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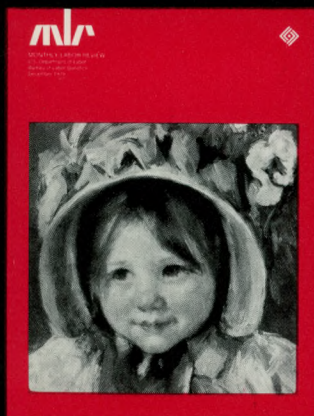
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MONTHLY LABOR REVIEW

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Labor Month In Review



GEORGE MEANY'S RETIREMENT, last month, as president of the AFL-CIO brought forth many tributes to the 85-year-old union leader, including these from U.S. Secretaries of Labor who have known him:

George Shultz. "George Meany is well known for his integrity, his patriotism, and his bluntness. There is never a doubt he will stand up for the things he believes in, whatever the potential blandishments may be from the White House, the Congress, or the press.

"Nor is there ever any question about his commitment to the betterment of the individual American worker. He also has the strength and integrity to be for free enterprise on the grounds that, along with free collective bargaining, it produces a good deal for the American worker.

"He is a genuine patriot. He looks to the defense of our country and our system and is always ready to do what is necessary in the ideological, military, and diplomatic struggle.

James Hodgson. "He was, of course, not without his detractors. American business often scored his unions for power abuses. Yet it was during the Meany era that American business soared to peak levels of productive efficiency and economic success.

"Ideologues also questioned Big George's pragmatic practices and goals. Yet the American worker was well served. Whether measured in terms of gains in human dignity, new high living standards, or attained political clout, Meany's leadership produced results.

"More than any other one man, perhaps more than any other ten men, America can thank this one-time plumber for the current state of our

union affairs. Yes—George Meany will be missed. But his legacy will linger. America will be the better for that legacy."

Arthur Goldberg. "To me, some of the highlights of his career are:

"The merger of the AFL-CIO.

"The disciplining of 11 corruptly led unions initially in the federation.

"His understanding that while the labor movement must assert the special interest of labor, government must act in the common interest of all.

"His intuitive sense that labor should be cautious about placing its trust in princes.

"His ability to speak and write in plain, unadorned English.

"His recognition that a leader must lead but that leadership depends upon the consent of the governed."

Willard Wirtz. "If it is true, as it probably is, that George Meany has been the most influential private citizen in the country, perhaps in the world, for 20 years, it is equally true that no one with this much power has ever been less overawed by it, or by himself.

"There has been too little realization of the effectiveness of this influence in the 1960's when George Meany and Walter Reuther and a few others mustered organized labor's critical support for every article in the new social compact John Kennedy and Lyndon Johnson and Hubert Humphrey took to the Congress.

"We wouldn't have had the Civil Rights Act without that support; or the vastly expanded educational program; or the housing legislation; or the Trade Expansion Act; or the attack on poverty; or a dozen other initiatives that served the Nation's interest first and organized labor's only second."

John Dunlop. "First, he took the leadership to unite the divided AFL and CIO, to keep them together over the past quarter century, and to bring organic unity in the sense that the previously warring camps are not divided today. The federation is united by more than the hyphen of 1955.

"Second, he took the leadership to help enact very considerable social legislation of much broader interest and significance than to the narrow concerns of the constituent unions.

"His critical role in securing Title VII of the Civil Rights Act of 1964 is of special significance.

"George Meany has uniquely personified the main stream of the American labor movement as only Samuel Gompers did before him."

W. J. Usery. "Americans in this century have been bountifully blessed with opportunities to achieve the best life known to man. This blessing has not come by chance, but through the dedicated, conscientious effort and leadership of people such as George Meany.

"His constant, unrelenting support for human rights and freedom for all people can be matched by only a few. His dynamic leadership has brought us the most rewarding system of free collective bargaining in the world, one that is uniquely based on a strong private enterprise system.

Ray Marshall. "George Meany has given unparalleled service to the Nation and its working people. He has fought untiringly to assure social and economic justice for the trade union members he represents. And he has insisted, with equal vigor, that all people have the opportunity to live fuller, more rewarding lives. The American people owe him a debt of gratitude."

The influence of energy on industry output and employment

During 1973–77, energy producers had higher employment growth, lower output growth; growth rates of other industries varied, based on labor, capital, and energy intensity

RONALD E. KUTSCHER

Energy issues have attracted considerable attention since the Arab oil embargo of 1973–74. The natural gas shortage during the winter of 1977, the extended coal strike of 1977–78, and the ever-increasing world price of oil have all heightened the Nation's sensitivity to energy issues. However, some effects of the new economic facts of energy—such as restrictions on private transportation and the uncertainty of home heating fuel supplies—have received more attention than other, equally important effects—such as the impact on employment. Based on the following analysis, it appears that the changes in the price and availability of energy since 1973 have had a measurable effect on the output and employment growth patterns of important groups of industries.

In general, those industries that consume relatively less energy in their production process experienced unusually high output growth rates during 1973–77. Reversing the long-term trend, their output growth rate surpassed the growth rate of the most energy intensive industries. Examined by specific energy resources, however, the effect on industry growth patterns varied.

In this article, the output and employment trends of energy-producing industries are examined over the 1958–77 period, with emphasis on changes during 1973–

77. Similarly, changes in the output and employment patterns of energy-consuming industries are examined, with comparisons among those determined to be the most and least energy intensive, most and least labor intensive, and most and least capital intensive.

Trends for energy producers

Production and employment in energy-producing industries remain a relatively small proportion of national output and employment, accounting for about 4 percent of total output and 1.6 percent of total employment.

A thorough appraisal of the energy-employment relationship, however, requires a review of the output and employment trends of energy-producing industries. For the purpose of this analysis, production encompasses crude petroleum and natural and liquid gas extraction (including oil- and gas-well drilling) coal mining, petroleum refining, and both electric and gas utilities.¹ This definition does not include solar, synthetic fuels, or other such unconventional energy sources that are largely in a research and development mode. Also, only a limited amount of energy distribution to users is included in the sectors described above. For example, they cover the distribution of natural gas and electricity but exclude the distribution of petroleum or coal products. Construction of electrical generating plants or petroleum refineries is also excluded.

Ronald E. Kutscher is Assistant Commissioner for Economic Growth and Employment Projections, Bureau of Labor Statistics.

Energy output. Table 1 highlights several important shifts in energy production patterns. During the 1958–77 period, there was a more rapid rate of growth in refined petroleum products than for crude petroleum extraction (4.6 percent compared with 1.6 percent average annual growth). The disparity in these two industries growth rates reflects the substitution of imported crude oil for domestic crude. Beginning with the 1967–73 period, crude petroleum extraction increased at a rate of 1.5 percent a year, while petroleum refining grew at a 4.4-percent annual rate. However, the gap in the growth of the two sectors widened dramatically during the 1973–77 period, reflecting an even more rapid rate of increase in imported crude oil. A number of factors have been cited as contributing to the decline of domestic crude oil extraction—ranging from a shortage of drilling rigs during part of this period, to price controls, to the decline in the availability of crude oil reserves in the lower 48 States.

These production data also show a relative movement away from natural gas to electricity during this period. This is reflected in the relative rates of growth of output for gas and for electric utilities (table 1). Examined by subperiods, the shift appears to have begun prior to 1973. However, the relative shift between natural gas and electricity becomes unclear during 1973–77—when electric utilities showed a decline. Of course, the relative rates of growth in output of these two energy industries reflect a complex substitution effect—not just between them but with petroleum products as well. Coal experienced a moderate rate of growth relative to most other types of energy during 1958–77 period. However, since 1973, coal output has increased at a very rapid rate. A primary factor behind this growth was the large supply of coal in the United States relative to other types of energy. The supply picture, of course, encompasses not only the quantity but also the stability of that supply. Finally the production data in table 1 show a dramatic turnaround in oil- and gas-well drilling since 1973, with a 1973–77 growth rate approaching 9 percent. This rapid growth compares with earlier declines in oil- and gas-well drilling and reflects, among other factors, prospects for higher product prices, an important element in the decision to search for new sources of oil and gas.

Other factors, of course, have influenced the relative growth rates of energy output during this period. Natural gas, for example, has been under price controls for several decades. Electricity production also reflects close regulatory review. Further, domestic production of natural gas and petroleum has been constrained, particularly at the regulated price.

Energy employment. Within the energy-producing sectors discussed here, significant employment shifts have

occurred since 1958. For example, employment growth in coal mining has grown faster than output—reflecting a decline in productivity—since 1967, although the gap narrowed during 1973–77.² A somewhat similar pattern occurred in the crude petroleum and natural gas extraction sector, particularly for oil- and gas-well drilling and exploration. However, in the latter, the disparity between output and employment growth occurred only during 1973–77, probably indicating intensification of the search for new oil and gas. In the other three energy-producing industries, 1973–77 employment growth was slower than output growth—pointing to productivity gains in these sectors.

As shown in chart 1, the employment trend in all crude petroleum and natural and liquid gas extraction industries (including oil- and gas-well drilling) was down—rather sharply—until the early 1970's. Since then, employment in these two sectors has increased. Within the well-drilling and exploration sector, for example, employment growth averaged an unprecedented 14.0 percent per year. Nevertheless, this increased effort in seeking new oil has yet to be translated into production, inasmuch as domestic crude oil production (actual units, as measured by changes in real price) declined 3.0 percent a year during 1973–77.

The coal mining employment trend was down sharply during 1947–67, but since then has shown a rather dramatic turnaround. In fact, during 1967–77, the number

Table 1. Output and employment trends of energy producing industries, selected years, 1958–77

Output and employment	1958	1967	1973	1977 ¹	Compound rates of growth			
					1958–77	1958–67	1967–73	1973–77
Output (millions of constant 1972 dollars)								
Coal mining	\$4,275	\$5,224	\$5,342	\$6,844	2.5	2.3	0.4	6.4
Crude petroleum and natural and liquid gas extraction ²	11,416	15,905	17,381	15,301	1.6	3.8	1.5	-3.1
Oil and gas well drilling ²	3,393	3,047	2,740	3,852	.7	-1.2	-1.7	8.9
Petroleum refining	19,465	27,656	35,752	45,996	4.6	4.0	4.4	6.5
Electric utilities	13,105	23,214	34,198	33,826	5.1	6.6	6.7	-3
Gas utilities	10,370	17,063	20,192	18,910	3.2	5.7	2.8	-1.6
Employment (thousands)³								
Coal mining	230	152	177	233	.1	-4.5	2.6	7.1
Crude petroleum and natural and liquid gas extraction	210	167	160	195	-4	-2.5	-7	5.1
Oil and gas well drilling	135	126	136	230	2.8	-.8	1.3	14.0
Petroleum refining	224	183	193	209	-.4	-2.2	.9	2.0
Electric utilities	357	364	426	434	1.0	.2	1.2	.5
Gas utilities	213	217	219	214	0	.2	.1	-.6

¹ 1977 output data are preliminary.

² Crude petroleum and natural and liquid gas extraction industries and oil- and gas-well drilling industries are components of SIC 13, oil and gas extraction industries.

³ Employment includes, wage and salary workers, self-employed, and unpaid family workers.

Chart 1. Employment in crude petroleum and natural gas extraction industries, 1947-78



of jobs in coal mining has increased by about 81,000. Most of this employment growth occurred in the deep, labor intensive mines of the Eastern United States. Western coal production is a small but growing proportion of total U.S. coal production; however, employment growth in these mines is not as pronounced. Western mines are less labor intensive because they are predominantly strip rather than deep mines.³

A review of employment trends in other energy producing industries shows little change during the last 10 years. Electric utilities employment grew moderately from 1969 to 1973; since then, both production and em-

ployment in electric utilities experienced almost no growth. The sharp reversal in the use of electricity (table 1) is not easy to explain, because price increases for electricity have been less than for some other energy sources. The 1974-75 recession and energy conservation programs initiated in this period may have affected total consumption of electricity.

Overall, the output and employment trends for these energy-producing sectors can be summarized as follows: (1) employment in energy-producing industries is a small part of total employment; (2) in several energy-producing industries, employment declined through the

late 1960's, stabilized, and began increasing—consequently, it is clear that not just the oil embargo of 1973 and the higher prices that followed contributed to this turnaround, but other factors such as lower production of oil and natural gas in the contiguous 48 States, regulation of natural gas prices, and the relative availability of coal contributed as well; (3) individual energy-producing industries have experienced differing growth patterns, as one type of energy appeared to be substituted for another because of changes in relative prices and because of other factors such as supply constraints and regulation; (4) several of these energy-producing industries have shown disparate changes in their rates of growth for output and employment since 1973, resulting in productivity increases for some industries (petroleum refining and both electric and gas utilities) and declines in productivity for others (oil and gas extraction and coal mining).

Trends for energy consumers

An industry can use energy for many different reasons, but uses can be broadly grouped into three categories: for heating, lighting, or cooling offices, stores, factories, or warehouses; as a raw material in a manufacturing process; or as a power or heat source, including fuel for transportation. The latter of these broad functional uses is the most crucial from an employment perspective: power can be a substitute for labor—just as capital equipment also can substitute for labor.

It is impossible at the present time to separate, in any systematic way, energy uses by industry. Therefore, an analysis of energy use by industry was performed for all energy uses combined. However, direct and indirect, or "embodied," energy consumption can be measured separately. Indirect energy use covers the proportion of energy used in producing parts, materials, power, or services used as inputs to production by an industry. Examined on this basis, an industry such as dairy and poultry production, which uses relatively small amounts of energy directly, is shown as a relatively large energy user because of the energy embodied in producing material or service inputs such as animal feeds or fertilizers.

Each industry produces its goods or services based on a mix of the factors of production—capital, labor, energy, and other material inputs. Over time, the mix of these factors can change in an industry because of changes in the relative prices of these factors, or because of changes in technology. Industries identified in this analysis as capital, labor, or energy intensive use all of the factors of production, even though one or another of the factors may predominate.

Industry input-output data for 1973 were used to calculate total energy use, direct use per \$100 of production, and the total of direct and indirect use per

\$100 of production for each of the four sources of energy (coal, oil, natural gas, and electricity).⁴ As shown in table 2, the most and least energy intensive industries were determined based on these calculations. Data on output per hour of employment were used in table 3 to determine the most and least labor intensive industries in 1973. And a newly developed measure of capital stock per unit of output was used to determine the most and least capital intensive industries for 1973,⁵ as shown in table 4. Some industries, such as amusement and recreational services, are ranked as both very low energy intensive and very high labor intensive; this is simply a logical result of the specific production process involved.

The review of industry output and employment trends which follows could have been done for more conventional groupings of industries, such as mining, durable goods, manufacturing, or transportation. However, grouping industries by their relative use of energy, labor, and capital provides a different and, for some purposes, more relevant perspective.

For the industries identified in tables 2, 3, and 4, 1973–77 output growth (in real terms) and employment growth were examined and compared with earlier periods, as shown in table 5. In addition to industry groupings by energy type, a selection of extreme energy intensive (both high and low) industries was made from the four energy sources. Listed in the note to table 5, these industries ranked highest or lowest based on their relative consumption of all energy types. Based on the data in table 5, the following observations can be made.

The most energy intensive industries have experienced slower output growth since 1973, but this slowdown appears to be of about the same proportion as the drop in the rate of growth for the entire economy. Employment in the most energy intensive industries experienced an absolute decline during 1973–77, an appreciable change from the 0.8-percent long-term growth rate.

The least energy intensive industries had a faster rate of output growth during 1973–77 than both the overall economy and the most energy intensive industries. The faster growth rate for the least energy intensive industries compared to the most energy intensive industries

Detailed industry data

Energy intensiveness—for oil, coal, electricity, and gas—has been calculated for 154 separate industries, based on a 1973 input-output table. These data, along with detailed industry data for labor and capital intensity, are available from the Office of Economic Growth and Employment Projections, Bureau of Labor Statistics, Washington, D. C. 20212. The data also will be published early next year together with a reprint of this article.

Table 2. The most and least energy intensive industries, by type of energy, 1973

Industry	Most energy intensive				Industry	Least energy intensive			
	Total use per \$100 of production	Direct use per \$100 of production	Direct use per 1,000 worker hours	Total value of directly consumed energy (millions)		Total use per \$100 of production	Direct use per \$100 of production	Direct use per 1,000 worker hours	Total value of directly consumed energy (millions)
Coal					Coal				
Electric utilities	\$5.99	\$4.56	\$1,430.38	\$1,560.6	Transportation services	\$0.04	\$0.01	\$0.79	\$0.2
Blast furnaces, basic steel	4.12	2.73	728.43	944.0	Doctors and dentist offices	.05	(¹)	(¹)	(¹)
Metal containers	1.58	.16	4.79	0.9	Miscellaneous professional services	.05	(¹)	(¹)	.2
Cement and concrete	1.49	.83	188.44	82.2	Communications	.06	(¹)	.26	.6
Synthetic fibers	1.40	.86	192.21	47.9	Post office	.07	(¹)	.12	.2
Metal stampings	1.28	.04	6.81	3.9	Insurance	.07	(¹)	(¹)	(¹)
Fabricated structural metal	1.23	(¹)	.52	0.5	Truck transportation	.08	.02	1.67	4.9
Water and sanitary services	1.09	.15	55.52	9.2	Banking	.09	(¹)	(¹)	.2
Iron and steel foundries	1.06	.07	10.86	7.6	Amusement and recreational services	.10	(¹)	.15	.2
Railroad equipment	1.02	.04	13.40	1.4	Agricultural, forestry, and fishery services	.11	.01	1.01	.5
Oil					Oil				
Industrial chemicals	\$22.87	\$16.38	\$5,850.80	\$3,879.1	Transportation services	\$0.19	(¹)	(¹)	(¹)
Plastic and synthetic rubber	14.14	3.26	1,375.19	317.7	Banking	.31	\$0.06	7.57	\$17.2
Agricultural chemicals	10.40	1.05	325.89	34.9	Communications	.48	.20	31.77	69.8
Miscellaneous chemical products	7.82	1.57	397.01	85.0	Radio and TV broadcasting	.49	.01	.95	.3
New highway construction	7.62	6.03	1,051.85	575.4	Doctors and dentist offices	.51	.18	24.39	46.9
Paint and allied products	7.11	1.21	373.15	55.6	Other medical services	.60	.09	6.70	10.3
Air transportation	6.45	5.29	924.02	673.6	Insurance	.60	.12	17.71	53.1
Food and feed grains	6.29	3.33	621.09	697.5	Motion picture production	.61	.08	18.86	7.0
Synthetic fibers	6.03	.10	21.24	5.3	Miscellaneous professional services	.65	.23	27.64	67.3
Cleaning and toilet preparations	5.07	.64	267.53	69.3	Credit agencies and financial institutions	.68	.14	10.92	15.2
Electricity					Electricity				
Water and sanitary services	\$7.69	\$1.56	\$578.42	\$95.4	Transportation services	\$0.28	\$0.11	\$8.35	\$2.0
Pipeline transportation	7.39	6.39	3,101.43	108.6	Miscellaneous professional services	.40	.12	13.58	33.1
Local government passenger transit	5.86	5.01	341.20	68.2	Doctors and dentist offices	.44	.03	3.97	7.6
Other nonferrous mining	5.80	3.39	517.05	22.8	Truck transportation	.45	.06	6.54	19.1
Iron ore mining	5.14	3.30	1,066.95	63.0	Agricultural, forestry, and fishery services	.55	.04	2.98	1.3
Chemical and fertilizer mineral mining	4.93	3.62	834.44	30.0	Tobacco manufacturing	.62	.14	93.77	14.9
Primary aluminum products	4.92	2.53	815.89	274.1	Insurance	.63	.14	20.20	60.6
Nonprofit organizations	4.49	3.76	204.88	664.4	Maintenance and repair construction	.66	.02	3.54	7.4
Copper ore mining	4.47	2.64	385.68	33.9	Miscellaneous business services	.67	.22	26.01	93.9
Industrial chemicals	4.02	2.02	720.84	477.9	Communications	.68	.47	73.97	162.6
Natural gas					Natural gas				
Structural clay products	\$9.21	\$5.60	\$627.21	\$69.6	Transportation services	\$0.09	\$0.01	\$0.58	\$0.1
Chemical and fertilizer mineral mining	5.73	3.15	725.28	26.1	Doctors and dentist offices	.23	(¹)	.66	1.3
Electric utilities	5.56	2.92	916.30	999.7	Communications	.24	.09	13.44	29.5
Industrial chemicals	4.72	1.83	655.05	434.3	Insurance	.26	.03	3.63	10.9
Water and sanitary services	3.42	.78	289.39	47.8	Truck transportation	.28	.03	3.06	9.0
Glass manufacturing	3.39	1.84	224.21	121.5	Post office	.28	.09	5.61	7.6
Petroleum refining	3.35	1.45	1,225.63	507.4	Banking	.32	.12	13.72	31.1
Iron ore mining	3.26	1.46	473.73	28.0	Agricultural, forestry, and fishing services	.35	.03	2.75	1.2
Cement and concrete	3.05	1.36	307.00	133.9	Tobacco manufacturing	.36	.05	34.15	5.4
Plaster and synthetic rubber	3.01	.36	151.56	35.0	Amusement and recreational services	.38	.10	7.25	8.6

¹ Less than 0.005.

reverses a pattern that had prevailed in all earlier periods examined. Employment growth in the least energy intensive industries remained stable—at about twice the national average—before and after 1973.

When the growth rates of the most and least energy intensive industries in each of the four energy types were compared, no consistent pattern emerged. The most coal intensive industries experienced the most pronounced output slowdown in the 1973–77 period. The most intensive industrial users of the other three energy types—oil, electricity, and natural gas—showed output slowdowns during 1973–77, but the reduced growth for all three groups was roughly consistent with the slowdown in the overall economy. Thus, the impact on the most oil intensive industries was not as pronounced as might have been expected, given that the price of oil in-

creased relatively more than did the price of other energy types. Output growth for the least intensive users of three energy sources—coal, oil, and electricity—during 1973–77 was faster than that of the most intensive consumers of those energy types—a reversal from the long-term growth patterns. The least intensive users of natural gas were the exception, with a 1973–77 growth rate below that of the most intensive users of natural gas.

Employment growth in 1973–77 for the most and least intensive users of the four energy types also varied. The employment growth among each group of least energy intensive industries was faster than for their most energy intensive counterparts. This was also true of earlier periods. Employment growth patterns among each group of most energy intensive industries during

Table 3. Most and least labor intensive industries, 1973

Industry	Worker hours (millions)	Output per worker hour ¹
Most labor intensive:		
Households	2,672	\$1.97
Other agricultural products	3,532	4.90
Hotels and lodging place	1,843	4.91
Barber and beauty shops	777	4.97
Nonprofit organizations	3,243	5.35
Educational services, private	2,314	5.56
Cotton	360	5.85
Retail trade	25,803	5.85
Amusements and recreation services	1,180	5.88
Post Office	1,360	6.09
Least labor intensive:		
Petroleum refining and related products	414	75.99
Tobacco manufacturing	133	62.70
Alcoholic beverages	122	60.20
Real estate	20	58.34
Advertising	84	56.88
Gas utilities	354	56.68
Pipeline transportation	153	49.31
Sugar	144	45.31
Meat products	48	41.92
Cleaning and toilet preparations	112	41.87

¹ Output per hour data are stated in constant 1972 dollars.

NOTE: Rankings of labor intensiveness reflect the amount of production per hour. As a consequence, those industries producing the least per hour are the most labor intensive, while those industries producing the most per hour are the least labor intensive.

1973-77 approximated the long-term trend, except for the most coal intensive industries. The latter showed a 1.4-percent average annual decline during 1973-77, a marked change from the growth rate posted in earlier periods. Another notable employment growth change during 1973-77 was the sharply narrowed growth rate differential between the most and least electricity intensive industries.

The most labor intensive industries have shown a somewhat faster rate of output growth than the overall economy during 1973-77, a reversal of the pattern recorded in earlier periods. Employment growth in the most labor intensive industries has been above the national average since 1973; in prior periods, employment growth in these industries has been about equal to that of the overall economy.

The least labor intensive industries have shown appreciably faster output growth than the overall economy since 1973. In earlier periods, these industries had experienced output growth at about the same rate as the national average. Employment growth among the least labor intensive industries was below the rate for the overall economy during 1973-77; generally, the rate has been no more than the national average, and in a number of instances it has been appreciably less.

The most capital intensive industries have shown, for all periods reviewed, appreciably faster output growth than the overall economy. Since 1973, however, the difference has narrowed. Employment growth in the most capital intensive industries has been consistently slower than for the overall economy. With absolute declines

in employment averaging 0.1 percent per year for these industries during 1973-77, the difference between this rate and the national average (1.5 percent annual increase) widened.

The least capital intensive industries have shown much slower output growth than the national average for all periods reviewed. In fact, the gap increased during 1973-77, when these industries experienced absolute declines in output averaging 0.9 percent per year. Employment growth in these industries has been below the national average over the long term; during 1973-77, absolute declines averaging 0.4 percent per year increased the difference.

The energy producing industries have shown slower output growth than the overall economy since 1973. Employment growth in these industries, however, has been faster than the national average during 1973-77. In each case, these data reverse earlier patterns. As noted earlier in this article, however, the overall energy industry trends may differ from the data for specific types of energy production.

Verifying the energy factor

The data appear to reveal some shifts in the underlying pattern of output and employment growth in industries grouped by their use of energy, capital, and labor, but a few cautions should be noted. In evaluating whether there has been a permanent change in underlying trends, a 4-year period, 1973-77, is very short; particularly when the period includes a major recession

Table 4. Most and least capital intensive industries, 1973

Industry	Gross capital stock (millions of 1972 dollars)	Output (millions of 1972 dollars)	Capital stock per unit of output
Most capital intensive:			
Railroad transportation	\$51,106	\$18,679	\$2.74
Miscellaneous chemical products	11,873	5,489	2.16
Air transportation	27,812	14,351	1.94
Electric utilities	54,033	34,198	1.58
Water transportation	13,511	9,344	1.45
Communication except radio and TV	49,051	34,446	1.42
Transportation services	2,477	1,861	1.33
Chemical and fertilizer mineral mining	959	820	1.17
Pipeline transportation	1,927	1,702	1.13
Stone and clay mining	3,158	3,216	.98
Least capital intensive:			
Other transportation equipment	171	5,521	.03
Miscellaneous manufactures	391	6,737	.06
Meat products	1,773	30,571	.06
Apparel	1,765	28,467	.06
Tobacco	818	10,483	.08
Medical and dental instruments	279	3,534	.08
Water and sanitary services	610	6,161	.10
Radio and TV receiving sets	626	6,194	.10
Miscellaneous food products	1,449	13,666	.11
New and repair construction	17,816	157,667	.11

NOTE: Capital stock are gross stock of plant and equipment priced in constant 1972 dollars.

Table 5. Output and employment trends, selected industry groups, 1959-77

Industry group	Employment					Constant dollar output				
	1973 Level (thousands)	Compound growth rates				1973 Level ¹ (billions of 1972 dollars)	Compound growth rates			
		1959-77	1959-67	1967-73	1973-77		1959-77	1959-67	1967-73	1973-77
Total	88,409.0	1.8	1.8	2.1	1.5	2,317.5	3.5	4.1	3.8	1.8
Public	12,289.0	3.8	4.6	3.4	2.7	138.9	2.7	4.2	1.5	1.5
Private	76,120.0	1.6	1.4	1.9	1.3	2,178.6	3.6	4.1	4.0	1.8
Energy intensive:										
Most	1,551.0	.8	1.1	.9	-2	98.6	5.3	5.5	6.6	3.1
Least	9,575.0	3.6	3.5	4.2	3.1	230.1	4.8	4.8	5.2	4.1
Labor intensive:										
Most	23,560.0	1.7	1.2	2.1	1.9	238.2	2.7	3.0	2.9	2.0
Least	2,312.0	1.0	.3	2.0	1.0	249.9	3.8	4.1	3.9	3.0
Capital intensive:										
Most	2,985.0	.4	.2	.8	-.1	124.1	5.1	6.0	6.0	2.1
Least	7,426.0	1.2	.9	2.5	-4	271.7	2.1	3.2	2.6	-9
Energy producers	1,175.0	.4	-1.3	1.4	2.3	112.9	3.8	4.6	4.0	1.7
Coal intensive:										
Most	2,538.0	.8	1.6	1.1	-1.4	133.3	3.3	4.4	4.2	-.3
Least	9,136.0	2.9	2.7	3.6	2.2	213.2	4.2	4.1	4.9	3.5
Oil intensive:										
Most	2,139.0	.1	.2	-0	.1	107.9	5.0	5.6	4.9	3.9
Least	8,122.0	3.9	3.3	4.7	3.9	196.3	4.4	4.0	5.2	4.1
Electricity intensive:										
Most	2,623.0	2.3	2.4	1.8	2.7	66.4	4.6	4.9	5.2	3.0
Least	9,886.0	3.4	3.0	4.0	3.0	256.7	4.3	4.6	4.5	3.5
Gas intensive:										
Most	1,690.0	.9	.5	1.5	.6	130.4	5.0	4.7	6.0	4.0
Least	7,938.0	2.6	2.5	3.3	1.6	194.9	4.0	3.7	5.1	3.2

¹ Private 1973 output is a gross duplicated measure, while public 1973 output is on a Gross National Product basis. Thus, the total is a mixture of the two concepts. Even though gross duplicated output is a much higher measure than GNP, growth rates using the two measures are similar.

