Infants' and toddlers' apparel[1].....................	130.3	130.9	132.0	128.6	126.2	128.3	131.1	133.5	134.3	130.3	126.7	128.4	131.7	131.7	129.9
Footwear.....................	126.2	123.1	124.5	122.1	121.4	122.0	123.0	124.9	124.2	121.0	117.7	119.3	122.8	124.4	124.4
Transportation.....................	143.4	153.6	159.2	157.9	153.4	152.5	155.1	151.4	149.2	147.4	147.3	147.1	149.2	152.7	152.7
Private transportation.....................	140.7	150.8	156.6	155.1	150.4	149.5	152.3	148.6	146.4	144.5	144.6	144.2	146.4	149.8	149.8
New and used motor vehicles[2].....................	100.4	101.9	102.0	101.7	101.4	101.0	100.7	101.1	101.7	102.0	101.3	100.3	99.7	99.5	99.3

See footnotes at end of table.

32. 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 2000	2001	2001 May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	2002 Jan.	Feb.	Mar.	Apr.	May
New vehicles	143.9	143.2	143.4	142.7	142.3	141.4	141.3	142.1	143.8	144.7	143.8	142.3	141.8	141.5	140.9
Used cars and trucks[1]	157.1	159.8	160.2	160.0	159.3	159.0	158.2	158.7	158.3	158.1	156.5	154.8	153.0	152.6	152.7
Motor fuel	129.5	124.9	147.4	142.1	124.9	122.0	132.4	116.2	104.4	96.3	98.2	98.5	108.0	121.7	121.8
Gasoline (all types)	128.8	124.2	146.7	141.1	124.2	121.3	131.7	115.5	103.8	95.7	97.6	97.9	107.5	121.2	121.2
Motor vehicle parts and equipment	100.9	104.0	103.6	103.6	104.3	104.1	104.4	104.7	105.0	104.9	105.3	105.3	105.7	106.0	106.0
Motor vehicle maintenance and repair	178.8	185.1	184.1	184.4	185.0	185.6	186.7	187.5	187.8	187.9	188.6	189.5	189.9	190.5	191.4
Public transportation	203.4	204.9	203.5	209.5	209.5	207.7	207.0	203.7	200.4	200.1	201.0	202.5	203.0	204.5	206.3
Medical care	259.9	271.8	270.4	271.5	272.0	273.4	273.9	274.9	275.6	276.2	278.5	279.8	280.9	281.9	282.9
Medical care commodities	233.6	242.7	241.7	243.2	243.6	244.1	244.6	245.2	245.6	246.7	247.6	248.5	249.0	249.6	250.3
Medical care services	265.9	278.5	277.0	278.0	278.5	280.2	280.7	281.7	282.6	283.0	285.7	287.2	288.4	289.6	290.6
Professional services	239.6	248.7	248.0	248.7	249.0	249.9	250.1	250.5	250.9	251.0	252.8	253.6	254.0	254.6	255.3
Hospital and related services	313.2	333.8	330.6	332.0	333.5	337.0	338.3	340.5	342.7	343.6	348.2	351.4	354.3	357.1	359.4
Recreation[2]	102.4	103.6	103.7	103.5	103.7	103.9	103.8	103.8	104.0	103.8	104.2	104.5	104.6	105.0	104.9
Video and audio[1,2]	100.7	100.9	101.1	100.7	101.1	101.0	100.6	100.6	100.7	100.5	101.4	102.2	102.1	102.2	102.3
Education and communication[2]	102.7	105.3	104.1	104.5	104.9	105.8	106.5	107.1	106.9	106.9	107.1	107.2	106.5	106.0	106.5
Education[2]	112.8	118.7	116.7	117.2	117.6	119.6	121.7	122.3	122.3	122.1	122.7	123.3	123.3	123.3	123.5
Educational books and supplies	283.3	299.9	294.5	298.2	299.3	302.2	309.8	311.7	308.9	297.3	305.2	315.2	315.1	315.3	316.3
Tuition, other school fees, and child care	318.2	334.7	329.1	330.3	331.3	337.3	342.9	344.4	344.9	345.2	346.2	347.0	347.2	347.2	347.7
Communication[1,2]	94.6	94.5	94.0	94.3	94.8	94.7	94.3	94.9	94.5	94.6	94.7	94.5	93.3	92.6	93.3
Information and information processing[1,2]	94.1	93.8	93.4	93.6	94.0	94.0	93.6	94.2	93.8	93.9	94.0	93.7	92.6	91.7	92.5
Telephone services[1,2]	98.7	99.4	98.8	99.2	99.7	99.8	99.4	100.1	99.7	99.9	100.4	100.5	99.3	98.4	99.4
Information and information processing other than telephone services[1,4]	26.8	22.1	22.4	22.2	22.0	21.5	21.2	21.0	20.8	20.6	20.1	19.7	19.5	19.3	19.2
Personal computers and peripheral equipment[1,2]	40.5	29.1	29.9	29.4	28.7	27.4	26.6	26.1	25.5	25.0	24.3	23.5	22.8	22.5	22.7
Other goods and services	276.5	289.5	286.8	287.9	293.8	290.0	295.5	292.4	297.3	293.3	294.0	298.3	295.2	301.7	299.1
Tobacco and smoking products	395.2	426.1	419.8	421.6	441.9	425.6	444.7	430.9	448.3	432.9	433.5	450.7	434.1	462.7	450.1
Personal care[1]	165.5	170.3	169.3	169.9	170.6	170.9	171.4	171.9	172.3	172.3	172.7	173.2	173.7	173.9	174.0
Personal care products[1]	154.2	155.7	153.8	155.4	155.9	155.5	156.1	156.1	156.1	156.0	155.9	156.3	156.0	156.2	155.4
Personal care services[1]	178.6	184.9	184.7	184.8	185.4	185.9	186.1	186.5	187.4	187.1	187.0	187.1	188.0	188.7	189.1
Miscellaneous personal services	251.9	262.8	260.7	261.6	263.2	264.9	265.6	266.8	267.5	268.0	269.8	271.4	272.5	272.6	273.6
Commodity and service group:															
Commodities	149.8	151.4	153.9	153.0	151.2	150.5	152.5	151.2	150.1	148.4	148.3	148.6	149.8	151.7	151.2
Food and beverages	167.7	173.0	172.3	172.8	173.4	173.8	174.0	174.8	174.5	174.6	175.7	175.8	176.1	176.1	175.7
Commodities less food and beverages	139.0	138.7	142.6	141.1	138.0	136.9	139.8	137.4	135.9	133.4	132.7	133.1	134.7	137.5	136.8
Nondurables less food and beverages	149.1	149.0	156.2	153.6	148.2	146.5	152.0	147.4	144.2	139.4	138.9	140.7	144.8	150.5	149.3
Apparel	128.3	126.1	128.5	125.2	121.9	121.6	125.6	128.3	127.2	123.0	119.6	122.4	126.9	127.9	126.2
Nondurables less food, beverages, and apparel	165.3	166.3	176.3	174.1	167.3	164.8	171.4	162.7	158.2	153.1	154.2	155.4	159.4	168.1	167.2
Durables	125.8	125.3	125.5	125.2	124.8	124.3	124.1	124.3	124.8	124.9	124.1	123.1	122.3	122.1	122.0
Services	191.6	199.6	198.7	200.1	200.6	201.2	201.1	201.0	201.4	201.7	202.5	203.3	203.9	204.2	205.8
Rent of shelter[3]	180.5	187.3	186.3	187.2	187.8	188.7	188.7	189.3	189.9	190.4	191.4	192.5	193.2	193.7	193.9
Transporation services	192.9	199.1	197.6	198.9	199.5	199.8	200.1	200.9	202.3	202.6	203.4	204.7	205.6	206.2 7.1239.7
Other services	225.9	233.7	232.2	232.6	233.6	235.1	235.9	236.8	237.2	237.3	238.3	239.0	238.8	283.9	283.9
Special indexes:															
All items less food	169.1	173.6	174.7	174.9	173.9	173.7	174.9	173.8	173.4	172.5	172.7	173.3	174.3	175.7	175.8
All items less shelter	163.8	167.6	169.1	169.0	167.8	167.5	168.8	167.6	166.9	165.7	165.8	166.1	167.1	168.5	168.4
All items less medical care	164.7	169.1	170.0	170.2	169.4	169.3	170.3	169.5	169.1	168.3	168.5	169.0	170.0	171.1	171.0
Commodities less food	140.4	140.2	144.1	142.6	139.6	138.5	141.3	139.0	137.6	135.1	134.5	134.8	136.5	139.1	138.5
Nondurables less food	150.7	150.8	157.6	155.3	150.1	148.5	153.8	149.4	146.4	141.8	141.8	143.1	147.0	152.5	151.4
Nondurables less food and apparel	165.4	166.7	175.9	173.9	167.7	165.4	171.5	163.5	159.5	154.7	154.7	157.0	160.7	168.7	167.9
Nondurables	158.9	161.4	164.8	163.8	161.2	160.5	163.5	161.5	159.7	157.3	157.5	158.5	160.8	163.7	162.9
Services less rent of shelter[3]	180.1	188.5	187.8	189.6	189.9	190.1	189.9	189.0	189.3	189.2	189.8	190.1	190.5	190.7	181.6
Services less medical care services	185.4	193.1	192.3	193.6	194.2	194.7	194.6	194.4	194.8	195.0	195.7	196.5	197.0	197.4	197.9
Energy	124.8	128.7	140.6	140.3	131.3	128.6	132.6	121.2	114.8	110.0	110.5	109.8	114.7	121.6	122.2
All items less energy	175.1	179.8	179.2	179.5	179.8	180.1	180.7	181.3	181.8	181.5	181.6	182.5	182.9	183.4	183.3
All items less food and energy	177.1	181.7	181.2	181.4	181.7	181.9	182.6	183.2	183.8	183.5	183.6	184.4	184.9	185.5	185.4
Commodities less food and energy	145.4	146.1	146.4	145.6	145.4	144.6	146.0	146.3	146.9	145.6	144.4	144.8	145.0	145.8	145.0
Energy commodities	129.7	125.3	146.6	141.5	125.0	122.1	132.1	116.7	105.5	97.5	99.2	99.5	108.7	121.9	121.9
Services less energy	198.7	206.0	204.8	205.7	206.3	207.6	207.6	208.3	209.0	209.4	210.4	211.5	212.1	212.6	213.0

[1] Not seasonally adjusted.

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

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

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

Dash indicates data not available.

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

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

[1982–84 = 100, unless otherwise indicated]

	Pricing sched-ule[1]	All Urban Consumers						Urban Wage Earners					
		2001	2002					2001	2002				
		Dec	Jan.	Feb.	Mar.	Apr.	May	Dec.	Jan.	Feb.	Mar.	Apr.	May
U.S. city average...	M	176.7	177.1	177.8	178.8	179.9	179.8	172.9	173.2	173.7	174.7	175.8	175.8
Region and area size[2]													
Northeast urban..	M	184.2	184.9	186.1	187.0	187.8	187.7	181.0	181.4	182.3	183.1	184.2	184.1
Size A—More than 1,500,000...........................	M	185.4	186.2	187.8	188.6	189.3	189.2	181.1	181.6	182.8	183.6	184.5	184.3
Size B/C—50,000 to 1,500,000[3].....................	M	10.3	110.5	110.5	111.2	111.9	112.0	109.9	110.1	110.1	110.8	111.7	111.7
Midwest urban[4]...	M	171.9	172.1	172.5	173.6	174.7	174.8	167.6	167.7	168.1	169.1	170.3	170.3
Size A—More than 1,500,000...........................	M	173.8	174.1	174.7	176.0	177.3	177.2	168.7	168.8	169.4	170.6	172.2	172.0
Size B/C—50,000 to 1,500,000[3].....................	M	109.6	109.5	109.6	110.2	110.7	110.8	109.2	109.2	109.2	109.7	110.2	110.7
Size D—Nonmetropolitan (less than 50,000)........	M	165.5	166.2	166.6	167.1	168.1	168.2	163.3	163.9	164.3	164.8	166.0	166.1
South urban...	M	170.3	170.6	171.0	172.1	173.1	173.2	168.1	168.3	168.6	169.6	170.8	170.8
Size A—More than 1,500,000...........................	M	171.7	171.7	172.4	173.3	172.4	174.6	169.0	169.0	169.5	170.5	171.7	171.9
Size B/C—50,000 to 1,500,000[3].....................	M	108.9	109.2	109.3	110.0	110.8	110.7	108.5	108.6	108.7	109.3	110.2	110.1
Size D—Nonmetropolitan (less than 50,000)........	M	167.7	168.6	168.6	169.9	170.5	170.6	168.3	169.2	168.9	170.2	171.2	171.1
West urban..	M	181.6	182.4	183.2	184.0	185.1	184.8	176.8	177.4	178.1	179.0	180.0	180.0
Size A—More than 1,500,000...........................	M	111.6	111.9	185.4	186.2	187.2	187.5	176.9	177.7	178.6	179.5	180.5	181.0
Size B/C—50,000 to 1,500,000[3].....................	M	111.6	111.9	112.4	112.8	113.7	112.5	111.2	111.4	111.8	112.2	112.9	112.3
Size classes:													
A[5]..	M	161.1	161.6	162.5	163.4	164.2	164.3	159.4	159.7	160.5	161.3	162.4	162.5
B/C[3]..	M	109.7	109.9	110.1	110.7	111.4	111.2	109.3	109.9	109.5	110.1	110.9	110.7
D..	M	169.8	170.5	170.7	171.5	172.4	172.4	168.5	169.7	169.3	170.2	171.3	171.1
Selected local areas[6]													
Chicago–Gary–Kenosha, IL–IN–WI......................	M	177.9	177.9	178.7	179.8	180.9	181.4	171.7	171.6	172.4	173.5	174.8	175.3
Los Angeles–Riverside–Orange County, CA...........	M	177.1	178.9	180.1	181.1	182.2	182.6	169.7	171.5	172.8	173.8	174.8	175.4
New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA..	M	187.3	188.5	189.9	191.1	191.8	191.4	182.8	183.5	184.7	185.6	186.6	186.4
Boston–Brockton–Nashua, MA–NH–ME–CT............	1	–	192.9	–	194.7	–	194.8	–	191.8	–	193.2	–	193.3
Cleveland–Akron, OH.......................................	1	–	171.4	–	173.7	–	173.0	–	162.8	–	164.1	–	164.0
Dallas–Ft Worth, TX...	1	–	170.6	–	172.1	–	172.9	–	170.0	–	171.4	–	172.5
Washington–Baltimore, DC–MD–VA–WV[7]............	1	–	110.9	–	111.9	–	112.8	–	110.5	–	111.4	–	112.4
Atlanta, GA..	2	174.8	–	176.1	–	178.6	–	172,0	–	173.2	–	175.5	–
Detroit–Ann Arbor–Flint, MI...............................	2	173.5	–	176.2	–	179.0	–	167.9	–	170.5	–	173.4	–
Houston–Galveston–Brazoria, TX........................	2	157.1	-	156.6	–	158.8	–	155.2	–	154.3	–	156.8	–
Miami–Ft. Lauderdale, FL..................................	2	173.1	–	175.0	–	175.0	–	170.5	–	172.3	–	172.5	–
Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD....	2	179.9	–	182.0	–	183.1	–	179.2	–	181.4	–	182.3	–
San Francisco–Oakland–San Jose, CA..................	2	190.6	–	191.3	–	193.0	–	186.5	–	186.8	–	188.8	–
Seattle–Tacoma–Bremerton, WA.........................	2	186.1	–	187.6	–	188.8	–	181.1	–	182.5	–	183.6	–

[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–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Port-land–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

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

Dash indicates data not available.