NOTE: The following were selected as the 10 most energy intensive industries, based on their relative consumption of all energy types: industrial chemicals; plastic and synthetic rub-

ber; synthetic fibers; cement and concrete; agricultural chemicals; stone and clay mining; electric utilities; miscellaneous chemical products; structural clay products; and iron ore mining.

The following were selected as the 10 least energy intensive industries, based on their relative consumption of all energy types: transportation services; doctors and dentist offices; communication; insurance; banking; miscellaneous business services; miscellaneous professional services; tobacco manufacturing; amusement and recreational service; and post office.

and partial recovery. Therefore, caution is necessary in considering whether there has been a change in underlying trends, or only a cyclical phenomenon.

Although 1973 was an important juncture in the price—and, consequently, the use—of energy, it was also the beginning of a cyclical downturn. Thus, changes in trend, if cyclically related, should be observable in previous cyclical downturns and recoveries. Data from the 3-year period 1958-61, covering a cyclical downturn and recovery, indicate that at least some of the post-1973 changes also occurred then. (See table 6.) For example, employment in the most energy intensive industries also declined during 1958-61. Output and employment growth in energy-producing industries, however, are not comparable between the two periods.

A review of other changes associated with the 1973-77 period reinforces the observation that this period was not just a cyclical downturn. The output growth rate of the most labor intensive industries surpassed that of the total economy, a complete reversal from the earlier period. Growth rates of the least capital intensive industries appear vastly different from the earlier period. In addition, the output growth rate of the least energy intensive industries was absolutely greater than that of the most energy intensive industries and relatively great-

er than the growth rate of the total economy, a pattern not found in the earlier period. Thus, it appears that changes in energy prices, beginning in 1973, exerted a measurable impact on the growth patterns of a broad range of industries, with the least energy intensive and the most labor intensive industries experiencing positive effects.

Classifications of energy, labor, and capital intensiveness contain duplication in that an industry can be both energy and capital intensive. An important question, therefore, involves the sensitivity of the trends to the elimination of duplication among the industry lists. Data calculated after duplication among these lists was eliminated show very little change in underlying trend results.

It cannot be concluded that, because an industry's growth pattern changes, a substitution of one factor for another has occurred. In this examination, industries were ranked based on their capital, labor, and energy intensiveness, and their changing growth patterns were analyzed. However, no explicit account was taken of the possible substitution of production factors. Further, a considerable body of research exists which shows that these factors, in some instances, are not substitutes but complements to the other factors of production.⁶

The industry/energy equation

The importance of energy in the U.S. economy cannot be overstated. Since 1973, dramatic changes in the price of most energy resources (particularly petroleum) have influenced the lives of nearly every individual consumer. These energy supply changes have also influenced the employment and output growth rates of a broad range of industries, partially based on the rate energy is used on their production processes.

This study has focused on the most and least energy intensive industrial users of energy, attempting to iso-

late the effect of the 1973-77 energy supply changes. Based on this analysis, the least energy intensive industries appear to have benefited from the otherwise adverse conditions. The output growth rate for these industries during 1973-77 was much greater than that of the total economy and eclipsed by a wide margin the output growth rate for the most energy intensive industries—a reversal of the long-term trend. It is not insignificant that this reversal occurred during a period that included the worst recession in modern times.

The employment growth rate of the least energy intensive industries during 1973-77 did not deviate much as output growth from the long-term trends, remaining about twice that of the total economy. Although employment declined for the most energy intensive industries over this period, this change is similar to the employment decline during the 1958-61 cyclical downturn. Thus, employment growth patterns appeared to correspond roughly with the output growth rate changes in these industries during 1973-77.

As discussed earlier, insufficient time has elapsed to determine whether these changes are just short term adjustments or will prevail over the long run. Capital stock is relatively fixed in the short run. Given sufficient time to adjust, some producers of energy intensive goods or services will make changes in their production processes which will affect their use of energy. This could influence the relative prices of the goods and services they produce and equalize the apparent advantage of less energy intensive industries in an era of limited energy supplies. □

Table 6. Output and employment trends of selected industry groups, 1958-61 and 1973-77

[Compound rates of growth]

Industry group	Employment		Output in constant 1972 dollars	
	1958-61	1973-77	1958-61	1973-77
Total	1.4	1.5	3.8	1.8
Public	3.0	2.7	2.9	1.5
Private	1.2	1.3	3.9	1.8
Energy intensive:				
Most	-4	-2	5.1	3.1
Least	2.8	3.1	5.1	4.1
Labor intensive:				
Most	2.0	1.9	1.7	2.0
Least .....	.2	1.0	5.2	3.0
Capital intensive:				
Most	-1.7	-.1	3.8	2.1
Least .....	.6	-.4	4.3	-.9
Energy producing	-2.8	2.3	3.5	1.7

NOTE: The notes to table 5 apply here also.

FOOTNOTES

¹ From the viewpoint of the Standard Industrial Classification (1967 version), this includes the following SIC codes: 11, 12, 1311, 1321, 138, 29, 491, 492, and 493. In the BLS Economic Growth model, energy production covers sectors 11, 12, 20, 60, 126, and 127. Although employment and production data presented early in the article are available in the 1972 version of the SIC, the data used in the later analysis are not. Thus, to be consistent, the 1967 SIC base is used for the industry data throughout this article.

² The relationship between output and employment trends provides only a very crude guide to productivity trends. The results in this case appear consistent with the BLS official productivity measures. See BLS Bulletin 2002, "Productivity Indexes for Selected Industries," 1978 Edition, September 1978.

³ For an examination of the potential employment growth in both Western and Eastern U.S. coal mines, see Willis J. Nordlund and John Mumford, "Estimating employment potential in U.S. energy industries," *Monthly Labor Review*, May 1978, pp. 10-13. Other aspects of employment growth in the coal industry are examined in

Everett M. Kassalow, "Labor-management relations and the coal industry," *Monthly Labor Review*, May 1979, pp. 23-27.

⁴ The 1973 input-output table used in this analysis is a BLS update of the 1967 input-output table prepared by the Bureau of Economic Analysis, Department of Commerce. The original 400-sector tables have been aggregated into 162 sectors by BLS.

⁵ The capital stock data is gross stock in constant prices. These data on industry capital stock were prepared by BLS. A detailed bulletin "Capital stocks estimates for input-output industries: methods and data," BLS Bulletin 2034, presents the data and methodology used in preparing industry capital stock data.

⁶ Ernst R. Berndt and Laurits R. Christensen, "The Translog Function and the Substitution of Equipment, Structure, and Labor in U.S. Manufacturing, 1929-1968," *Journal of Econometrics*, March 1973; and Ernst R. Berndt and David O. Wood, "Technology, Prices, and the Derived Demand for Energy," *The Review of Economics and Statistics*, August 1975.

The Producer Price Index revision: overview and pilot survey results

Data on the four industries tested show that expanded coverage, better samples, and improved methodology significantly affected BLS estimates of price change

JOHN F. EARLY

As the first stage of a comprehensive revision of the Producer Price Index program¹ the Bureau of Labor Statistics has recently completed a pilot survey to test the new methodology and operational procedures. The four-industry trial run implemented changes in sampling, collection, pricing, and weighting. This article reports on the results of the pilot survey for 1978 and discusses other aspects of the Producer Price Index Revision program.

Program for revision

The goal of the revision program is to replace and expand the mining and manufacturing portions of the current Producer Price Indexes (PPI) with new indexes covering all 493 manufacturing and mining industries at the four-digit level of detail in the Standard Industrial Classification (SIC) System. Data for the first four industries in the pilot survey are now being released on a monthly basis.² Beginning with the data for January 1980, 12 additional industries will be published using the methods and systems of the full-scale revision. Publication then is planned to accelerate, increasing to 49 industries by the end of 1980; 124 by 1981; 234 by 1982; 344 by 1983; 454 by 1984; and all 493 by early 1985.³ As indexes for new industries are published under the revision program, they will replace the corresponding commodity indexes in the present structure.

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Finally, in 1983, BLS will shift to the new revision structure as the framework for publication and analysis.

Price indexes initially will be published for the total output and for major products and product classes of each industry surveyed. As data from additional industries become available, indexes will be developed for products, regardless of the industry of origin. Output price indexes will be developed for groups of industries and for stage-of-processing industry sectors. Price indexes of industry inputs will also be constructed.

Briefly, the following are the major improvements that will be incorporated in the new indexes:

- Coverage of mining and manufacturing will be complete. The present indexes include prices for products representing only about half of the value of shipments in mining and manufacturing production. Many major industries, such as printing and publishing and computers, are not covered at all. Even among the covered industries, pricing is largely confined to major products. In the new indexes, all industries will be surveyed and every source of revenue—primary production, secondary production, resales, and miscellaneous receipts—will be sampled for pricing in each industry.
- Samples of both producers and products will be much larger. For the present indexes, about 3,000 producers report prices on 10,000 items in 2,800 product areas. When the revision is complete, about 30,000 producers will be reporting prices on 140,000

items in nearly 10,000 product areas, of which about 6,000 will be published. (The samples in the pilot survey are less than half the size of those to be used in the full-scale survey.)

- The new indexes will better represent the different kinds of transactions that can take place by including them in the index sample. For example, a sale may be "off the shelf" or the result of a long-term contract; the buyer may be a distributor, retailer, exporter, or manufacturer; the sale may be in the open market or to another part of the company utilizing a transfer price; finally, items may be sold individually, or by the dozen, gross, carload, or other quantity. These variables are, of course, held constant from one month to the next in constructing both the new and present indexes. In the present indexes, a particular item is priced only for a "typical" customer and transaction size. Contract sales have only rarely been included, and intra-company transfer sales have been definitionally excluded.
- Substantial effort will be exerted to obtain transaction prices—that is, the price received by the producer. With the exception of machinery commodities, for which order prices generally continued to be requested, the present PPI in recent years has sought to reflect transaction prices, and substantial progress has already been made; however, some areas of the present index continue to reflect list prices, prices from trade journals, and nominal prices from organized exchanges. For the new index, more time and resources will be used to obtain actual transaction prices.
- Samples of producers and items to be priced will be selected on a probability basis for the new indexes. The present indexes have been composed almost exclusively of volume-selling items from major producers selected on a judgmental basis. While this technique ensures that the "most important" prices are included, it also produces an index that automatically excludes substantial portions of the market. The direction and magnitude of the resulting bias are inherently unknowable. The major producers and volume-selling products will continue to have a major role in the new index, because the "probability-proportional-to-size" technique to be used will produce a sample in which the different types of producers, products, and transactions will appear with a frequency and weight proportional to their shipment values in the economy. The introduction of probability techniques for sample selection will allow the calculation of measures of precision (variances and standard errors) which will aid analysts in assessing price trends.⁴
- The old commodity index structure for broad levels of aggregation, such as All Commodities or Industri-

als, suffers from multiple counting of price changes. For example if a price increase for raw cotton is passed on to cotton yarn, cotton gray cloth, finished cotton cloth, and then cotton shirts, that price increase would be reflected five times in the All-Commodities Index, weighted each time by the total shipment value of each particular item. To prevent such distortions in the indexes, *net output* weights will be used. Net output is the value of shipments that leave an industry; shipments within an industry are excluded. At the four-digit level of industry detail, the differences between net and gross value of shipments are very small. As a result, the pilot indexes provide very little insight into the effects this change will have as more industries are completed and summary indexes are calculated.

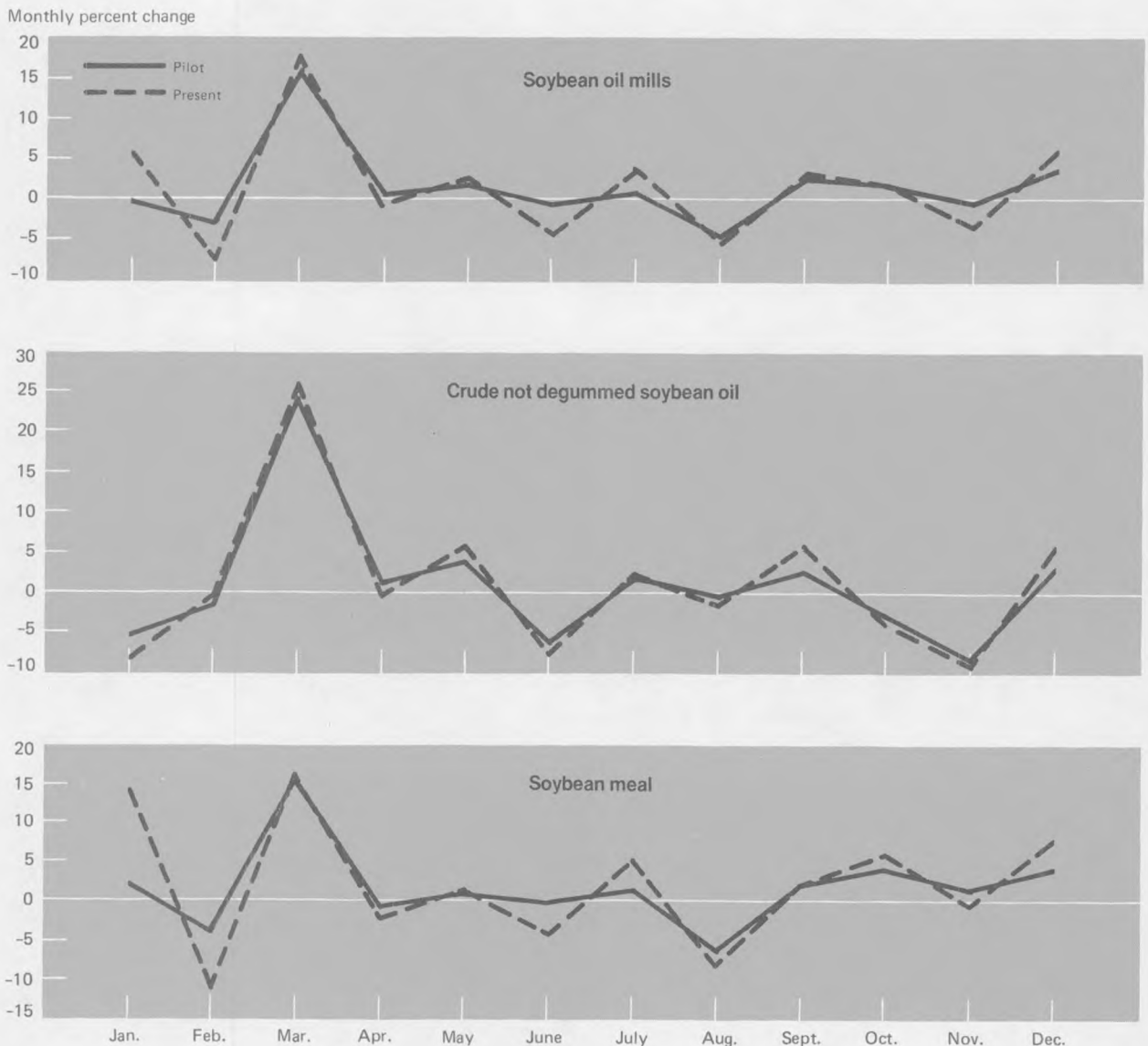
- One of the most persistent problems in constructing good price indexes is quality adjustment. When an item that is being priced is discontinued, it is replaced by a new item. The difference between the observed price of the two items may be factored into two components—(1) the change resulting from the physical change in the item, the quality change, and (2) the pure price change. Only the pure price change should be reflected in a price index. As part of the revision effort, research is being conducted on the better ways to do quality adjustment, but improvement in this area will not be introduced initially.

The pilot indexes

The four industries tested in the pilot survey were soybean oil mills, home laundry equipment, newspaper printing and publishing, and concrete products except brick and block. The industries were selected to provide a variety of problems with which to test the survey. Industry output price indexes are published in the present program for the first two pilot industries, allowing for direct comparison between the results of the present and pilot surveys. Charts 1 and 2 compare the percent change in the two sets of indexes for the two industries as a whole and for their major products as well. In the present PPI, no index is published for newspaper printing and publishing and, for concrete products except brick and block, only a commodity index for reinforced storm sewer pipe is published. Chart 3 displays the index changes for the present and pilot index for reinforced storm sewer pipe. (Table 1 lists data for all three charts.)

The charts show significant differences between the present and revision indexes, although these differences were not consistent across industries. For soybean oil mills, the aggregate indexes followed each other closely; however, the indexes diverged in individual months for industry products. For household laundry equipment, the present index rose more than 60 percent faster than the revised one from December 1977 to December 1978,

Chart 1. Comparison of present and pilot revised Producer Price Indexes for the soybean oil mills industry, 1978



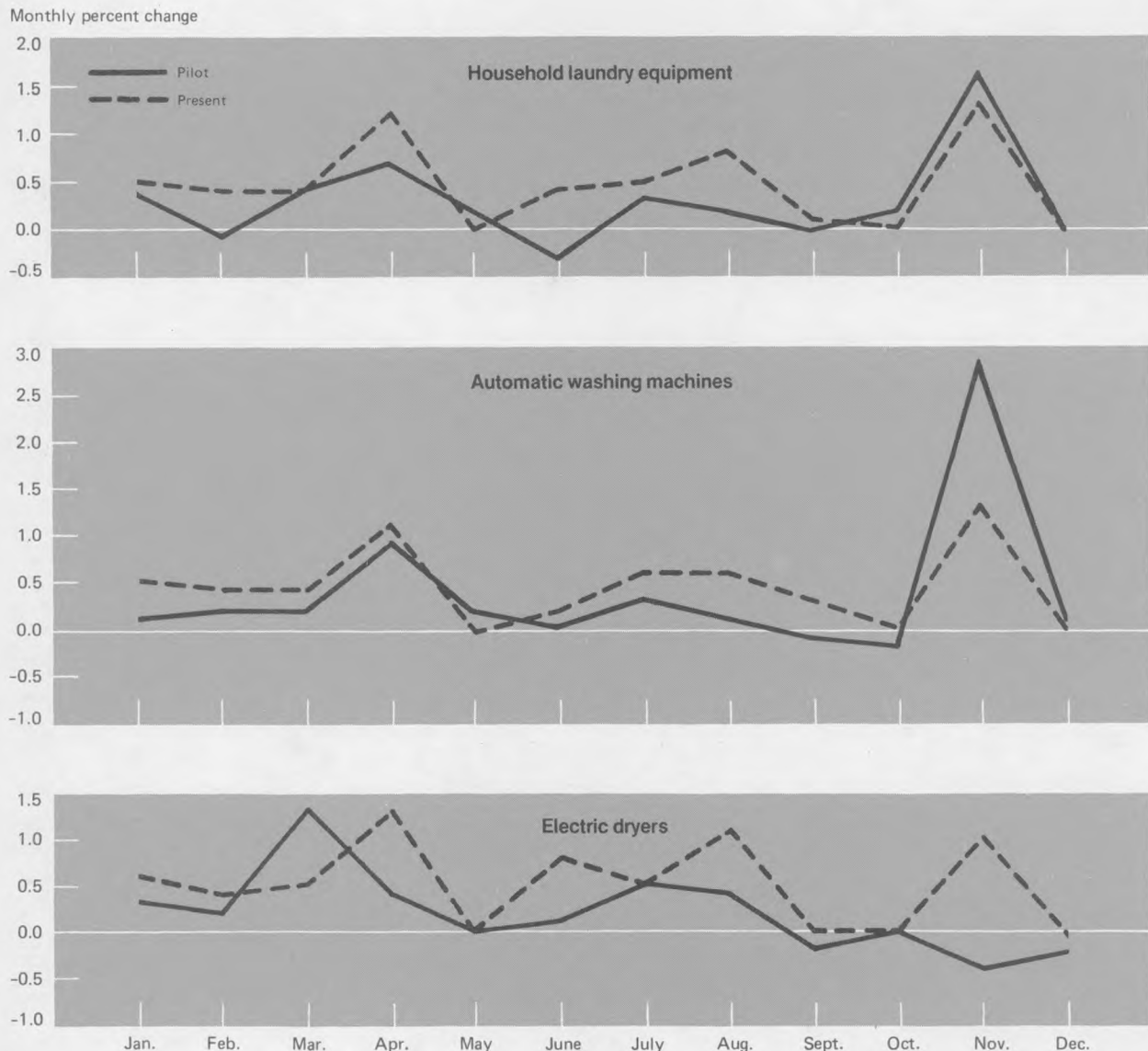
rising as fast or faster in most months. The divergence between the present and pilot storm sewer pipe indexes also was quite substantial, with changes in the indexes differing in both magnitude and direction.

The effects of expansion

It is not possible to draw conclusions from such limited data on the possible magnitude or direction of error that may exist in the old indexes. Nor is it possible to measure with precision the source of the divergences. We can, however, estimate the possible effects of the changes for particular cases.

Broader product coverage. A major difference between the present and new methodology is the expanded coverage of the revision program. This is clearly demonstrated in exhibit 1. For household laundry equipment, the most significant expansion in coverage is the addition of gas dryers to the items priced. According to the new index, prices for electric dryers rose by 2.4 percent between December 1977 and December 1978, while prices for gas dryers actually *declined*, by 0.5 percent in the same period. The difference in demand for gas versus electric dryers is undoubtedly a major factor in explaining the difference in price trends between the two

Chart 2. Comparison of present and pilot revised Producer Price Indexes for the household laundry equipment industry, 1978



products. With widespread restrictions on new gas hook-ups, the demand for gas dryers was more limited than for electric dryers. Consequently, demand for gas dryers generally did not rise with the increase in major appliance demand induced by the rapidly expanding sales of new homes.

Other additions of primary production items of household laundry equipment include nonautomatic washers and parts and accessories. "Parts and accessories" is a common category of production in the machinery industries. Frequently in the present indexes,

the price movements of parts and accessories are imputed from the price changes for the complete unit. In household laundry equipment, this imputation for 1978 would be inaccurate, as the trends are quite different. While the price index for total industry output rose 3.5 percent in the 12 months following December 1977, prices for parts and accessories actually declined by 8.1 percent. The new index also includes more items of secondary production and miscellaneous receipts.

The most significant addition to the new index for soybean oil mills is crude soybean oil, degummed. In

the present index, only the oil that is not degummed is priced with the implicit assumption that the prices of the two oils move together. Chart 4 shows the monthly change of the two pilot soybean oil indexes. The two exhibit similar trends, but the timing and magnitude of the changes are quite different, reflecting the differences in demand for the two types of oil.

These examples illustrate how the limited coverage of the old indexes could introduce inaccuracies in the measurement of price change, even in industries that were well covered by the old standards. The concrete products except brick and block and the newspaper printing and publishing industries have little or no pricing in the present index and, thus, offer less opportunity for comparison. For reinforced storm sewer pipes, the present index's only product to represent the entire concrete products except brick and blocks industry, the present index rose 18.7 percent in 1978, while the revision index for the same product rose 10.0 percent and the revision index for the entire industry rose 8.8 percent.

In the present PPI indexes, no items at all represent printing and publishing. Revenue from advertising is excluded altogether from the weights, and it has been implicitly assumed in the aggregate indexes that newspaper prices moved like the average of all pulp and paper product prices. Between December 1977 and December 1978, the new index for newspaper printing and

publishing rose only 7.2 percent, while the index for all pulp and paper products increased 9.0 percent.

Better item and transaction coverage. The above results illustrate the substantial changes that are likely to occur as the result of complete coverage of production. The indexes from the new survey also will give better measure of price change for those products that are priced in both surveys by expanding the coverage of particular items and the types of transactions to be priced. A substantially larger number of individual items are priced in the new index. Exhibit 2 summarizes several characteristics of the automatic washing machines priced in the present and revision indexes. Six companies report for the present index and seven for the pilot one, with four of them common to both indexes.

The "volume-seller" approach of the present index seems to have produced, in this case, a sample skewed toward higher priced machines with extra features. This skewing results from pricing the models most frequently purchased at retail. The present index completely misses the lower-cost, minimum-feature model typically sold as "contractors' models" for installation in new housing units. Because the demand for these different models may move very differently, the price trends as well as price levels may differ.⁵

Not only are the new indexes more representative of the products and producers in an industry, they are also more representative of the circumstances of the sale of these products. One of the transaction characteristics sampled in the new index is the type of customer, because different prices are frequently charged to different customers. The following tabulation shows, by the type of customer, the number of prices collected in the present and pilot surveys for automatic washers:

Type of customer	Number in present index	Number in pilot index
Distributor	6	4
Retailer, general	7
Retailer, private brand	9
Intra-company	3
Same price to all	5

The present index does not cover many of the important types of transactions in the industry. The discount structure to distributors and to retailers is different; prices for private brand production are usually long-term negotiated arrangements; and intra-company transfers, excluded in the present index by definition, must be included to account for prices of *all* output from an industry.

It is not possible to quantify the contribution of each of these sources of differences between the present and pilot indexes. However, it can be illustrated that this expanded coverage of item specification and types of transactions does make a difference. Between December

Chart 3. Comparison of present and pilot revised Producer Price Indexes for reinforced storm sewer pipe, 1978

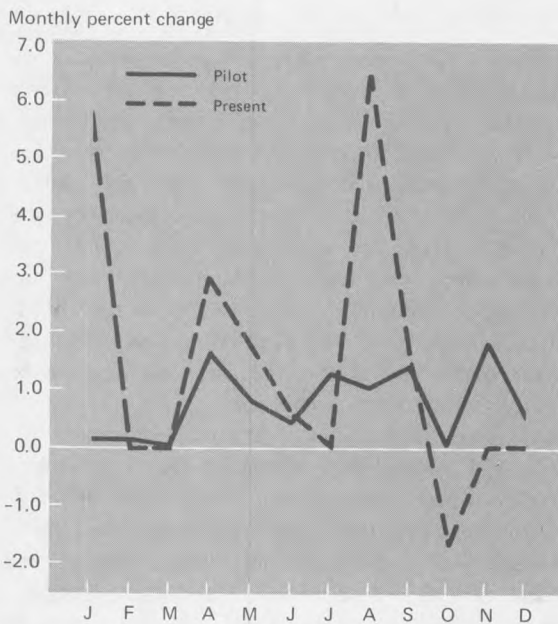


Table 1. Comparison of present and pilot revised Producer Price Indexes, 1978¹

Industry or product priced	Code ²	Percent changes from previous month, 1978												Percent change, 12/77-12/78
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Soybean oil mills	2075													
Pilot		-0.4	-2.8	15.8	0.8	1.8	-0.7	0.8	-4.7	2.3	1.9	-0.4	3.5	17.8
Present		5.4	-7.3	17.3	-8	2.4	-4.4	3.3	-5.2	3.0	1.9	-3.2	6.1	17.6
Crude degummed soybean oil	2075-113													
Pilot		-8.1	3.7	4.5	4.6	6.8	6.2	-1.7	-2.8	3.3	-4	-9	1.9	17.2
Present		(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
Crude not-degummed soybean oil														
Pilot	2075-115	-5.7	-2.0	24.5	1.1	4.8	-6.2	1.8	-5	2.4	-2.8	-8.2	3.0	9.1
Present	02-72-01-01	-8.3	-4	25.8	-2	6.4	-7.5	1.9	-1.5	5.5	-4.1	-9.7	5.2	8.9
Soybean meal														
Pilot	2075-211	2.0	-4.0	15.4	-1.0	.6	-1	1.3	-6.1	1.9	4.0	1.6	4.0	19.9
Present	02-92-01-11	14.5	-11.8	15.7	-2.0	.9	-4.0	5.0	-7.6	1.9	5.7	-3	7.7	24.3
Household laundry equipment	3633													
Pilot		.3	-1	.4	.7	.2	-3	.3	.2	0	.2	1.6	0	3.5
Present		.5	.4	.4	1.2	0	0.4	0.5	0.8	0.1	0	1.3	0	5.7
Automatic washing machines														
Pilot	3633-131	.1	.2	.2	0.9	.2	0	.3	.1	-1	-2	2.8	.1	4.6
Present	12-41-02-11	.5	.4	.4	1.1	0	.2	.6	.6	.3	0	1.3	0	5.4
Electric dryers														
Pilot	3633-155	.3	.2	1.3	.4	0	.1	-5	.4	-2	0	-4	-2	2.4
Present	12-41-02-32	.6	.4	.5	1.3	0	.8	.5	1.1	0	0	1.0	0	6.4
Concrete products, except brick and block	3272													
Pilot		.6	.4	.3	1.6	.8	.7	.7	.8	.7	.6	1.1	.4	8.8
Present		(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)
Reinforced storm sewer pipe														
Pilot	3272-161	.2	.2	.1	1.7	.8	.4	1.3	1.1	1.4	.1	1.8	.6	10.0
Present	13-32-01-01	5.7	0	0	2.9	1.8	.7	0	6.5	1.7	-1.7	0	0	18.7
Newspaper printing and publishing	2711													
Pilot		1.8	1.2	.2	1.3	.3	.4	.3	.2	.2	.8	.1	.2	7.2
Present		(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)	(³)

¹ Data revised through December 1978.² Industry codes are 4-digit SIC codes, present index codes are PPI commodity codes formu-

lated by BLS, and pilot index codes are Census commodity codes based on the SIC codes.

³ Not available.

1977 and December 1978, the pilot index for automatic washers rose 4.6 percent, while the present index increased more rapidly, 5.4 percent. Of the 28 items priced in the pilot index, eight fell into the same price and capacity range as those included in the present index. A special index was constructed from that subset. Like the present index, this limited coverage index increased more rapidly (6.5 percent) than did the pilot index covering total production. There were also nine items in the pilot index that reflected prices to distributors; a special index based on them rose 5.1 percent, also showing a faster rate of increase than did the full-coverage index. These results are much too skimpy to draw any conclusions about the direction or magnitude of any bias in the present index as a whole, but, at least for this 12-month period, the markedly different price trends for different segments of the market are not captured in the limited coverage of the present index.

Larger samples. The larger sample sizes alone also contribute to the precision of the index. The difference between change in the present and pilot indexes for storm sewer pipe (18.7 versus 10.0 percent) seems to be largely a matter of statistical variability. The pilot index is based on 45 price quotations and moves much more

smoothly. The present index has only three price quotations and is more volatile.

Transaction pricing improves accuracy

Although the prices in the old index reflect most of the discounts used in an industry, they were chosen to reflect the "typical" situation and, as a result, do not account for some important variations in transactions captured by improved transaction pricing under the new index. Some of the differences between the present and pilot indexes for automatic washers and electric dryers can be traced to better transaction price reporting. While the magnitude of this effect cannot be documented, comparisons of detailed prices supplied by reporters have shown that the pilot indexes are based on better transaction information.

The indexes for soybean oil and meal illustrates another aspect of pricing improvements. The present indexes use the spot market prices that are reported in the trade press for these products. These prices do not reflect the wide variety of contractual arrangements under which the vast majority of soybean oil and meal is sold. Because many soybean oil and meal sales are tied in some way to future market prices in these commodities, it is widely assumed that all oil sales and all meal sales

Exhibit 1. Industry coverage under the present and pilot revised Producer Price Indexes

Industry	Census product code	Present index	Pilot index
Household laundry equipment			
Primary production:			
Washing machine, electric automatic	3633-131	X	X
Washing machine, electric nonautomatic	3633-136		X
Dryer, mechanical, gas	3633-151		X
Dryer, mechanical, electric	3633-155	X	X
Parts and accessories	3633-396		X
Secondary production:			
Commercial dryers, operated over 10 lbs.	3582-017		X
Commercial washer	3582-012		X
Room air conditioner	3585-611		X
Electric range, free standing	3631-121		X
Electric range, drop in	3631-165		X
Dishwasher, portable	3639-412		X
Dishwasher, built in	3639-414	X	X
Food waste disposal	3639-471	X	
Resales	3633-X98		X
Soybean oil mills			
Primary production:			
Soybean oil, crude, degummed	2075-113		X
Soybean oil, crude, not degummed	2075-115	X	X
Soybean meal	2075-211	X	X
Soybean, other by products	2075-298		X
Secondary production:			
Grain, ground, (excluding corn)	2048-911		X
Shortening and cooking oils	2079-1	X	X
Margarine	2079-2	X	X
Cottonseed oil, refined	2074-2	X	
Meat meal and tankage	2076-2	X	
Animal and marine oil	2077-3	X	
Other food, not elsewhere classified	2099-9	X	
Nitrogenous fertilizer	2873-385		X
Phosphatic fertilizer	2874-331		X
Resales	2075-X98		X
Other receipts	2075-XXX		X

move together. While this view may be true in general terms, the data in table 1 and chart 1 show that the spot price used in the present index is not a sufficient indicator for all sales. Soybean oil prices rose 8.9 percent during 1978 as measured by the old indexes and 9.1 percent as measured by the new. However, while the average change is similar between the two indexes, the individual prices that compose the revised index showed changes ranging from small declines to increases of nearly 40 percent. The following tabulation shows the percent distribution of price changes for the industrial item in the two pilot soybean product indexes:

Percent change in price December 1977-December 1978	Soybean oil, not degummed	Soybean meal
-10 to -0.1	11.1	...
0.0 to 9.9	55.6	7.7
10.0 to 19.9	...	42.3
20.0 to 29.9	11.1	46.2
30.0 to 39.9	22.2	3.8

Such diversity is a clear warning that, while the individual changes may average fairly near those for the spot market used as the basis for pricing in the present index, there could be radical departures in the future, especially in a market that is suddenly affected by external events, such as sudden large unplanned foreign

sales. By sampling all types of transactions, BLS can ensure that the new indexes will more accurately reflect price trends at all times.

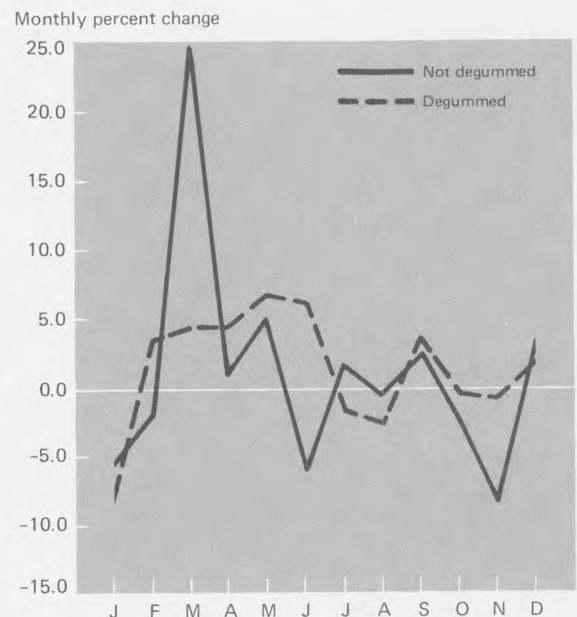
New weights eliminate double counting

The revision uses net shipment weights to combine product price indexes into industry output price indexes. Each product index is weighted by the value of that product leaving the industry. The value of the product sold to other establishments within the same industry is excluded. The present aggregate commodity indexes include this intra-industry value in the weight, causing the multiple counting of price change, noted earlier.

For the four pilot industries, the use of net weights made very little difference, because the amount of intra-industry shipments is quite small at the four-digit level. Intra-industry shipments were valued at slightly more than 1 percent of total shipments for soybean oil mills, less than 0.5 percent for home laundry equipment, and near zero for the other two industries. At higher levels of aggregation, the effect of the new weights will be more important.

The Finished Goods Producer Price Index, which is part of the stage of processing the index system based on the present indexes, is essentially a subindex of a net-output-weighted price index for the private sector.⁶ The following tabulation compares the annual percent

Chart 4. Pilot revised Producer Price Indexes for degummed and not degummed soybean oils, 1978



change for 1973-78 of the finished goods index with the comparable All-Commodities Index, which is based on gross-shipment weights:

Year	All commodities	Finished goods
1973	15.4	11.8
1974	20.9	18.3
1975	4.2	6.6
1976	4.7	3.3
1977	5.9	6.6
1978	9.7	9.1

Not only does the change in weighting structure make a difference in the measured level of inflation (15.4 percent versus 11.8 percent in 1973), but it also changes the *direction* of the trend. Both indexes measured a sharp drop in inflation between 1974 and 1975. The net-weighted Finished Goods Index showed a further substantial slowdown in prices during 1976, while the gross-weighted All-Commodities Index began a modest acceleration.

Extended application. The difference in gross- and net-weighted output price indexes extends to more sophisticated applications as well. Work done on developing industry price equations has generally relied on gross-shipment-weighted output price indexes.⁷ The price equations used in the major macroeconomic forecasting models also generally rely on gross-shipment-weighted priced indexes.⁸ To illustrate the potential econometric

impact of using gross *versus* net shipment weights, an output price equation was estimated for the rolling, drawing, and extruding of nonferrous metals industry (SIC 335). This industry was selected because it has a relatively high incidence of intra-industry shipment (17.3 percent) and both its inputs and outputs have reasonably good pricing coverage in the current PPI.

Special output price indexes were constructed using price indexes available from the PPI and weights constructed from the 1972 Census of Manufactures and the 1967 input-output tables prepared by the Bureau of Economic Analysis. One index was constructed using gross-shipment weights; a second was constructed using net-shipment weights. A materials input price index was also constructed from the same sources. Data on average hourly earnings of production workers in the industry were used to measure labor costs. The equations were estimated for the period 1971-78 using quarterly percent changes of each variable. Capacity utilization, interest rate, and aggregate hours variables were also tested but discarded because of very low significance. Several different lag structures were tested without success.

The differences between the two equations are not large; however, they could well make a difference in a large econometric model. For this model, the equation based on the gross-weighted index would "pass through" nearly 10 percent more of any change in input prices than would the equation based on the net-weighted index. (See table 2.)

In addition, the results are sufficiently different that they might lead to different conclusions about the pricing behavior of the industry. For example, based on the 1967 input-output tables, the cost of materials and fuels was 65.0 percent of the total value of this industry's shipments. To test the hypothesis that producers in this industry operated on a simple cost-pass-through basis, one would test whether the coefficient of the input prices is equal to 0.65. Results show that, with the net-output model, the hypothesis could be accepted, but that the gross-output model requires rejection of the hypothesis at the 1-percent level of certainty and acceptance of the alternative that material cost increases are more than completely passed through, which would suggest an oligopolistic market with relatively inelastic demand.

Survey response: cooperation is crucial

One critical factor in both surveys is the cooperation received from American companies, because they are the only possible source for the required information. Most companies have been highly cooperative in both the present and revision programs. They generally realize the important role that accurate price statistics play in fiscal and monetary policy decisions, which in turn are major determinants of the Nation's economic health

Exhibit 2. Comparison of item specifications for automatic washing machines, present and pilot revised Producer Price Indexes

Item specifications	Number of occurrences	
	Present index	Pilot index
Number of prices	6	28
Number of companies	6	7
Average price (June 1978)	\$257.84	\$201.12
Capacity, pounds		
20	1	4
19	...	1
18	2	14
16	...	1
14	...	3
Not available	3	5
Wash cycles		
5 or more	3	5
4	2	1
3	...	14
2	...	6
Not available	1	2
Water temperatures		
5	3	2
4	2	2
3	...	21
2	...	1
Not available	1	2
Water level adjustment		
Infinite	3	8
Fixed	1	18
Not available	2	2
Motor speeds		
3	...	1
2	4	16
1	2	11

and the performance of individual companies. Many companies also use the data extensively in their own market and economic research activities, and more and more companies are using the data to escalate prices in long-term contracts for items they sell or buy.

When a company that has been selected for the sample does not cooperate, more is lost than just the information on that company. If the refusing companies have price trends that differ from those that cooperate, a bias of inherently unknowable magnitude and direction is introduced into the index. Although, there is no generally accepted quantitative relationship between cooperation rates and the quality of the estimates, as the revision proceeds, some effort will be made to analyze the possible impact of refusals on this survey.

The tabulation below shows the frequency (in percent) of successful pricing for the indexes for the four pilot industries in December 1978:

Industry	Initial cooperation rate	Refusal during repricing	Temporarily not available	Total response rate
Soybean oil mills	96	9	0	87
Newspaper publishing	80	5	16	59
Concrete products, except brick and block	69	15	5	49
Home laundry equipment	100	0	6	94

The initial cooperation rate is the weighted proportion of sample units that cooperated and successfully completed the initial interview for the survey. During this interview, the survey is explained and data concerning the unit are collected to classify properly and to weigh it in the indexes. The majority of the interview is spent in the probability selection of items and transaction terms that are to be priced in the indexes and the development of a detailed description or specification of each.

The total response rate is the proportion of weight in the index represented by the items for which prices were available in the reference month, December 1978 in this case. Differences between the initial cooperation rate and the total response rate are twofold: (1) the refusal of a few firms to continue with the monthly pricing of the items selected during the initial interview and (2) the temporary unavailability of reports for the reference month, many of which become available before revised data are issued 4 months later.

In two of the industries—newspaper publishing and concrete products—the total response rate is low enough to suggest the need for special attention. As the PPI continues, intensive reviews are being conducted

Table 2. Comparison of estimates of output price equations for rolling, drawing, and extruding nonferrous metals, using net- and gross-weighted output price indexes as dependent variables

Statistic	Net-weighted index	Gross-weighted index
Independent variable coefficients		
Constant	-.0102 (.0090)	-.0121 (.0082)
Input prices . . . . .	.7471 (.0658)	.8185 (.0598)
Hourly earnings . . . . .	.5925 (.3787)	.5893 (.3439)
R ² . . . . .	.8320	.8782
Durbin-Watson	1.42	1.81

NOTE: Standard error in parentheses.

to determine both the causes and effects of high refusal rates in some industries.

SUBSTANTIAL EFFORT WILL be spent over the next several years in improving the Producer Price Indexes. Experience with the pilot survey has shown that changes in sampling methods, collection procedures, pricing, and weights have a significant impact on the estimates. Research is continuing on other improvements, which will be introduced in coming years. □

FOOTNOTES

¹ The PPI was formerly known as the WPI (Wholesale Price Index). For a full description of problems with the old indexes, the theory behind the revision, and the general methods being used, see John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review*, April 1978, pp. 7-15.

² Data were first released on August 10, 1978, and are available from January 1978 forward on a December 1977 = 100 base.

³ This schedule assumes that additional funding for the program will be provided in future fiscal years.

⁴ Variances of the indexes and related measures are not available for the pilot survey. It is planned that they will become available for the production indexes in 1981.

⁵ There is no evidence that the direction of this skewing is consistent across products. The electric dryer samples in the PPI and PPIR do show a similar skewed sample for the existing indexes. Another study of refrigerator prices, however, suggest that for that appliance the sample was skewed in the opposite direction. (See Jack E. Triplett and Richard J. McDonald, "Assessing the Quality Error in Output Measures: The Case of Refrigerators," *Review of Income and Wealth*, June 1977, p. 151).

⁶ Because of the superior characteristics of the stage-of-processing indexes, in 1978 the BLS changed from the All-Commodities index to the stage-of-processing indexes as the primary analytical framework used in news releases and articles on producer prices.

⁷ Otto Eckstein and Gary Fromm, "The Price Equation," *The American Economic Review*, December 1968, pp. 1159-83. Otto Eckstein and David Wyss, "Industry Price Equations," *The Economics of Price Determination*, Proceedings of a conference sponsored by the Board of Governors of the Federal Reserve System and the Social Science Research Council, Oct. 30-31, 1970, pp. 133-56.

⁸ L. Douglas Lee, *A Comparison of Econometric Models* (Joint Economic Committee, United States Congress, July 28, 1978).

Heavy bargaining again in 1980

Contracts covering 3.7 million workers are slated to expire throughout the year, including agreements in steel, telephone, aerospace, and other major industries

MARY A. ANDREWS AND WINSTON TILLERY

Collective bargaining will be heavy in 1980, with 3.7 million workers covered by major contracts¹ that expire or are subject to reopening on wages or benefits. About the same number of workers were covered in 1979, but 1980 will be busier because more contracts will be negotiated. Bargaining is scheduled to take place in the steel, aluminum and copper, telephone communication, longshore, and aerospace industries.² In addition, nearly half of the large contracts in the construction industry expire in 1980. Unlike past years, when bargaining was concentrated in a few months, talks in key industries are scheduled throughout 1980.

Negotiators preparing for the 1980 bargaining rounds may potentially face a repeat of the 1974-75 economy. As the Nation entered the fourth quarter of 1979, employment and industrial production continued high, but some economists predicted a downturn. Interest rates were at record highs. Inflation was running at more than 13 percent annually, the highest rate since the late 1940's—paced by sharp increases in energy costs. In an attempt to curb persistently high inflation, labor leaders agreed to participate with government and industry on a Pay Advisory Committee to develop pay and price standards for 1980.

High inflation rates in 1979 will focus negotiators' attention on automatic cost-of-living adjustment (COLA)

clauses.³ About 60 percent of the workers subject to 1980 bargaining already are covered under contracts that have such clauses; union negotiators probably will seek to liberalize existing COLA provisions. Escalator clauses are rare in the construction industry, where unions have attempted to offset inflation by focusing on wage increases.

In 1980, as in past years, expiring contracts with COLA clauses tend to be of longer duration than those without such clauses. Contracts with COLA clauses also tend to provide for a larger total wage increase.⁴ Following are the average annual wage changes (in percent) for contracts with and without COLA clauses:⁵

	<i>Negotiated change</i>	<i>Negotiated change plus COLA</i>
Contracts expiring in 1980	6.0	8.1
With COLA	5.0	8.4
Without COLA	7.5	7.5

Steel industry may set pattern

The importance of basic steel in the 1980 bargaining schedule is underlined both by the strategic position of steel in the economy and by the possibility that contracts covering a large number of employees in other industries may follow the steel pattern. The negotiations between the Coordinating Committee Steel Companies, representing nine major steel firms,⁶ and the Basic Steel Industry Conference of the United Steelworkers of America

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will begin early in the year; contracts covering 280,000 workers expire August 1. (All unresolved issues are to be submitted to arbitration by April 20.) This will be the first round of steel talks headed by Lloyd McBride, who succeeded retiring Steelworkers President I. W. Abel,⁷ and the third round of bargaining conducted under the Experimental Negotiating Agreement, adopted in 1973 to prevent "crisis bargaining" and strikes.

The 1977 steel agreement was reached on April 12, more than 3 months before the existing contract expired. The agreement provided for 80-cent pay increases over the life of the contract, plus additional pay increments between job grades; continuation of the cost-of-living adjustment clause; added protection from subcontracting; paid holiday, pension, and insurance improvements; a new employment and income security program for employees with 20 years of service; up to 2 years of supplemental unemployment benefits; and improved disability, early retirement, and short workweek benefits.

The Steelworkers union has not yet announced its demands.⁸ However, under the Experimental Negotiating Agreement, some of the 1980 terms have already been agreed upon, including a \$150 bonus, a 3-percent yearly minimum pay increase, continuation of the cost-of-living escalator clause, the right to strike over local issues, and the use of binding arbitration. McBride has said that the developing recession will not be a major factor in the union's bargaining strategy. He acknowledged that a recession may cause steel companies to close marginal facilities, resulting in layoffs, but that the union would maintain bargaining strength because of the industry's improved productivity and predictions of steel shortages in the 1980's. Steel strikes have created little problem over the last two decades, although a few customers have persisted in stockpiling steel.

The continuing fear of shutdowns and stockpiling was instrumental in the development of the Experimental Negotiating Agreement, which prevents large-scale shutdowns. The agreement will govern 1980 negotiations, but it remains on trial and could be dropped after 1980. Some steel company officials suggest that the cost of the "no-strike" pact is too high, and factions within the Steelworkers union resent the loss of the strike as an economic weapon.

Until the 1960's, negotiation breakdowns and industrywide strikes were common. During the 1950's, four strikes occurred, culminating in a 116-day walkout in 1959 which ended only after President Eisenhower invoked the Taft-Hartley emergency dispute procedures. Besides impairing the national economy, the strikes allowed foreign steel firms to enlarge their share of the market and caused customers to stockpile steel in anticipation of walkouts. The stockpiling disrupted normal

Table 1. Calendar of major collective bargaining activity

[Workers in thousands]

Year and month	Principal industry	Contract expirations ¹		Scheduled wage reopenings	
		Number	Workers covered	Number	Workers covered
All years .....	.....	2,009	9,253	52	121
Total 1980 .....	.....	876	3,651	44	104
January	Motor vehicle parts and accessories; petroleum refining	38	113	19	35
February .....	.....	28	75	3	11
March	Construction	92	305	6	17
April	Construction	112	264	.....	.....
May	Construction; aluminum	151	397	5	10
June	Construction; copper	122	508	3	10
July .....	.....	56	152	2	4
August	Telephone; basic steel	108	1,218	.....	.....
September	Men's apparel; longshoring (East Coast)	64	274	1	1
October	Aerospace	56	179	1	3
November .....	.....	20	58	1	1
December .....	.....	29	108	3	13
Total 1981 .....	.....	557	2,197	8	17
January	Petroleum refining	44	115	1	1
February	Cans	29	78	.....	.....
March	Railroads; coal (bituminous)	80	773	.....	.....
April	Construction	110	304	1	3
May	Construction	80	285	2	5
June	Construction	88	259	1	1
July	Longshoring (West Coast)	27	137	2	3
August .....	.....	16	45	1	4
September .....	.....	26	46	.....	.....
October .....	.....	31	87	.....	.....
November .....	.....	11	23	.....	.....
December .....	.....	15	45	.....	.....
Total 1982 .....	.....	250	2,073	.....	.....
January - June	Trucking; apparel	210	1,397	.....	.....
July - December	Automobiles; electrical equipment	40	676	.....	.....
1983 or later .....	.....	5	15	.....	.....
Year unknown or in negotiation ²	Ford and Chrysler; farm and construction equipment	321	1,317	.....	.....

¹ 14 agreements covering 51,000 workers are excluded because they have no fixed expiration or reopening date.

² Bargaining units for which necessary information was not available: 225 agreements which expired prior to Oct. 1, 1979 (when data for this table were tabulated), covering 1,013,000 workers, and 96 contracts which expire between Oct. 1, 1979, and Dec. 31, 1979, covering 304,000 workers.

NOTE: Only bargaining units in the private nonagricultural economy affecting 1,000 workers or more are considered for this table. Because of rounding, sums of individual items may not equal totals.

industry workflow, requiring heavy overtime to meet demand, followed by layoffs until steel inventories were reduced.

Aluminum and copper talks begin in spring

The agreements with major aluminum companies are scheduled to expire on May 31, 1980, and those with principal copper mining and refining firms a month later. Bargaining over terms of employment for about 42,000 workers will be conducted between the three largest aluminum companies (Aluminum Company of America, Kaiser Aluminum and Chemical Co., and Reynolds Metals Co.) and the United Steelworkers of America and the Aluminum Workers of America. Anaconda, Phelps-Dodge, Kennecott, Magma, and other

copper companies will negotiate with the Steelworkers and other unions.

Terms of Steelworkers agreements for the basic steel, aluminum and copper, and metal containers industries have many similarities because these industries are related. The Steelworkers' Wage Policy Committee develops a general prenegotiation wage policy statement which applies to all four industries.

For more than 20 years, the timing of negotiation and agreement among these industries determined which industry agreement would set a pattern for the others. The can industry set the pattern in several rounds, but its employment has declined because of competition from glass containers, and from food processors that manufacture their own cans. The can industry apparently lacks the size to influence the other negotiations and has been moved to last in the bargaining order. Copper is unlikely to set the pattern because settlements in this industry are on a piecemeal basis, involve a number of unions besides the Steelworkers, and are often reached only after lengthy strikes. Aluminum set the pattern in 1974; agreement was reached 4 months before the existing contract expired. However, in 1977, for the first time in several rounds, the steel industry came to terms first and established the pattern. Because of the record of early settlement in both steel and aluminum, it is impossible to predict which industry will settle first in 1980.

The terms of the 1977 aluminum settlement were similar to those for steel, including 3-year increases totaling 80 cents, incremental increases based on grade level, continuation of the cost-of-living clause, benefit improvements, and a job-and-income-security program. Copper settlements called for slightly larger pay increases and differed in other ways from the overall pattern.

Recent aluminum settlements have been reached without significant strike activity, but the copper industry has been characterized by frequent strikes, some of them long and bitter. The 1977 copper settlements were reached only after widespread strikes. One of the longest large-scale strikes in U.S. labor history involved the Steelworkers and 25 other unions and shut down major copper-producing companies for 9 months during 1967-68.

Telephone industry negotiates in summer

Nearly all major telephone agreements come up for negotiation in 1980. Contracts covering nearly 700,000 employees of the American Telephone and Telegraph Company (AT&T) are scheduled to expire August 9. AT&T, which employs about 90 percent of the industry work force, includes 24 operating companies of the Bell System, the Long Lines Department, the Western Electric Company,⁹ and Bell Laboratories. The three princi-

pal unions involved are the Communications Workers of America (CWA), representing about 500,000 workers; the International Brotherhood of Electrical Workers (IBEW), 120,000 workers; and the independent Telecommunications International Union, 70,000 workers.

Until the 1970's, negotiations were conducted separately with each company. In 1971, CWA negotiated settlements with two companies that established a pattern for the other units, and, in 1974, AT&T agreed to negotiate with each union on a national basis. The CWA largely represents Bell System and Long Line employees; IBEW represents most workers at Western Electric; and Telecommunications International represents Bell System workers in six eastern States.

Information on 1980 union demands is not now available, but job security again may be an issue. Although the telephone industry is not greatly disturbed by economic downturns, relatively high increases in productivity, technological advances, and increased imports of foreign telephone equipment have affected employee security. The terms of the 1977 Bell System settlement reflected concern over declining telephone employment. Included were loss-of-income protection and paid moving expenses in reassignments, benefits for eligible employees retiring as an option to reassignment or layoff, and additional paid time off and limitations on compulsory overtime. The settlement also provided for a savings and security plan, involving company stock contributions and improvement in retirement and insurance benefits. Pay increases were related to the Bell System pay progression system, and ranged up to 8 percent the first year and 3 percent the second and third years. The cost-of-living adjustment clause was continued without change.

The last nationwide telephone strike occurred in 1971 and lasted 5 days. In 1974 and 1977, agreement with operating companies was reached only hours before nationwide strikes were scheduled. In 1977, 56,000 Western Electric workers represented by the IBEW rejected the terms agreed to in the AT&T-CWA agreement. They finally accepted a contract the company categorized as "within the framework" of the earlier settlement. The industry is highly automated, and a work stoppage of operating companies must continue for a considerable period before service begins to seriously deteriorate.

Longshore agreements expire in fall

The International Longshoremen's Association (ILA, AFL-CIO) will bargain for about 50,000 dockworkers at eastern and Gulf ports on agreements due to expire at the end of September. If the employers' bargaining structure used during the 1977 negotiations is maintained, the ILA will bargain with the Council of North Atlantic Shipping Associations (CONASA) and

Table 2. Major contract expiration and wage reopening dates, by industry

[Workers in thousands]

Industry	Total		Year of contract termination ¹										Scheduled wage reopening			
			1980		1981		1982		1983 or later		Unknown or in negotiation ²		1980		1981	
	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered	Contracts	Workers covered
All industries ..	2,009	9,253	876	3,651	557	2,197	250	2,073	5	15	321	1,317	44	104	8	17
Manufacturing ..	975	4,020	425	1,412	246	524	128	1,276	4	13	172	795	27	58	2	4
Food and kindred products ..	108	335	36	87	31	66	20	136	..	..	21	46	1	2	..	..
Tobacco manufacturing ..	8	29	7	28	..	..	1	1	..	..	..	..	..	..	..	..
Textile mill products ..	17	51	8	31	5	11	3	8	..	..	1	1	..	..	..	..
Apparel and other finished products ..	55	498	6	92	8	26	30	331	..	..	11	50	1	2	..	..
Lumber and wood products, except furniture ..	20	58	15	50	2	2	1	3	..	..	2	3	..	..	..	..
Furniture and fixtures ..	19	32	8	13	4	5	3	7	..	..	4	7	..	..	..	..
Paper and allied products ..	70	102	34	51	22	28	2	2	1	8	11	13	1	1	1	1
Printing, publishing, and allied industries ..	36	61	10	21	15	28	..	..	2	2	9	10	..	..	..	..
Chemicals and allied products ..	38	74	15	29	13	23	1	2	..	..	9	19	1	3	..	..
Petroleum refining and related industries ..	21	40	..	..	21	40	..	..	..	..	..	..	17	32	..	..
Rubber and miscellaneous plastics products ..	18	88	5	6	..	..	4	56	..	..	9	26	..	..	..	..
Leather and leather products ..	18	52	6	17	8	20	..	..	..	..	4	15	1	2	..	..
Stone, clay, glass, and concrete products ..	37	95	19	63	11	20	2	3	..	..	5	9	..	..	..	..
Primary metal industries ..	116	482	87	434	15	25	3	4	..	..	11	19	2	4	..	..
Fabricated metal products ..	50	104	24	37	13	41	5	11	..	..	8	15	..	..	..	..
Machinery, except electrical ..	97	286	47	101	23	38	7	13	..	..	20	134	..	..	..	..
Electrical machinery, equipment and supplies ..	107	451	38	141	18	30	25	185	..	..	26	96	1	2	..	..
Transportation equipment ..	112	1,130	50	196	30	105	16	503	1	3	15	324	1	3	1	3
Instruments and related products ..	16	32	7	13	4	12	..	..	..	..	5	8	1	8	..	..
Miscellaneous manufacturing industries ..	12	21	3	4	3	4	5	11	..	..	1	1	..	..	..	..
Nonmanufacturing ..	1,034	5,233	451	2,239	311	1,674	122	797	1	2	149	522	17	47	6	13
Mining, crude petroleum and natural gas production ..	16	218	12	54	3	163	1	1	..	..	..	..	..	..	..	..
Construction ..	504	1,597	230	758	178	586	67	187	1	2	28	65	10	25	2	2
Transportation, except railroads and trucking ..	57	262	23	111	17	108	..	..	..	..	17	43	..	..	..	..
Railroads ..	18	432	..	..	18	432	..	..	..	..	..	..	..	..	..	..
Trucking ..	27	520	3	4	1	2	9	443	..	..	14	71	..	..	..	..
Communications ..	46	761	35	729	6	15	3	11	..	..	2	6	1	1	..	..
Utilities, gas and electric ..	76	207	38	130	9	18	4	10	..	..	25	49	3	5	1	4
Wholesale trade ..	33	84	10	16	6	10	8	21	..	..	9	38	..	..	..	..
Retail trade, except restaurants ..	150	701	64	250	36	198	18	75	..	..	32	178	..	..	..	..
Restaurants ..	23	71	7	25	6	19	7	18	..	..	3	10	..	..	2	6
Finance, insurance and real estate ..	14	84	5	42	6	15	2	22	..	..	1	5	..	..	..	..
Services, except hotels and health services ..	39	110	13	39	14	35	1	1	..	..	11	34	2	9	..	..
Hotels ..	21	108	7	34	7	51	2	8	..	..	5	14	1	8	1	1
Health services ..	10	77	4	48	4	22	..	..	..	..	2	8	..	..	..	..