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.

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

[1982–84 = 100]

Series	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Consumer Price Index for All Urban Consumers:										
All items:										
Index..	140.3	144.5	148.2	152.4	156.9	160.5	163.0	166.6	172.2	177.1
Percent change..	3.0	3.0	2.6	2.8	3.0	2.3	1.6	2.2	3.4	2.8
Food and beverages:										
Index..	138.7	141.6	144.9	148.9	153.7	157.7	161.1	164.6	168.4	173.6
Percent change..	1.4	2.1	2.3	2.8	3.2	2.6	2.2	2.2	2.3	3.1
Housing:										
Index..	137.5	141.2	144.8	148.5	152.8	156.8	160.4	163.9	169.6	176.4
Percent change..	2.9	2.7	2.5	2.6	2.9	2.6	2.3	2.2	3.5	4.0
Apparel:										
Index..	131.9	133.7	133.4	132.0	131.7	132.9	133.0	131.3	129.6	127.3
Percent change..	2.5	1.4	−.2	−1.0	−.2	.9	.1	−1.3	−1.3	−1.8
Transportation:										
Index..	126.5	130.4	134.3	139.1	143.0	144.3	141.6	144.4	153.3	154.3
Percent change..	2.2	3.1	3.0	3.6	2.8	0.9	−1.9	2.0	6.2	0.7
Medical care:										
Index..	190.1	201.4	211.0	220.5	228.2	234.6	242.1	250.6	260.8	272.8
Percent change..	7.4	5.9	4.8	4.5	3.5	2.8	3.2	3.5	4.1	4.6
Other goods and services:										
Index..	183.3	192.9	198.5	206.9	215.4	224.8	237.7	258.3	271.1	282.6
Percent change..	6.8	5.2	2.9	4.2	4.1	4.4	5.7	8.7	5.0	4.2
Consumer Price Index for Urban Wage Earners and Clerical Workers:										
All items:										
Index..	138.2	142.1	145.6	149.8	154.1	157.6	159.7	163.2	168.9	173.5
Percent change..	2.9	2.8	2.5	2.9	2.9	2.3	1.3	2.2	3.5	2.7

35. Producer Price Indexes, by stage of processing

[1982 = 100]

Grouping	Annual average		2001								2002				
	2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Finished goods........................	138.0	140.7	142.5	142.1	140.7	141.1	141.7	139.6	139.7	137.2	137.4	137.7	138.7	139.0	138.8
Finished consumer goods.....................	138.2	141.5	143.8	143.3	141.5	142.0	142.9	139.9	138.4	136.8	137.2	137.5	138.9	139.4	139.2
Finished consumer foods.....................	137.2	141.3	141.8	141.9	141.2	142.6	142.9	141.8	140.5	140.4	141.1	142.3	143.4	139.2	139.4
Finished consumer goods excluding foods....................	138.4	141.4	144.5	143.7	141.4	141.6	142.7	139.0	137.3	135.1	135.4	135.4	136.9	139.2	138.8
Nondurable goods less food................	138.7	142.8	147.3	146.5	143.1	143.5	145.1	139.2	136.8	134.0	134.4	134.3	136.7	140.0	139.7
Durable goods..............................	133.9	133.9	133.8	133.2	133.2	133.0	133.2	134.4	134.5	133.9	133.9	134.1	133.6	133.7	133.1
Capital equipment............................	138.8	139.7	139.7	139.6	139.8	139.5	139.4	139.8	139.9	139.7	139.7	139.8	139.5	139.4	139.2
Intermediate materials, supplies, and components..................	129.2	128.7	131.2	131.4	130.3	129.8	130.1	127.6	126.7	125.4	125.5	125.2	126.1	127.6	127.2
Materials and components for manufacturing......................	128.1	127.4	128.6	128.3	127.5	126.9	126.6	125.9	125.2	124.7	124.5	124.6	125.1	125.7	125.7
Materials for food manufacturing.............	119.2	124.3	124.6	125.7	126.1	128.1	127.5	126.1	123.9	122.5	122.1	122.6	122.9	122.0	121.4
Materials for nondurable manufacturing...	132.6	131.8	134.2	133.4	131.9	130.1	129.9	128.7	127.4	126.2	125.4	125.4	126.5	128.4	128.3
Materials for durable manufacturing........	129.0	125.2	126.9	126.5	125.3	124.6	124.2	123.4	122.8	122.5	122.5	122.6	123.5	123.7	124.2
Components for manufacturing................	126.2	126.3	126.4	126.4	126.2	126.2	125.9	125.9	125.9	126.0	126.3	126.3	126.4	126.3	126.4
Materials and components for construction...........................	150.7	150.6	151.6	151.7	151.0	151.0	150.8	150.4	150.3	149.0	150.2	150.2	150.7	151.1	151.3
Processed fuels and lubricants.................	102.0	104.5	108.1	110.2	106.8	106.0	108.4	97.4	94.7	89.3	90.0	88.8	91.3	97.0	95.2
Containers...	151.6	153.1	153.9	154.1	153.6	153.2	153.0	152.4	152.2	152.2	152.6	151.9	151.7	151.2	151.1
Supplies..	136.9	138.6	139.0	138.8	138.8	138.7	138.6	138.3	138.3	138.1	138.2	138.1	138.3	138.5	138.4
Crude materials for further processing....................................	120.6	121.3	130.9	122.8	116.1	113.4	108.0	97.7	104.8	94.8	98.9	98.0	103.7	107.9	110.5
Foodstuffs and feedstuffs.....................	100.2	106.2	110.3	109.7	109.6	108.9	108.5	104.7	98.3	96.4	99.6	102.0	102.8	96.4	98.4
Crude nonfood materials......................	130.4	127.3	140.4	127.4	116.3	112.4	103.8	89.4	105.5	90.2	95.0	91.4	100.9	113.5	116.5
Special groupings:															
Finished goods, excluding foods................	138.1	140.4	142.6	142.0	140.5	140.5	141.3	138.8	137.7	136.1	136.3	136.3	137.2	138.7	138.4
Finished energy goods..........................	94.1	96.8	104.1	102.7	97.0	97.8	100.1	90.1	85.5	80.7	81.3	81.3	85.0	89.3	88.9
Finished goods less energy....................	144.9	147.5	147.7	147.6	147.5	147.7	147.9	147.9	147.7	147.6	147.7	148.1	148.2	147.3	147.2
Finished consumer goods less energy........	147.4	150.8	151.6	150.9	150.7	151.1	151.4	151.3	151.0	150.9	151.1	151.6	151.9	150.6	150.5
Finished goods less food and energy........	148.0	150.0	150.0	149.9	149.9	149.7	149.8	150.4	150.6	150.4	150.4	150.4	150.2	150.5	150.2
Finished consumer goods less food and energy..................................	154.0	156.9	156.9	156.7	156.8	156.6	156.8	157.5	157.8	158.0	157.6	157.6	157.4	158.0	157.7
Consumer nondurable goods less food and energy..................................	169.8	175.1	175.4	175.5	175.5	175.3	175.6	175.8	176.4	176.4	176.4	176.2	176.3	176.4	177.4
Intermediate materials less foods and feeds..	130.1	130.5	132.1	132.3	131.0	130.4	130.7	128.2	127.3	126.0	126.1	125.9	126.8	128.4	128.0
Intermediate foods and feeds...................	111.7	115.9	114.9	116.3	117.1	119.4	118.7	117.3	115.5	114.3	113.6	113.6	114.3	113.7	113.0
Intermediate energy goods.......................	101.7	104.1	107.6	109.7	106.3	105.6	107.9	97.1	94.3	89.0	89.6	88.4	90.9	96.6	94.9
Intermediate goods less energy..................	135.0	135.1	136.1	135.9	135.3	134.9	134.7	134.2	133.7	133.4	133.3	133.3	133.8	134.1	134.1
Intermediate materials less foods and energy..................................	136.6	136.4	137.5	137.2	136.5	136.0	135.8	135.3	134.9	134.6	134.6	134.6	135.0	135.5	135.5
Crude energy materials...........................	122.1	122.8	139.8	123.1	109.0	104.2	93.1	75.2	96.5	76.7	82.8	76.9	89.9	106.7	109.1
Crude materials less energy.....................	111.7	112.2	115.3	114.8	114.3	113.6	113.3	109.8	104.8	103.4	106.2	108.5	109.3	105.3	107.9
Crude nonfood materials less energy.........	145.2	130.6	130.9	130.6	129.4	128.4	128.5	125.8	124.5	124.2	126.1	128.1	129.0	131.4	136.1

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

[December 1984 = 100, unless otherwise indicated]

SIC	Industry	Annual average		2001									2002			
		2000	2001	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
–	**Total mining industries**.....................................	113.5	114.3	128.1	112.2	98.7	98.9	90.8	78.3	88.3	77.6	81.9	78.0	87.5	99.9	101.7
10	Metal mining...	73.8	70.8	71.6	71.2	70.7	69.8	71.7	69.8	68.9	68.9	71.0	72.3	72.9	72.4	73.9
12	Coal mining (12/85 = 100).............................	84.8	91.3	93.8	89.6	92.8	92.0	92.1	92.9	95.4	92.5	95.3	94.5	94.6	94.3	94.3
13	Oil and gas extraction (12/85 = 100)...............	126.8	127.5	145.6	125.1	106.4	107.0	95.9	79.1	92.0	78.3	84.0	77.9	92.7	112.1	114.8
14	Mining and quarrying of nonmetallic minerals, except fuels..................	137.0	141.0	140.8	141.3	141.5	141.4	141.5	141.8	141.6	141.5	142.5	143.4	143.5	142.9	143.5
–	**Total manufacturing industries**....................	133.5	134.6	136.5	135.8	134.4	134.6	135.6	133.7	132.7	131.6	131.7	132.0	132.8	133.8	133.6
20	Food and kindred products..............................	128.5	132.8	133.4	133.7	134.0	134.6	134.5	134.1	132.4	131.7	131.5	132.0	132.0	131.6	131.0
21	Tobacco manufactures....................................	345.8	386.1	391.3	391.7	391.1	391.0	391.1	391.1	398.3	398.2	391.7	391.7	392.2	407.9	408.0
22	Textile mill products.......................................	116.7	116.9	117.2	117.2	117.1	116.8	116.4	116.5	116.3	116.1	116.3	115.8	115.8	115.7	115.5
23	Apparel and other finished products made from fabrics and similar materials.......	125.7	125.8	125.9	125.8	125.9	125.9	125.9	125.9	125.6	125.3	125.2	125.1	125.2	125.1	125.1
24	Lumber and wood products, except furniture.....................................	158.1	156.2	160.1	161.6	158.4	158.1	157.3	154.6	154.0	153.4	154.0	154.8	156.7	157.1	156.2
25	Furniture and fixtures.....................................	143.3	145.1	145.2	145.3	145.4	145.2	145.4	145.5	145.5	145.5	145.6	145.8	145.7	145.7	145.9
26	Paper and allied products................................	145.8	146.2	147.0	147.0	146.5	145.6	145.5	145.1	144.6	144.8	144.1	143.2	142.9	143.2	142.4
27	Printing, publishing, and allied industries........	182.9	188.7	188.5	188.7	188.8	189.1	189.4	189.7	190.2	192.0	192.0	192.1	192.1	192.2	192.6
28	Chemicals and allied products.........................	156.7	158.4	160.1	159.7	157.8	156.3	156.6	155.7	155.4	154.3	154.0	154.3	155.1	156.0	156.6
29	Petroleum refining and related products..........	112.8	105.3	122.8	115.9	101.7	104.7	114.9	94.6	86.3	75.9	77.7	79.5	89.2	100.2	99.4
30	Rubber and miscellaneous plastics products...	124.6	125.9	126.5	126.4	126.2	125.7	125.6	125.5	125.6	125.2	125.1	124.4	124.6	124.8	125.4
31	Leather and leather products..........................	137.9	141.3	142.7	141.9	142.1	142.3	141.5	141.2	140.9	140.3	140.2	139.8	140.0	140.5	140.8
32	Stone, clay, glass, and concrete products.......	134.6	136.0	136.0	135.7	136.0	136.0	136.4	136.6	136.9	136.7	136.9	136.4	136.3	136.5	136.9
33	Primary metal industries.................................	119.8	116.1	116.7	115.4	116.1	115.6	115.3	114.6	114.2	114.0	113.7	113.7	114.4	114.7	115.4
34	Fabricated metal products, except machinery and transportation equipment............................	1,310.3	131.0	131.2	131.1	131.1	131.1	131.1	131.0	131.1	131.2	131.2	131.2	131.2	131.4	131.4
35	Machinery, except electrical............................	117.5	118.0	118.1	118.1	118.1	117.9	117.9	117.9	117.9	117.8	117.7	117.6	117.7	117.6	117.6
36	Electrical and electronic machinery, equipment, and supplies............................	108.3	107.0	107.2	107.0	106.8	106.4	106.5	106.4	106.5	106.6	106.7	106.6	106.6	106.5	106.3
37	Transportation..	136.8	137.9	137.4	137.1	137.5	137.4	137.3	138.5	138.3	138.6	138.0	138.5	137.9	137.7	137.1
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks........................	126.2	127.3	127.3	127.2	123.2	127.4	127.5	127.6	127.8	127.7	128.3	128.6	128.9	128.1	128.2
39	Miscellaneous manufacturing industries industries (12/85 = 100).............................	130.9	132.4	132.5	132.5	132.6	132.7	132.8	132.7	132.6	132.4	132.7	133.4	132.9	133.1	134.0
	Service industries:															
42	Motor freight transportation and warehousing (06/93 = 100)...................	119.4	123.1	122.9	123.1	123.2	123.5	123.8	123.6	123.4	123.1	123.2	123.4	123.5	123.8	123.8
43	U.S. Postal Service (06/89 = 100)....................	135.2	143.4	141.3	141.3	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4	145.4
44	Water transportation (12/92 = 100)...................	122.6	129.8	129.2	129.2	133.1	133.2	133.9	133.5	130.2	129.7	129.3	128.9	128.7	127.6	131.5
45	Transportation by air (12/92 = 100).................	147.7	157.2	156.7	157.6	158.7	159.0	158.5	158.9	156.8	157.1	157.1	157.1	156.8	160.2	156.4
46	Pipelines, except natural gas (12/92 = 100).....	102.3	110.3	109.0	109.0	110.9	111.2	111.7	111.8	112.0	112.0	111.1	111.3	111.6	111.3	111.3

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

[1982 = 100]

Index	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Finished goods										
Total	123.2	124.7	125.5	127.9	131.3	131.8	130.7	133.0	138.0	140.7
Foods	123.3	125.7	126.8	129.0	133.6	134.5	134.3	135.1	137.2	141.3
Energy	77.8	78.0	77.0	78.1	83.2	83.4	75.1	78.8	94.1	96.8
Other	134.2	135.8	137.1	140.0	142.0	142.4	143.7	146.1	148.0	150.0
Intermediate materials, supplies, and components										
Total	114.7	116.2	118.5	124.9	125.7	125.6	123.0	123.2	129.2	129.7
Foods	113.9	115.6	118.5	119.5	125.3	123.2	123.2	120.8	119.2	124.3
Energy	84.3	84.6	83.0	84.1	89.8	89.0	80.8	84.3	101.7	104.1
Other	122.0	123.8	127.1	135.2	134.0	134.2	133.5	133.1	136.6	136.4
Crude materials for further processing										
Total	100.4	102.4	101.8	102.7	113.8	111.1	96.8	98.2	120.6	121.3
Foods	105.1	108.4	106.5	105.8	121.5	112.2	103.9	98.7	100.2	106.2
Energy	78.8	76.7	72.1	69.4	85.0	87.3	68.6	78.5	122.1	122.8
Other	94.2	94.1	97.0	105.8	105.7	103.5	84.5	91.1	118.0	101.8

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

[2000 = 100]

SITC Rev. 3	Industry	2001								2002				
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
0	Food and live animals..	101.2	101.1	101.8	102.6	103.3	102.7	100.9	101.2	102.7	100.0	100.3	100.6	99.7
01	Meat and meat preparations................................	106.2	106.1	105.7	106.4	107.8	107.8	99.2	97.8	93.1	91.3	93.2	92.0	91.6
04	Cereals and cereal preparations..........................	104.3	102.6	102.2	104.5	106.4	103.9	105.2	107.2	108.4	106.0	105.4	105.2	103.8
05	Vegetables, fruit, and nuts, prepared fresh or dry..........	97.4	98.6	101.7	102.4	100.8	102.1	99.7	100.6	110.5	102.4	102.5	103.7	103.8
2	Crude materials, inedible, except fuels........................	93.3	92.6	92.4	91.1	89.5	87.1	86.3	87.1	87.1	86.9	87.7	89.7	90.9
22	Oilseeds and oleaginous fruits.............................	91.0	95.6	102.5	104.3	99.0	89.8	89.1	90.9	91.6	89.4	92.0	93.8	95.1
24	Cork and wood..	93.1	92.8	93.4	92.9	90.2	89.7	88.7	88.0	88.1	87.6	87.2	87.3	87.4
25	Pulp and waste paper..	82.3	80.6	78.2	76.6	77.3	77.7	77.4	77.2	75.8	73.9	74.1	77.1	81.4
26	Textile fibers and their waste..............................	92.5	90.9	90.4	89.3	87.7	84.5	82.0	84.0	85.3	86.6	86.2	86.8	84.9
28	Metalliferous ores and metal scrap.....................	91.6	91.0	87.8	86.2	85.1	82.7	81.4	81.3	84.9	87.0	87.3	91.7	92.4
3	Mineral fuels, lubricants, and related products............	106.8	103.2	96.7	97.5	103.3	93.4	88.3	82.4	87.1	84.3	89.8	99.7	95.4
32	Coal, coke, and briquettes..................................	106.6	106.9	106.8	107.9	108.8	108.9	108.9	108.8	109.5	109.7	110.8	111.4	111.4
33	Petroleum, petroleum products, and related materials....	106.1	101.8	93.7	95.2	103.6	88.4	80.9	74.6	80.1	76.5	83.6	95.8	90.2
5	Chemicals and related products, n.e.s.	96.9	96.2	94.9	94.1	93.8	93.8	93.6	92.8	92.2	92.3	93.2	94.7	95.0
54	Medicinal and pharmaceutical products..................	99.5	99.5	100.2	100.8	101.1	100.9	100.9	100.9	101.1	100.8	100.5	100.3	100.2
55	Essential oils; polishing and cleaning preparations........	99.7	99.7	99.1	99.0	99.1	99.0	98.9	98.8	97.5	97.1	97.6	97.5	97.0
57	Plastics in primary forms	94.9	93.9	91.2	90.0	88.6	89.2	88.5	86.5	85.4	85.8	87.6	89.9	92.2
58	Plastics in nonprimary forms...............................	97.0	97.4	98.0	96.9	97.2	95.9	95.8	95.8	95.9	95.7	95.8	95.1	95.6
59	Chemical materials and products, n.e.s.	98.9	99.1	98.7	98.7	99.0	98.6	98.7	97.6	98.1	97.6	98.0	97.5	97.4
6	Manufactured goods classified chiefly by materials.....	99.7	99.5	99.1	98.4	98.2	97.3	96.6	96.7	97.3	97.2	96.7	97.4	97.4
62	Rubber manufactures, n.e.s.	99.8	99.8	100.5	101.0	101.0	100.6	100.5	100.9	100.4	100.4	100.8	101.1	101.6
64	Paper, paperboard, and articles of paper, pulp, and paperboard...	98.0	97.4	95.1	95.1	95.6	95.1	95.2	95.2	95.3	94.1	92.5	93.1	93.1
66	Nonmetallic mineral manufactures, n.e.s.	100.4	100.8	100.8	101.0	101.1	101.1	101.4	102.1	101.7	101.4	102.1	101.9	102.0
68	Nonferrous metals...	100.0	98.0	97.0	93.0	90.2	86.9	81.8	83.1	85.3	85.9	85.1	86.5	86.5
7	Machinery and transport equipment........................	100.4	100.3	100.2	100.0	100.0	99.7	99.7	99.6	99.3	99.3	99.5	99.5	99.3
71	Power generating machinery and equipment................	102.3	102.3	102.4	102.8	103.0	103.1	104.1	104.0	104.6	104.4	104.6	104.6	104.6
72	Machinery specialized for particular industries..............	100.3	100.3	99.6	99.5	99.5	100.6	100.5	100.5	100.7	100.8	101.1	101.4	102.0
74	General industrial machines and parts, n.e.s., and machine parts..	101.3	101.3	101.8	101.8	101.9	101.8	101.9	101.7	102.1	102.0	102.2	102.2	102.3
75	Computer equipment and office machines.....................	96.9	95.9	95.6	94.8	94.8	94.6	94.2	92.9	92.5	92.9	93.1	92.5	91.7
76	Telecommunications and sound recording and reproducing apparatus and equipment........................	99.7	99.8	99.8	98.7	98.5	98.0	98.0	97.7	97.9	97.5	97.5	97.8	97.8
77	Electrical machinery and equipment.............................	98.7	98.3	97.8	97.7	97.6	95.9	95.9	95.9	94.8	94.6	94.7	94.8	94.6
78	Road vehicles..	100.2	100.2	100.3	100.2	100.2	100.3	100.2	100.3	100.1	100.2	100.3	100.3	1,004.0
87	Professional, scientific, and controlling instruments and apparatus.................................	100.8	100.9	100.8	100.8	100.9	101.0	100.9	100.9	100.8	101.1	101.2	101.1	101.3

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

[2000 = 100]

SITC Rev. 3	Industry	2001								2002				
		May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
0	Food and live animals..	97.3	96.0	95.1	94.9	95.1	94.7	95.1	94.8	95.8	94.3	96.4	97.0	96.4
01	Meat and meat preparations...........................	106.3	106.2	109.3	108.9	113.5	114.8	118.0	109.8	105.5	107.4	109.8	110.1	105.4
03	Fish and crustaceans, mollusks, and other aquatic invertebrates........................	90.7	90.0	87.0	86.8	86.3	84.6	82.8	82.9	82.3	82.0	80.4	80.1	80.0
05	Vegetables, fruit, and nuts, prepared fresh or dry..........	101.1	97.6	98.4	98.2	98.5	99.1	101.5	99.3	106.8	98.1	104.0	104.9	108.1
07	Coffee, tea, cocoa, spices, and manufactures thereof.............................	87.4	85.8	81.2	78.8	80.1	77.3	77.2	78.5	77.5	78.8	83.3	88.5	83.8
1	Beverages and tobacco..	102.0	101.7	101.7	102.1	1-2.0	102.7	102.6	103.0	102.9	102.9	102.1	102.0	102.7
11	Beverages...	102.7	102.4	102.4	102.4	102.4	102.6	102.6	103.1	103.2	103.2	102.5	102.3	102.4
2	Crude materials, inedible, except fuels.................	98.1	102.8	96.4	95.8	96.6	94.5	91.3	89.9	90.1	92.7	95.8	96.3	96.8
24	Cork and wood.......................................	104.9	122.1	108.2	109.6	112.2	105.1	97.5	91.7	92.6	98.6	106.6	108.1	105.2
25	Pulp and waste paper............................	92.4	87.1	83.5	79.3	77.3	76.8	78.0	77.7	78.1	77.2	74.9	73.4	73.5
28	Metalliferous ores and metal scrap....................	95.5	93.9	94.4	93.1	92.8	91.6	89.8	91.2	91.4	92.7	93.7	95.0	95.6
29	Crude animal and vegetable materials, n.e.s.	94.9	92.9	80.8	81.0	83.8	93.4	93.1	96.0	92.2	91.7	92.3	90.5	103.8
3	Mineral fuels, lubricants, and related products.............	93.1	90.4	94.4	85.6	85.8	72.3	65.0	61.2	64.0	65.2	76.4	87.1	89.0
33	Petroleum, petroleum products, and related materials....	90.0	89.3	84.4	86.1	86.8	73.0	63.0	59.8	62.6	65.6	77.4	86.8	89.1
34	Gas, natural and manufactured.....................	113.7	97.4	82.8	80.9	77.8	65.7	75.9	68.7	70.8	58.2	64.8	86.0	84.3
5	Chemicals and related products, n.e.s.	101.6	100.5	99.3	98.4	98.3	98.8	97.8	97.5	97.7	96.7	96.3	97.3	98.0
52	Inorganic chemicals.....................................	101.2	100.1	99.4	98.0	98.1	99.4	98.9	97.6	97.0	97.1	97.8	98.5	98.7
53	Dying, tanning, and coloring materials.....................	100.2	98.1	95.6	95.7	96.3	97.1	96.8	97.1	97.8	97.4	97.2	95.6	95.6
54	Medicinal and pharmaceutical products...........	96.7	96.7	99.0	97.3	97.0	97.5	97.3	97.0	97.1	96.3	96.0	96.6	96.7
55	Essential oils; polishing and cleaning preparations.........	98.7	98.4	98.1	98.1	99.7	99.8	99.7	100.1	100.1	99.9	99.8	98.9	99.1
57	Plastics in primary forms.............................	101.1	102.1	102.1	100.5	99.7	99.8	99.8	99.8	98.6	97.1	91.5	91.4	96.8
58	Plastics in nonprimary forms...........................	103.6	102.4	100.7	100.7	99.3	101.6	101.1	100.9	100.8	100.6	100.6	101.8	1,002.0
59	Chemical materials and products, n.e.s.	100.1	99.9	99.1	99.0	99.0	99.2	98.6	97.8	96.1	95.2	93.6	94.5	94.3
6	Manufactured goods classified chiefly by materials.....	98.2	98.0	96.8	95.0	94.8	93.8	92.4	92.0	92.4	92.3	92.2	92.6	92.3
62	Rubber manufactures, n.e.s.	99.4	99.0	98.8	98.7	98.7	98.5	97.8	97.9	97.3	97.6	97.6	97.9	98.1
64	Paper, paperboard, and articles of paper, pulp, and paperboard..............................	103.7	102.7	101.7	99.9	99.3	98.6	97.6	96.1	95.0	93.7	93.4	92.5	91.9
66	Nonmetallic mineral manufactures, n.e.s.	99.7	99.4	99.3	99.1	99.3	97.5	97.2	97.5	97.2	97.0	96.9	96.9	97.0
68	Nonferrous metals..	96.1	95.3	91.0	83.4	82.2	78.7	73.7	73.8	76.4	77.2	76.9	79.2	79.7
69	Manufactures of metals, n.e.s.	100.0	100.1	99.3	99.3	99.3	99.7	99.5	99.0	99.0	98.5	98.5	98.2	98.2
7	Machinery and transport equipment............................	98.5	98.5	98.2	98.1	98.0	98.0	97.9	97.7	97.4	97.2	97.1	97.2	97.0
72	Machinery specialized for particular industries................	99.2	99.1	98.5	98.6	99.1	99.2	99.0	98.7	98.5	98.5	98.5	98.6	98.8
74	General industrial machines and parts, n.e.s., and machine parts..............................	98.3	98.2	98.0	97.8	98.0	98.7	98.1	97.8	98.1	97.5	97.5	97.6	97.4
75	Computer equipment and office machines....................	93.9	93.6	92.1	91.7	90.0	89.1	89.0	88.8	88.6	88.2	88.1	88.2	88.0
76	Telecommunications and sound recording and reproducing apparatus and equipment.......................	97.1	97.2	97.3	97.1	96.8	96.5	96.4	96.3	95.7	95.1	94.8	94.8	94.5
77	Electrical machinery and equipment...........................	99.2	98.8	98.9	98.7	98.6	98.7	98.6	97.0	96.9	97.0	96.8	97.0	97.1
78	Road vehicles...	99.7	99.8	99.7	88.7	100.0	100.3	100.2	100.3	1,001.0	100.2	100.1	100.2	100.0
85	Footwear..	100.2	100.1	100.1	100.5	100.4	99.9	99.9	100.3	99.3	99.6	99.5	99.0	99.1
88	Photographic apparatus, equipment, and supplies, and optical goods, n.e.s.	98.8	98.5	97.9	97.9	98.2	98.6	98.5	98.4	97.7	97.3	97.2	97.2	97.2