¹ See table 1, footnote 1.
² See table 1, footnote 2.

NOTE: Only bargaining units in the private, nonagricultural economy including 1,000 workers or more are considered for this table. Because of rounding, sums of individual items may not equal totals.

the New York Shipping Association on a single master agreement covering about 35,000 dockworkers at New

York, Baltimore, and other northern ports. The terms of this agreement—limited to major issues including

(Text continued on p. 27)

Table 3. Expiration, reopening, and wage adjustment provisions of selected collective bargaining agreements

[Contracts are listed in order of the Standard Industrial Classification Code]

1967 SIC Code	Industry and employer ¹	Union ²	Employees covered	Contract term and reopening provisions ³	1980 provisions for automatic cost-of-living review ⁴	1980 provisions for deferred wage increases ⁵
Manufacturing						
20	Food and kindred products: California Processors, Inc. and other can- nery and food processors ⁶ Dairy Industrial Relations Association (Southern California) John Morrell & Co. ⁶ Kellogg Co. (Interstate) Sugar Cos., Negotiating Committee (Hawaii)	Teamsters (Ind.) Teamsters (Ind.) Food and Commercial Workers Grain Millers Longshoremen and Warehousemen (Ind.)	60,000 5,000 8,000 5,350 7,000	July 1, 1979 to July 1, 1982 Mar. 6, 1977 to Mar. 3, 1980 Sept. 1, 1979 to Sept. 1, 1982 Oct. 10, 1978 to Sept. 26, 1981 Feb. 1, 1979 to Jan. 31, 1980	July Jan. and July	July 1: 5.8 percent Sept. 1: 20 cents Apr. 1: 27 cents Jan. 1: 10 cents
21	Tobacco manufacturers: Phillip Morris, U.S.A. (Richmond, Va.)	Bakery, Confectionery and Tobacco Workers	8,200	Feb. 1, 1977 to Jan. 31, 1980	.....	.....
22	Textile mill products: I-A Screen Print and Screen Makers and Dye and Machine Print Cos. Textile dyeing, printing and finishing compa- nies ⁶	Textile Workers Clothing and Textile Workers	6,000 11,000	Oct. 1, 1978 to Sept. 30, 1980 Oct. 1, 1978 to Sept. 30, 1980	..... .....	1980: 50 cents
23	Apparel and other finished products: Clothing Manufacturers Association of U.S.A. Cotton Garment Manufacturers ⁶ New York Coat and Suit Assn.; Affiliated Dress Manufacturers, Inc. (New York, N.Y.) ⁶	Clothing and Textile Workers Clothing and Textile Workers Ladies', Garment Workers	80,000 60,000 160,000	June 1, 1977 to Sept. 30, 1980 Sept. 1, 1979 to Aug. 31, 1982 May 1, 1979 to May 31, 1982	..... ..... .....	..... Sept. 1: 30 cents June 2: 8 percent
27	Printing and publishing: Metropolitan Lithographers Association, Inc. (N.Y., Conn., N.J., and Pa.)	Amalgamated Lithographers of Ameri- ca (Ind.)	8,100	July 1, 1978 to June 29, 1980	.....	.....
30	Rubber and miscellaneous products: ⁶ Goodyear Tire & Rubber Co.	Rubber Workers	22,000	Apr. 21, 1979 to Apr. 1, 1982	July, thereafter quarterly	Apr. 29: 20 cents and 15 cents advance C.O.L.A.
32	Stone, clay and glass products: Brockway Glass Co., Inc. Libbey-Owens-Ford Co. Owens-Illinois, Inc.	Glass Bottle Blowers Glass and Ceramic Workers Glass Bottle Blowers	7,500 7,500 14,100	Apr. 1, 1977 to Mar. 31, 1980 Oct. 25, 1977 to Oct. 25, 1980 Apr. 1, 1977 to Mar. 31, 1980	..... Feb., thereafter quarterly.....	...............
33	Primary metal industries: Aluminum Co. of America Aluminum Co. of America Armco Steel Corp. (Middletown, Ohio) Colt Industries, Crucible, Inc. Division Kaiser Aluminum and Chemical Corp. Kaiser Steel Corp. (Fontana, Calif.) National Steel Corp., Weirton Steel Divi- sion (Ohio and West Virginia) Reynolds Metals Co. United States Steel Corp. Salaried employees 9 major basic steel companies: Allegheny Ludlum Industries, Inc.; Armco Steel Corp.; Bethlehem Steel Corp.; In- land Steel Co.; Jones and Laughlin Steel Corp.; National Steel Corp.; Great Lakes Steel Div. (Michigan); Republic Steel Corp.; United States Steel Corp.; Wheel- ing-Pittsburgh Steel Co.	Aluminum Workers Steelworkers Armco Employees Independent Feder- ation, Inc. (Ind.) Steelworkers Steelworkers Steelworkers Independent Steelworkers Union (Ind.) Steelworkers Steelworkers Steelworkers	9,000 9,000 6,000 6,300 10,000 6,300 15,000 8,000 5,800 280,000	June 1, 1977 to May 31, 1980 Feb. 1, 1977 to May 31, 1980 Aug. 1, 1977 to July 31, 1980 Aug. 1, 1977 to Aug. 1, 1980 June 1, 1977 to May 31, 1980 Aug. 1, 1977 to July 31, 1980 Aug. 1, 1977 to Aug. 1, 1980 June 1, 1977 to May 31, 1980 Aug. 1, 1977 to Aug. 1, 1980 Aug. 1, 1977 to July 31, 1980	Mar. Mar. Feb. and May Feb. and May Mar. Feb., thereafter quarterly Feb. and May Feb. and May Feb., thereafter quarterly.....	............................................................
34	Fabricated metal products: ⁶ American Can Co. The Continental Group, Inc.	Steelworkers Steelworkers	9,000 15,500	Nov. 1, 1977 to Feb. 15, 1981 Nov. 1, 1977 to Feb. 15, 1981	Feb., thereafter quarterly Feb., thereafter quarterly	Mar. 1: 34 - 43.6 cents and \$13.60 - \$17.44 weekly Mar. 1: 34 - 42.4 cents and \$13.60 - \$17.44 weekly general in- crease, plus 0.1 cent increment
35	Machinery, except electrical: Briggs and Stratton Corp. (Milwaukee, Wisc.) Cummins Engine Co., Inc. (Columbus, Ind.) J. I. Case Co. Timken Co. (Ohio)	Allied Industrial Workers Diesel Workers' Union (Ind.) Auto Workers (Ind.) Steelworkers	8,000 6,700 6,500 8,400	Aug. 1, 1977 to July 31, 1980 May 1, 1978 to May 3, 1981 July 1, 1977 to June 30, 1980 Aug. 1, 1977 to Aug. 25, 1980	Feb. Mar., thereafter quarterly Jan. Mar.	Feb. 1: 1.5 percent Apr. 28: 34 - 54 cents

Table 3. Continued—Expiration, reopening, and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1967 SIC Code	Industry and employer ¹	Union ²	Employees covered	Contract term and reopening provisions ³	1980 provisions for automatic cost-of-living review ⁴	1980 provisions for deferred wage increases ⁵
36	Electrical machinery, equipment and supplies: General Electric Co.	Electrical Workers (UE-Ind.)	16,000	July 1, 1979 to June 27, 1982	June and Dec.	June 30: 17.5 cents and \$7 weekly
	General Electric Co.	Electrical Workers (IUE)	68,000	July 1, 1979 to June 27, 1982	June and Dec.	June 30: 17.5 cents and \$7 weekly
	General Motors Corp.	Electrical Workers (IUE)	25,000	Sept. 15, 1979 to Sept. 14, 1982	Mar.; thereafter quarterly	Sept. 15: 3 percent
	Raytheon Co. (Massachusetts)	Electrical Workers (IBEW)	9,400	Aug. 31, 1979 to Aug. 21, 1981	Sept.	.....
	Western Electric Co., Inc.	Communications Workers	14,200	Aug. 7, 1977 to Aug. 9, 1980	.....	.....
	Western Electric Co., Inc.	Communications Workers	15,000	Aug. 7, 1977 to Aug. 9, 1980	.....	.....
	Westinghouse Electric Corp.	Electrical Workers (IBEW)	50,000	Aug. 7, 1977 to Aug. 9, 1980	.....	.....
371	Westinghouse Electric Corp.	Electrical Workers (IUE)	19,000	Sept. 4, 1979 to July 11, 1982	Jan. and July	July 14: 17.5 cents and \$7 weekly
	Westinghouse Electric Corp.	Electrical Workers (UE-Ind.)	5,500	Sept. 4, 1979 to July 11, 1982	Jan. and July	July 14: 17.5 cents and \$7 weekly
	Westinghouse Electric Corp.	Federation of Westinghouse Independent Salaried Unions (Ind.)	12,000	July 16, 1979 to July 26, 1982	Jan. and July	July 14: \$7 weekly and \$33.33 monthly
	Whirlpool Corp. (Evansville, Ind.)	Electrical Workers (IUE)	5,000	Feb. 17, 1977 to Feb. 17, 1980	.....	.....
	Transportation equipment—motor vehicle and motor vehicle equipment:					
	American Motors Corp., Jeep Division (Toledo, Ohio)	Auto Workers (Ind.)	5,000	Feb. 1, 1977 to Jan. 31, 1980	.....	.....
	Budd Co., National agreement	Auto Workers (Ind.)	9,000	Jan. 15, 1977 to Jan. 15, 1980	.....	.....
372	General Motors Corp., National Agreement ⁶	Auto Workers (Ind.)	490,000	Sept. 17, 1979 to Sept. 14, 1982	Jan., thereafter quarterly	Sept. 15: 3 percent (of base rates)
	Ford Motor Co., National Agreement ⁶	Auto Workers (Ind.)	190,000	Sept. 17, 1979 to Sept. 14, 1982	Jan., thereafter quarterly	Sept. 15: 3 percent (of base rates)
	Rockwell International Automotive Group	Auto Workers (Ind.)	5,350	Feb. 5, 1977 to Feb. 4, 1980	.....	.....
	Transportation equipment—aircraft:					
Beech Aircraft Corp. (Kansas and Colorado)	Machinists	6,550	Aug. 7, 1978 to Aug. 2, 1981	Mar., thereafter quarterly	Mar.: 6 percent	
Bendix Corp.	Auto Workers (Ind.)	6,900	Apr. 30, 1977 to Apr. 30, 1980	Jan.	.....
Boeing Co. (Washington, Utah, and Florida)	Seattle Professional Engineering Employees Association (Ind.)	10,300	Dec. 16, 1977 to Dec. 15, 1980	.....	.....
Boeing Co., Technical employees (California and Washington)	Seattle Professional Engineering Employees Association (Ind.)	6,500	Dec. 16, 1977 to Dec. 15, 1980	July	.....
Boeing Co. (Washington, Kansas, and Florida)	Machinists	24,000	Nov. 14, 1977 to Oct. 3, 1980	Apr. and July	.....
Lockheed Aircraft Corp., Lockheed California Co. Division (California)	Machinists	10,300	Jan. 1, 1978 to Oct. 1, 1980	Jan., thereafter quarterly	.....
McDonnell Douglas Corp. (California and Oklahoma)	Auto Workers (Ind.)	9,900	Apr. 17, 1978 to Oct. 12, 1980	Jan., thereafter quarterly	.....
McDonnell Douglas Corp. (St. Louis, Mo.)	Machinists	9,300	May 8, 1978 to May 10, 1981	Feb., thereafter quarterly	.....
Rockwell International, Rockwell, Aerospace and Electronics Group (California, Ohio, and Oklahoma)	Auto Workers (Ind.)	8,000	June 11, 1978 to June 30, 1981	Jan., thereafter quarterly	Mar. 30: 16–22 cents	
United Aircraft Corp., Pratt Whitney Aircraft Division (Connecticut)	Machinists	9,700	Nov. 28, 1977 to Nov. 28, 1982	June	.....
373	Transportation equipment—shipbuilding:					
	Bethlehem Steel Corp., Shipbuilding department	Marine and Shipbuilding Workers	5,000	Aug. 14, 1978 to Aug. 13, 1981	Feb., thereafter quarterly	Aug. 14: 40 cents
	Litton Systems, Inc., Ingalls Shipbuilding Division (Pascagoula, Miss.)	Metal Trades Department and Teamsters (Ind.)	10,900	Jan. 29, 1978 to Feb. 1, 1981	Jan., thereafter quarterly	Jan. 18: 23–31 cents
	Pacific Coast Shipbuilding and Ship Repair Firms (California, Washington, and Oregon)	Metal Trades Department and Teamsters (Ind.)	18,000	July 1, 1977 to June 29, 1980	Feb., thereafter quarterly	.....
Nonmanufacturing						
12	Bituminous coal and lignite mining:					
	Association of Bituminous Contractors, Inc. Bituminous Coal Operators Association, National	United Mine Workers (Ind.) United Mine Workers (Ind.)	14,000 160,000	Mar. 26, 1978 to Mar. 27, 1981 Mar. 26, 1978 to Mar. 27, 1981	Mar. Mar.	Apr.: 40–43 cents Mar. 27.: \$2.50–\$3.20 daily
40	Railroads ⁶					
	Class I railroads:					
	Operating unions	Locomotive Engineers United Transportation	25,150 91,000	Jan. 1, 1978 to Mar. 31, 1981 Jan. 1, 1978 to Mar. 31, 1981	Jan. and July Jan. and July	July 1: 5 percent July 1: 5 percent
	Nonoperating unions:					
	Shop craft	Carmen	44,000	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
	Nonshop craft	Firemen and Oilers	13,800	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
		Electrical Workers (IBEW)	11,400	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
		Machinists	18,000	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
		Maintenance of Way	37,000	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
		Railway Clerks	105,000	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent
Railway Signalmen	8,000	Jan. 1, 1978 to Mar. 31, 1981	Jan. and July	July 1: 5 percent		

Table 3. Continued—Expiration, reopening, and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1967 SIC Code	Industry and employer ¹	Union ²	Employees covered	Contract term and reopening provisions ³	1980 provisions for automatic cost-of-living review ⁴	1980 provisions for deferred wage increases ⁵
41	Transit: ⁶ Greyhound Lines, Inc.	Amalgamated Transit	13,000	Nov 1, 1977 to Oct. 30, 1980	Feb., thereafter quarterly	.....
42	Trucking and warehousing: Local cartage, for hire and private carriers agreement (Chicago, Ill.) National master freight agreement and supplements: ⁶ Local cartage Over-the-road	Chicago Truck Drivers, Helpers and Warehouse Workers (Ind.) Teamsters (Ind.) Teamsters (Ind.)	7,700 200,000 100,000	Apr. 1, 1979 to Mar. 31, 1982 Apr. 1, 1979 to Mar. 31, 1982 Apr. 1, 1979 to Mar. 31, 1982	Apr. and Oct. Apr. and Oct. Apr. and Oct.	Apr. 1: 35 cents Apr. 1: 35 cents Apr. 1: 35 cents
44	Water transportation: Dry Cargo companies, Atlantic and Gulf coasts New York Shipping Association (New York) Pacific Maritime Association ⁶ Standard Freightship agreement, unlicensed personnel Standard Tanker agreement, unlicensed personnel West Gulf Maritime Association, Inc. (Louisiana and Texas)	Master, Mates and Pilots Longshoremen's Association Longshoremen's and Warehousemen's (Ind.) Seafarers' Seafarers' Longshoremen's Association	5,000 10,600 11,500 10,750 10,750 20,000	June 16, 1978 to June 15, 1981 Oct. 1, 1977 to Sept. 30, 1980 July 1, 1978 to July 1, 1981 June 16, 1978 to June 15, 1981 June 16, 1978 to June 15, 1981 Oct. 1, 1977 to Sept. 30, 1980	June and Dec. 	June 16: 7 percent July: 85 cents June 16: \$54.17 - \$103.77 June 16: \$54.17 - \$107.93
45	Airlines: ⁶ American Airlines, ground service Pan American, ground service United Airlines, Inc., flight attendants	Transport Workers Transport Workers Pilots	12,500 5,850 7,300	Sept. 1, 1977 to Mar. 1, 1980 Nov. 1, 1977 to July 1, 1980 Oct. 1, 1977 to Apr. 1, 1980	..... ..... .....	..... Jan. 6: 4 percent
48	Communications: American Telephone and Telegraph Co., Long Line Dept. Bell Telephone Co. of Pennsylvania General Telephone Co. of the Southwest General Telephone of California ⁶ Illinois Bell Telephone Co., plant department (Illinois and Indiana) New England Telephone and Telegraph Co., plant New England Telephone and Telegraph Co. New Jersey Bell Telephone Co., plant and engineering departments New York Telephone Co., downstate agreement (New York and Connecticut) New York Telephone Co., traffic department (New York and Connecticut) Southern New England Telephone Co. (Connecticut) Western Electric Co., Inc., installation agreement	Communications Workers Federation of Telephone Workers of Pennsylvania (Ind.) Communications Workers Communications Workers Electrical Workers (IBEW) Electrical Workers (IBEW) Electrical Workers (IBEW) Electrical Workers (IBEW) Union of Telephone Workers (Ind.) Telephone Traffic Union (Ind.) Connecticut Union of Telephone Workers, Inc. (Ind.) Communications Workers	22,600 12,150 6,300 16,500 13,500 16,000 7,500 12,000 8,000 10,000 9,000 17,300	Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 May 18, 1977 to May 15, 1980 Mar. 5, 1977 to Mar. 4, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980 Aug. 7, 1977 to Aug. 9, 1980	............................................................	..................................................
49	Electric, gas and sanitary services: Consolidated Edison Co. of New York, Inc. Niagara Mohawk Power Corporation	Utility Workers Electrical Workers (IBEW)	17,700 7,300	June 18, 1977 to June 17, 1980 June 1, 1978 to May 31, 1980	Jan. .....	..... .....
53	Retail trade—general merchandise: R. H. Macy and Co., Inc. (New York, N.Y.)	Retail, Wholesale and Department Store	7,000	Feb. 1, 1978 to Jan. 31, 1980	.....	.....
54	Retail trade—food stores: Food Employers Council General Merchandise agreement (California) Great Atlantic and Pacific Tea Co. (New York and New Jersey) Pathmark and Shop Rite Supermarkets (New York and New Jersey) United Supermarket Association (Detroit, Mich.) ⁶ Washington, D.C. Food Employers Labor Relations Association (Washington, D.C. area)	Food and Commercial Workers Food and Commercial Workers Food and Commercial Workers Food and Commercial Workers Food and Commercial Workers	60,150 11,900 10,750 12,500 12,200	July 31, 1978 to July 26, 1981 Aug. 14, 1977 to Aug. 16, 1980 Apr. 10, 1978 to Apr. 5, 1981 Mar. 27, 1977 to Mar. 22, 1980 Aug. 28, 1977 to Sept. 6, 1980	Feb. and Dec. Feb. Jan. Mar.	Aug. 4: 50 cents Feb. 17: \$8 per week Apr. 6: \$20 per week
58	Retail trade—eating and drinking places: Long Beach and Orange County Restaurant Association (California) Restaurant-Hotel Employees Council of Southern California	Hotel and Restaurant Employees Hotel and Restaurant Employees	6,500 9,000	Mar. 1, 1975 to Feb. 28, 1980 Mar. 16, 1975 to Mar. 15, 1980	..........	..........
65	Real estate: Building Managers Association of Chicago Realty Advisory Board on Labor Relations, Inc., apartment buildings (New York, N.Y.) ⁶	Service Employees Service Employees	5,000 20,000	Mar. 28, 1977 to Mar. 30, 1980 Apr. 21, 1979 to Apr. 20, 1982	..... Mar.	..... Apr. 21: \$16 per week

Table 3. Continued—Expiration, reopening, and wage adjustment provisions

[Contracts are listed in order of the Standard Industrial Classification Code]

1967 SIC Code	Industry and employer ¹	Union ²	Employees covered	Contract term and reopening provisions ³	1980 provisions for automatic cost-of living review ⁴	1980 provisions for deferred wage increases ⁵
70	Real estate: (continued) Realty Advisory Board on Labor Relations, Inc., commercial buildings (New York, N.Y.)	Service Employees	55,000	Jan. 1, 1978 to Dec. 31, 1980	Jan.	Jan. 1: \$11 per week
	Hotels, roominghouses, camps, and other lodging places: Hotel Association of New York City, Inc. ⁶	New York Hotel Trades Council	25,000	June 1, 1978 to May 31, 1982	.....	June 1: \$11 per week (with tip) \$16 per week (non-tipped)
	Hotel Employers Association of San Francisco	Hotel and Restaurant Employees	20,000	July 1, 1975 to June 29, 1980	.....	.....
	Hotel Industry (Hawaii)	Hotel and Restaurant Employees	10,000	June 1, 1977 to May 31, 1982 REOPENING: Dec. 1, 1980	.....	.....
78	Nevada Resort Association resort hotels (Las Vegas, Nev.)	Hotel and Restaurant Employees	15,000	Mar. 26, 1978 to Apr. 1, 1980	.....	.....
	Motion pictures: Association of Motion Pictures Theatrical Agreement (Los Angeles, Calif.)	Actors	8,500	July 1, 1977 to June 3, 1980	.....	.....
	Screen Actors Guild 1979 Commercials Contract	Actors	39,000	Feb. 7, 1979 to Feb. 6, 1982	.....	.....
79	Television Videotape agreement	Musicians	5,000	May 1, 1978 to Apr. 30, 1980	.....	.....
	Amusement and recreation services, except motion pictures: Association of Motion Picture and Producers, Theatrical Agreement	Actors	8,500	July 1, 1977 to July 1, 1980	.....	.....
80	Medical and other health services: League of Voluntary Hospital and Homes of New York	Retail, Wholesale and Department Store	37,000	July 1, 1978 to June 30, 1980	.....	.....
91	Postal services: United States Postal Service nation-wide agreement	Postal Workers; Letter Carriers; and Laborers'	600,000	July 21, 1978 to July 20, 1981	July	July 21: \$500 per year

¹ Geographical coverage of contracts is interstate unless specified.

² Unions are affiliated with AFL-CIO, except where noted as independent (Ind.).

³ Contract term refers to the date contract is to go into effect, not the date of signing. Where a contract has been amended or modified and the original termination date extended, the effective date of the changes becomes the new effective date of the agreement. For purposes of this listing, the expiration is the formal termination date established by the agreement. In general, it is the earliest date on which termination of the contract could be effective, except for special provisions for termination as in the case of disagreement arising out of wage reopening. Many agreements provide for automatic renewal at the expiration date unless notice of termination is given. The Labor Management Relations Act of 1947 requires that a party to an agree-

ment desiring to terminate or modify it shall serve written notice upon the other party 60 days prior to the expiration date.

⁴ Dates shown indicate the month in which adjustment is to be made, not the month of the Consumer Price Index on which adjustment is based.

⁵ Hourly rate increase unless otherwise specified.

⁶ Contract terms are not on file with the Bureau of Labor Statistics, information is based on newspaper accounts.

SOURCE: Contracts on file with the Bureau of Labor Statistics, October 1, 1979. Where no contracts are on file, table entries are based on newspaper accounts.

contract duration, wages, hours, containerization, and employer contributions to pension and welfare funds—set the pattern for ILA settlements with other associations covering about 15,000 workers in South Atlantic and Gulf ports. Many terms, such as vacations and holidays, are negotiated separately at each port.

The 1977 negotiations were complicated by a National Labor Relations Board decision, upheld by the courts, that "rules on containers" in the previous master contract violated Federal labor law. The ruling prompted the ILA to demand an alternate job security provision, and led to disagreement among the various employer associations within CONASA over funding arrangements for the industry's guaranteed annual income plan. As a result, the New York Shipping Association withdrew from CONASA, and has remained independent, even though the job security issue was resolved through an arrangement outside the regular agreement.

The terms of the 1977 master contract, achieved after a 2-month strike over the job security issue, provided for 80 cents annual pay raises, increased employer con-

tributions to welfare and pension funds, and guaranteed that the local funds would remain solvent. Other benefits were improved at some ports.

The rise in containerization and other labor-displacing technology has spurred the ILA to protect workers' jobs and earnings through exclusive hiring halls at some ports, complex work rules, and in 1968, negotiating a guaranteed annual income plan. Although the 1980 bargaining goals have not been announced, ILA President Thomas W. Gleason has stated that job security continues to be a major issue and that further improvements in employee safety are needed. Gleason also expressed the need to gain uniform agreement terms at all ports to "stabilize competition" and to prevent employers from using "whip-sawing tactics."

Negotiation breakdowns and strikes have been common in the longshore industry. Because even a short dock strike can seriously disrupt international trade and cause layoffs in other industries, the Taft-Hartley emergency dispute procedures have been invoked eight times. The last instance occurred in late 1971, after ILA

longshoremen joined striking West Coast workers represented by the International Longshoremen's and Warehousemen's Union, who had walked out in July. The West Coast workers did not return to work until February 1972. The 1977 ILA agreement ended a 2-month strike directed against containerships at 34 Atlantic and Gulf ports. During the strike, the dockworkers, with few exceptions, continued to load and unload conventional vessels.

Aerospace contracts expire in last quarter

Major collective bargaining agreements covering about 100,000 workers in the aerospace industry will be up for negotiation during the closing months of 1980. Because of delay in reaching accord on the 1977 negotiations (and, in one situation, negotiation of a 5-year agreement), several aerospace contracts do not expire until 1981 or 1982. The major aerospace companies are Boeing, Lockheed, McDonnell Douglas, and Rockwell International.

On the union side, principal negotiations will be conducted by the International Association of Machinists and Aerospace Workers (IAM) and the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW). Several other unions will negotiate contracts for a significant number of engineers and other white-collar workers.

Although the IAM and UAW have a history of intense competition for aerospace workers, they have worked closely in recent rounds to develop common objectives and strategies. Negotiations are on a company-by-company basis, with the earliest settlement usually setting the pattern. However, the terms of individual contracts, as well as expiration dates, may vary considerably, even within the company. Settlements in the auto industry have sometimes influenced the aerospace terms, particularly for UAW aerospace contracts.

The aerospace industry is characterized by large fluctuations in employment. The largest companies, which build complex military aircraft, missiles, and space vehicles and large commercial airplanes, rely heavily on contracts with relatively few customers—the U.S. and foreign governments and commercial airlines. Manufacturers of smaller aircraft, such as Beechcraft, Cessna, Fairchild, and Piper, have a broader market, including sales to businesses and individuals.

Boeing settled first in the 1977 negotiations, following a 45-day strike. Employees received a 6.9-percent pay increase the first year, and 3 percent in each of the succeeding 2 years. The cost-of-living clause was retained, the number of paid holidays increased, and the pension formula improved. Changes also strengthened the union security provisions, which had been a major issue. The terms of settlement with other companies were similar but not identical. Some units of McDonnell

Douglas settled for somewhat reduced pay hikes in exchange for full retirement benefits (with no actuarial reductions) at age 55 with 30 years of service. The Lockheed Corporation, pleading financial problems, won some concessions on pay, paid holidays, and seniority. Lockheed claimed the then current system resulted in an inefficient amount of "bumping" and transferring during layoffs. Talks between the UAW and Rockwell International continued far beyond the October 1977 expiration date, and the agreement finally reached will not expire until June 1981; another large company, United Technologies, Inc., agreed to a 5-year contract with UAW.

Because much of the industry is engaged in production for the armed forces, prolonged strikes can have a critical effect on national security. Aerospace has a history of strikes, which sometimes closed down individual companies for 2 or 3 months. A 93-day strike against McDonnell Douglas in 1975 involved 18,700 workers. Strike activity again erupted in 1977, disrupting production for 6 to 11 weeks at Boeing, Lockheed, and McDonnell Douglas plants. The IAM failed to maintain a solid front in the Lockheed strike; employees at some locals delayed striking and some agreed to a Lockheed offer and returned to work early. □

—FOOTNOTES—

¹ Major contracts are those covering 1,000 workers or more in the private nonfarm economy.

² Bargaining situations in the railroad and bituminous coal industries, formerly on a 3-year cycle coinciding with the end of the calendar year, do not appear because their expiration dates have been extended into 1981. These industries were last summarized in Lena Bolton, "Bargaining calendar to be heavy in 1977," *Monthly Labor Review*, December 1976, pp. 14-24. Also, the bargaining situation in the construction industry is not discussed because of the localized nature of its contracts.

³ For more detailed information about escalators offsetting inflation, see Victor J. Sheifer, "Cost-of-living adjustment: keeping up with inflation?" *Monthly Labor Review*, June 1979, pp. 14-17.

⁴ For an analysis of how 1978 contracts compared with prior contracts, see Edward J. Wasilewski, "1978 first year wage-rate and package adjustments smallest since 1973," *Current Wage Developments*, April 1979, pp. 45-66.

⁵ Data are through the third quarter 1979. It should be noted that the construction industry, scheduled for substantial bargaining activity during 1980, is characterized by relatively few COLA provisions and by short-term agreements.

⁶ The firms are Allegheny Ludlum Industries, Inc.; Armco Steel Corp.; Bethlehem Steel Corp.; Inland Steel Co.; Jones and Laughlin Steel Corp.; National Steel Corp.; Republic Steel Corp.; United States Steel Corp.; and Wheeling-Pittsburg Steel Corp.

⁷ Lloyd McBride defeated Edward Sadlowski for the presidency in a bitter contest in February 1977.

⁸ Preliminary information from the Steelworkers' Wage Policy Committee indicates that the union's 1980 bargaining program for steel and related industries will emphasize cost-of-living protection and other benefits for retirees, as well as improved cost-of-living clauses, wage increases, and reduced worktime for active employees.