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

[2000 = 100]

Category	2001								2002				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
ALL COMMODITIES................................	99.6	99.4	99.0	98.8	99.0	98.3	97.8	97.6	97.5	97.3	97.6	98.0	98.0
Foods, feeds, and beverages................................	99.8	100.4	101.7	102.6	102.6	101.2	99.7	100.6	102.0	98.9	99.7	100.3	100.4
Agricultural foods, feeds, and beverages................	100.6	101.2	102.4	104.0	103.6	102.2	100.7	101.6	102.6	99.4	100.0	100.8	100.9
Nonagricultural (fish, beverages) food products......	92.7	92.6	94.8	90.2	92.9	91.9	90.9	90.4	96.3	94.5	98.3	96.2	96.1
Industrial supplies and materials............................	98.0	97.2	95.5	94.8	95.2	93.6	92.3	91.4	91.5	91.4	91.9	93.4	93.7
Agricultural industrial supplies and materials..........	102.1	99.3	98.5	97.2	96.8	93.8	92.1	93.3	92.3	92.9	93.6	93.6	93.0
Fuels and lubricants..	106.0	102.8	96.9	97.6	103.2	93.6	88.5	83.5	85.6	83.8	85.6	90.3	87.9
Nonagricultural supplies and materials, excluding fuel and building materials.................	96.5	96.1	94.9	94.0	93.8	93.4	92.8	92.3	92.3	92.2	92.6	94.0	94.7
Selected building materials................................	96.3	97.0	97.0	96.8	95.5	95.1	94.4	94.1	94.4	94.4	94.2	94.3	94.1
Capital goods..	100.4	100.3	100.2	100.0	100.0	99.7	99.7	99.4	99.1	99.2	99.4	99.5	99.2
Electric and electrical generating equipment...........	101.7	101.7	101.8	101.5	101.6	101.6	101.6	101.5	102.1	102.0	102.1	101.8	101.8
Nonelectrical machinery....................................	99.4	99.1	98.9	98.6	98.6	98.2	98.1	97.7	97.2	97.3	97.5	97.6	97.3
Automotive vehicles, parts, and engines.................	100.5	100.4	100.5	100.5	100.4	100.5	100.4	100.5	100.7	100.8	100.9	100.7	100.9
Consumer goods, excluding automotive.................	99.4	99.4	99.5	99.5	99.7	99.7	99.8	99.9	99.5	99.1	99.1	98.9	98.9
Nondurables, manufactured................................	98.9	99.0	98.9	98.9	99.1	99.0	99.1	99.1	98.2	98.2	98.1	98.2	98.2
Durables, manufactured....................................	99.9	100.0	100.2	100.2	100.4	100.6	100.5	100.5	100.6	99.9	99.7	99.3	99.2
Agricultural commodities....................................	100.8	100.9	101.8	102.8	102.5	100.7	99.2	100.2	100.9	98.3	98.9	99.6	99.5
Nonagricultural commodities...............................	99.5	99.3	98.8	98.5	98.6	98.1	97.7	97.3	97.2	97.2	97.5	97.8	97.8

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

[2000 = 100]

Category	2001								2002				
	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
ALL COMMODITIES................................	98.0	97.6	96.1	96.0	95.9	93.7	92.3	91.4	91.6	91.6	92.8	94.3	94.4
Foods, feeds, and beverages................................	96.6	95.4	94.4	94.5	95.0	94.5	95.2	94.6	95.7	93.8	95.0	96.0	97.2
Agricultural foods, feeds, and beverages................	98.4	97.0	96.7	96.9	97.8	97.8	99.5	98.3	99.9	97.2	99.5	100.9	102.7
Nonagricultural (fish, beverages) food products......	92.9	92.2	89.7	89.5	89.2	87.8	86.4	86.8	87.0	86.8	85.5	85.5	85.2
Industrial supplies and materials............................	96.5	95.5	91.4	91.0	91.0	84.3	79.9	77.6	79.1	79.8	84.9	90.3	90.9
Fuels and lubricants..	93.4	90.9	84.8	86.0	86.1	72.9	65.7	61.6	64.5	65.9	76.4	87.1	88.4
Petroleum and petroleum products....................	90.3	89.4	84.6	86.1	86.7	73.4	63.6	59.9	63.0	65.7	76.9	86.7	88.4
Paper and paper base stocks.............................	102.2	100.0	98.0	95.1	93.9	93.1	92.3	90.7	90.0	88.8	88.0	87.0	86.4
Materials associated with nondurable supplies and materials..	101.4	100.3	98.6	98.0	97.9	98.0	96.7	96.2	96.3	96.0	95.9	97.4	97.8
Selected building materials................................	100.1	111.1	103.0	102.9	103.7	99.9	96.1	92.9	93.1	96.1	100.7	101.0	99.6
Unfinished metals associated with durable goods...	94.2	93.6	91.4	87.4	87.1	85.1	82.1	82.1	83.2	83.8	83.8	86.2	86.6
Nonmetals associated with durable goods..............	100.9	100.6	100.1	100.2	100.4	99.9	98.9	99.0	98.4	97.6	97.2	97.6	96.7
Capital goods..	97.8	97.7	97.3	97.1	96.8	96.7	96.5	96.2	95.7	95.4	95.2	95.2	95.1
Electric and electrical generating equipment..........	101.8	101.8	101.6	101.3	101.4	101.4	101.2	100.6	97.3	96.7	95.5	95.3	94.9
Nonelectrical machinery....................................	96.9	96.7	96.2	96.0	95.6	95.4	95.3	94.9	94.8	94.5	94.4	94.5	94.4
Automotive vehicles, parts, and engines.................	99.8	99.8	99.7	99.6	99.9	100.1	100.0	100.1	99.8	100.1	99.9	100.1	99.9
Consumer goods, excluding automotive.................	99.5	99.3	99.2	99.2	99.1	98.9	98.8	98.7	98.7	98.4	98.2	98.1	98.2
Nondurables, manufactured................................	100.0	99.8	100.0	100.0	99.6	99.6	99.6	99.7	99.8	99.7	99.2	99.1	99.1
Durables, manufactured....................................	99.0	98.9	98.6	98.6	98.7	98.4	98.3	98.0	97.8	97.4	97.3	97.2	97.2
Nonmanufactured consumer goods....................	99.6	99.2	97.6	97.4	97.9	95.8	95.7	96.4	95.8	95.7	96.1	95.8	97.6

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

[2000 = 100]

Category	2000				2001				2002
	Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Dec.	Mar.
Air freight (inbound)................................	100.7	100.1	100.2	99.0	97.9	95.1	94.9	95.2	93.8
Air freight (outbound)................................	99.2	100.3	100.2	100.2	100.1	98.0	97.6	97.9	95.3
Air passenger fares (U.S. carriers)...........................	95.8	101.2	103.1	99.9	101.9	106.4	107.6	103.5	103.3
Air passenger fares (foreign carriers)........................	97.1	102.1	103.2	97.6	100.7	103.8	110.2	100.8	99.4
Ocean liner freight (inbound)................................	96.6	101.3	101.1	101.0	102.8	100.8	98.1	93.6	91.7

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

[1992 = 100]

Item	1999				2000				2001				2002
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
Business													
Output per hour of all persons......................................	112.7	112.5	113.6	115.2	115.3	117.2	117.3	117.9	117.5	117.4	117.9	120.1	122.5
Compensation per hour..	124.1	124.3	123.4	127.0	131.4	132.4	135.0	136.8	137.3	137.5	137.8	138.3	139.0
Real compensation per hour.................................	107.7	107.1	107.3	107.8	110.5	110.5	111.7	111.9	111.8	111.0	111.1	111.6	112.2
Unit labor costs..	110.2	110.5	110.4	110.2	114.0	113.0	115.1	115.6	116.9	117.1	116.8	115.1	113.9
Unit nonlabor payments..	112.9	113.2	114.1	115.3	110.7	114.1	111.2	112.0	112.3	113.6	115.5	117.2	119.6
Implicit price deflator..	111.2	111.5	111.8	112.1	112.8	113.4	113.7	114.3	115.2	115.8	116.4	115.9	116.0
Nonfarm business													
Output per hour of all persons......................................	112.1	111.9	112.9	114.7	114.7	116.4	116.6	117.1	116.7	116.6	117.2	119.3	121.8
Compensation per hour..	123.2	123.4	124.5	126.3	130.8	131.5	134.5	135.3	136.3	136.3	136.7	137.2	138.4
Real compensation per hour.................................	106.9	106.3	106.6	107.2	110.2	109.8	111.1	111.2	110.9	110.1	110.2	110.7	111.3
Unit labor costs..	109.9	"0.3	110.3	110.1	113.0	113.0	115.2	115.6	116.8	116.9	116.6	115.0	113.6
Unit nonlabor payments..	114.3	113.8	115.8	117.0	112.3	115.6	112.8	113.4	113.8	115.3	117.2	119.2	121.3
Implicit price deflator..	111.5	111.9	112.3	112.6	223.4	113.9	114.3	114.8	115.7	116.3	116.8	116.5	116.4
Nonfinancial corporations													
Output per hour of all employees.............................	114.3	114.5	114.6	115.2	116.7	116.8	117.6	117.3	116.6	117.3	118.2	121.3	122.8
Compensation per hour..	120.2	120.4	121.2	122.7	126.9	127.8	130.4	'2'.7	131.3	131.9	132.7	133.6	134.9
Real compensation per hour.................................	104.3	103.8	103.7	104.1	106.7	106.6	107.9	108.2	106.9	106.5	107.0	107.8	108.5
Total unit costs..	104.2	104.5	105.4	106.1	107.8	108.9	110.4	111.9	112.9	113.3	113.7	111.8	111.6
Unit labor costs..	105.1	105.2	105.7	106.5	108.7	109.4	110.9	112.2	112.6	12.5	112.3	110.2	109.9
Unit nonlabor costs..	101.6	102.6	104.6	105.1	105.4	107.7	108.9	111.0	113.7	115.6	117.6	116.2	116.0
Unit profits..	137.1	135.5	127.8	126.5	120.5	120.4	111.4	110.4	94.9	97.2	99.7	109.6	109.4
Unit nonlabor payments..	110.7	111.0	110.5	110.6	109.3	110.9	109.5	108.3	108.9	110.9	113.1	114.5	114.3
Implicit price deflator..	106.9	107.1	107.3	107.8	108.9	209.9	110.5	110.9	111.4	112.0	112.5	111.6	111.4
Manufacturing													
Output per hour of all persons......................................	128.0	128.8	129.8	132.1	133.6	134.9	135.4	135.9	135.4	135.4	136.4	137.6	140.9
Compensation per hour..	120.6	120.9	122.6	124.2	131.4	129.3	132.2	131.5	132.0	133.0	133.3	134.3	136.5
Real compensation per hour.................................	103.7	104.2	104.9	105.4	110.5	107.9	109.4	108.0	107.4	107.4	107.5	108.3	109.6
Unit labor costs..	94.3	93.9	94.4	94.0	98.4	95.9	97.7	96.7	97.5	98.2	97.8	97.6	96.9

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

[1996 = 100, unless otherwise indicated]

Item	1960	1970	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Private business													
Productivity:													
Output per hour of all persons....................	45.6	63.0	75.8	90.2	91.3	94.8	95.4	96.6	97.3	100.0	102.0	104.8	104.8
Output per unit of capital services.........................	110.4	111.1	101.5	99.3	96.1	97.7	98.5	100.3	99.7	100.0	100.5	100.1	100.1
Multifactor productivity..	65.2	80.0	88.3	95.3	94.4	96.6	97.1	98.1	98.4	100.0	101.1	102.6	102.6
Output..	27.5	42.0	59.4	83.6	82.6	85.7	88.5	92.8	95.8	100.0	105.2	110.6	110.6
Inputs:													
Labor input...	54.0	61.0	71.9	89.4	88.3	89.3	91.8	95.6	98.0	100.0	103.7	106.4	106.4
Capital services..	24.9	37.8	58.6	84.2	86.0	87.7	89.8	92.6	96.0	100.0	104.7	110.4	110.4
Combined units of labor and capital input................	42.3	52.4	67.3	87.7	87.5	88.8	91.1	94.6	97.3	100.0	104.0	107.7	107.7
Capital per hour of all persons....................	41.3	56.7	74.7	90.8	95.0	97.0	96.8	96.3	97.6	100.0	101.5	104.7	104.7
Private nonfarm business													
Productivity:													
Output per hour of all persons....................	48.7	64.9	77.3	90.3	91.4	94.8	95.3	96.5	97.5	100.0	101.7	104.5	104.5
Output per unit of capital services.........................	120.1	118.3	105.7	100.0	96.6	97.9	98.8	100.3	99.9	100.0	100.2	99.8	99.8
Multifactor productivity..	69.1	82.6	90.5	95.6	94.7	96.6	97.1	98.1	98.6	100.0	100.9	102.4	102.4
Output..	27.2	41.9	59.6	83.5	82.5	85.5	88.4	92.6	95.8	100.0	105.1	110.6	110.6
Inputs:													
Labor input...	50.1	59.3	70.7	89.2	88.0	89.0	91.8	95.4	97.8	100.0	103.8	106.6	106.6
Capital services..	22.6	35.5	56.4	83.5	85.4	87.3	89.5	92.3	95.9	100.0	104.9	110.8	110.8
Combined units of labor and capital input................	39.3	50.7	65.9	87.3	87.1	88.4	91.0	94.4	97.2	100.0	104.2	108.0	108.0
Capital per hour of all persons....................	40.5	54.8	73.1	90.3	94.7	96.8	96.5	96.3	97.6	100.0	101.5	104.7	104.7
Manufacturing (1992 = 100)													
Productivity:													
Output per hour of all persons....................	41.8	54.2	70.1	92.8	95.0	100.0	101.9	105.0	109.0	112.8	117.1	124.3	124.3
Output per unit of capital services.........................	124.3	116.5	100.9	101.6	97.5	100.0	101.1	104.0	105.0	104.5	105.6	106.5	106.5
Multifactor productivity..	72.7	84.4	86.6	99.3	98.3	100.0	100.4	102.6	105.0	106.1	109.8	113.2	113.2
Output..	38.5	56.5	75.3	97.3	95.4	100.0	103.3	108.7	113.4	116.9	123.5	130.7	130.7
Inputs:													
Hours of all persons...	92.0	104.2	107.5	104.8	100.4	100.0	101.4	103.6	104.0	103.7	105.5	105.2	105.2
Capital services..	30.9	48.5	74.7	95.8	97.9	100.0	102.2	104.5	108.0	111.9	116.9	122.8	122.8
Energy..	51.3	85.4	92.5	99.9	100.1	100.0	103.7	107.3	109.5	107.0	103.9	109.2	109.2
Nonenergy materials...	38.2	44.8	75.0	92.5	93.6	100.0	105.7	111.3	112.8	120.4	120.4	127.2	127.2
Purchased business services.................................	28.2	48.8	73.7	92.5	92.1	100.0	103.0	105.1	110.0	108.9	114.2	116.8	116.8
Combined units of all factor inputs.........................	52.9	67.0	87.0	98.0	97.0	100.0	102.9	106.0	107.9	110.2	112.5	115.5	115.5

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

[1992 = 100]

Item	1960	1970	1980	1990	1993	1994	1995	1996	1997	1998	1999	2000	2001
Business													
Output per hour of all persons................................	48.8	67.0	80.4	95.2	100.5	101.9	102.6	105.4	107.8	110.6	113.5	116.9	118.2
Compensation per hour..	13.7	23.5	54.2	90.7	102.5	104.5	106.7	110.1	113.5	119.7	125.2	133.8	137.7
Real compensation per hour....................................	59.8	78.6	89.2	96.3	100.0	99.9	99.6	100.1	101.0	105.0	107.6	111.2	111.4
Unit labor costs...	28.0	35.1	67.4	95.3	101.9	102.6	104.1	104.5	105.3	108.2	110.3	114.4	116.5
Unit nonlabor payments...	25.2	31.6	61.5	93.9	102.5	106.4	109.4	113.3	117.1	114.5	113.9	112.0	114.7
Implicit price deflator..	27.0	33.9	65.2	94.8	102.2	104.0	106.0	107.7	109.7	110.6	111.8	1113.5	115.8
Nonfarm business													
Output per hour of all persons................................	51.9	68.9	82.0	95.3	100.5	101.8	102.8	105.4	107.5	110.3	112.9	116.2	117.5
Compensation per hour..	14.3	23.7	54.6	90.5	102.2	104.3	106.6	109.8	113.1	119.1	124.3	133.0	136.6
Real compensation per hour....................................	62.6	79.2	89.8	96.2	99.7	99.7	99.4	99.8	100.6	104.5	106.8	110.6	110.5
Unit labor costs...	27.5	34.4	66.5	95.0	101.7	102.5	103.7	104.2	105.2	108.0	110.1	114.4	116.3
Unit nonlabor payments...	24.6	31.3	60.5	93.6	103.0	106.9	110.4	113.5	118.0	115.7	115.5	113.5	116.4
Implicit price deflator..	26.5	33.3	64.3	94.5	102.2	104.1	106.1	107.6	109.8	110.8	112.1	114.1	116.3
Nonfinancial corporations													
Output per hour of all employees...........................	55.4	70.4	81.1	95.4	100.7	103.1	104.2	107.5	108.4	111.7	114.7	117.1	118.3
Compensation per hour..	15.6	25.3	56.4	90.8	102.0	104.2	106.2	109.0	110.3	116.0	121.1	129.2	132.4
Real compensation per hour....................................	68.1	84.4	92.9	96.5	99.6	99.6	99.0	99.0	98.1	101.7	104.1	107.4	107.0
Total unit costs...	26.8	34.8	68.4	95.9	101.0	101.1	102.0	101.2	101.5	103.3	105.1	109.8	112.9
Unit labor costs..	28.1	35.9	69.6	95.2	101.3	101.0	101.9	101.4	101.8	103.8	105.6	110.3	111.9
Unit nonlabor costs..	23.3	31.9	65.1	98.0	100.2	101.3	102.2	100.6	100.9	102.2	103.5	108.3	115.8
Unit profits...	50.2	44.4	68.8	94.3	113.2	131.7	139.0	152.2	156.9	141.7	131.7	113.2	100.5
Unit nonlabor payments...	30.2	35.1	66.0	97.1	103.5	109.0	111.6	113.8	115.2	112.3	110.7	109.5	111.8
Implicit price deflator..	28.8	35.6	68.4	95.8	102.1	103.7	105.1	105.5	106.2	106.6	107.3	110.0	111.9
Manufacturing													
Output per hour of all persons................................	41.8	54.2	70.1	92.9	101.9	105.0	109.0	112.8	117.6	123.3	129.7	134.9	136.2
Compensation per hour..	14.9	23.7	55.6	90.8	102.7	105.6	107.9	109.4	111.5	117.4	122.1	131.1	133.1
Real compensation per hour....................................	65.0	79.2	91.4	96.4	100.2	101.0	100.6	99.4	99.1	103.0	104.9	109.0	107.7
Unit labor costs...	35.6	43.8	79.3	97.8	100.8	100.7	99.0	96.9	94.8	95.2	94.1	97.2	97.8
Unit nonlabor payments...	26.8	29.3	80.2	99.8	100.9	102.8	106.9	109.9	110.0	103.7	104.9	107.0	–
Implicit price deflator..	30.2	35.0	79.9	99.0	100.9	102.0	103.9	104.8	104.1	100.4	100.7	103.2	–

Dash indicates data not available.

46. Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Mining												
Copper ores............................	102	102.7	100.5	115.2	118.1	126.0	117.2	116.5	118.9	118.3	110.0	122.6
Gold and silver ores...................	104	122.3	127.4	141.6	159.8	160.8	144.2	138.3	158.5	187.6	197.5	239.9
Bituminous coal and lignite mining....	122	118.7	122.4	133.0	141.2	148.1	155.9	168.0	176.6	188.0	194.9	207.0
Crude petroleum and natural gas.......	131	97.0	97.9	102.1	105.9	112.4	119.4	123.9	125.2	127.5	134.5	142.5
Crushed and broken stone..............	142	102.2	99.8	105.0	103.6	108.7	105.4	107.2	112.6	110.2	105.0	101.9
Manufacturing												
Meat products.........................	201	97.1	99.6	104.6	104.3	101.2	102.3	97.4	102.5	102.3	101.8	102.9
Dairy products........................	202	107.3	108.3	111.4	109.6	111.8	116.4	116.0	119.3	119.3	112.7	113.5
Preserved fruits and vegetables.......	203	95.6	99.2	100.5	106.8	107.6	109.1	109.2	110.7	117.8	120.4	123.5
Grain mill products...................	204	105.4	104.9	107.8	109.2	108.4	115.4	108.0	118.2	126.2	129.3	127.5
Bakery products.......................	205	92.7	90.6	93.8	94.4	96.4	97.3	95.6	99.1	100.9	106.4	107.6
Sugar and confectionery products......	206	103.2	102.0	99.8	104.5	106.2	108.3	113.7	116.7	123.0	127.0	130.5
Fats and oils.........................	207	118.1	120.1	114.1	112.6	111.8	120.3	110.1	120.2	137.3	154.4	151.4
Beverages.............................	208	117.0	120.0	127.1	126.4	130.1	133.5	135.0	135.5	136.4	129.7	128.6
Miscellaneous food and kindred products..	209	99.2	101.7	101.5	105.2	100.9	102.9	109.1	104.0	112.4	113.9	116.3
Cigarettes............................	211	113.2	107.6	111.6	106.5	126.6	142.9	147.2	147.2	152.2	137.7	139.1
Broadwoven fabric mills, cotton.......	221	103.1	111.2	110.3	117.8	122.1	134.0	137.3	131.2	136.2	139.3	140.2
Broadwoven fabric mills, manmade......	222	111.3	116.2	126.2	131.7	142.5	145.3	147.6	162.2	168.6	175.3	167.4
Narrow fabric mills...................	224	96.5	99.6	112.9	111.4	120.1	118.9	126.3	110.8	117.7	124.9	117.1
Knitting mills........................	225	107.5	114.0	119.3	127.9	134.1	138.3	150.3	138.0	135.9	146.6	155.6
Textile finishing, except wool........	226	83.4	79.9	78.6	79.3	81.2	78.5	79.2	94.3	93.7	94.4	97.2
Carpets and rugs......................	227	93.2	89.2	96.1	97.1	93.3	95.8	100.2	100.3	102.3	96.0	103.0
Yarn and thread mills.................	228	110.2	111.4	119.6	126.6	130.7	137.4	147.4	150.4	153.0	157.6	155.4
Miscellaneous textile goods...........	229	109.2	104.6	106.5	110.4	118.5	123.7	123.1	118.7	120.1	128.0	134.4
Men's and boys' furnishings...........	232	102.1	108.4	109.1	108.4	111.7	123.4	134.7	162.1	174.8	190.9	200.3
Women's and misses' outerwear.........	233	104.1	104.3	109.4	121.8	127.4	135.5	141.6	149.9	151.9	173.9	189.9
Women's and children's undergarments..	234	102.1	113.7	117.4	124.5	138.0	161.3	174.5	208.9	216.4	294.7	352.3
Hats, caps, and millinery.............	235	89.2	91.1	93.6	87.2	77.7	84.3	82.2	87.1	98.7	99.3	106.1
Miscellaneous apparel and accessories..	238	90.6	91.8	91.3	94.0	105.5	116.8	120.1	101.5	108.0	105.8	111.3
Miscellaneous fabricated textile products	239	99.9	100.7	107.5	108.5	107.8	109.2	105.6	119.2	117.3	128.8	132.5
Sawmills and planing mills............	242	99.8	102.6	108.1	101.9	103.3	110.2	115.6	116.9	118.7	125.4	124.4
Millwork, plywood, and structural members..	243	98.0	98.0	99.9	97.0	94.5	92.7	92.4	89.1	91.3	89.2	91.4
Wood containers.......................	244	111.2	113.1	109.4	100.1	100.9	106.1	106.7	106.2	106.5	103.9	104.6
Wood buildings and mobile homes.......	245	103.1	103.0	103.1	103.8	98.3	97.0	96.7	100.3	99.2	100.3	94.6
Miscellaneous wood products...........	249	107.7	110.5	114.2	115.3	111.8	115.4	114.4	123.4	131.2	140.7	146.5
Household furniture...................	251	104.5	107.1	110.5	110.6	112.5	116.9	121.6	121.3	125.7	128.9	128.4
Office furniture......................	252	95.0	94.1	102.5	103.2	100.5	101.1	106.4	118.3	113.1	108.9	111.2
Public building and related furniture..	253	119.8	120.2	140.6	161.0	157.4	173.3	181.5	214.9	207.6	222.4	202.0
Partitions and fixtures...............	254	95.6	93.0	102.7	107.4	98.9	101.2	97.5	121.1	125.6	125.9	131.9
Miscellaneous furniture and fixtures..	259	103.5	102.1	99.5	103.6	104.7	110.0	113.2	110.7	121.9	119.1	110.5
Pulp mills............................	261	116.7	128.3	137.3	122.5	128.9	131.9	132.6	82.3	86.6	84.8	78.8
Paper mills...........................	262	102.3	99.2	103.3	102.4	110.2	118.6	111.6	112.0	114.8	126.2	133.5
Paperboard mills......................	263	100.6	101.4	104.4	108.4	114.9	119.5	118.0	126.7	127.8	134.9	135.3
Paperboard containers and boxes.......	265	101.3	103.4	105.2	107.9	108.4	105.1	106.3	109.7	113.5	111.9	112.9
Miscellaneous converted paper products..	267	101.4	105.3	105.5	107.9	110.6	113.3	113.6	119.5	123.0	126.0	128.3
Newspapers............................	271	90.6	85.8	81.5	79.4	79.9	79.0	77.4	79.0	83.6	86.0	88.3
Periodicals...........................	272	93.9	89.5	92.9	89.5	81.9	87.8	89.1	100.1	112.2	111.2	109.9
Books.................................	273	96.6	100.8	97.7	103.5	103.0	101.6	99.3	102.6	100.9	106.1	106.1
Miscellaneous publishing..............	274	92.2	95.9	105.8	104.5	97.5	94.8	93.6	114.5	119.4	127.2	127.8
Commercial printing...................	275	102.5	102.0	108.0	106.9	106.5	107.2	108.3	108.8	109.9	115.0	118.7
Manifold business forms...............	276	93.0	89.1	94.5	91.1	82.0	76.9	75.2	77.9	76.7	70.6	69.4
Greeting cards........................	277	100.6	92.7	96.7	91.4	89.0	92.5	90.8	92.2	104.1	109.3	105.1
Blankbooks and bookbinding............	278	99.4	96.1	103.6	98.7	105.4	108.7	114.5	114.2	116.5	123.8	126.2
Printing trade services...............	279	99.3	100.6	112.0	115.3	111.0	116.7	126.2	123.3	126.7	121.5	119.6
Industrial inorganic chemicals........	281	106.8	109.7	109.7	105.6	102.3	109.3	110.1	116.8	145.8	148.5	141.3
Plastics materials and synthetics.....	282	100.9	100.0	107.5	112.0	125.3	128.3	125.3	135.4	142.2	148.6	151.0
Drugs.................................	283	103.8	104.5	99.5	99.7	104.6	108.7	112.5	112.4	104.3	105.6	106.2
Soaps, cleaners, and toilet goods.....	284	103.8	105.3	104.4	108.7	111.2	118.6	120.9	126.4	122.7	114.8	124.8
Paints and allied products............	285	106.3	104.3	102.9	108.8	116.7	118.0	125.6	126.4	126.8	122.7	124.6
Industrial organic chemicals..........	286	101.4	95.8	94.6	92.2	99.9	98.6	99.0	111.3	105.7	120.6	127.8
Agricultural chemicals................	287	104.7	99.5	99.5	103.8	105.0	108.5	110.0	119.8	118.0	104.6	112.0