⁹ A wholly-owned subsidiary of the American Telephone and Telegraph Company that manufactures telephone equipment used by the Bell System.

Labor and material requirements for federally aided highways

Despite technological gains and more efficient construction methods, overall labor requirements for federally aided highway construction have increased; each \$1 billion in expenditures during 1978 created an estimated 32,000 jobs

ROBERT J. PRIER

Reversing a long downward trend, labor requirements for new federally aided highway construction have increased. Measured in 1972 dollars, 121.6 employee hours were spent for each \$1,000 of federally aided highway construction in 1976. (See table 1.) Approximately 44 percent of these employee hours (53.8 per \$1,000) came from workers in the construction industry, while 56 percent (67.8 per \$1,000) came from factories, offices, and mines which produced and transported the materials used. (See table 2.)

In constant dollars, after declining at a rate of 2.0 percent a year between 1958 and 1973, the number of employee hours for new highways generated in all industries increased at an annual rate of 0.6 percent between 1973 and 1976.¹ (See table 3.)

Adjusting the 1976 data for price and productivity changes, the Bureau estimates that in 1978 each \$1 billion of contract cost generated 32,000 full-time jobs, 15,000 within the construction industry and 17,000 in other industries. In 1976, each \$1 billion created 43,000 jobs, 20,000 in construction and 23,000 in other industries. Excluded from other industries are estimates of the employment generated by spending of construction workers' wages and salaries, and contractors' profits.³ Money spent for federally aided highways generated a

total of 354,000 jobs in 1976, 163,000 in construction and 191,000 in other industries. Based on employee-hour figures for Federal highway construction, the Bureau estimates that expenditures on all public highways created a total of 517,000 jobs:

Industry	Number of jobs (in thousands)		
	Jobs per billion dollars	Federally aided highways	All public highways
Total	43	354	517
Construction	20	163	238
Onsite	18	149	217
Offsite	2	14	21
Other industries	23	191	278
Manufacturing	11	91	133
Trade, transportation, and services	9	71	104
Mining and miscellaneous	3	28	41

Labor requirements for highway construction are affected by a number of factors, including changes in technology, productivity, and the cost of labor, materials, and equipment. Smaller projects, and urban construction involve different labor and technological requirements than the large-scale, rural projects which were characteristic of much of the Interstate Highway System, over 90 percent of which is now open to traffic.⁴

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Table 1. Employee hours per \$1,000 of construction cost for federally aided highway construction, by industry, in current and 1972 dollars, selected years

Industry	Current dollars							1972 dollars ¹						
	1958	1961	1964	1967	1970	1973	1976	1958	1961	1964	1967	1970	1973	1976
Total	246.4	234.6	200.1	172.6	141.3	112.2	80.7	162.4	144.4	131.4	126.8	123.2	119.5	121.6
Construction	102.0	96.1	83.3	74.6	60.4	47.2	35.7	67.2	59.2	54.7	54.8	52.6	50.3	53.8
Onsite	97.3	91.7	79.0	70.2	56.6	43.6	32.2	64.1	56.5	51.9	51.6	49.3	46.4	48.5
Offsite	4.7	4.4	4.3	4.4	3.8	3.6	3.5	3.1	2.7	2.8	3.2	3.3	3.8	5.3
Other industries	144.4	138.5	116.8	98.0	80.9	65.0	45.0	95.1	85.3	76.7	72.0	70.5	69.2	67.8
Manufacturing	66.1	66.4	66.0	57.4	47.3	33.8	22.8	43.6	40.9	43.3	42.2	41.2	36.0	34.4
Trade, ² transportation, and services	52.5	49.9	32.4	27.4	22.6	22.2	15.4	34.6	30.7	21.3	20.1	19.7	23.6	23.2
Mining and miscellaneous ³	25.8	22.2	18.4	13.2	11.0	9.0	6.9	17.0	13.7	12.1	9.7	9.6	9.6	10.4

¹ The deflator used is an unpublished composite index derived by the Bureau of Labor Statistics for highway projects reported as completed.

² Data for trade have been revised to include retail as well as wholesale trade.

³ Includes finance, insurance, real estate, communications, other construction, public utilities, mining, agriculture, and government enterprises.

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

Onsite labor requirements

The number of onsite employee hours required by each \$1,000 decreased at an average rate of 2.1 percent per year between 1958 and 1973, only to increase at a rate of 1.5 percent between 1973 and 1976. Declining employee-hour requirements paralleled the construction of most of the Interstate Highway System. The shift to more labor intensive projects, such as non-Interstate highways, and the economic recession of 1974-75 were partially responsible for the increasing labor requirements of 1973-76. Although no generally accepted figures are available for productivity in the highway construction industry because of the changing mix of work involved and the lack of sufficiently detailed data, the increasing employee hours reflect, in part, decreasing productivity.

In 1976, each \$1,000 of expenditures for federally aided highways required 48.5 employee hours at the construction site. (See table 4.) The distribution by occupation reflects the high mechanization in modern highway building. Twenty-four percent of onsite construction workers were equipment operators, 13 percent

were truckdrivers, and 2 percent were mechanics involved in equipment upkeep. These three occupations accounted for 40 percent of total onsite labor requirements in 1976, the same as in 1973. Skilled craftworkers, such as carpenters and cement finishers, supplied 21 percent of the onsite labor, while semiskilled and unskilled laborers provided 33 percent. Managerial, supervisory, and clerical personnel made up 6 percent. The overall occupational distribution has remained virtually unchanged since 1970.

Minority groups. Minority workers accounted for 21 percent of onsite construction employment in 1976. (See table 5.) In 1970, 30 percent of minority workers held jobs in skilled construction trades, while nearly 60 percent were laborers. In 1976, 40 percent of minority workers held skilled trade jobs, while the percentage employed as laborers decreased to 48 percent. This change results partly from apprenticeship and on-the-job training programs. In 1976, over 56 percent of on-the-job trainees were members of minority groups, as were 45 percent of all apprentices. Between 1973 and 1976, minority groups increased their participation in every skilled construction trade except cement finishers, where minority workers already account for 53 percent of employment.

By type of operation

The onsite labor requirements of federally aided highway construction are partly affected by type of construction and by region as shown below in employee hours per \$1,000 of cost (current dollars).⁵

Type of construction	United States	North-east	North Central	South	West
All projects ..	37.2	31.8	29.8	48.5	30.8
Surfaces only ...	31.3	28.7	26.6	41.3	27.3
Structures only ..	33.9	31.7	30.6	40.6	30.6
Projects involving structures and surfaces	41.8	33.0	34.0	53.0	32.9

Table 2. Employee hours per \$1,000 of contract cost for federally aided highway construction, selected years

[In percent]

Industry	1958	1961	1964	1967	1970	1973	1976
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Construction	41.4	41.0	41.6	43.2	42.7	42.1	44.2
Onsite	39.5	39.1	39.5	40.7	40.1	38.9	39.9
Offsite	1.9	1.9	2.1	2.5	2.7	3.2	4.3
Other industries	58.6	59.0	58.4	56.8	57.3	57.9	55.8
Manufacturing	26.8	28.3	33.0	33.3	33.5	30.1	28.3
Trade, ¹ transportation, and services	21.3	21.3	16.2	15.9	16.0	19.8	19.1
Mining and miscellaneous	10.5	9.5	9.2	7.6	7.8	8.0	8.6

¹ Data for trade have been revised to include retail as well as wholesale trade.

NOTE: Percent distribution derived from current dollar figures from table 1. Detail may not add to totals due to rounding.

Table 3. Average annual rates of change of employee hours per \$1,000 of contract cost for federally aided highway construction, based on 1972 dollars, selected periods

Industry	1958-76	1958-73	1958-67	1967-76	1973-76
Total	-1.6	-2.0	-2.7	-0.5	+0.6
Construction	-1.2	-1.9	-2.2	-2	+2.3
Onsite	-1.5	-2.1	-2.4	-7	+1.5
Offsite	+3.0	+1.4	+4	+5.8	+11.7
Other industries	-1.9	-2.1	-3.0	-7	-7
Manufacturing	-1.3	-1.3	-4	-2.2	-1.5
Trade, transportation, services	-2.2	-2.5	-5.9	+1.6	-6
Mining and miscellaneous ...	-2.7	-3.7	-6.0	+8	+2.7

NOTE: Rates of change derived using compound interest method.

Surfaces. Projects involving surfacing operations only, required fewer employee hours, for each 1,000 current dollars of contract cost, reflecting the efficient use of construction equipment in this type of work. Equipment operators and truckdrivers provided a particularly important portion of onsite labor for surfacing projects.

Structures. In all regions except the South, construction of bridges, tunnels, and elevated highways required greater labor cost than did surfacing projects. Much of the modern, laborsaving equipment available for surfacing cannot be used in the building of highway structures. The result is fewer equipment operators but more skilled craftworkers, such as carpenters, steel workers, and cement finishers.

Combined projects. While less than 20 percent of projects involved both surfacing operations and structures, they averaged five times the cost of those involving surfacing or structures alone. They also required more employee hours.

Geographic distribution. Nationwide statistics for highway labor requirements are affected by the regional distribution of construction work as well as by type of work. The North Central States, with 29.8 employee hours per \$1,000 of construction cost, had the lowest employee-hour requirements in any region, followed closely by the West and Northeast. In the South, 48.5 employee hours were required for each \$1,000 of contract cost, reflecting in part its lower level of mechanization.

Offsite labor requirements

Sixty percent of highway-related employee hours were worked away from the construction site in 1976. More than 4 percent represented work in the construction industry such as in contractors' offices and warehouses, while nearly 56 percent occurred in the industries which supply and transport highway construction materials.

Since 1958, the employment generated in manufacturing industries for federally aided highway construction has declined at a rate of 1.3 percent a year. The manufacturing industries most affected by the material requirements of highway construction are steel, cement, and petroleum refining. (See table 6.) The declining rate of employee-hour requirements reflects increased productivity in the individual industries, and other factors such as technological advances, substitution of one material for another, material shortages, and the type of roadwork.

The number of employee hours worked away from the construction site, such as clerical and managerial positions, increased at a rate of nearly 6 percent per year between 1967 and 1976. Employment in mining and miscellaneous categories increased at a rate of 0.8 percent a year over the same period.

Distribution of construction costs

In 1976, materials and supplies accounted for 47 percent of contractor expenditures, while onsite wages and salaries claimed 24 percent. Overhead, equipment, off-site wages and salaries, fringe benefits, and contractors' profit accounted for the remaining cost. (See table 7.)

Between 1961 and 1973, the percentage of costs going for materials and supplies decreased steadily. This trend reversed between 1973 and 1976 as the percentage of total costs increased for materials.

In 1973, shortages of petroleum products, steel, and

Table 4. Onsite hours per \$1,000 of construction cost for federally aided highway construction, by occupation, selected years

Occupation	1970		1973		1976	
	Onsite hours per \$1,000	Percent	Onsite hours per \$1,000	Percent	Onsite hours per \$1,000	Percent
Total	49.3	100.0	46.4	100.0	48.5	100.0
Construction trades	22.3	45.2	21.5	46.3	21.9	45.1
Blue-collar supervisors	3.7	7.6	3.5	7.6	3.6	7.4
Equipment operators	12.1	24.5	11.8	25.5	11.8	24.3
Ironworkers	1.3	2.7	1.2	2.5	1.3	2.6
Carpenters	3.1	6.3	2.8	6.1	2.8	5.7
Cement masons	1.4	2.8	1.4	3.0	1.6	3.4
Electricians .....	.3	.7	.5	1.1	.6	1.2
Pipefitters .....	.1	.3	.1	.2	.1	.2
Painters .....	.1	.3	.1	.3	.2	.4
Apprentices .....	.3	1.7	.6	1.3	.7	1.4
On-the-job trainees ..	.2	1.7	.9	1.9	.8	1.6
Laborers	17.0	34.4	15.8	34.0	16.1	33.2
Semiskilled	16.3	12.7	6.4	13.8	6.8	14.0
Unskilled	10.7	21.7	9.4	20.2	9.3	19.2
Other trades						
Mechanics	1.5	3.0	1.3	2.7	1.2	2.5
Truckdrivers	5.5	11.2	5.3	11.4	6.3	12.9
Managerial, supervisory, and clerical	3.1	6.2	2.7	5.9	3.1	6.3

¹ Revised data.

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

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Civil Rights.

Table 5. Minority employment in federally aided highway construction, by occupation, selected years

Occupation	1970		1973		1976	
	Minority workers as a percent of all workers in category	Percent distribution of minority employment	Minority workers as a percent of all workers in category	Percent distribution of minority employment	Minority workers as a percent of all workers in category	Percent distribution of minority employment
Total	19.8	100.0	20.7	100.0	21.0	100.0
Construction trades	13.2	30.2	15.9	35.4	18.6	40.0
Blue-collar supervisors	9.0	3.4	9.1	3.3	11.3	4.0
Carpenters	13.5	4.3	19.6	5.8	22.9	6.3
Cement finishers	50.8	7.3	52.7	7.7	50.6	8.1
Electricians	5.9	.2	11.2	.6	15.2	.8
Equipment operators	10.1	12.6	12.1	14.8	14.9	17.3
Ironworkers	14.3	2.0	21.7	2.6	22.3	2.7
Painters	17.4	.3	13.6	.2	17.1	.3
Pipefitters	16.8	.2	37.5	.3	45.5	.4
Apprentices	17.1	.6	35.8	2.3	45.1	3.0
On-the-job trainees	51.2	1.3	62.7	5.8	56.4	4.4
Laborers	34.3	59.4	32.5	53.2	30.2	47.8
Semiskilled	36.6	23.4	...	...	29.6	19.8
Unskilled	32.9	36.0	...	...	30.7	28.1
Other trades						
Mechanics	5.6	.8	8.1	1.0	9.5	1.1
Truckdrivers	14.9	8.5	16.6	9.0	15.2	9.4
Managerial, supervisory, and clerical	3.4	1.1	4.8	1.4	5.4	1.6

SOURCE: U.S. Department of Transportation, Federal Highway Administration, Office of Civil Rights.

cement were accompanied by sharply rising prices. Between 1973 and 1976, asphalt prices increased at an average rate of 36 percent a year, while the prices of cement, reinforcing steel, and structural steel all rose at an annual rate of approximately 16 percent.⁶

The distribution of costs depends in part on the type of project. For surfacing work, onsite wages and salaries accounted for 21.2 percent of costs, and materials 47.2 percent. For structural work, labor accounted for 22.8 percent of costs, and materials 54.7 percent. For projects involving both tasks, onsite labor claimed 25.8 percent, and materials 44.7 percent. The remaining costs were for equipment, overhead, and profit.

Materials constituted nearly 55 percent of costs for bridges, tunnels, and elevated highways, reflecting the large quantities of steel and concrete used in these structures. Surfacing operations, however, required more construction equipment and less labor.

Average hourly earnings for highway construction workers rose from \$2.43 per hour in 1958 to \$7.55 per hour in 1978, an average increase of 5.8 percent a year.⁷ Productivity gains have kept labor's share of highway expenditures stable. However, the trend toward more labor-intensive maintenance and repair work may adversely affect highway productivity, until new technology or methods are developed and implemented.

Technological changes

Technological advances in the methods, materials, and machinery of the highway construction industry increase productivity and reduce cost. The increasing

complexity of highway construction, and the rising costs of material and labor have encouraged technological innovation and experimentation in the search for more economical and efficient methods of building highways.

Methods of construction

Asphalt, cement, and aggregates are becoming more expensive, making recycling of both asphalt and concrete surfaces more economical. Recycled concrete can be used as a low-cost aggregate, eliminating quarrying and hauling of rock, sand, and gravel. Recycled asphalt can be combined with new asphalt and a softening agent to produce surfacing material of acceptable quality.

Pavement recycling still accounts for little current resurfacing, but technology adaptations are expected to make recycling more economically acceptable. Manufacturers have developed equipment, which in a single step can remove pavement and prepare the underlying base material. Asphalt mixing plants with new modifications are capable of both recycling and new production.

Much current research is directed towards making highways safer and more durable. The Federal Highway Administration is experimenting with safety features such as nonskid pavement, de-icing techniques, and electronic traffic control devices to warn motorists of changing weather and road conditions. Salt-resistant materials and improved drainage techniques are being developed to increase the life span of pavement and bridges.

Table 6. Materials and supplies used in federally aided highway construction, selected years

[Per 1,000 current dollars]

Type of material	1958	1961	1964	1967	1970	1973	1976
Total	\$506	\$526	\$502	\$478	\$450	\$445	\$467
Stone, clay, glass, and concrete products	180	178	204	209	189	164	151
Aggregates (purchased and produced)	75	72	98	99	87	81	71
Ready-mix concrete	41	48	46	49	50	45	41
Cement	49	46	44	48	38	26	29
Concrete culvert pipe	15	12	15	12	12	10	9
Clay pipe			1	1	2	2	1
Metal products	122	147	132	127	119	116	120
Structural steel	56	68	49	47	37	45	47
Reinforcing steel	39	47	45	45	44	36	36
Bridge and guard railing			12	14	18	14	14
Steel culvert pipe	9	8	8	6	6	7	10
Miscellaneous steel	18	24	13	9	8	9	8
Fencing			5	6	6	5	5
Petroleum products	107	85	82	97	92	94	100
Premixed bituminous paving materials	45	33	29	40	43	43	48
Fuels and oils	35	33	39	42	36	36	30
Bitumens	27	19	14	15	13	15	22
Other products	97	116	84	45	50	72	95
Lumber and timber products	11	10	9	7	7	9	5
Explosives	5	6	8	14	9	4	6
Materials not reported	81	100	67	24	34	59	84

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Transportation, Federal Highway Administration, based on material quantities reported by contractors.

Machinery usage

Highway equipment is becoming increasingly versatile as a result of more complex and diversified work requirements. Maintenance and repair work require smaller, more flexible machinery than did earlier, large, Interstate construction jobs. Fuel costs have caused contractors to seek energy-efficient equipment. Government health and safety regulations now require safer, cleaner, quieter machinery.

As equipment costs rise, time lost because of equipment breakdown becomes more expensive. According to

Table 7. Distribution of construction costs for federally aided highways (except secondary), selected years

Type of cost	1958	1961	1964	1967	1970	1973	1976
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Onsite wages and salaries	23.9	24.7	26.0	24.8	25.6	24.6	23.8
Materials and supplies	50.6	52.6	50.3	47.8	45.0	44.5	46.7
Overhead ¹ , contractors' equipment, and profit	25.5	22.7	23.7	27.4	29.4	30.9	29.5

¹ Includes salaries for offsite workers, supplemental benefits, insurance, construction financing charges, and other miscellaneous expenses.

SOURCE: U. S. Department of Transportation, Federal Highway Administration.

BLS data, construction equipment costs rose an average of 15 percent per year between 1973 and 1976.⁸ In some cases, particularly for smaller, more diversified firms, equipment leasing is becoming increasingly popular and practical.

Equipment manufacturers are seeking to increase the efficiency and productivity of their products. Slipform paving machines, the major labor-saving innovation of the past two decades, are still being refined and made more versatile. Slipform pavers today can not only pave up to 2 miles of road surface a day, but also can form curves, gutters, and safety medians, speeding completion time.

Advances in laser beam technology have made surveying and measuring more precise. Lasers enhance on-the-job safety by eliminating the need for string lines, thus creating fewer obstructions. By increasing the speed and precision of surveying techniques, lasers can also increase productivity and save labor.

Computer technology is gaining importance in the highway construction industry, particularly in larger firms. Computers increase managerial efficiency by allowing contractors to better monitor costs and work scheduling. They are also used to aid offsite clerical tasks such as bookkeeping and preparing payrolls. □

FOOTNOTES

¹ The 1978 employment estimates for highway construction were developed from previous survey data adjusted for price and productivity changes. The deflator used to adjust for price changes is the Federal Highway Administration's composite index for highway price trends. The index, when converted to a 1972 base, equaled 144.2 in 1976, and 191.7 in 1978.

The estimate used to adjust the survey data for productivity change is the inverse of the change in onsite employee hours per \$1,000, after adjustments for price variations, between 1970 and 1976. The annual rate of change averaged 0.6 percent a year.

Because of part-time workers, transients, and the seasonal nature of the construction industry, more workers would be employed than indicated by the full-time job estimates.

See *Labor and Material Requirements for Construction of Federally Aided Highways, 1958, 1961, and 1964*, Report 299 (Bureau of Labor Statistics, 1966); Robert Ball, "Labor and materials required for highway construction," *Monthly Labor Review*, June 1973, pp. 40-45;

Diane S. Finger, "Labor requirements for Federal highway construction," *Monthly Labor Review*, December 1975, pp. 31-36. These findings are part of a series of studies prepared every 3 years by the Bureau of Labor Statistics, from data provided by the Federal Highway Administration. Initiated in 1958, the studies trace the labor and material requirements of federally aided highway construction.

² The Federal Highway Administration provides data on total costs, onsite employee-hour requirements, material costs, and occupational distributions, from reports filed upon the completion of projects. Expenditure figures exclude purchases of rights-of-way, preliminary and construction engineering costs, and State and local projects for which Federal funds were not requested or allowed.

Employee-hour and employee-year estimates for offsite construction were derived from the ratio of "nonconstruction" to total workers in the highway and street construction industry (Standard Industrial Classification 161) as shown in *Employment and Earnings* (Bureau of Labor Statistics), March issues. The data were adjusted to remove the

portion of clerical and administrative hours already included in onsite hours. Estimates in supplying industries were derived from an interindustry growth model, adjusted for subsequent productivity changes. Material costs from each industry group were aggregated, deflated by the respective wholesale price indexes, and matched with the industry groups in the model, yielding employee-hour estimates for given expenditures. Karen Horowitz of the Office of Economic Growth (BLS) assisted in the development of the employment estimates for the supplying industries.

³ BLS uses 1,800 hours to represent one full-time, year-round onsite construction job, and 2,000 hours for offsite construction. Employee years in the other industries average about 2,000 hours, based upon actual hours worked. Total job figures are based upon estimated capital expenditures of \$8.31 billion for federally aided highway construction in 1976. Expenditures for all public highways were \$12.14 billion. Because the total job estimates for all public highways are based upon employee-hour data for federally aided projects, the estimates will not reflect any differences that may exist between federally aided and nonfederally aided highway work. State and local construction would usually involve smaller, more labor-intensive work than federally aided projects. The estimates exclude certain types of employment: planning and design work before a contract is let; government time for inspection, supervision, and purchasing of rights-of-way; and employment generated by consumer spending of wages, salaries, and profit.

⁴ According to the Federal Highway Administration, on December 31, 1977, 38,907 out of 42,500 total miles were open to traffic.

⁵ The tabulation prepared by BLS included over 3,400 reports received by the Federal Highway Administration during 1976 (FHWA form PR-47). Data was obtained by State, for total contract cost, including materials, labor, and type of work (surfacing, structural, or a combination).

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

⁶ Based on the Producer Price Index (formerly the Wholesale Price Index), using compound interest rates to determine annual rates of change. The index for asphalt paving rose from 128.3 in 1973 to 319.5 in 1976. Other annual rates of increase were: fuels and oils, 29 percent; structural steel, 16.9 percent; reinforcing steel, 16.5 percent; and cement, 15.7 percent.

⁷ See *Employment and Earnings*, March 1979, table C-2. Average hourly earnings for the highway and street construction industry, SIC 161.

⁸ See *Wholesale Prices and Price Indexes*, BLS Supplement 1974, Data for 1973; and Supplement 1977, Data for 1976, Category 112.

The base of the iceberg

In all the exhortations to develop measures of inadequate employment, no metaphor has been so widespread as that of the iceberg. Unemployment is claimed to be the tip of an iceberg of underutilized labor. Like all metaphors, this one makes a point. The volume of inadequate employment is probably much greater than the volume of the unemployment, and because more workers are affected, the national product lost to inadequate employment is probably greater than that lost to unemployment. The rhetorical point of the metaphor has succeeded, for there is congressional mandate to develop new employment indicators. The iceberg metaphor has not yet completed its usefulness, however. Like all metaphors, it also has its shortcomings, and the shortcomings provide clues to problems of measuring inadequate employment.

In an iceberg, there is a relatively constant ratio between the proportion of the ice above the water line and that below. Both the visible and the invisible ice are assumed to be the same physical phenomenon. And so having measured the tip, it is not really necessary to measure the base; an empirical rule-of-thumb will suffice. But underutilized labor is not analogous.

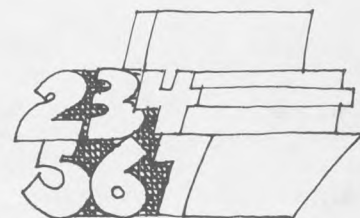
Unemployment does not necessarily bear any constant ratio to inadequate employment. Both might be results of the same underlying causes; for example, both might increase during recessions. But they might also be partial substitutes, so that the lower the unemployment, the higher the inadequate employment. Within the United States, differences in the social organization of work may mean that in response to identical economic conditions, one labor market may have higher unemployment and another may have more inadequate employment. In other words, the "tip" and the "base" of the iceberg may be only superficially the same. Further, without repeated empirical measurements, it is impossible to make *a priori* determination about the relation of the "tip" to the "base." No empirical rule-of-thumb is available.

—TERESA A. SULLIVAN AND PHILLIP M. HAUSER

The Labor Utilization Framework: Assumptions, Data, and Policy Implications

(Washington, National Commission on Employment and Unemployment Statistics, 1978), pp. 12–13.

The Anatomy of Price Change



Consumer prices rise at 13-percent rate for the third consecutive quarter

CRAIG HOWELL, WILLIAM THOMAS,
AND EDDIE LAMB

During the third quarter, the Consumer Price Index for All Urban Consumers (CPI-U) moved up at a seasonally adjusted annual rate of 13.2 percent, the same rate as in the first half. Energy items soared at a 49.1-percent rate, much less than in the second quarter, but substantially more than in the first. Food prices rose less than in either of the two preceding quarters. Prices for items other than food and energy increased about as much as in the second quarter, but considerably more than in the first. (See table 1.)

At the primary market level, the Producer Price Index (PPI) for Finished Goods advanced at a rate of 15.7 percent, compared with a 6.8-percent rate in the second quarter and a 14.3-percent rate in the first. The index for finished energy goods rose even more rapidly than it did earlier in the year, and consumer food prices turned up after a second-quarter decrease. Prices for finished goods less food and energy, however, rose at a 7.7-percent rate, about the same as in the second quarter and somewhat less than in the first. Prices for both intermediate and crude materials advanced more than in the second quarter.

The continued high rate of inflation for consumer goods and services other than food and energy was in part due to the strength of the general economy, which rebounded somewhat after a second-quarter decline. Although consumer demand was generally good, the rate of savings was the lowest (just over 4 percent) since the Korean conflict, raising fears that a high level of business activity in the third quarter was maintained at the expense of a weaker economy later on. The level of residential construction activity was also unexpectedly high from June to September. Capital spending remained vig-

orous, and inventory levels were not excessive in most industries.

Crude oil prices continue to rise

The rapid advance for energy prices in the third quarter was largely the result of increased costs of both foreign and domestic crude petroleum. (See table 2.) At the retail level, the CPI for energy items rose at a 49.1-percent annual rate, substantially less than the 70-percent rate in the previous quarter. Prices received by energy producers, however, moved up at even faster rates at all stages of processing than in the first half. (These third-quarter PPI data generally reflect price increases between May and August, because of a 1-month lag in the Producer Price Indexes for many energy products.)

The cutoff of oil shipments from Iran last winter brought about a shortage of petroleum products, which lasted through the spring and early summer. During the second quarter, several oil-exporting countries raised their prices above \$14.55 per barrel, the official Organization of Petroleum Exporting Countries (OPEC) benchmark; some began selling on the spot market for immediate delivery, rather than through long-term contracts. Because of uncertainty about future supplies and speculative hoarding, spot prices for oil in world markets had risen to nearly \$40 per barrel by early June.

When the oil ministers of the OPEC nations convened in late June, they permitted member countries to add surcharges of up to \$5.50 per barrel. In early July, Saudi Arabia announced that it would increase oil production by 1 million barrels a day to stabilize the chaotic conditions in the oil market. Spot prices for oil then dropped to about \$30 per barrel, as the supply situation improved. However, oil shipments from Iran again declined in August, partly because of renewed political turmoil. Algeria and Nigeria also cut back output; these countries produce high-grade light oil, which is preferred for refining gasoline. Thus, by September, world oil prices were again on the rise.

In the United States, phased deregulation of crude oil prices began in June, leading to sharply higher domestic oil prices (up at a rate of 97.0 percent in the third quarter). Crude oil stocks decreased about 2 percent from June to September as refiners increased output of gasoline and distillate fuels (diesel fuel and fuel oil No.

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2), which were in short supply in the second quarter. Shortages of petroleum products which had existed at midyear were substantially alleviated by the end of the third quarter.

Gasoline lines disappear

Prices for gasoline were substantially higher in the third quarter, mainly due to increased crude oil costs. Retail prices rose considerably less than in the previous 3 months, while prices received by refiners advanced even more than in the second quarter. The market share of unleaded gasoline grew to 41 percent; this type of gasoline requires the addition of octane-boosting chemi-

cals which were in short supply and therefore increasingly expensive. Panic buying among motorists broke out in the late spring, leading to service station lines in many parts of the country reminiscent of the 1973-74 shortage. Many State and local governments moved to curb panic buying by setting minimum purchases and odd-even sales days by license plate number. Service station lines disappeared as the availability of gasoline increased. Sales declined during the quarter because of both low gasoline supplies and driver resistance to rapidly climbing prices.