See footnotes at end of table.

46. Continued - Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Miscellaneous chemical products.......................	289	97.3	96.1	101.8	107.1	105.7	107.8	110.1	120.3	120.8	123.3	125.6
Petroleum refining...	291	109.2	106.6	111.3	120.1	123.8	132.3	142.0	149.2	155.8	170.2	180.2
Asphalt paving and roofing materials.................	295	98.0	94.1	100.4	108.0	104.9	111.2	113.1	123.1	124.7	123.4	126.1
Miscellaneous petroleum and coal products........	299	94.8	90.6	101.5	104.2	96.3	87.4	87.1	96.5	98.5	86.5	82.9
Tires and inner tubes......................................	301	103.0	102.4	107.8	116.5	124.1	131.1	138.8	149.1	144.1	142.1	145.9
Hose and belting and gaskets and packing.........	305	96.1	92.4	97.8	99.7	102.7	104.6	107.4	113.5	112.7	110.6	115.4
Fabricated rubber products, n.e.c......................	306	109.0	109.9	115.2	123.1	119.1	121.5	121.0	125.3	132.3	136.9	144.7
Miscellaneous plastics products, n.e.c................	308	105.7	108.3	114.4	116.7	120.8	121.0	124.7	129.9	133.8	140.9	145.4
Footwear, except rubber..................................	314	101.1	94.4	104.2	105.2	113.0	117.1	126.1	121.4	110.9	132.6	146.2
Flat glass...	321	84.5	83.6	92.7	97.7	97.6	99.6	101.5	107.6	114.0	129.4	140.4
Glass and glassware, pressed or blown.............	322	104.8	102.3	108.9	108.7	112.9	115.7	121.4	128.3	135.2	139.3	135.8
Products of purchased glass............................	323	92.6	97.7	101.5	106.2	105.9	106.1	122.0	125.1	122.0	130.2	137.2
Cement, hydraulic..	324	112.4	108.3	115.1	119.9	125.6	124.3	128.7	133.1	134.1	138.6	136.9
Structural clay products..................................	325	109.6	109.8	111.4	106.8	114.0	112.6	119.6	111.9	114.8	123.5	124.8
Pottery and related products............................	326	98.7	95.9	99.5	100.3	108.5	109.4	119.4	124.2	127.4	122.0	121.2
Concrete, gypsum, and plaster products............	327	102.3	101.2	102.5	104.6	101.5	104.5	107.3	107.6	112.8	111.1	105.1
Miscellaneous nonmetallic mineral products........	329	95.4	94.0	104.3	104.5	106.3	107.8	110.4	114.7	114.9	113.3	116.1
Blast furnace and basic steel products...............	331	109.7	107.8	117.0	133.6	142.4	142.6	147.5	155.0	151.0	155.6	160.1
Iron and steel foundries..................................	332	106.1	104.5	107.2	112.1	113.0	112.7	116.2	120.8	121.1	128.9	132.1
Primary nonferrous metals...............................	333	102.3	110.7	101.9	107.9	105.3	111.0	110.8	112.0	118.9	117.7	111.9
Nonferrous rolling and drawing.........................	335	92.7	91.0	96.0	98.3	101.2	99.2	104.0	111.3	115.7	121.4	118.0
Nonferrous foundries (castings)........................	336	104.0	103.6	103.6	108.5	112.1	117.8	122.3	127.0	131.5	129.8	129.7
Miscellaneous primary metal products................	339	113.7	109.1	114.5	111.3	134.5	152.2	149.6	136.2	140.0	149.0	154.3
Metal cans and shipping containers...................	341	117.6	122.9	127.8	132.3	140.9	144.2	155.2	160.3	163.8	157.9	159.5
Cutlery, handtools, and hardware......................	342	97.3	96.8	100.1	104.0	109.2	111.3	118.2	114.6	115.7	121.9	125.4
Plumbing and heating, except electric................	343	102.6	102.0	98.4	102.0	109.1	109.2	118.6	127.3	130.5	125.7	132.2
Fabricated structural metal products..................	344	98.8	100.0	103.9	104.8	107.7	105.8	106.5	111.9	112.7	112.8	112.8
Metal forgings and stampings...........................	346	95.6	92.9	103.7	108.7	108.5	109.3	113.6	120.2	125.9	128.3	129.8
Metal services, n.e.c......................................	347	104.7	99.4	111.6	120.6	123.0	127.7	128.4	124.4	127.3	126.1	135.7
Ordnance and accessories, n.e.c.......................	348	82.1	81.5	88.6	84.6	83.6	87.6	87.5	93.7	96.6	91.0	92.8
Miscellaneous fabricated metal products............	349	97.5	97.4	101.1	102.0	103.2	106.6	108.3	107.7	111.6	109.3	109.2
Engines and turbines.....................................	351	106.5	105.8	103.3	109.2	122.3	122.7	136.6	136.9	146.1	151.5	164.5
Farm and garden machinery.............................	352	116.5	112.9	113.9	118.6	125.0	134.7	137.2	141.2	148.5	128.6	139.6
Construction and related machinery...................	353	107.0	99.1	102.0	108.2	117.7	122.1	123.3	132.5	137.6	133.6	139.8
Metalworking machinery..................................	354	101.1	96.4	104.3	107.4	109.9	114.8	114.9	119.2	119.8	123.0	129.8
Special industry machinery..............................	355	107.5	108.3	106.0	113.6	121.2	132.3	134.0	131.7	124.5	138.6	172.2
General industrial machinery............................	356	101.5	101.6	101.6	104.8	106.7	109.0	109.4	110.0	111.2	113.1	118.7
Computer and office equipment.........................	357	138.1	149.6	195.7	258.6	328.6	469.4	681.3	960.2	1356.6	1862.5	2172.0
Refrigeration and service machinery..................	358	103.6	100.7	104.9	108.6	110.7	112.7	114.7	115.0	121.4	124.0	122.3
Industrial machinery, n.e.c..............................	359	107.3	109.0	117.0	118.5	127.4	138.8	141.4	129.3	127.5	135.8	141.8
Electric distribution equipment.........................	361	106.3	106.5	119.6	122.2	131.8	143.0	143.9	142.8	147.5	148.9	155.4
Electrical industrial apparatus..........................	362	107.7	107.1	117.1	132.9	134.9	150.8	154.3	164.2	162.3	158.3	157.0
Household appliances......................................	363	105.8	106.5	115.0	123.4	131.4	127.3	127.4	142.9	150.2	149.5	162.4
Electric lighting and wiring equipment................	364	99.9	97.5	105.7	107.8	113.4	113.7	116.9	121.8	129.2	132.4	134.8
Communications equipment..............................	366	123.8	129.1	154.9	163.1	186.4	200.7	229.5	275.4	284.5	371.9	448.8
Electronic components and accessories.............	367	133.4	154.7	189.3	217.9	274.0	401.5	515.0	613.4	768.6	1062.6	1440.1
Miscellaneous electrical equipment & supplies...	369	90.6	98.6	101.3	108.2	110.5	114.1	123.1	128.3	135.3	147.2	156.0
Motor vehicles and equipment..........................	371	102.4	96.6	104.2	106.2	108.8	106.7	107.2	116.3	125.2	136.7	127.1
Aircraft and parts..	372	98.9	108.2	112.3	115.2	109.5	107.8	113.1	114.7	140.1	138.1	132.2
Ship and boat building and repairing..................	373	103.7	96.3	102.7	105.9	103.8	98.1	99.3	105.5	102.5	113.1	121.6
Railroad equipment..	374	141.1	146.9	147.9	151.0	152.5	150.0	148.3	184.2	189.1	212.8	218.4
Motorcycles, bicycles, and parts.......................	375	93.8	99.8	108.4	130.9	125.1	120.3	125.5	120.4	127.7	122.4	119.4
Guided missiles, space vehicles, parts...............	376	116.5	110.5	110.5	119.4	114.9	116.9	125.1	133.6	138.9	156.1	113.3
Search and navigation equipment......................	381	112.7	118.9	122.1	129.1	132.1	149.5	142.2	149.5	149.1	149.6	163.7
Measuring and controlling devices.....................	382	106.4	113.1	119.9	124.0	133.8	146.4	150.5	142.4	143.5	152.4	158.5
Medical instruments and supplies.....................	384	116.9	118.7	123.5	127.3	126.7	131.5	139.8	147.4	158.6	160.4	167.0
Ophthalmic goods..	385	121.2	125.1	144.5	157.8	160.6	167.2	188.2	196.3	199.0	235.2	250.2
Photographic equipment & supplies...................	386	107.8	110.2	116.4	126.9	132.7	129.5	128.7	121.5	128.0	160.6	169.4
Jewelry, silverware, and plated ware..................	391	99.3	95.8	96.7	96.7	99.5	100.2	102.6	114.2	113.1	134.3	144.9
Musical instruments.......................................	393	97.1	96.9	96.0	95.6	88.7	86.9	78.8	82.9	81.4	97.1	105.3

See footnotes at end of table.

46. Continued - Annual indexes of output per hour for selected 3-digit SIC industries

[1987=100]