The rate of increase in home heating oil prices accelerated somewhat from the second quarter at both the producer and retail levels, reflecting higher crude oil prices. During the first 9 months of the year, retail and producer prices for fuel oil rose at annual rates of more than 80 percent, compared with rates of about 62 percent for gasoline prices. Unlike gasoline, fuel oil prices are not controlled. As a result of strong demand, refiners and distributors were able to raise heating oil prices by more than the pass-through of increased crude oil costs. Primary stocks of middle distillate fuels (which include home heating oil) increased from about 140 million barrels to about 230 million barrels in the third quarter, as the Federal Government sought to ensure that oil companies would have enough home heating oil supplies on hand for peak demand in winter.

Consumer prices for piped gas and electricity rose considerably less than in the second quarter as electric rate increases slowed. Higher costs of natural gas at the wellhead were reflected in increased residential rates.

Industrial fuel prices soar

Prices for intermediate energy goods rose at a 72.5-percent rate, compared with a 55.7-percent rate in the second quarter. Price increases for liquefied petroleum gas skyrocketed (from a 60.8-percent rate to a 238.3-percent rate), partly because of higher prices for crude petroleum feedstocks. In addition, demand for butane from gasoline refiners was strong, as was petrochemical producers' demand for propane and ethane. The index for diesel fuel soared at a 160.8-percent rate, compared with a 120-percent rate in the second quarter. Diesel prices usually closely follow home heating oil prices, as the two fuels are nearly identical. Commercial jet fuel price increases accelerated about as much as did diesel fuel in the wake of stronger demand and a continued response to the removal of price controls last winter. Prices for residual fuel increased slightly more than in the previous 3 months as several States forced electric utilities to switch from relatively inexpensive high-sulfur fuel oil to cleaner but more expensive low-sulfur fuel. Producer prices for industrial and commercial electric power rose less than in the second quarter. Although higher residual fuel costs did lead to

Table 1. Changes in selected components of the Consumer and the Producer Price Indexes, 1978-79

Index	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
	1978		1979		
	Sept.	Dec.	Mar.	June	Sept.
Consumer Price Index for All Urban Consumers (CPI-U)¹					
All items	8.5	8.5	13.0	13.4	13.2
Food and beverages	4.9	10.0	17.6	7.5	4.3
Housing	10.5	8.8	12.0	15.5	16.1
Apparel and upkeep	2.3	2.3	8.7	1.5	7.7
Transportation	9.0	11.1	14.6	24.4	19.5
Medical care	8.7	10.8	9.4	7.7	9.9
Entertainment	6.1	6.7	8.9	5.5	7.2
Other goods and services	13.1	2.4	8.5	5.7	12.6
Food	4.8	10.2	17.7	7.5	4.2
Commodities less food	8.3	9.6	12.9	15.8	16.2
Services	10.3	7.2	10.6	13.8	14.3
Energy ²	8.2	5.8	24.6	70.0	49.1
Fuel oil, coal and bottled gas	4.8	14.0	36.7	89.4	100.9
Gas and electricity	4.5	-2.8	10.7	29.9	18.9
Gasoline, motor oil, coolants, etc. ²	15.3	9.5	30.5	105.7	65.6
All items less energy	8.5	7.7	11.6	10.6	10.0
All items less food and energy ²	9.7	7.7	9.3	11.2	11.5
Producer Price Index (PPI) by stage of processing¹					
Finished goods	7.4	10.5	14.3	6.8	15.7
Finished energy goods	8.0	22.7	31.4	76.8	107.5
Consumer goods	4.9	15.3	21.0	-11.1	12.9
Finished goods less food	8.1	8.8	12.1	13.7	16.7
Finished goods less food and energy	7.8	7.5	10.3	8.0	7.7
Finished consumer goods less food	8.8	8.8	13.4	16.8	24.4
Finished consumer goods less food and energy	9.2	6.5	10.0	7.2	10.1
Capital equipment	7.0	8.8	10.3	9.2	4.9
Intermediate materials, supplies, and components	7.3	11.5	14.1	13.4	19.9
Intermediate energy goods	-4.2	11.6	13.2	55.7	72.5
Intermediate foods and feeds	16.1	14.8	13.2	-1.6	20.5
Intermediate materials less foods and feeds	6.9	11.2	14.0	14.3	19.8
Intermediate materials less food and energy	8.3	11.1	14.2	9.5	13.4
Crude materials for further processing	8.2	20.6	30.1	4.3	17.0
Crude energy materials ²	10.5	12.2	21.6	35.2	48.2
Crude foodstuffs and feedstuffs	2.8	21.2	31.0	-7.1	13.9
Crude nonfood materials	16.9	19.8	29.2	22.0	21.2
Crude materials less agricultural products and energy	27.8	37.0	71.3	.1	-15.8

¹ See "Definitions" and "Notes" preceding tables 22-30 of *Current Labor Statistics* in this Review.

² Not seasonally adjusted.

NOTE: Monthly data for Producer Price Indexes have been revised through May 1979 to reflect the availability of late reports and corrections by respondents. For this reason, some of the figures shown above and elsewhere in this report differ from those previously published.

Table 2. Changes in retail and producer prices for energy-related items, 1978-79

Item	Index	Relative Importance December 1978	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1978		1979		
			Sept.	Dec.	Mar.	June	Sept.
Finished items							
Energy items, (gas, electricity, fuel oil, coal, gasoline, motor oil) ¹	CPI	100.0	8.2	5.8	24.6	70.0	49.1
Finished energy goods	PPI	100.0	8.0	22.7	31.4	76.8	107.5
Gasoline, motor oil, coolants, etc. ¹	CPI	50.2	15.3	9.5	30.5	105.7	65.6
Gasoline ²	CPI	37.0	13.0	18.2	35.6	90.8	63.1
	PPI	64.7	11.3	27.8	38.4	62.6	88.0
Household fuels	CPI	49.8	4.6	.5	16.1	41.1	35.2
Fuel oil ²	CPI	8.7	6.8	17.9	44.3	101.6	107.9
	PPI	22.9	1.6	26.1	31.9	122.1	141.6
Gas (piped) and electricity	CPI	39.4	4.5	-2.8	10.7	29.9	18.9
Intermediate materials							
Intermediate energy goods	PPI	100.0	-4.2	11.6	13.2	55.7	72.5
Diesel fuel ²	PPI	8.4	2.4	19.1	30.1	120.0	160.8
Commercial jet fuel ²	PPI	6.8	7.7	-7	6.1	121.3	162.4
Residual fuel ²	PPI	12.8	-7.6	17.6	18.4	121.8	128.2
Liquefied petroleum gas ¹	PPI	5.7	-19.6	-7.7	-5.2	60.8	238.3
Electric power ³	PPI	46.0	-10.0	11.0	1.9	20.0	12.2
Crude materials							
Crude energy materials ¹	PPI	100.0	10.5	12.2	21.6	35.2	48.2
Natural gas ^{1,2}	PPI	42.6	13.0	21.5	39.0	43.8	39.4
Crude petroleum ¹	PPI	34.0	9.4	9.1	16.0	45.9	97.0
Coal	PPI	23.2	9.9	-5	8.5	-1.6	3.1

¹ Not seasonally adjusted.
² Prices for these items are lagged 1 month in the PPI.
³ Includes commercial and industrial power, but not residential power.

higher electricity prices, the relatively large supply and low cost of coal helped keep the increases moderate.

The index for crude petroleum (which includes only domestic production) increased more than at any time since early 1974, as a result of the phased decontrol of crude oil prices which began in June. During the third quarter, the Department of Energy decontrolled an additional 5 percent of crude oil, allowing one-fifth of U.S. output to be sold at the world market price. Natural gas prices spurted at a rate of about 40 percent for the third consecutive quarter. The increase was due to the phased deregulation of domestic natural gas, as well as continued advances in the price of gas imported from Canada. Coal prices turned up slightly after a small decline in the second quarter. A few utilities switched to coal from increasingly costly residual fuel for generation of electricity, but supplies remained abundant and both foreign and domestic demand was weak. From September 1978 to September 1979, coal prices moved up only 2.3 percent.

Retail food price increases moderate

In the third quarter, retail price increases for food continued to moderate. Food prices in the CPI rose at a

seasonally adjusted annual rate of 4.2 percent, compared with a 12.5-percent rate in the first half. At the producer level, food prices advanced at a 12.9-percent rate after declining from March to June and, before that, increasing sharply from December to March. The difference in the inflation rate for foods in the CPI and PPI was mainly due to differences in timing of price changes for meats and poultry. (See table 3.)

Retail prices declined sharply for beef and veal, pork, and poultry, reflecting second-quarter declines at the processor level. However, producer prices for beef and veal rose sharply in September as a result of improved retail demand, resulting in an overall rise in the PPI for the third quarter. Processor prices for pork fell sharply in July as supplies were more than ample but rose in August and September when supplies decreased. Declines for processed poultry in both the CPI and PPI were due to ample supplies of turkeys and fryers. At the farm level, cattle prices advanced at a rate of 15.1 percent, after falling at a 22.5-percent rate in the second quarter and surging at a record 152.1-percent rate in the first quarter. By the end of September, the number of cattle being fed for slaughter was 13 percent below the level of a year earlier. Hog prices rose at a 4.7-percent rate, following a steep decline at a 72.9-percent rate from March to June. Live poultry prices continued to decrease, although not as sharply as in the previous quarter.

Higher prices for green coffee caused roasted coffee prices to rise sharply at both the retail and processor levels (at rates of 126.2 and 107.8 percent, respectively). The steep rise in green coffee bean prices reflected strong roaster demand and supply uncertainties as a result of a Brazilian freeze, and political unrest in Nicaragua.

Price increases for dairy products accelerated in both the CPI and PPI, reflecting increased costs for producing fluid milk and higher processing costs for dairy products. In September, manufacturing grade fluid milk prices were 17.2 percent higher than a year earlier.

Egg prices fell sharply at both the retail (38.6-percent rate) and farm (44.3-percent rate) levels, the first decreases this year. Lower prices resulted from increased production.

Both retail and primary market prices for fresh fruits and vegetables advanced, partly as a result of sharply higher prices for lettuce due to labor problems in the West. Prices for bananas, grapes, and tomatoes were lower as a result of increased supplies. Processed fruits and vegetables rose in both the CPI and PPI, reflecting tight stocks of some items and increased processing costs.

Prices for cereal and bakery products advanced rapidly at both the retail and processor levels. The rise in bread prices reflected higher production costs, particularly for flour, fuel, and labor. The PPI for milled rice

advanced at a 151.2-percent rate, even faster than the 73.9-percent rate in the second quarter; demand continued strong, supplies shortened, and production costs, particularly for labor and fuel, increased. Price increases for grains moderated considerably after rising at a 68.3-percent rate in the second quarter. Favorable growing conditions resulted in expectations of increased crops for wheat and corn, but export demand remained unusually strong.

Among other foods, producer prices for refined sugar in consumer-sized packages rose over the quarter, reflecting higher raw sugar costs. Strong demand continued to exert upward pressure on retail and processor prices for fats and oils.

Among other farm products, the index for hay, hayseeds, and oilseeds declined from June to September; lower prices for hay were due to improved growing conditions, and soybean prices fell as a result of expecta-

tions of a record U.S. crop. After rising sharply in the preceding 3 months, prices for grain byproduct feeds rose much more slowly, reflecting the moderation in grain price increases.

Consumer services

The services component of the Consumer Price Index rose at a seasonally adjusted rate of 14.3 percent, about the same as in the second quarter and considerably more than in the first. More than a third of this advance was due to the index for contracted mortgage interest costs, which climbed at a rate of about 38 percent after rising at a 28.5-percent rate during the first half. Charges for public transportation and for personal and educational services also rose much faster than earlier in the year, and most other major categories of the services index moved up more than in the second quarter. However, increases for piped gas and electricity, home and auto maintenance, and entertainment services were somewhat smaller than in the second quarter. (See table 4.)

The household services less rent index rose at a 17.7-percent rate, about the same as in the first half of the year. Contracted mortgage interest costs accounted for nearly half of the rise in this index. Prices of new homes also continued to move up strongly. Housing starts remained fairly strong because of good demand and the availability of mortgage money. Prices of piped gas and electricity rose at a 18.9-percent rate, compared with rates of 30 percent in the second quarter and 10.7 percent in the first. Electricity rates increased much less than they did earlier in the year, but gas rates continued to climb.

Among other housing-related services, the index for property taxes rose at a 4-percent annual rate, compared with 2.2 percent in the second quarter, reflecting higher assessed property values in many large metropolitan areas. Property insurance costs rose at a rate of 11.6 percent, compared with 15.2 percent in the preceding quarter. Charges for home maintenance and repair services rose at a rate of 8.8 percent, compared with 11.1 percent in the first half.

The transportation services index rose at a rate of 12.5 percent, compared with rates of 10.1 percent in the second quarter and 5.8 percent in the first. The public transportation component rose much more than in the first half. Airline fares soared at a 47.4-percent rate in the third quarter, after a 5.3-percent rate in the second quarter, and intercity train and bus fares advanced at rates of 34.3 and 24.1 percent, compared with 8 and 9.9 percent in the second quarter; higher fuel prices were largely responsible for each increase. The rise in the index for other private transportation reflected increases in automobile insurance costs, finance charges, and rental registration fees.

Table 3. Changes in retail and producer prices for consumer foods, 1978-79

Commodity	Index	Relative Importance December 1978	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1978		1979		
			Sept.	Dec.	Mar.	June	Sept.
Consumer foods ¹	CPI	100.0	4.8	10.2	17.7	7.5	4.2
	PPI	100.0	4.9	15.3	21.0	-11.1	12.9
Beef and veal ² . . .	CPI	8.5	-11.2	11.3	87.6	25.6	-17.7
	PPI	13.1	-2.2	1.0	135.0	-25.5	27.6
Pork	CPI	5.2	-16.7	57.9	12.1	-30.4	-29.4
	PPI	8.3	13.6	27.8	4.5	-56.5	2.5
Poultry ²	CPI	2.3	-1.1	.7	30.7	-5.6	-24.0
	PPI	3.6	-8.8	26.1	-8.2	-50.5	-9.9
Cereal and bakery products	CPI	8.7	11.3	6.6	8.5	10.2	17.8
	PPI	12.1	-4	5.5	7.2	23.6	20.8
Dairy products . . .	CPI	9.4	8.5	13.5	12.9	9.9	11.3
	PPI	14.9	12.0	19.3	5.9	12.5	15.4
Fresh fruits and vegetables	CPI	4.7	17.9	-27.2	20.2	2.1	38.3
	PPI	4.3	-7	36.9	-10.0	-24.0	7.2
Processed fruits and vegetables	CPI	4.5	8.9	9.7	7.0	9.9	10.1
	PPI	7.1	12.4	25.5	6.0	2.9	5.7
Eggs	CPI	1.4	-3.0	24.0	50.3	7.8	-38.6
	PPI	2.2	50.1	14.7	79.6	3.8	-44.3
Sugar and sweets ^{3,4}	CPI	2.2	9.0	6.5	1.3	12.0	11.6
	PPI	4.1	11.2	4.0	7.8	8.3	9.1
Coffee, roasted . . .	CPI	.9	-31.8	-9.3	-20.3	-1.1	126.2
	PPI	3.9	-17.1	-1	-32.5	21.6	107.8
Fats and oil products ⁵	CPI	1.9	7.2	3.6	8.4	9.9	8.2
	PPI	1.4	-11.6	11.4	6.3	6.0	14.2

¹ Includes items not listed. The CPI includes prices of food away from home, which account for about 30 percent of the food index. The PPI for finished consumer foods does not reflect restaurant prices.

² These items are no longer seasonally adjusted in the CPI.

³ "Sugar and confectionery" in the PPI.

⁴ Not seasonally adjusted in the PPI.

⁵ "Vegetable oil end products" in the PPI.

Table 4. Changes in consumer service prices, 1978-79

Item	Relative Importance December 1978	Compound annual rate, seasonally adjusted except as noted, for 3 months ended —				
		1978		1979		
		Sept.	Dec.	Mar.	June	Sept.
Services	100.0	10.3	7.2	10.6	13.8	14.3
Rent, residential	13.6	7.3	7.7	3.6	8.7	10.7
Household less rent ¹	51.0	12.3	6.1	15.7	18.5	17.7
Home financing, taxes, and insurance	23.7	19.6	7.0	25.8	23.1	25.4
Home maintenance and repairs	9.1	8.2	11.9	9.8	12.4	8.8
Gas (piped) and electricity	8.2	4.5	-2.8	10.7	29.9	18.9
Housekeeping services	5.2	11.5	13.0	5.8	8.3	10.8
Transportation services	14.3	6.3	7.8	5.8	10.1	12.5
Auto maintenance and repairs	3.7	9.6	10.0	9.9	11.3	9.1
Other private transportation services	8.1	6.8	8.9	3.5	10.8	10.9
Public transportation	2.5	-2	1.9	5.9	7.1	22.2
Medical care services	10.1	9.2	11.3	10.1	8.0	10.5
Entertainment services	4.0	7.8	7.2	6.8	9.5	4.1
Personal care services ²	2.3	7.7	7.3	9.0	8.5	9.0
Apparel services ²	1.6	7.6	9.2	16.5	10.0	11.0
Personal and educational services	3.1	17.3	5.3	3.9	6.2	19.7

¹ Includes items not listed.
² Not seasonally adjusted.

A large acceleration in the index for personal and educational services was primarily due to college tuition costs (priced almost entirely during the third quarter). These charges increased at a 31.8-percent rate, compared with a rate of 32.7 percent in the same quarter of 1978.

Finished goods except food and energy

Consumer goods. Retail prices for commodities except food and energy rose at a seasonally adjusted rate of 8.0 percent, somewhat more than in the second quarter but less than in the first. Home purchase prices continued to rise at double-digit rates. The increase in the PPI for finished consumer goods less food and energy accelerated from a 7.2-percent rate in the second quarter to a 10.1-percent rate in the third, virtually the same as in the first 3 months of 1979. This acceleration was caused in part by a surge in material costs, especially for energy and precious metals. Prices for passenger cars moved up much less than in the first half at both the retail and primary market levels, and used car prices dropped for the second consecutive quarter. (See table 5.)

Home purchase prices (which are included in the CPI but not in the PPI) advanced at a 16.5-percent rate, an even faster pace than in the first half. House prices continued to rise in most parts of the country, even though the historically high level of interest rates severely restricted the flow of savings into thrift institutions, the major source of home mortgage financing.

Higher costs for petroleum-based materials were a major influence in accelerated price increases at the pri-

mary market level for products such as tires, soaps and detergents, plastic dinnerware, and floor coverings. Speculation in gold prices led to a 62.7-percent rate of advance in the PPI for precious metal jewelry, while household flatware prices climbed in the wake of a 120-percent spurt in silver prices from September 1978 through September 1979. Higher material costs were also a crucial factor in higher producer prices for footwear, paper goods, sporting goods, and tobacco products. However, fears of consumer resistance helped to restrain the full pass-through of many of these price increases to the retail level. Weak demand helped to keep increases for apparel, appliances, and furniture relatively moderate at both the retail and primary market levels in spite of higher material costs.

Price indexes for new cars rose in July when domestic manufacturers raised prices, especially for small and medium-size cars, to cover higher costs and to reduce demand for models with a heavy backlog of orders. The July price increases brought prices for the 1979 model year close to the maximum permitted under the Carter Administration's guidelines. The indexes moved down in August and September as manufacturers offered large rebates on larger sized models to reduce the unusually high inventories that had developed by midyear. Demand for bigger cars had fallen as tight supplies and rapidly climbing gasoline prices made smaller cars with better mileage more attractive. Prices for used cars (included in the CPI but not in the PPI) declined throughout the third quarter, chiefly because of buyer resistance to larger models with relatively poor mileage.

Capital equipment. Producer prices for capital equipment moved up at a seasonally adjusted rate of 4.9 percent, only half as much as in the first half, and the smallest rate of increase in 6 years. The slowdown was primarily caused by a drop in the motor vehicles index, which edged slightly lower when manufacturers cut prices to revive demand for lighter trucks. The motor vehicles index had risen at a 12.1-percent rate during the first half. Prices for most other kinds of capital equipment, however, continued to rise about as much as earlier in the year, reflecting strong demand. Some of the largest third quarter advances were registered for machine tools, plastic and rubber industry machinery, agricultural machinery, and railroad equipment.

Materials except food and energy

Nondurable manufacturing. The index for nondurable manufacturing materials advanced at a 19.1-percent seasonally adjusted rate, compared with a 15.3-percent rate during the first half. The principal cause was the sharply increased cost of crude petroleum, used in making chemicals, plastics, and other synthetic products.

Prices for plastic resins and materials rose more than at any time since late 1974. This was due to sharp advances in petrochemical feedstock prices combined with strong foreign and domestic demand. Synthetic rubber, which is also derived from petroleum, registered the biggest price increase since mid-1974. Demand for rubber products weakened in response to the steep price rises, however, resulting in a slowdown in the rate of increase of synthetic rubber prices by the end of the quarter.

Table 5. Changes in retail and producer prices for consumer goods other than food and energy, 1978-79

Commodity	Index	Relative Importance December 1978	Compound annual rate, seasonally adjusted except as noted, for 3 months ended—				
			1978		1979		
			Sept.	Dec.	Mar.	June	Sept.
Commodities less food and energy ¹	CPI	100.0	7.2	8.3	9.8	7.3	8.0
	PPI	100.0	9.2	6.5	10.0	7.2	10.1
Apparel, excluding footwear ²	CPI	11.5	1.3	0	8.2	-1.8	7.0
	PPI	14.5	3.2	5.9	7.4	4.4	4.1
Footwear	CPI	1.9	3.7	10.6	4.8	12.4	7.0
	PPI	2.8	10.8	22.6	32.9	20.0	12.0
Textile house-furnishing ²	CPI	1.6	7.6	4.7	7.9	8.7	.9
	PPI	2.2	3.6	7.1	9.0	4.1	10.1
Soap and detergents ³	CPI	.9	4.9	17.0	4.3	-2	9.7
	PPI	1.7	5.5	15.2	4.8	2.4	22.6
Cleansing and toilet tissue, paper towels and napkins ^{3,4}	CPI	.7	5.7	11.6	14.8	5.7	-1.0
	PPI	2.7	4.8	24.4	2.4	4.2	18.5
Tires ^{5,6}	CPI	1.2	3.7	8.1	13.5	3.2	12.4
	PPI	1.8	-10.3	23.4	20.4	11.4	20.9
Furniture ²	CPI	3.6	7.9	6.5	6.9	5.1	3.9
	PPI	4.4	9.1	7.5	5.7	7.9	6.0
Appliance, including radio and TV	CPI	4.6	3.7	4.3	5.2	2.4	1.8
	PPI	6.7	9.5	3.1	4.7	3.1	2.4
New cars	CPI	9.7	7.2	1.0	12.8	12.7	6.9
	PPI	15.7	5.0	2.0	12.4	12.8	.5
Sporting goods and equipment ⁵	CPI	1.9	-2.3	4.8	11.2	10.5	7.5
	PPI	1.3	5.3	1.3	19.6	6.2	19.6
Tobacco products ²	CPI	3.2	14.1	-2.4	11.8	3.7	9.7
	PPI	3.9	15.6	-2.7	21.1	-2	15.4
Precious metal jewelry ⁷	PPI	1.9	(⁸)	(⁸)	42.2	26.9	62.7
Home purchase ⁹	CPI	28.3	11.8	14.3	10.8	15.5	16.5
Used cars ⁹	CPI	8.0	11.7	21.5	9.1	-4.6	-8.8

¹ Commodities less food and energy account for 35.9 percent of the CPI-U and 53.9 percent of the PPI for finished consumer goods.

² Not seasonally adjusted in the PPI.

³ Not seasonally adjusted in the PPI or the CPI.

⁴ "Sanitary papers and health products" in the PPI.

⁵ Not seasonally adjusted in the CPI.

⁶ "Tires and tubes" in the PPI.

⁷ Not included in the CPI; not seasonally adjusted.

⁸ Not available.

⁹ Not included in the PPI.

The industrial chemicals index continued to advance rapidly, but not quite as much as in the second quarter. The biggest increases were for organic petrochemicals, which were affected by the rising cost of crude oil. An additional influence was strong foreign demand for American petrochemicals, generally cheaper than those produced overseas because U.S. crude oil is priced much lower than the world market level. Increasing demand for benzene and toluene by refiners of unleaded gasoline led to still higher prices and tight supplies of these commodities. Synthetic fibers prices advanced even more than in the second quarter, as makers of polyester and nylon passed through rising costs of oil-based raw materials; these increases led to accelerated price increases for processed yarns and threads and for gray fabrics. Higher petrochemical prices also led to sharp increases for paint materials prices.

Prices for nitrogenates and phosphates rose sharply as demand was up for fertilizers to be used in the fall planting season. Strong demand for corrugated cardboard containers contributed to large increases in the indexes for paperboard and woodpulp. Prices for leather declined after a year of sharp increases; this reflected similar movements in the price of hides.

Durable manufacturing. The Producer Price Index for durable manufacturing materials increased at a seasonally adjusted annual rate of 17.7 percent, considerably more than the 9.4-percent rate in the second quarter. The acceleration was partly due to rapidly climbing prices for gold and silver, in high demand by speculators as a hedge against inflation. The high cost of gold led to steep increases for jewelers' materials and findings. Speculative demand coupled with a rapid climb in copper prices on the world market caused the copper index to rise. Prices for aluminum increased because of higher raw material costs. Lead prices, however, rose much more slowly than in the first half because of weak demand.

The steel mill products index increased as a result of widespread price increases on July 1, when steel producers passed along the increases allowed under the wage-price guidelines. However, weaker demand from a variety of customers contributed to some steel plant shutdowns during the quarter.

Construction materials. The PPI for materials and components for construction advanced at a 9.8-percent annual rate, more than in the second quarter, but less than in the first quarter. The annual rate of housing starts remained at approximately 1.8 million in the third quarter, about the same as in the previous quarter but about 8 percent below the level of the year before. Price increases for softwood lumber accelerated sharply. Lumber distributors maintained low inventories in an-

ticipation of a recession in the construction industry, but the unexpected strength of the housing market put a strain on available supplies and led to higher prices. In addition, log exports to Japan were at a record level, further reducing domestic supplies. After falling in the second quarter, plywood prices rebounded strongly because of unexpectedly good demand.

Higher domestic copper prices, spurred chiefly by a surge in copper prices on the world market, brought about an increase for nonferrous wire and cable prices. Prices for plastic construction products advanced because of increased costs of oil-based plastic resins. Higher petroleum prices also led to accelerating price increases for bituminous paving materials. Prices for structural clay products, which are energy-intensive, moved up in the wake of increased costs for energy. Increases were also recorded for heating equipment and wiring devices.

Other intermediate materials. Mixed fertilizer prices rose even more rapidly than in the second quarter because of strong demand. The index for paper boxes and containers advanced as a result of good demand and higher woodpulp costs. Prices for electronic components and accessories increased sharply, partly because of large increases in the costs of precious metals, tantalum, and plastics; strong demand was also a major factor. Increased material and energy costs, plus continued strong demand in the capital goods sector, led to accel-

erating price increases for refrigerant compressors, fans and blowers, electric motors, internal combustion engines, mining machinery parts, and cutting tools.

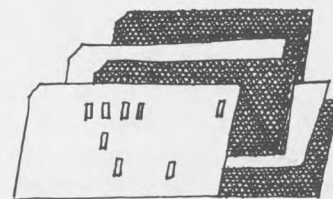
Crude materials. The Producer Price Index for crude materials except agricultural products and energy declined at a 15.8-percent rate, seasonally adjusted, from June to September. There had been virtually no change in the second quarter, but prices had surged at a 71.3-percent rate in the first quarter. Prices for hides and skins fell even more than in the second quarter; domestic and foreign demand was weak as many tanners resisted sharply higher prices registered in earlier months. Iron and steel scrap prices also moved down substantially as a drop in steel production caused a lull in the scrap market. Wastepaper prices declined moderately for the second consecutive quarter because of poor demand. After rising sharply in the second quarter, natural rubber prices fell because manufacturers of tires and other automotive rubber products curtailed materials purchases in the wake of lower sales. Prices for aluminum base scrap, which had been rising since last December, declined sharply because of poor market demand from U.S. primary and secondary smelters.

However, copper base scrap moved up after falling in the second quarter; improved demand from primary and secondary smelters was largely responsible for the turnaround. Prices for sand, gravel, and crushed stone, potash, and iron ore also rose. □

A note on communications

The Monthly Labor Review welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and

analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.



The effect of unemployment on family income in 1977

HOWARD HAYGHE

Nearly one in every four husband and wife families, 10.8 million out of 46.6 million, encountered some period of unemployment during 1977. For the most part, only one member in these families was unemployed at some time, usually the wife, or teenage son or daughter.¹ In 9 out of 10 families where the wife or other relative was jobless at some time, the husband usually worked full time (table 1).

These data are based on special tabulations from the March 1978 Current Population Survey.² The number of employed and unemployed persons shown is much larger than indicated by annual average data, because many more persons work or seek work over the course of a year than at any one point in time.³

Family income levels vary depending on which members experienced unemployment. However, other factors, especially the age, sex, occupation, and relationship of working family members, also are major factors. For example, married women and young people, two groups more often affected by unemployment than married men, have lower than average earnings. In May 1977, median usual full-time weekly earnings were \$158 for wives, \$168 for young men (16 to 24), and \$133 for young women. In comparison, husbands had earnings of \$272. A majority of those unemployed at some time during 1977 worked at relatively low-skill low-pay clerical, operative, service, and nonfarm labor jobs, further accentuating income differences with families experiencing no unemployment. In addition, the existence of other sources of income, such as unemployment insurance benefits, may also tend to obscure the direct effect of unemployment.

Overall, the median 1977 income of husband and wife families encountering some period of unemployment was \$2,500 lower than for families encountering none

(table 2). Of course, this aggregate difference varied considerably depending on the number of earners, the number of persons encountering unemployment, and their family relationship.

When families had two earners or more, median income was about \$21,950 where no one experienced unemployment, \$19,180 where one member had been unemployed, and \$18,020 where two members or more had been unemployed at some time. Income was relatively high among the small number of families with two or more members unemployed at some time during the year, because well over half also had three earners or more.

Taking the information on number of earners one step further reveals a wide variation in family income, depending on which member experienced some period of joblessness. For instance, in one-earner families, me-

Table 1. Employment and unemployment in husband and wife families during 1977

Item	Number (in thousands)	Percent
Husband and wife families		
Total	46,645	100.0
With one or more members in labor force	41,803	89.6
No member with unemployment	31,023	66.5
Some member(s) unemployed ¹	10,780	23.1
No members in labor force	4,842	10.4
Number and relationship of unemployed members		
Families with unemployed members	10,780	100.0
One unemployed	8,874	82.3
Husband	3,478	32.3
Wife or other relative only	5,396	50.1
Two or more unemployed	1,906	17.7
Wife or other relative(s) or both	785	7.3
Husband and others	1,121	10.4
Unemployed members by presence of employed members		
Husband only unemployed	3,478	100.0
Other member employed	2,205	63.4
Wife only	1,739	50.0
Other relative only	134	3.9
Wife and other relative(s)	291	8.4
Other relatives	41	1.2
No other member in labor force	1,274	36.6
Wife or other relative(s) unemployed	6,181	100.0
Husband employed	5,645	91.3
Husband not in labor force	535	8.7

¹ Refers to unemployment at any time during survey year.

NOTE: Because of rounding, sums of individual items may not equal totals.

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Table 2. Median income of husband and wife families in 1977, by presence of unemployed members and number of earners

[Numbers in thousands]

Item	Number with unemployed during 1977 (in thousands)			Median family income in 1977		
	None	One	Two or more	None unemployed	One unemployed	Two or more unemployed
Total families with one member or more in labor force	31,022	8,874	1,907	\$19,551	\$16,991	\$16,884
No earners		142	22		5,303	(¹)
One earner	12,152	1,993	179	15,790	11,483	9,190
Two earners or more	18,856	6,739	1,706	21,954	19,179	18,016
Two earners	15,115	4,582	750	20,668	16,463	13,000
Three earners or more	3,741	2,157	956	27,520	26,320	23,415

¹ Median not shown where base is less than 75,000.

NOTE: Because of rounding, sums of individual items may not equal totals.

dian income was \$16,250 where the husband experienced no unemployment but only \$10,680 where he was jobless at some time. Even the presence of other earners does not entirely compensate for the husband's unemployment. Among working couples with no unemployment during the year, income averaged \$20,500. When the wife was unemployed at some time and the husband was not, family income averaged \$16,950, but when the reverse was true, family income averaged \$14,260.

How did families with some member or members unemployed during the year fare relative to families where no one was unemployed? Of the families encountering no unemployment, 48 percent had incomes above \$20,000 in 1977 (table 3). This proportion, varied of course, by the number of earners: When there was only one earner, 33 percent had incomes that high, compared with 77 percent of families with three earners or more. Families encountering unemployment in 1977 were concentrated in lower income brackets, particularly when

there was only one earner in the family. For instance, 41 percent of one-earner families where the worker was jobless at some time during the year, had incomes of less than \$10,000, while only 14 percent had incomes over \$20,000. In comparison, 17 percent of two-earner families with one member unemployed had incomes below \$10,000 while for three-earner families, the proportion was 2 percent.

A family's economic status depends largely upon which family members were without work. For instance, 35 percent of one-earner families where the husband experienced no unemployment were in the \$20,000 bracket. However, where the husband had some period of unemployment, only 10 percent of the families had incomes that high. Similarly, in two-earner families where the husband and wife were workers, 20 percent of the families had incomes over \$20,000 if the husband was jobless at some time, compared to 50 percent when he was not.

Although husband and wife families encountering unemployment had lower incomes than those which did not, their 1977 median income levels were from two to three times as great as the poverty threshold⁴ for a family of comparable size:

Family size	Poverty threshold	One member unemployed	Two or more members unemployed
Two persons . . .	\$3,961	\$14,360	\$11,840
Three persons . .	4,860	16,360	13,620
Four persons . .	6,195	18,520	17,560
Five persons . . .	7,324	18,910	21,520
Six persons	8,268	19,270	20,830

Further, even though the unemployment of the husband is associated with greatly reduced family income, the median income of such families remained substantially above the poverty level. □

Table 3. Percent distribution of husband and wife families by presence and number of unemployed family members, number of earners and income in 1977

Item	Total families (in thousands)	Percent	Family income					
			Under \$5,000	\$5,000 - \$9,999	\$10,000 - \$14,999	\$15,000 - \$19,999	\$20,000 - \$24,999	\$25,000 and over
None unemployed	31,022	100.0	2.6	10.6	17.5	21.2	17.9	30.2
1 earner	12,152	100.0	4.8	17.9	23.0	21.2	14.4	18.7
2 earners	15,115	100.0	1.3	6.8	15.8	23.0	20.8	32.3
3 or more earners	3,741	100.0	.5	2.3	6.2	13.7	17.6	59.6
1 unemployed	8,874	100.0	4.3	15.2	21.2	20.1	15.5	23.7
No earners	142	100.0	43.7	45.1	7.7	2.8	...	...
1 earner	1,993	100.0	13.0	28.3	27.7	16.9	8.4	5.7
2 earners	4,582	100.0	2.4	15.2	24.5	24.3	17.2	16.4
3 or more earners	2,157	100.0	.3	1.3	8.4	14.3	18.4	55.6
2 or more unemployed	1,907	100.0	4.5	17.1	20.8	18.1	9.3	25.5
No earners	22	(²)	(²)	(²)	(²)	(²)	(²)	(²)
1 earner	179	100.0	22.3	32.4	30.2	11.2	2.8	1.1
2 earners	750	100.0	7.1	26.0	28.1	20.7	11.3	7.2
3 or more earners	956	100.0	.5	7.1	13.4	17.2	17.2	44.4

¹ Refers to unemployment at any time during survey year.

² Percent not shown where base is less than 75,000.

NOTE: Because of rounding, sums of individual items may not equal totals.

FOOTNOTES

¹ Husband and wife families consist of married couples living in the same household who may or may not have children or other relatives living with them.

See, for example, *Marital and Family Characteristics of the Work Force, March 1978*, Special Labor Force Report 219, (Bureau of Labor Statistics, 1979). Also, see *Employment and Earnings*, February 1979, p. 35, table A-9.

Statistics similar to these have been available for some 20 years in annual Bureau of Labor Statistics' data series on the labor force characteristics of family members and are now available on a monthly and quarterly basis.

² The Current Population Survey is a nationwide sample survey conducted for the Bureau of Labor Statistics by the Bureau of the Census. Data in this report relate to the civilian noninstitutional population 16 years old and over. Sampling variability may be relatively large in cases where numbers are small, therefore, small differences between estimates or percentages should be interpreted with caution. For more information on tests for statistical significance, see Special Labor Force Report 219, *op. cit.*

Earlier Bureau of Labor Statistics studies on families include R. L. Stein and D. P. Klein, "Unemployment Among Household Heads," BLS Report 443 (May 1975), E. Waldman and Y. C. Olson, "Unemployment in the American Family," *Monthly Labor Review*, October 1968, pp. 239-46, and Howard Hayghe, "New data series on families shows most jobless have working relatives," *Monthly Labor Review*, December 1976, pp. 46-48.

³ See A. M. Young, "Work experience of the population in 1978," to be published in the *Monthly Labor Review*.

⁴ See U.S. Bureau of the Census, Current Population Reports, Series, P-60, No. 119, "Characteristics of the Population Below the Poverty Level: 1977," table A-3.

Occupational mobility during 1977

CARL ROSENFELD

Workers change occupations for many reasons, either individually or in combination. Some cannot find another job in their field after they are laid off because of plant closing, business failure, or lack of work. Others may change occupations voluntarily because they dislike the one they have or just want to try a different one. They may wish to get into a better paying field, one that is less subject to layoff, or where physical and other working conditions are more pleasant. Some workers, especially college students and those in vocational training programs, hold temporary jobs while in school and then tend to shift to a job related to their field of study upon graduation or completion of training.

About 11.6 percent of all persons 18 years of age and

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over (and not in school) employed in both January 1977 and January 1978 were working at a different detailed occupation at the latter date.¹ Similar surveys in 1965 and 1972 showed lower mobility rates of 8.9 percent and 8.7 percent, respectively.²

Several factors contributed to the greater tendency to change occupations during 1977 than in the years covered by the prior two surveys. Some persons who become unemployed during the course of a year may find another job only if they are willing to change the kind of work they do. Unemployment in 1977 was relatively high. It averaged 7 percent during the year; in 1965 and 1972 the unemployment rates were much lower. Of course, some workers voluntarily shift from one occupation to another during the year without any intervening unemployment. Contributing to the high rate of occupational mobility during 1977 was the general availability of jobs for persons with the requisite skills, in spite of the relatively large numbers who were unemployed. During the year employment rose by about 4.2 million, more than in 1965 and 1972.

Nearly 9 out of 10 of the 87 million men and women 18 years and over employed in January 1978 had also worked a year earlier. The remainder had been either looking for work or were not in the labor force (table 1). This article examines the occupational mobility of the nearly 9 million workers who had a different occupation in January 1977 than in January 1978.³ The occupational mobility rates in this report are based on questions asked in the Current Population Survey in January 1978 relating to the occupation in which persons were employed that month, and the occupation a year earlier. Indications are that occupational mobility data derived from retrospective questions may be subject to errors of recall since some persons cannot accurately remember their occupation a year earlier; some may incorrectly report a different occupation while others may incorrectly report a past occupation as the same as current occupation. Also, the consistency level of the two sets of data can be affected by errors of response to labor force status, in coding of the occupation, and in reporting. In about half of the households in the survey information is given by someone other than the person for whom the data are requested.

Age and sex

The proportion of workers who change occupations decreases sharply as age increases and occupational patterns tend to stabilize. Occupational mobility rates were highest, regardless of sex or race, among young workers,⁴ especially those 18 and 19 years old, where it exceeded 40 percent among both men and women (table 2). Persons under age 25 comprised about 36 percent of all who were in a different occupation in January 1978 than a year earlier but only 15 percent of all the work-

Table 1. Occupational mobility between January 1977 and January 1978 of employed persons, by age, sex, race, and Hispanic origin, January 1978

Characteristic	Total employed in January 1978		Status in January 1977				Occupational mobility rate ¹
	Number (in thousands)	Percent	Same occupation	Different occupation	Unemployed	Not in labor force	
BOTH SEXES							
Total, 18 years old and over, not in school . . .	86,564	100.0	78.1	10.2	4.4	7.3	11.6
MEN							
Total, 18 years old and over, not in school . . .	51,117	100.0	80.9	10.5	4.5	4.1	11.5
18 and 19 years . . .	1,782	100.0	33.5	26.4	11.1	29.0	44.1
20 to 24 years . . .	6,415	100.0	57.5	21.9	9.9	10.7	27.8
25 to 34 years . . .	14,140	100.0	78.1	14.3	4.8	2.8	15.5
35 to 44 years . . .	10,473	100.0	87.7	7.7	3.2	1.4	8.1
45 to 54 years . . .	9,838	100.0	91.5	4.3	2.9	1.3	4.5
55 to 64 years . . .	6,702	100.0	92.5	3.3	2.2	2.1	3.4
65 years and over . . .	1,767	100.0	90.8	1.8	1.9	5.5	2.0
White	45,944	100.0	81.2	10.7	4.1	4.0	11.6
Black	4,371	100.0	77.8	9.2	8.7	4.4	10.6
Hispanic origin	2,384	100.0	77.8	10.9	6.2	5.1	12.2
WOMEN							
Total, 18 years old and over, not in school . . .	35,447	100.0	74.1	9.8	4.4	11.8	11.7
18 and 19 years . . .	1,613	100.0	33.4	23.0	8.5	35.1	40.8
20 to 24 years . . .	5,535	100.0	58.4	17.1	7.2	17.4	22.6
25 to 34 years . . .	9,438	100.0	70.4	11.8	4.8	13.0	14.4
35 to 44 years . . .	7,021	100.0	77.7	8.0	3.5	10.8	9.3
45 to 54 years . . .	6,457	100.0	85.9	4.6	3.5	5.9	5.1
55 to 64 years . . .	4,285	100.0	90.1	3.4	1.7	4.8	3.6
65 years and over . . .	1,098	100.0	89.5	2.3	9	7.4	2.5
White	30,897	100.0	73.6	10.3	4.0	12.1	12.2
Black	3,886	100.0	78.4	6.3	6.4	8.8	7.5
Hispanic origin	1,445	100.0	69.2	9.1	6.5	15.2	11.6

¹ Percent of persons employed in both January 1977 and January 1978 who had a different occupation in January 1978 than in January 1977.

ers. Many workers under age 25 have little if any family responsibilities and therefore they are in a position to try different occupations before they find their place in the occupational structure. Also, some of those employed in January 1977 may have been attending school and holding part-time or temporary jobs totally unrelated to their education and training. When they left school they presumably took different kinds of jobs than they held while in school.

Occupational mobility was lowest (5 percent or less) among workers age 45 and over.⁵ Their low tendency to change occupations reflects not only an increase in family responsibilities for most workers but also their relative immunity to layoffs because of seniority rights and their strong attachment to one occupation. Also, there may be a reluctance to change jobs voluntarily, in part because they do not wish to leave a job with pension coverage to take a better paying one without such coverage.

The overall occupational mobility rates for men and women were about the same, but there were variations by age. Among workers under age 35, the rates for men were higher than those for women but above this age the rates for men tended to be somewhat lower.

Single men and women are no more likely to change occupations than married persons of comparable age. However, since a majority of the single persons are under age 25, whereas only a small proportion of the married are in this age group, the mobility average for all single persons is much higher than the average for the married group.

Occupational mobility rates among men were the same for blacks and persons of Hispanic origin as for whites. Among women, however, the rate for blacks was below those for whites and Hispanics. The higher rate for white than for black women may reflect the relatively large increase in the number of white women entering the labor force in recent years; newcomers may be more likely to change jobs to find the kind of work they like than persons who are in the work force longer.

Educational attainment

Occupational mobility rates among both men and women were lowest for persons with no more than an elementary education; the highest rate for men was among those who had completed 1 to 3 years of college; among women, the rate was equally high for those who completed 1 to 3 years of college as for college graduates:

	Men	Women
Elementary school, 8 years or less	7.0	6.0
High school: 1 to 3 years	11.7	9.8
4 years	12.2	12.1
College: 1 to 3 years	14.7	13.4
4 years or more	10.0	12.5

To a certain extent, the above differences reflect the differing age composition of the two groups. Persons with the least education are mainly in the upper age groups where occupational mobility tends to be low. A majority of the persons who attended college are in the age groups under 35 which have the highest mobility rates.

The comparatively low occupational mobility rate for men who graduated from college undoubtedly reflects the selective nature of the jobs they hold. About 3 of 4 employed men with a college degree work at relatively well-paid professional or managerial jobs. Only if a worker has the high education, training, or experience requirements, can he expect to enter these two occupational groups.

When occupational mobility rates are examined for each age group by education, we find that the rates do not vary consistently as the number of years of formal

Table 2. Percent¹ of workers who changed occupations in 1977, by age, sex, race and Hispanic origin

Age	White		Black		Hispanic origin	
	Men	Women	Men	Women	Men	Women
Total, 18 years and over, not in school	11.6	12.2	10.6	7.5	12.2	11.6
18 and 19 years	43.7	41.2	(²)	(²)	(²)	(²)
20 to 24 years	27.8	23.1	24.9	18.2	26.4	23.5
25 to 34 years	15.8	14.9	13.2	10.7	14.3	14.4
35 to 44 years	8.1	10.2	7.3	4.2	6.7	8.1
45 to 54 years	4.5	5.6	5.7	1.8	5.5	4.2
55 to 64 years	3.4	3.8	3.8	2.2	6.1	2.8
65 years and over	2.2	2.7	...	1.3	(²)	(²)

¹ Percentage reflects the proportion of workers employed in both January 1977 and January 1978 who had a different occupation in January 1977 than in January 1978.

² Percent not shown where base is less than 75,000.

NOTE: Dash (-) represents zero or rounds to zero.

schooling increased. However, for each educational attainment group the occupational mobility rates declined with advancing age.

Rates by occupation

Mobility rates varied widely by occupation depending in part on the extent of education and training required (table 3). Relatively few men and women went from other occupation groups into farming or professional and technical occupations. The small proportion becoming farmers is not surprising since their number has been declining for many years, in part because of the large resources usually required to acquire a farm. As for professional jobs, these require a large amount of education, and are more generally entered into by persons leaving school than by those shifting from a different occupational group. For men, occupational mobility rates were also below average for managers and craftworkers, two occupation groups for which particular skills are required. The high rates for women in these two occupations are probably a reflection of the expansion of job opportunities for them. In fact, employment of women managers expanded faster over the year than for all women. For both men and women, the highest mobility rates were for nonfarm laborers, an occupation group for which skill or experience requirements are minimal. The low rate for female private household workers reflects the apparent reluctance of women to move into this kind of relatively low paid work.

Most of the occupational shifts in 1977 involved going into an occupation group entirely different from the one held in January 1977. Only about 32 percent of the men and 44 percent of the women who changed their occupations during the year came from occupations in the same occupation group. Among men, for example nearly half of the professional and technical workers who changed jobs came from other professional or technical occupations, the highest proportion for men (table 4). Among women who changed occupations, 59 per-

cent of the clerical workers had shifted from other clerical jobs, by far the highest proportion for any occupation group among both men and women. Because 35 percent of all women employed in January 1977 were clerical workers, it is reasonable to expect that a large proportion of those moving into different clerical jobs over the year would come from the same occupation group.

Although occupation changers tended to move to occupation groups different from the one in which they were formerly, they generally remained within their broad occupation field—white collar or blue collar. About 70 percent of the male occupation changers who were white- or blue-collar workers in January 1978 came from jobs within their respective fields. Among women, about 80 percent of the white-collar changers and about half the blue-collar changers remained within the same field.

The net result of all the occupation shifting over the year was a minor upgrading in the occupational composition of these persons. In January 1978, somewhat more of the occupational changers were white-collar workers, shifting into mainly professional and manager jobs, and fewer were service workers. The number of blue-collar workers remained unchanged but there was a slight rise in the number of craftworkers.

Changing employer and industry

Changing occupations was usually associated with changes in an employer. This is not surprising because some of the workers who changed occupations had been

Table 3. Occupational mobility rates¹ between January 1977 and January 1978 of employed persons, by occupation and sex, January 1978

[Numbers in thousands]

Occupation	Men		Women	
	Number employed, January 1978	Occupational mobility rate ¹	Number employed, January 1978	Occupational mobility rate ¹
Total	45,388	11.5	28,830	11.7
Professional, technical and kindred workers	7,293	8.4	5,168	8.5
Managers and administrators, except farm	7,331	10.3	2,117	14.1
Sales workers	2,664	13.4	1,754	13.9
Clerical and kindred workers	2,850	13.2	10,331	12.8
Craft and kindred workers	9,926	10.6	511	14.3
Operatives, except transport	5,235	15.1	3,188	11.6
Transport equipment operatives	2,630	12.6	193	14.8
Laborers, except farm	2,392	20.4	252	16.5
Private household workers	20	(²)	670	9.1
Service workers, except private household	3,275	11.4	4,398	10.4
Farmers and farm managers	1,230	3.0	75	7.5
Farm laborers and supervisors	537	12.1	173	9.2

¹ Percent of persons employed in both January 1977 and January 1978 who had a different occupation in January 1978 than in January 1977.

² Rate not shown where base is less than 75,000.

Table 4. Occupation in January 1977 of workers who changed occupations during 1977, by occupation in January 1978

Occupation in January 1978	Total employed who changed occupation		Occupation in January 1977										
	Number ¹ (in thousands)	Percent	Professional, technical, and kindred workers	Managers and administrators, except farm	Sales workers	Clerical and kindred workers	Craft and kindred workers	Operatives, except transport	Transport equipment operatives	Laborers, except farm	Service workers, including private household	Farmers and farm managers	Farm laborers and supervisors
Men, 18 years and over, not in school	5,232	100	10	11	7	8	16	17	7	9	10	1	2
White-collar workers	2,099	100	21	21	13	11	9	6	3	5	7	1	1
Professional, technical, and kindred workers	613	100	46	13	6	7	8	6	2	4	6	1	1
Managers and administrators, except farm	753	100	13	32	15	9	11	6	3	4	4	1	1
Salesworkers	357	100	8	25	25	7	6	3	5	4	10	(²)	1
Clerical and kindred workers	376	100	7	8	7	27	11	11	4	10	13	(²)	1
Blue-collar workers	2,657	100	3	5	5	5	22	25	9	13	8	1	2
Craft and kindred worker	1,048	100	5	5	5	4	31	19	8	12	6	1	1
Operatives, except transport	791	100	1	5	3	5	18	37	9	11	7	1	2
Transport equipment operatives	330	100	2	7	6	6	13	24	13	13	8	(²)	5
Laborers, except farm	488	100	4	2	5	6	13	20	7	21	14	1	4
Service workers, including private household	374	100	5	7	2	8	12	14	9	7	34	(²)	1
Farmworkers	101	100	2	5	1	2	11	19	9	12	6	11	16
Women, 18 years and over, not in school	3,361	100.0	12	5	8	39	2	11	1	1	19	³ 1	...
White-collar workers	2,308	100.0	15	7	9	47	1	4	1	1	14	(²)	...
Professional, technical and kindred workers	439	100.0	44	5	6	29	2	1	(²)	1	10	(²)	...
Managers and administrators, except farm	299	100.0	17	17	12	35	3	2	1	...	12	(²)	...
Salesworkers	244	100.0	15	8	19	28	...	5	...	...	22	...	...
Clerical and kindred workers	1,326	100.0	6	5	7	59	1	6	(²)	1	13	(²)	...
Blue-collar workers	515	100.0	3	1	5	21	5	39	2	3	20	(²)	...
Craft and kindred workers	75	100.0	11	...	8	27	7	28	...	2	15	...	...
Operatives, except transport	370	100.0	1	1	5	17	5	44	2	2	22	...	...
Transport equipment operatives	29	(⁴)	...	...	...	...	...	...	...	...	...	...	...
Laborers, except farm	41	(⁴)	...	...	...	...	...	...	...	...	...	...	...
Service workers, including private household	519	100.0	6	3	9	23	2	10	1	1	44	2	...
Farmworkers	21	(⁴)	...	...	...	...	...	...	...	...	...	...	...

¹ Includes some persons who changed occupations but whose occupation in January 1977 was not reported.
² Less than 0.5 percent.
³ Data are for women classified as farmworkers.

⁴ Percent not shown where base is less than 75,000.
 NOTE: Because of rounding, sum of individual items may not equal totals.

unemployed between jobs. Others may have found it easier to change to the kind of work they want to do by moving to a different employer. About 9 out of 10 persons who changed occupations during 1977 had a different employer in January 1978 than a year earlier.

This proportion was about the same for men as for women, and for blacks as for whites. Only about 4 percent of the persons who changed occupations had worked for their employer for over 5 years. Many of these persons probably moved up the job ladder to su-

pervisory or managerial positions or to a job requiring more skill.

Most occupation changers also changed industry of employment. Approximately 7 of 10 persons who changed occupations were in a different industry in January 1978 than a year earlier. The ratio was about the same for men as for women and for blacks as for whites. During 1972, a higher proportion, 80 percent, of the occupation changers also moved into a different industry.

— FOOTNOTES —

¹ The occupational mobility rate reflects the percentage of persons who changed 3-digit occupations between January 1977 and January 1978 as a proportion of the total employed at both dates. This is based primarily on information obtained from supplementary questions to the January 1978 Current Population Survey conducted for the Bureau of Labor Statistics by the Bureau of the Census. The data relate to the civilian noninstitutional population 18 years old and over and not in school in the week ending Jan. 15, 1978.

Because estimates are based on a sample, they may differ from the figures that would have been obtained from a complete census. Sampling variability may be relatively large in cases where the numbers are small. Small estimates, or small differences between estimated percentages or rates should be used and interpreted with caution. All distributions and rates are based on total number of persons reporting data for both dates.

² For previous reports on occupational mobility see Samuel Saben, "Occupational Mobility of Employed Workers" (between January 1965 and January 1966), *Monthly Labor Review*, June 1967, pp. 31-38, reprinted as Special Labor Force Report 84; and James J. Byrne, "Occupational mobility of workers" (between January 1972 and January 1973), *Monthly Labor Review*, February 1975, pp. 53-59, reprinted as Special Labor Force Report 186.

³ In addition to limitations of the data resulting from retrospective bias, there are several limitations which reflect how the data were obtained. First, the survey asked for a worker's occupation in January 1978; if a different kind of work was done in January 1977, information was obtained about that occupation. Therefore, any intermediate changes during the course of the year are not included in this report. Second, the mobility rates are based on the occupation held in January 1978, the survey date, rather than in January 1977, the beginning of the period. Thus, the rates reflect the percentage of workers in an occupation who came from a different occupation, not the probability of persons leaving a given occupation. Third, the degree of occupation and industry mobility increases with the amount of detail used in classifying them. This survey used the detailed 440 3-digit occupations and the 227 3-digit industries in the 1970 *Census of Population, Alphabetical Index of Industries and Occupations* (Bureau of the Census, 1970). Consequently, moves defined as occupational mobility in this survey may not be similarly defined in a survey using a less detailed classification system. No information was available for about 3 percent of the workers on whether they were in the labor force in January 1977 or on whether they changed occupations.

⁴ For information on occupational mobility of young men over a period of several years see *Career Thresholds, Volume 6, A longitudinal study of educational and labor market experience of young men*, Research and Development Monograph 16 (U.S. Department of Labor, Employment and Training Administration, 1977), ch. IV.

⁵ For information on occupational mobility of middle-aged men over a 5-year period see the *Pre-retirement years, Volume 4, A longitudinal study of the labor market experience of men*, Manpower Research and Development Monograph 15 (U.S. Department of Labor, Manpower Administration, 1975), ch. IV.

Job tenure declines as work force changes

EDWARD S. SEKSCENSKI

Many factors determine the length of time a person works continuously for the same employer. Among the most important are seasonal and economic developments, and demographic characteristics. Seasonal fluctuations in some industries, such as construction and retail trade, may prevent some workers from gaining even 1 year of continuous employment. Similarly, resort employees or migrant farmworkers may have several employers during the course of a year. Others, especially the self employed, professionals, and some highly skilled workers tend to remain employed at the same job for a longer time, due partly to the large investment in capital, training, and education their jobs require.

Individual characteristics such as age, sex, marital status, and race also are important determinants of how long a worker wants to remain in any one job. Many persons, especially those under the age 25, voluntarily shift from one employer to another as they seek work they prefer. Older workers are more likely to remain with the same employer longer, especially if their earnings reflect longevity increases, or they have accumulated pension or seniority rights.

About 30 percent of the 91 million Americans employed in January 1978 were working at jobs they had found during the prior year. At the other end of the tenure spectrum, one fourth of the workers had been at the same job for over 10 years (table 1). In January 1978, median job tenure for all workers was 3.6 years, somewhat less than in 1968 and 1973:¹

	Both sexes	Men	Women
1968	3.8	4.8	2.4
1973	3.9	4.6	2.8
1978	3.6	4.5	2.6

The decline in job tenure reflects two basic trends that have been evident for 10 or 15 years: the large inflow into the work force of youths and women, who start at the bottom as new entrants or reentrants, and the trend toward earlier retirement, which removes some of the workers with the longest tenure. The relatively high unemployment in recent years also has been a contributing factor.

Job tenure is defined as the length of time an employee

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has worked steadily for the same employer, though not necessarily in the same occupation. A steady period of employment at a particular job is one in which there have been no interruptions except for vacations, temporary illness, strikes, layoffs of less than 30 days, and similar short-term absences. Employment is considered terminated if a person quits or is laid off from a job for 30 days or more, enters the Armed Forces, or transfers to a job in a different company.

Age and sex differences

Average job tenure is linked directly to age. The nearly 1.2 million workers age 70 and over had the longest average tenure, reflecting in part the many self-employed in this group. Tenure for teenagers was less than 6 months in light of their recent entry into the work force, the temporary nature of many of their jobs, and their tendency to change jobs. Workers age 20 to 24 also had very short tenure, slightly less than 1 year, reflecting in part that some had recently entered the work force after completion of high school or college, or after military service. Young workers are also prone to change jobs as they search for a suitable career.

In January 1978, average job tenure for women was about 2.6 years, and for men, about 4.5 years. The lower duration for women is a result of the large proportion under age 25, and the tendency of many to leave the work force at least once during their working lives because of family responsibilities. For men under 25, tenure is also low. However, the gap between women and men widens after 25. In the 55 to 59 age group, women's tenure is 6.5 years less than that of men.