Industry	SIC	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Toys and sporting goods..................	394	108.1	109.7	104.9	114.2	109.7	113.6	119.9	125.7	131.6	126.6	140.4
Pens, pencils, office, and art supplies................	395	118.2	116.8	111.3	111.6	129.9	135.2	144.1	127.5	132.5	123.4	124.9
Costume jewelry and notions...........................	396	105.3	106.7	110.8	115.8	129.0	143.7	142.2	118.0	131.2	130.8	145.3
Miscellaneous manufactures........................	399	106.5	109.2	109.5	107.7	106.1	108.1	112.8	109.4	108.5	114.9	115.9
Transportation												
Railroad transportation..................................	4011	118.5	127.8	139.6	145.4	150.3	156.2	167.0	169.8	173.3	182.5	195.8
Trucking, except local [1]................	4213	111.1	116.9	123.4	126.6	129.5	125.4	130.9	132.4	129.9	131.6	131.2
United states postal service [2]...........................	431	104.0	103.7	104.5	107.1	106.6	106.5	104.7	108.3	109.8	110.9	113.6
Air transportation..........................	4512,13,22(pts.)	92.9	92.5	96.9	100.2	105.7	108.6	111.1	111.6	108.4	109.1	110.7
Utilities												
Telephone communications...........................	481	113.3	119.8	127.7	135.5	142.2	148.1	159.5	160.9	170.1	186.3	201.3
Radio and television broadcasting....................	483	104.9	106.1	108.3	106.7	110.1	109.6	105.8	101.7	104.5	108.4	109.9
Cable and other pay TV services.....................	484	92.6	87.6	88.5	85.3	83.4	84.5	81.9	84.7	86.1	85.0	87.6
Electric utilities...	491,3(pts.)	110.1	113.4	115.2	24.1	50.5	80.8	116.8	150.0	159.6	162.0	169.6
Gas utilities..	492,3(pts.)	105.8	109.6	111.1	121.8	125.6	137.1	145.9	158.6	144.4	147.2	160.6
Trade												
Lumber and other building materials dealers........	521	104.3	102.3	106.4	111.4	118.9	117.8	121.6	121.8	134.2	143.0	144.2
Paint, glass, and wallpaper stores.....................	523	106.8	100.4	107.6	114.2	127.8	130.9	133.5	134.8	163.5	165.1	170.1
Hardware stores..	525	115.3	108.7	115.2	113.9	121.2	115.6	119.5	119.0	137.9	147.6	145.7
Retail nurseries, lawn and garden supply stores....	526	84.7	89.3	101.2	107.1	117.0	117.4	136.4	127.5	133.7	150.4	154.5
Department stores....................................	531	96.8	102.0	105.4	110.4	113.5	116.1	123.8	129.1	135.8	146.0	160.4
Variety stores...	533	154.6	159.0	173.9	191.9	197.9	212.4	240.4	260.1	271.2	315.0	330.9
Miscellaneous general merchandise stores..........	539	118.6	124.8	140.4	164.3	164.8	167.4	167.7	170.4	185.9	199.6	224.3
Grocery stores...	541	96.6	96.3	96.5	96.0	95.4	93.9	92.1	91.7	92.2	95.3	96.1
Meat and fish (seafood) markets.....................	542	98.9	90.8	99.2	97.7	95.7	94.4	86.4	90.8	95.7	97.4	110.0
Retail bakeries..	546	91.2	96.7	96.5	86.5	85.3	83.0	75.9	67.6	68.1	83.1	88.4
New and used car dealers.............................	551	106.7	104.9	107.4	108.6	109.7	108.1	109.1	108.8	108.7	111.6	112.5
Auto and home supply stores.........................	553	103.7	100.2	101.6	100.8	105.3	109.1	108.2	108.1	113.1	115.5	119.3
Gasoline service stations.............................	554	103.0	104.8	110.2	115.9	121.1	127.2	126.1	126.1	133.9	141.7	139.0
Men's and boy's wear stores..........................	561	115.6	121.9	122.3	119.5	121.7	121.4	129.8	136.3	145.2	154.5	165.0
Women's clothing stores..............................	562	106.6	111.2	123.6	130.0	130.4	139.9	154.2	157.3	176.0	190.2	205.7
Family clothing stores................................	565	107.8	111.5	118.6	121.5	127.7	141.8	146.9	150.2	153.1	155.9	160.4
Shoe stores..	566	107.9	107.8	115.5	117.3	130.7	139.2	151.9	148.4	145.0	152.9	160.2
Furniture and homefurnishings stores...............	571	104.6	105.4	113.9	113.3	114.7	117.4	123.6	124.2	127.3	134.5	141.1
Household appliance stores............................	572	104.6	107.2	116.1	118.7	122.4	139.6	142.2	155.2	184.2	186.4	209.3
Radio, television, computer, and music stores......	573	120.8	129.3	139.3	153.8	178.2	198.1	206.6	216.8	258.3	309.1	359.4
Eating and drinking places............................	581	104.5	103.8	103.4	103.8	102.1	102.0	100.6	101.6	102.0	104.0	107.3
Drug and proprietary stores...........................	591	106.3	108.0	107.6	109.6	109.9	111.1	113.9	119.8	125.7	129.8	136.9
Liquor stores...	592	105.9	106.9	109.6	101.8	100.1	104.7	113.8	109.9	116.5	114.5	127.7
Used merchandise stores..............................	593	103.0	102.3	115.7	116.7	119.5	120.6	132.6	140.3	163.6	183.2	216.7
Miscellaneous shopping goods stores................	594	107.4	109.3	107.9	111.7	117.3	123.2	125.3	129.4	138.7	143.7	150.6
Nonstore retailers.....................................	596	111.1	112.5	126.5	132.2	149.0	152.5	173.5	186.8	208.3	220.6	263.2
Fuel dealers...	598	84.6	85.3	84.3	91.9	99.0	111.4	112.5	109.1	105.8	115.2	117.3
Retail stores, n.e.c....................................	599	114.5	104.0	112.5	118.1	125.8	127.0	140.2	147.8	157.4	162.5	168.1
Finance and services												
Commercial banks......................................	602	107.7	110.1	111.0	118.5	121.7	126.4	129.7	133.0	132.6	135.9	143.2
Hotels and motels......................................	701	96.2	99.3	108.0	106.5	109.9	110.5	110.0	108.2	108.2	109.9	114.1
Laundry, cleaning, and garment services............	721	102.3	99.9	99.3	99.9	105.0	106.6	109.8	109.0	116.0	120.8	123.6
Photographic studios, portrait........................	722	98.2	92.1	95.8	101.8	108.3	116.2	110.7	114.1	121.6	107.7	112.0
Beauty shops..	723	97.5	95.8	100.9	97.0	101.1	104.8	107.6	108.5	110.5	113.4	114.5
Barber shops..	724	100.7	94.9	113.2	121.9	118.8	115.7	128.8	150.4	157.4	132.8	129.9
Funeral services and crematories.....................	726	91.2	89.9	103.8	98.7	104.3	100.2	97.6	101.9	104.2	100.2	93.9
Automotive repair shops...............................	753	107.9	100.1	105.1	105.7	114.3	121.6	116.1	117.2	124.9	126.4	128.5
Motion picture theaters................................	783	118.1	118.2	114.8	113.8	110.4	105.0	104.1	103.4	106.1	108.7	112.3

[1] Refers to output per employee.
[2] Refers to output per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

47. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

Country	Annual average		2000				2001			
	2000	2001	I	II	III	IV	I	II	III	IV
United States........	4.0	4.8	4.0	4.0	4.1	4.0	4.2	4.5	4.8	5.6
Canada.................	6.1	6.4	6.1	6.1	6.1	6.1	6.2	6.3	6.4	6.8
Australia..............	6.3	6.7	6.5	6.4	6.1	6.2	6.5	6.9	6.8	6.8
Japan[1]...................	4.8	5.1	4.8	4.7	4.7	4.8	4.8	4.9	5.2	5.5
France[1]................	9.4	8.7	9.9	9.5	9.3	9.0	8.6	8.5	8.7	8.9
Germany[1].............	8.1	8.0	8.3	8.1	8.0	7.8	7.9	8.0	8.0	8.1
Italy[1,2]..................	10.7	9.6	11.2	10.9	10.5	10.1	10.0	9.7	9.5	9.3
Sweden[1].............	5.8	5.0	6.6	6.0	5.6	5.2	5.1	5.0	5.0	5.1
United Kingdom[1]...	5.5	–	5.8	5.5	5.4	5.3	5.1	5.0	5.1	–

[1] Preliminary for 2001 for Japan, France, Germany, Italy, Sweden, and the United Kingdom.

[2] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France and Germany 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.

See "Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries, 1959-2001 (B*ureau of Labor Statistics, Mar. 25, 2002), on the Internet at

http://www.bls.gov/fls/home.htm

Monthly and quarterly unemployment rates, updated monthly, are also on this site. Dash indicates data not available.

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

[Numbers in thousands]

Employment status and country	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Civilian labor force										
United States	128,105	129,200	131,056	132,304	133,943	136,297	137,673	139,368	140,863	141,815
Canada	14,177	14,308	14,400	14,517	14,669	14,958	15,237	15,536	15,789	16,027
Australia	8,557	8,613	8,771	8,995	9,115	9,204	9,339	9,466	9,678	9,817
Japan	65,040	65,470	65,780	65,990	66,450	67,200	67,240	67,090	66,990	66,870
France	24,570	24,640	24,780	24,830	25,090	25,210	25,520	25,830	25,980	–
Germany	39,010	39,100	39,070	38,980	39,140	39,420	39,750	39,800	39,750	–
Italy	22,910	22,570	22,450	22,460	22,570	22,680	22,960	23,130	23,340	23,540
Netherlands	6,950	7,100	7,190	7,260	7,370	7,530	7,690	7,900	8,050	–
Sweden	4,520	4,443	4,418	4,460	4,459	4,418	4,402	4,430	4,489	4,537
United Kingdom	28,410	28,430	28,440	28,560	28,720	28,910	29,040	29,300	29,450	–
Participation rate[1]										
United States	66.4	66.3	66.6	66.6	66.8	67.1	67.1	67.1	67.2	66.9
Canada	65.9	65.5	65.2	64.9	64.7	65.0	65.4	65.8	65.9	66.0
Australia	63.9	63.5	63.9	64.6	64.6	64.3	64.3	64.2	64.7	64.7
Japan	63.4	63.3	63.1	62.9	63.0	63.2	62.8	62.4	62.0	61.6
France	55.9	55.8	55.8	55.6	55.8	55.7	56.1	56.4	56.4	–
Germany	58.2	57.7	57.4	57.1	57.1	57.3	57.7	57.6	57.5	–
Italy	47.5	47.9	47.3	47.1	47.1	47.2	47.6	47.8	48.1	–
Netherlands	57.8	58.6	59.0	59.2	59.8	60.8	61.7	62.8	63.5	–
Sweden	65.7	64.5	63.7	64.1	64.0	63.3	62.8	62.8	63.8	64.2
United Kingdom	63.1	62.8	62.7	62.7	62.8	62.9	62.9	63.2	63.3	–
Employed										
United States	118,492	120,259	123,060	124,900	126,708	129,558	131,463	133,488	135,208	135,073
Canada	12,672	12,770	13,027	13,271	13,380	13,705	14,068	14,456	14,827	14,997
Australia	7,660	7,699	7,942	8,256	8,364	8,444	8,618	8,808	9,068	9,157
Japan	63,620	63,810	63,860	63,890	64,200	64,900	64,450	63,920	63,790	63,470
France	22,020	21,740	21,720	21,910	21,960	22,090	22,510	22,940	23,530	–
Germany	36,390	35,990	35,760	35,780	35,640	35,510	36,060	36,360	36,540	–
Italy	21,230	20,270	19,940	19,820	19,920	19,990	20,210	20,460	20,840	21,280
Netherlands	6,560	6,630	6,670	6,760	6,900	7,130	7,380	7,640	7,810	–
Sweden	4,265	4,028	3,992	4,056	4,019	3,973	4,034	4,117	4,229	4,309
United Kingdom	25,530	25,450	25,720	26,070	26,380	26,880	27,210	27,530	27,830	–
Employment-population ratio[2]										
United States	61.5	61.7	62.5	62.9	63.2	63.8	64.1	64.3	64.5	63.8
Canada	58.9	58.5	59.0	59.4	59.1	59.7	60.4	61.3	62.1	61.9
Australia	57.2	56.8	57.8	59.2	59.3	59.0	59.3	59.8	60.6	60.3
Japan	62.0	61.7	61.3	60.9	60.9	61.0	60.2	59.4	59.0	58.4
France	50.1	49.2	48.9	49.0	48.8	48.8	49.5	50.1	51.1	–
Germany	54.2	53.2	52.6	52.4	52.0	51.6	52.3	52.6	52.8	–
Italy	44.0	43.0	42.0	41.5	41.6	41.6	41.9	42.3	42.9	–
Netherlands	54.5	54.7	54.7	55.1	56.0	57.5	59.2	60.8	61.6	–
Sweden	62.0	58.5	57.6	58.3	57.7	56.9	57.6	58.4	60.1	61.0
United Kingdom	56.7	56.2	56.7	57.2	57.6	58.5	58.9	59.4	59.4	–
Unemployed										
United States	9,613	8,940	7,996	7,404	7,236	6,739	6,210	5,880	5,655	6,742
Canada	1,505	1,539	1,373	1,246	1,289	1,252	1,169	1,080	962	1,031
Australia	897	914	829	739	751	760	721	658	611	661
Japan	1,420	1,660	1,920	2,100	2,250	2,300	2,790	3,170	3,200	3,400
France	2,550	2,900	3,060	2,920	3,130	3,120	3,020	2,890	2,450	–
Germany	2,620	3,110	3,320	3,200	3,510	3,910	3,690	3,440	3,210	–
Italy	1,680	2,300	2,510	2,640	2,650	2,690	2,750	2,670	2,500	2,270
Netherlands	390	470	520	500	470	400	310	270	240	–
Sweden	255	415	426	404	440	445	368	313	260	228
United Kingdom	2,880	2,980	2,720	2,490	2,340	2,030	1,830	1,770	1,620	–
Unemployment rate										
United States	7.5	6.9	6.1	5.6	5.4	4.9	4.5	4.2	4.0	4.8
Canada	10.6	10.8	9.5	8.6	8.8	8.4	7.7	7.0	6.1	6.4
Australia	10.5	10.6	9.4	8.2	8.2	8.3	7.7	7.0	6.3	6.7
Japan	2.2	2.5	2.9	3.2	3.4	3.4	4.1	4.7	4.8	5.1
France	10.4	11.8	12.3	11.8	12.5	12.4	11.8	11.2	9.4	8.7
Germany	6.7	8.0	8.5	8.2	9.0	9.9	9.3	8.6	8.1	8.0
Italy	7.3	10.2	11.2	11.8	11.7	11.9	12.0	11.5	10.7	9.6
Netherlands	5.6	6.6	7.2	6.9	6.4	5.3	4.0	3.4	3.0	–
Sweden	5.6	9.3	9.6	9.1	9.9	10.1	8.4	7.1	5.8	5.0
United Kingdom	10.1	10.5	9.6	8.7	8.1	7.0	6.3	6.0	5.5 –	

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

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

NOTE: See notes on the data for information on breaks in series.

For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics , Ten Countries*, 1959–2001 (Bureau of Labor Statistics, Mar. 25,2002), on the Internet at **http://www.bls.gov/fls/home.htm**

Dash indicates data are not available.

49. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

Item and country	1960	1970	1980	1989	1990	1991	1993	1994	1995	1996	1997	1998	1999	2000
Output per hour														
United States.........	–	–	70.5	95.7	96.9	97.8	102.1	107.3	113.8	117.0	121.2	126.5	135.3	142.8
Canada.........	38.5	56.0	74.4	93.2	94.7	95.5	104.9	109.7	111.3	110.1	113.2	113.1	114.9	116.3
Japan.........	13.8	37.5	63.2	88.5	94.4	99.0	101.7	103.3	111.0	116.1	121.0	121.2	126.9	134.1
Belgium.........	18.0	32.9	65.4	96.9	96.8	99.1	102.5	108.4	113.2	117.0	127.0	129.2	129.5	133.4
Denmark.........	29.9	52.7	90.3	99.6	99.1	99.6	104.5	–	–	–	–	–	–	–
France.........	21.9	43.0	66.2	91.9	93.6	96.9	100.6	108.6	114.7	115.3	123.8	129.5	132.9	141.1
Germany.........	29.2	52.0	77.2	94.6	99.0	98.3	101.8	109.6	112.3	114.0	119.5	120.4	120.5	128.0
Italy.........	22.5	42.2	70.8	91.3	93.9	95.9	101.8	106.1	111.2	110.8	113.7	113.1	113.5	117.8
Netherlands.........	18.5	37.9	68.8	96.9	98.5	99.6	101.6	113.2	118.2	120.2	122.3	125.0	128.5	133.8
Norway.........	37.0	58.3	76.7	94.6	96.6	97.5	100.6	101.4	102.0	102.0	103.0	103.6	103.1	104.2
Sweden.........	27.3	52.2	73.1	93.2	94.6	95.5	107.3	119.4	121.9	124.5	132.3	139.5	143.5	150.4
United Kingdom.........	30.0	43.2	54.3	86.2	89.1	93.8	103.9	107.1	104.9	103.8	105.2	106.9	111.6	117.6
Output														
United States.........	–	–	75.8	102.4	101.6	98.3	103.5	111.1	118.4	121.3	127.9	133.1	141.2	147.0
Canada.........	34.0	60.0	85.2	112.1	107.5	99.2	105.0	113.0	118.5	120.0	127.3	132.5	140.8	148.8
Japan.........	10.7	39.2	60.4	90.9	97.1	102.0	96.3	94.9	98.9	103.0	106.5	100.2	101.9	107.6
Belgium.........	30.7	57.6	78.2	99.1	101.0	100.7	97.0	101.4	104.2	106.6	113.8	116.4	118.0	122.2
Denmark.........	40.8	68.0	91.3	104.3	102.7	101.7	99.0	109.3	114.7	109.7	118.5	120.8	119.8	125.8
France.........	31.0	64.1	88.7	97.2	99.1	99.8	95.7	100.3	104.9	104.6	109.7	115.0	117.3	121.2
Germany.........	41.5	70.9	85.3	94.0	99.1	102.3	92.5	95.2	95.3	92.6	95.7	97.2	95.9	101.7
Italy.........	23.0	48.1	84.4	98.3	99.4	99.3	96.5	102.4	107.2	105.4	108.8	110.5	110.2	113.9
Netherlands.........	31.5	59.1	76.8	96.6	99.9	100.4	98.4	104.6	108.1	108.7	111.5	114.8	118.1	123.7
Norway.........	57.0	89.9	103.6	101.3	100.2	98.3	102.7	106.7	109.0	110.1	115.7	117.7	114.0	110.9
Sweden.........	45.9	80.7	90.7	110.9	110.1	104.1	101.9	117.1	128.4	131.1	138.0	147.6	153.6	163.4
United Kingdom.........	67.3	90.2	87.2	105.5	105.3	100.0	101.4	106.1	107.8	108.5	109.9	110.8	111.1	113.3
Total hours														
United States.........	92.1	104.4	107.5	107.1	104.8	100.4	101.4	103.6	104.0	103.6	105.5	105.2	104.3	102.9
Canada.........	88.3	107.1	114.6	120.2	113.5	103.9	100.1	103.0	106.4	109.0	112.4	117.1	122.6	128.0
Japan.........	77.8	104.4	95.6	102.7	102.9	103.1	94.7	91.9	89.1	88.7	88.0	82.7	80.3	80.2
Belgium.........	170.7	174.7	119.7	102.3	104.3	101.5	94.7	93.6	92.0	91.1	89.6	90.1	91.1	91.7
Denmark.........	136.5	129.0	101.1	104.7	103.7	102.1	94.8	–	–	–	–	–	–	–
France.........	141.2	148.9	133.2	105.8	105.9	103.1	95.1	92.4	91.5	90.7	88.6	88.8	88.3	85.9
Germany.........	142.3	136.3	110.5	99.3	100.1	104.1	90.8	86.8	84.9	81.2	80.1	80.7	79.6	79.5
Italy.........	102.3	113.8	119.3	107.6	105.9	103.6	94.9	96.5	96.4	95.1	95.7	97.7	97.1	96.7
Netherlands.........	170.5	156.1	111.7	99.7	101.4	100.9	96.8	92.4	91.5	90.4	91.1	91.8	92.0	92.5
Norway.........	154.1	154.3	135.0	107.1	103.7	100.8	102.1	105.2	106.8	107.9	112.3	113.6	110.6	106.4
Sweden.........	168.3	154.7	124.0	119.0	116.4	109.0	94.9	98.1	105.3	105.3	104.3	105.8	107.1	108.6
United Kingdom.........	224.6	208.8	160.5	122.4	118.1	106.6	97.6	99.1	102.7	104.5	104.5	103.6	99.5	96.3
Compensation per hour														
United States.........	14.9	23.7	55.6	86.6	90.8	95.6	102.7	105.6	107.9	109.4	111.4	117.4	122.1	130.7
Canada.........	10.0	17.1	47.6	82.6	88.3	95.0	102.0	103.7	106.0	107.0	109.3	111.6	113.1	117.0
Japan.........	4.3	16.4	58.5	84.0	90.5	96.4	102.8	104.9	108.3	109.2	112.9	115.8	115.2	114.5
Belgium.........	5.4	13.7	52.5	85.9	90.1	97.3	104.8	106.1	109.2	110.9	114.9	116.6	118.3	121.1
Denmark.........	4.6	13.3	49.6	87.7	92.7	95.9	104.6	–	–	–	–	–	–	–
France.........	4.3	10.3	40.8	86.0	90.6	96.2	103.1	105.6	108.5	110.3	113.1	115.7	118.7	125.7
Germany.........	8.1	20.7	53.6	83.2	89.4	91.5	106.4	111.7	117.6	122.4	124.7	126.5	129.3	133.5
Italy.........	1.7	5.0	29.0	77.4	85.8	94.2	106.1	108.1	114.6	122.0	127.2	125.6	129.4	133.6
Netherlands.........	6.4	20.2	64.4	88.6	90.9	95.3	103.8	108.2	110.7	113.0	115.8	120.6	124.0	131.0
Norway.........	4.7	11.8	39.0	87.2	92.3	97.5	101.5	104.4	109.2	113.6	118.7	126.1	133.4	140.1
Sweden.........	4.1	10.7	37.3	79.4	87.8	95.5	97.4	100.0	106.5	114.4	119.4	124.4	127.5	130.7
United Kingdom.........	3.0	6.1	32.1	73.8	82.9	93.8	104.7	106.8	107.9	109.5	113.8	120.5	129.6	134.7
Unit labor costs: National currency basis														
United States.........	–	–	78.8	90.5	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.5
Canada.........	25.9	30.5	63.9	88.6	93.3	99.5	97.2	94.5	95.2	97.2	96.5	98.6	98.4	100.6
Japan.........	31.3	43.8	92.5	94.9	95.9	97.4	101.1	101.5	97.6	94.0	93.3	95.5	90.8	85.4
Belgium.........	30.1	41.7	80.3	88.7	93.0	98.1	102.3	97.9	96.4	94.7	90.5	90.2	91.4	90.8
Denmark.........	15.4	25.2	55.0	88.1	93.6	96.3	100.1	93.0	93.8	100.9	96.9	98.7	101.9	100.2
France.........	19.4	24.0	61.3	93.5	96.8	99.3	102.4	97.3	94.6	95.7	91.4	89.4	89.3	89.1
Germany.........	27.8	39.8	69.4	87.9	90.3	93.1	104.5	101.9	104.7	107.4	104.3	105.1	107.4	104.3
Italy.........	7.5	11.9	41.0	84.8	91.5	98.2	104.3	101.9	103.0	110.0	111.9	111.1	1114.0	113.4
Netherlands.........	34.6	53.3	93.7	91.4	92.3	95.6	102.1	95.6	93.7	94.0	94.7	96.5	96.6	97.9
Norway.........	12.8	20.3	50.8	92.2	95.6	100.0	100.9	102.9	107.0	111.4	115.2	121.7	129.5	134.5
Sweden.........	15.0	20.6	51.0	85.1	92.8	100.0	90.8	83.8	87.4	91.9	90.2	89.2	88.8	86.9
United Kingdom.........	9.8	14.1	59.0	85.6	93.0	100.1	100.8	99.7	102.9	105.5	108.2	112.7	116.1	114.5
Unit labor costs: U.S. dollar basis														
United States.........	–	–	78.8	90.5	93.7	97.6	100.6	98.5	94.8	93.5	91.9	92.8	90.2	91.5
Canada.........	32.2	35.3	66.1	90.4	95.6	104.9	91.0	83.6	83.8	86.1	84.2	80.4	80.0	81.8
Japan.........	11.0	15.5	51.8	87.1	83.8	91.7	115.4	125.9	131.7	109.6	97.7	92.4	101.2	100.4
Belgium.........	19.4	27.0	88.3	72.3	89.5	92.3	95.1	94.2	105.2	98.4	81.2	79.9	77.6	66.8
Denmark.........	13.5	20.3	58.9	72.6	91.3	90.8	93.2	88.3	101.1	105.0	88.6	88.9	88.0	74.8
France.........	20.9	23.1	76.7	77.6	94.0	93.1	95.7	92.8	100.5	99.0	82.8	80.2	76.8	66.4
Germany.........	10.4	17.1	59.6	73.0	87.3	87.5	98.6	98.2	114.2	111.4	93.9	93.3	91.3	76.9
Italy.........	15.0	23.3	59.0	76.1	94.1	97.5	81.6	77.9	77.9	87.9	80.9	78.8	77.3	66.6
Netherlands.........	16.1	25.9	82.9	75.8	89.1	89.9	96.6	92.4	102.7	98.1	85.3	85.5	82.1	72.1
Norway.........	11.2	17.6	63.9	82.9	95.0	95.7	88.3	90.7	105.0	107.1	101.0	100.2	103.1	94.8
Sweden.........	16.9	23.1	70.2	76.8	91.3	96.3	67.8	63.2	71.3	79.8	68.8	65.3	62.5	55.2
United Kingdom.........	15.6	19.1	77.7	79.4	93.9	100.1	85.7	86.5	92.0	93.2	100.3	105.8	106.3	98.3

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.

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

Industry and type of case[2]	1989[1]	1990	1991	1992	1993[4]	1994[4]	1995[4]	1996[4]	1997[4]	1998[4]	1999[4]	2000[4]
PRIVATE SECTOR[5]												
Total cases	8.6	8.8	8.4	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3	6.1
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
Lost workdays	78.7	84.0	86.5	93.8	–	–	–	–	–	–	–	–
Agriculture, forestry, and fishing[5]												
Total cases	10.9	11.6	10.8	11.6	11.2	10.0	9.7	8.7	8.4	7.9	7.3	7.1
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
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
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
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
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
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
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
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
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
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
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
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
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
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	–
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	–
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
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
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
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
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
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
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
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
Lost workdays	168.3	180.2	169.1	175.5	–	–	–	–	–	–	–	–
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
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
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
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
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
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
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
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
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
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
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
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
Lost workdays	97.6	113.1	104.0	108.2	–	–	–	–	–	–	–	–

See footnotes at end of table.

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

Industry and type of case[2]	1989 [1]	1990	1991	1992	1993 [4]	1994 [4]	1995 [4]	1996 [4]	1997 [4]	1998 [4]	1999 [4]	2000 [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	–
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	–
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	–
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
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	–
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	–
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
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	–
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	–
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	–
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
Lost workday cases..........	.9	1.1	1.1	1.2	1.2	1.1	1.0	.9	.9	.5	.8	.8
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
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
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.

Dash indicates data not available.

## 51. Fatal occupational injuries by event or exposure, 1994-2000

Event or exposure[1]	Fatalities			
	1994-98	1999[2]	2000	
	Average	Number	Number	Percent
Total..	6,280	6,054	5,915	100
Transportation incidents...	2,640	2,618	2,571	43
Highway incident..	1,374	1,496	1,363	23
Collision between vehicles, mobile equipment.....................	662	714	694	12
Moving in same direction..............................	113	129	136	2
Moving in opposite directions, oncoming...........................	240	270	243	4
Moving in intersection...............................	136	161	153	3
Vehicle struck stationary object or equipment......................	272	334	279	5
Noncollision incident....................................	368	390	356	6
Jackknifed or overturned—no collision...........................	280	322	304	5
Nonhighway (farm, industrial premises) incident....................	387	352	399	7
Overturned..	215	206	213	4
Aircraft..	304	228	280	5
Worker struck by a vehicle....................................	382	377	370	6
Water vehicle incident..	104	102	84	1
Railway...	78	56	71	1
Assaults and violent acts...	1,168	909	929	16
Homicides...	923	651	677	11
Shooting...	748	509	533	9
Stabbing...	68	62	66	1
Other, including bombing...............................	107	80	78	1
Self-inflicted injuries...	215	218	220	4
Contact with objects and equipment................................	984	1,030	1,005	17
Struck by object..	564	585	570	10
Struck by falling object.......................................	364	358	357	6
Struck by flying object..	60	55	61	1
Caught in or compressed by equipment or objects....................	281	302	294	5
Caught in running equipment or machinery...........................	148	163	157	3
Caught in or crushed in collapsing materials.......................	124	129	123	2
Falls...	686	721	734	12
Fall to lower level...	609	634	659	11
Fall from ladder...	101	96	110	2
Fall from roof...	146	153	150	3
Fall from scaffold, staging....................................	89	92	85	2
Fall on same level...	53	70	56	1
Exposure to harmful substances or environments...................	583	533	480	8
Contact with electric current.....................................	322	280	256	4
Contact with overhead power lines..............................	136	125	128	2
Contact with temperature extremes..................................	45	51	29	–
Exposure to caustic, noxious, or allergenic substances.............	118	108	100	2
Inhalation of substances.......................................	66	55	48	1
Oxygen deficiency...	96	92	93	2
Drowning, submersion..	77	75	74	1
Fires and explosions	199	216	177	3
Other events or exposures[3]....................................	21	27	19	–

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 17, 2000, reported a total of 6,023 fatal work injuries for calendar year 1999. Since then, an additional 31 job-related fatalities were identified, bringing the total job-related fatality count for 1999 to 6,054.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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