Over the past decade the average tenure of women 65 to 69 has decreased from 10.5 to 7.5 years, partially because many with long work histories are now obtaining retirement benefits and leaving the work force.² This leaves a larger proportion with shorter tenure.

Table 1. Length of time on current job, workers 16 years and older, by sex, race, and Hispanic origin, January 1978

[Numbers in thousands]

Length of time on current job	Both sexes	Men	Women	White	Black	Hispanic origin
Total: Number	91,048	53,525	37,523	80,995	8,512	3,967
Percent	100.0	100.0	100.0	100.0	100.0	100.0
6 months or less	19.0	16.6	22.5	19.0	18.4	22.8
7 to 12 months	9.2	8.6	10.0	9.3	7.8	10.8
Over 1 and up to 2 years	11.7	10.4	13.6	11.8	10.5	13.8
2 to 3 years	7.7	7.1	8.4	7.6	7.7	8.5
3 to 5 years	12.5	11.9	13.4	12.4	13.5	14.2
5 to 10 years	16.7	16.9	16.4	16.5	19.3	16.6
10 to 15 years	8.7	9.6	7.4	8.5	10.5	6.4
15 to 20 years	5.0	6.1	3.5	5.1	4.6	2.7
20 to 25 years	3.7	4.8	2.1	3.8	3.4	1.7
25 to 30 years	2.8	3.8	1.3	2.8	2.2	1.5
30 to 35 years	1.7	2.4	.8	1.8	1.1	.5
Over 35 years	1.3	1.9	.5	1.4	.9	.6
Median years on job	3.6	4.5	2.6	3.6	3.7	2.6

Marital status of women

Average tenure of women workers varies with their marital status, as well as with age. In January 1978, in every age group from 25 to 64 years, single women (never married) had been on the same job longer than either married women or those who were widowed, divorced, or separated. (See table 2.) At ages 55 to 64, for example, single women averaged nearly 15 years on the job, 6 years longer than married women, but the same average as men. Because single women generally remain in the labor force once entering, their average duration on the job in each age group is the same or nearly the same as for men. Under age 25, married women had slightly higher tenure than single women, although both averaged less than a year.

Racial variations

Job tenure for whites was about the same as for blacks, and about 1 year longer than for workers of Hispanic origin.³ White men had worked longer on their current jobs than black men, but black women had worked longer than white women. (See table 3.)

The lower job tenure for black men as compared with white men reflects the occupations in which these two groups tend to be employed. Black men are more heavily represented among service workers, operatives, and nonfarm laborers, occupational groups in which unemployment rates are generally above average and tenure is below average. More white men are in the professional and managerial occupations in which unemployment rates are relatively low and tenure higher.

Job tenure for black women exceeded that for white women in January 1978 partly because of the large influx of white women into the labor force during recent years. Labor force participation rates for white women historically have been much lower than those for black women. During the 1960's and 1970's, the labor force participation rate of white women increased dramatically, while the rate for black women rose only slightly. As a result, the white rate is now only slightly lower than that for blacks.⁴

Table 2. Median years on current job of women, by marital status and age, January 1978

Age	Single	Married, spouse present	Other marital ¹ status
Total	1.5	3.5	3.6
16 to 24 years	.6	.9	.7
25 to 34 years	2.6	1.6	1.6
35 to 44 years	5.7	3.5	3.6
45 to 54 years	10.7	5.8	5.8
55 to 64 years	14.6	8.6	7.8
65 years and over	8.5	9.7	8.1

¹ Includes widowed, divorced, and separated.

Tenure of black women nearly doubled in the past decade, from 2.0 years to 3.6 years, while that for white women did not rise significantly. A greater proportion of black women are now employed in professional and managerial jobs than in 1968, and fewer work as domestics, where their tenure is about the average for all women.

Table 3. Median years on current job, by sex, age, race and Hispanic origin, January 1978

Age	All workers			White		Black		Hispanic origin	
	Both sexes	Men	Women	Men	Women	Men	Women	Men	Women
Total 16 years old and over	3.6	4.5	2.6	4.6	2.6	3.7	3.6	2.7	1.6
16 to 24 years . . . . .	.7	.7	.7	.7	.7	.7	.7	.7	.7
25 to 34 years	2.6	2.7	1.6	2.7	1.6	2.7	2.7	2.6	1.6
35 to 44 years	5.0	6.9	3.6	6.9	2.7	6.7	5.0	5.7	2.6
45 to 54 years	8.3	11.0	5.9	11.3	5.8	9.4	7.9	6.0	4.6
55 to 64 years	11.0	14.6	8.5	14.8	8.4	13.0	9.2	9.3	6.9
65 and over	11.0	13.5	8.4	14.1	8.3	10.9	8.7	(¹)	(¹)

¹ Median not shown where base is less than 75,000.

Table 4. Median years on current job, by occupation, industry, and sex, January 1978

Occupation and industry	Men	Women
Total, all workers	4.5	2.6
OCCUPATION		
Professional, technical, and kindred workers	4.8	3.6
Managers and administrators, except farm	5.9	3.6
Salesworkers	3.6	1.6
Clerical and kindred workers	4.7	2.6
Craft and kindred workers	4.9	2.7
Operatives, except transport	3.6	3.5
Transport equipment operatives	3.7	1.6
Nonfarm laborers	1.6	1.6
Service workers	2.5	1.6
Farmers and farm managers	19.8	8.2
Farm laborers and supervisors	2.7	3.6
INDUSTRY		
Agriculture	8.3	3.6
Wage and salary workers	3.5	1.6
Self-employed workers	18.1	6.9
Unpaid family workers	(¹)	7.5
Nonagricultural industries	3.7	2.6
Wage and salary workers	3.7	2.6
Mining	3.5	1.6
Construction	2.5	1.6
Manufacturing	5.0	3.5
Transportation and public utilities	6.6	3.7
Wholesale and retail trade	2.5	1.5
Finance, insurance, and real estate	3.7	2.5
Service	3.5	2.6
Public administration	6.7	3.6
Self-employed workers	6.8	3.5
Unpaid family workers	(¹)	4.7

¹ Median not shown where base is less than 75,000.

Tenure by occupation and industry

Farmers had by far the longest job tenure of any occupational group, about 20 years for men, and over 8 years for women (table 4). Farmers are self-employed and tend to operate their farms regardless of unemployment fluctuations in other industries. Farmers also tend to be older than the average worker (61 percent are age 45 and over, double the percentage for all workers); relatively few young persons have the capital to purchase and operate a farm.

Among men, managers had worked longer (almost 6 years) on their current jobs than any other major occupational group except farmers. For women, the managerial occupation was 1 of 4 occupations with equally high duration. Unemployment rates are generally lower for managers than any other occupational group, and managers tend to be older than the average worker.

For both men and women, tenure was low for non-farm laborers and service workers, in part because some are employed in industries subject to seasonal fluctuations, and because they tend to be younger than most other workers.

Job tenure for wage and salary workers in non-agricultural industries was longest (nearly 7 years for men and 4 years for women) in the transportation and public utilities industry group, and in public administration (Federal, State, and local government). Workers in these industries are less likely to be laid off and their jobs are less likely to be affected by cyclical factors than in other industries. Tenure was lowest for workers in the construction and trade industries. □

— FOOTNOTES —

¹ This report is based primarily on information from a supplementary question, "When did . . . start working at his present job or business?" found in the January 1978 Current Population Survey, conducted for the Bureau of Labor Statistics by the Bureau of the Census. Most of the data relate to persons 16 years old and over employed in the week ending Jan. 14, 1978. Sampling variability may be large where numbers are small. Therefore, small differences between estimates or percentages should be interpreted with caution.

This report is another in a series of reports on job tenure. Survey findings for January 1968 appeared in the September 1969 *Monthly Labor Review* (reprinted with additional tabular material and an explanatory note as Special Labor Force Report 112). Data for January 1973 appeared in the December 1974 *Monthly Labor Review* (reprinted as Special Labor Force Report 172).

² *Reaching Retirement Age, Findings from a survey of newly entitled workers 1968-70* (U.S. Department of Health, Education, and Welfare, Social Security Administration, 1976), p.91.

³ Data on workers of Hispanic origin were tabulated separately without regard to race. They, therefore, are included in the data for white and for black workers. According to the 1970 census, approximately 96 percent of the Hispanic population was classified as white.

⁴ *Employment and Training Report of the President, 1978*, table A-4, pp. 187-88.

Union wage rates in local trucking

Average union wages of local truckdrivers and helpers increased 8.9 percent in the year ended July 1, 1977. This was the largest rise since 1971-72. (See table 1.) Its size reflected, to some extent, the impact of the first uncapped (unlimited) cost-of-living adjustment under the 1976 nationwide general freight agreement.

Local truckdrivers averaged \$8.09 an hour on July 1, 1977; their helpers averaged \$7.28. Much of this differential reflects the distribution of drivers and helpers among cities and in trucking operations with disparate

pay levels, rather than differences in rates paid the two classifications within the same city and type of hauling. Sixty percent of the drivers averaged at least \$8.40 an hour and 8 percent averaged \$9 or more, while only 20 percent of the helpers had wage rates of at least \$8.40 an hour and fewer than 1 percent reached the \$9 mark.

Among the nine regions studied, the Southwest reported the largest average wage-rate increase (10.2 percent), and the Middle Atlantic States the smallest (7.7 percent). In the Great Lakes, the region with the largest concentration of union truckdrivers and helpers, the increase was 9.5 percent.

Nearly all of the truckdrivers and helpers were provided benefits through insurance or pension funds either fully or partially paid for by their employers. These payments were usually identical for drivers and helpers covered by the same agreement.

The survey, conducted by the Bureau of Labor Statistics, covered about 322,000 drivers and 28,000 helpers who were active union members in the 153 cities with populations of at least 100,000, according to the 1970 census. Excluded were drivers and helpers paid on a mileage or commission basis, and over-the-road drivers. Union wage rates are the basic (minimum) wage rates (excluding holiday, vacation, or other benefit payments made or regularly credited to the employee) agreed upon through collective bargaining between employers and unions.

A comprehensive report on the 1977 survey is available from the Bureau or its regional offices. □

Table 1. Annual percent increases in average union hourly wage rates for local truckdrivers and helpers, July 1967-77

Year	Drivers and helpers	Drivers	Helpers
1967-68	5.2	5.3	5.2
1968-69	5.9	5.9	5.8
1969-70	10.0	10.0	10.0
1970-71	12.5	12.4	13.4
1971-72	9.9	10.0	9.7
1972-73	7.9	7.9	8.4
1973-74	8.2	8.3	7.7
1974-75	7.5	7.5	7.0
1975-76	8.2	8.3	8.0
1976-77	8.9	8.9	8.7

NOTE: Beginning in 1979, the Bureau's local trucking survey will be conducted biennially.

Significant Decisions In Labor Cases



Supreme Court opens new term

On the opening day of its 1979–80 term, the Supreme Court agreed to review a 6th Circuit decision upholding a Department of Labor regulation that allows employees the right to refuse to work under conditions that present a real and immediate danger of death or serious injury.¹ The regulation, which permits work refusals only when “there is insufficient time, due to the urgency of the situation, to eliminate the danger through resort to regular statutory channels,” was ruled invalid by the 5th Circuit earlier in 1977.² Last term, the High Court refused to review that decision. But its review of the more recent 6th Circuit ruling may lead to a resolution of the conflict between the appeals courts on the issue.

On the first Monday in October, the High Court also summarily dismissed a pair of workers’ compensation cases on appeal from two State Supreme Courts³ and refused to review another 38 labor and labor-related cases on appeal from various lower courts. Unless four of the nine justices vote to review a case, review is denied, leaving the lower court ruling in effect.⁴

Of those cases denied review, a ruling by the 8th Circuit involved issues particularly important to organized labor’s potential political influence. In *Gabauer v. Woodcock*,⁵ the appeals court ruled 4 to 3 that the United Auto Workers did not violate the Landrum-Griffin Act by expending union money for political purposes not related to the interests and welfare of the union. Six members of an Auto Workers local in St. Louis had charged that the union violated the law by contributing to such organizations as the Students for a Democratic Society and the Students Nonviolent Coordinating Committee. The court held, however, that union officers “did not breach their fiduciary duty by making the questioned expenditures.” It also noted that the union constitution authorized political activities which directly or indirectly further the union’s interests “in the improvement of general economic and social conditions.” Thus, the court concluded that it had “neither the power nor the standards by which to review expenditures challenged by a minority of the union merely because of their controversial nature.”

“Significant Decisions in Labor Cases” is written by Gregory J. Mounts, of the *Monthly Labor Review* staff.

Compensation under which law?

Lower court rulings in a pair of workers’ compensation cases were also left standing by the Supreme Court. In *Pettus v. American Airlines*,⁶ the 4th Circuit ruled that the Full Faith and Credit Clause of the Constitution and *res judicata* prevent an injured worker from receiving compensation in one jurisdiction, if another jurisdiction has refused to continue paying benefits it had once authorized for the same injury and its law excludes other remedies.

Following a back injury at his job in Virginia, George Pettus received benefits under the State’s workers’ compensation law. However, Virginia stopped payments to Pettus for refusing to undergo “recommended” back surgery. Pettus then filed a workers’ compensation claim with the District of Columbia, which granted benefits based on his “contact” with the city and its discretionary policy concerning the refusal of medical treatment.⁷ However, the appeals court ruled that the District was required to accept Virginia’s decision to deny benefits.

In 1943, the Supreme Court ruled in *Magnolia*⁸ that a specific provision in the Texas workers’ compensation law barred claims for the same injury in other jurisdictions. Four years later, however, the High Court’s ruling in *McCartin*⁹ permitted an Illinois resident injured in Wisconsin to receive compensation from Wisconsin, less any amounts paid under Illinois law. The acknowledged distinction between *Magnolia* and *McCartin* was that the Texas law specifically forbade recovery for the same injury in another State, whereas the Illinois law did not.

The Federal appeals court in Richmond compared the language of the Virginia workers’ compensation statute. It found that the rights and remedies granted to an employee by the law exclude “all other rights and remedies of such employees, . . . at common law or otherwise.”¹⁰ The court concluded that this language had the same exclusionary effect as the Texas law, barring any remedies available in other jurisdictions through the doctrine of *res judicata* in conjunction with the Full Faith and Credit Clause of the Constitution.

Significantly, however, the Texas law restricts remedies from second jurisdictions only when “the employee has claimed and received compensation” from the first.¹¹

And, in *Magnolia*, the worker continued to receive benefits from Texas.

In *Boggs v. Blue Diamond Coal Co.*,⁸ the 6th Circuit ruled that the parent holding company of a coal mining company may be sued for negligence in a mining disaster in which 15 miners lost their lives. Their widows alleged that the parent company negligently delayed construction of improvements required to minimize the accumulation of methane gas. As restated by the court, Blue Diamond allegedly "authorized removal of existing ventilation and safety devices in order to open a new tunnel of the mine but concealed the changes from Federal mine inspectors who would have taken immediate steps to correct the dangerous conditions . . . The ventilation changes increased the methane gas in the tunnel and caused the explosion."

The court evaluated Blue Diamond's claimed immunity from liability by examining the relationship between the parent and subsidiary in the context of Kentucky's workers' compensation law. The law provides immunity from tort liability only for entities classified as "contractors" or "employers." The court rejected Blue Diamond's claim that its "functional relationship" with its subsidiary constituted an implied contract and that it should therefore be regarded as a "contractor" under the law. The court also reasoned that the "corporate veil" should not be pierced at the convenience of corporations; thus, Blue Diamond's alternative claim that it should be regarded as the "employer" for purposes of the compensation law was rejected. Thus, the miners' widows may sue Blue Diamond for damages under the State's tort law.

Not trespass in California

In 1978, the Supreme Court ruled that courts may apply State trespass laws to cases involving picketing that might either be protected or prohibited by the Na-

tional Labor Relations Act.¹³ Reversing the California Supreme Court, the High Court carved out this exception to the traditional rule of Federal preemption because employers in such cases could not seek relief from the National Labor Relations Board.

On remand, the California Supreme Court considered whether union picketing on privately owned sidewalks surrounding a Sears store violated State law. In a recent 5-to-3 decision, the court ruled that such picketing was permissible under California labor law and, by a 1975 act of the legislature, could not be enjoined.¹⁴

The majority examined the provisions of the Moscone Act. The 1975 law prohibited the judiciary from restraining or enjoining persons from peaceful picketing in "any public street or any place where any person or persons may lawfully be." Another provision of the law, the court noted, required that the protections afforded labor disputes "be strictly construed in accordance with existing law governing labor disputes."

The court reasoned that a pair of earlier cases, addressing the same issue of private property interests versus union picketing rights, established the "existing law" referred to in the act. In both cases,¹⁵ the court had ruled that, under California labor law, the interests of unions in peaceful picketing outweighed the property rights of employers engaged in retail businesses.

In approving peaceful picketing on sidewalks outside retail stores—"whether it is on main street, . . . in a suburban shopping center or in a parking lot"—the court rejected Sears' claim of a federally derived right to enjoin such activity. In addition, the court concluded, the Moscone Act is valid under the due process clause of the Fourteenth Amendment to the Constitution because its purpose—"the elimination of unnecessary judicial intervention into labor disputes—indisputably bears a reasonable relationship to legitimate State objectives." □

—FOOTNOTES—

¹ *Marshall v. Whirlpool Corp.*, 5 F.2d 715 (6th Cir., 1979) 48 U.S.L.W. 3188 (U.S., Oct. 2, 1979, Review Granted); for a discussion of the case, see *Monthly Labor Review*, June 1979, pp. 44-45.

² *Marshall v. Daniel Construction Co.*, 563 F.2d 707 (5th Cir., 1977) 47 U.S.L.W. 3226 (U.S., Oct. 2, 1978, Review Denied); for a discussion of the case, see *Monthly Labor Review*, March 1979, p. 61.

³ *Dodson Insurance Group v. Maloney* (New Mex. Sup. Ct., Feb., 7, 1979); and *Slagle v. Parker*, 370 So.2d 947 (Ala. Sup. Ct., Apr. 6, 1979), where the court ruled that Alabama's workmen's compensation law does not violate the Constitution by immunizing coworkers in wrongful death suits, even though such immunity is not permitted for common law personal injury actions.

⁴ Denial of review does not technically affirm lower court holdings because the Supreme Court is free to alter them by ruling in other cases raising the same issues.

⁵ *Gabauer v. Woodcock*, 594 F.2d 662 (8th Cir., 1979), 48 U.S.L.W. 3207 (U.S., Oct. 2, 1979, Review Denied).

⁶ *Pettus v. American Airlines*, 587 F.2d 627 (4th Cir., 1978), 48 U.S.L.W. 3214 (U.S., Oct. 2, 1979, Review Denied).

⁷ Workmen's compensation in the District of Columbia is administered through the Office of Workers' Compensation Programs, U.S. Department of Labor, as an extension of the Longshoremen's and Harbor Workers' Compensation Act.

⁸ *Magnolia Petroleum Co. v. Hunt*, 320 U.S., 430 (1943).

⁹ *Industrial Commission of Wisconsin v. McCartin*, 330 U.S. 622 (1947).

¹⁰ Virginia Code Annotated, Sec. 65.1-40 (Repl. Vol. 1973).

¹¹ See *Magnolia Petroleum Co. v. Hunt*, 320 U.S. 430, at 435 (1943).

¹² *Boggs v. Blue Coal Diamond Company*, 590 F.2d 655 (6th Cir., 1979), 48 U.S.L.W. 3214 (U.S., Oct. 2, 1979, Review Denied).

¹³ *Sears, Roebuck & Co. v. San Diego County District Council of Carpenters*, 436 U.S. 180 (1978), see *Monthly Labor Review*, August 1978, pp. 46-47, and January 1979, pp. 55-57.

¹⁴ *Sears, Roebuck & Co. v. San Diego County District Council of Carpenters*, 1979 DAILY LAB. REP. 190, D-1 (Cal Sup Ct, 1979).

¹⁵ *Schwartz-Torrance Investment Corp. v. Bakery & Confectionery Workers' Union*, 61 Cal2d 766 (Cal Sup Ct, 1964), and *In re Lane*, 71 Cal2d 872 (Cal Sup Ct, 1969).

Major Agreements Expiring Next Month



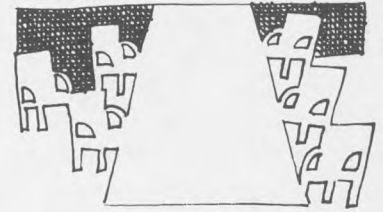
This list of collective bargaining agreements expiring in January is based on contracts on file in the Bureau's Office of Wages and Industrial Relations. The list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Union ¹	Number of workers
American Motors Corp., Jeep Corp. (Toledo, Ohio)	Transportation equipment	Auto Workers (Ind.)	5,000
American Tobacco Co. (North Carolina and Virginia)	Tobacco	Bakery, Confectionery, and Tobacco Workers	4,200
Associated Produce Dealers & Brokers of Los Angeles, Inc. (California)	Wholesale trade	Teamsters (Ind.)	1,500
Budd Co., National Office Agreement (Michigan, Indiana, and Pennsylvania)	Transportation equipment	Auto Workers (Ind.)	3,500
Budd Co., National Agreement (Michigan, Indiana, and Pennsylvania)	Transportation equipment	Auto Workers (Ind.)	9,000
Bulova Watch Co., Inc. (New York)	Instruments	Independent Production, Maintenance and Service Employees of the Bulova Watch Co., Inc.	1,600
Campbell Soup Co. (Napoleon, Ohio)	Food products	Food and Commercial Workers	2,000
Caterpillar Tractor Co. (Joliet, Ill.)	Machinery	Machinists	4,800
Champion Spark Plug Co. (Interstate)	Electrical products	Auto Workers (Ind.)	4,200
Dana Corp., Spicer Axle Division (Fort Wayne, Ind.)	Transportation equipment	Allied Industrial Workers	2,200
Delmarva Poultry Processors Association (Maryland and Delaware)	Food products	Food and Commercial Workers; Teamsters (Ind.)	1,600
DeSoto Inc., Jackson Furniture Division (Jackson, Miss.)	Furniture	Carpenters	1,100
Fedders Corp. (Effingham, Ill.)	Machinery	Stove Workers	1,300
General Mills Fun Group, Inc., Kenner Products Division (Cincinnati, Ohio)	Miscellaneous manufacturing	Allied Industrial Workers	1,500
Graphic Arts Association of Delaware Valley, Inc. (Pennsylvania)	Printing and publishing	Graphic Arts	1,650
Greater Seattle Retail Drug Association, Inc. (Seattle, Wash.)	Retail trade	Food and Commercial Workers	2,300
Industrial Relations Council of Furniture Manufacturers in Southern California	Furniture	Carpenters	1,200
John-Manville Sales Corp. (Manville and Finderne, N.J.)	Stone, clay, and glass products	Paperworkers	1,600
Kelsey-Hayes Co. (Detroit and Romulus, Mich.)	Transportation equipment	Auto Workers (Ind.)	1,900
Kelsey-Hayes Co. (Jackson, Mich.)	Transportation equipment	Allied Industrial Workers	1,000
Levingston Shipbuilding Co. (Orange, Tex.)	Transportation equipment	Orange Metal Trades Council	1,300
Lockheed Aircraft Corp., Lockheed California Co. Division (California)	Transportation equipment	Machinists	10,300
Masonite Corp., Hardboard Division (Laurel, Miss.)	Lumber	Woodworkers	1,650
Philip Morris U.S.A. (Richmond, Va.)	Tobacco	Bakery, Confectionery and Tobacco Workers	5,800
Philip Morris U.S.A. (Louisville, Ky.)	Tobacco	Bakery, Confectionery and Tobacco Workers	2,400
Pineapple Companies, Factory and Plantations (Hawaii) ²	Food products	Longshoremen and Warehousemen (Ind.)	4,000
R. H. Macy & Co., Inc. (New York, N.Y.)	Retail trade	Retail, Wholesale and Department Store	7,000
Revlon, Inc. (Edison, N.J.)	Chemicals	Distributive Workers (Ind.)	2,000
Sterling Drug, Inc., Winthrop Laboratories (Rensselaer, N.Y.)	Chemicals	Chemical Workers	1,100
Utility Contractors Association of New Jersey	Construction	Laborers	4,500

¹ Affiliated with AFL-CIO except where noted as independent (Ind.).

² Industry area (group of companies signing same contract).

Developments in Industrial Relations



George Meany retires

AFL-CIO President George Meany did not seek reelection in November, ending a quarter-century reign as the leader of the American labor movement. Secretary-Treasurer Lane Kirkland had made the announcement earlier to the Executive Council of the organization for the ailing 85-year-old leader.

Meany, a high school dropout, began his 69-year labor career as a plumber in Brooklyn. At age 28, he became the business agent of his local and then secretary-treasurer of the New York City Building Trades Council. In 1939, he was elected secretary-treasurer of the AFL and became the chief lieutenant to Federation President William Green. On Green's death in 1952, Meany was elected his successor.

He was the key figure in the 1955 merger of the American Federation of Labor and the Congress of Industrial Organizations that ended a period of bitter feuding between the organizations. The new AFL-CIO recognized his achievement by electing him president, a post he retained until his decision to step down.

President Carter praised Meany, saying that the Nation had benefited from "his heart, his mind and his experience." R. Heath Larry, president of the National Association of Manufacturers, saluted Meany, saying that while Meany had his differences with American business, "they were always articulated openly and with rectitude." (See p. 2 for tributes of U.S. Secretaries of Labor.)

Despite the departure of Meany, no major changes are expected in the policies and aims of the 13.5-million member Federation in the near future. Kirkland, who succeeded Meany, called the labor movement "entirely healthy" with "forceful and progressive leadership." He said, "I am not a stranger coming into this house. I've been here quite a while. Every program, every policy has my fingerprints on it."

"Developments in Industrial Relations" is prepared by George Ruben and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and is largely based on information from secondary sources.

UAW president gets seat on Chrysler's board

The round of bargaining between the "Big Three" automobile manufacturers and the United Auto Workers was concluded when the Ford Motor Co. and Chrysler Corp. settled. The accord for 190,000 Ford workers was essentially identical to the General Motors accord. (See *Monthly Labor Review*, November 1979, pp. 58-59.)

In a break from tradition, Chrysler and UAW agreed that union president Douglas Fraser would be nominated to be a member of Chrysler's board of directors. The union had broached the subject in 1976; it revived the idea in May 1979 when Chrysler closed its Hamtramck, Mich., plant, which employed 5,000 UAW members. According to Fraser, this action made many in the union think about seeking a board seat "when they saw decisions like this being made without any voice on the board to raise questions or present a different viewpoint."

The UAW, as it had promised, settled for a less costly package to aid the financially beleaguered Chrysler Corp. Union officials stressed that the concessions are temporary and that Chrysler employees will be at the same wage and benefit levels as General Motors and Ford employees at the end of the three agreements in 1982. The parties estimated that the contract concessions would save Chrysler \$202 million. (The union also agreed to a 1-year deferral of a \$200 million payment to the pension fund.) Some deviations in the contract:

- Chrysler's 3-percent wage increases are effective in March 1980, January 1981, and November 1981, compared with September of 1979, 1980, and 1981 at General Motors. (The 24-cents-an-hour "travel" cost-of-living increase was effective September 17, 1979, at all companies.)

- Chrysler's automatic wage escalator formula matched the liberalized General Motors formula but, unlike at General Motors, \$1.32 of the existing \$1.37 escalator allowance will not be incorporated into base rates until December 1980. Also, until October 1981, the \$1.32 and the 24 cents travel increase at Chrysler will not be treated as part of base rates in determining sickness and accident benefits.

- The immediate improvements in pensions at Chrysler were valued at 70 percent of those at General

AFL-CIO public employee delegates oppose mandatory social security

Delegates to the fourth convention of the AFL-CIO's Public Employee Department opposed legislation providing for mandatory social security coverage for all government workers, including any proposal to merge government retirement plans into the social security system. Delegates from 29 of the 33-member unions were in attendance.

The convention passed a resolution urging legislation to prohibit the unilateral withdrawal of governmental jurisdictions from the social security system. In 1980, 98 jurisdictions in 16 States plan to leave the system in a move to reduce their payroll retirement contributions (*Monthly Labor Review*, November 1979, p. 61).

Some delegates argued that State and local government workers should have the right to vote on whether governmental units may withdraw from the system. Other delegates expressed concern that employees leaving the system give up more than they gain. The resolution proved to be the only divisive issue at the convention, held September 11-12 in Washington, D.C.

The Public Employee Department was established in 1974 to coordinate the activities of AFL-CIO's public employee unions. The Department promotes the interests of more than 2 million Federal, postal, and State and local government employees through legislative activities and research, legal, safety, and public relations services.

The convention unanimously reelected William H. McClennan for another 2-year term. McClennan, head of the 150,000 member International Association of Fire Fighters, has led the Department since its inception in 1974. Kenneth T. Blaylock, president of the 260,000 member American Federation of Government Employees, was reelected treasurer in an unopposed election.

In the keynote address, President McClennan discussed the roles of public employee unions. He urged the Public Employee Department to fulfill its mission of bringing all public employee unions into the organization to promote change, compare experiences, and make common decisions on matters of legislation and collective bargaining.

Hatch Act reform. The convention again made reform of the Hatch Act a top priority. Congress originally enacted the Hatch Act to protect Federal employees from partisan political pressures and patronage. Some now argue that the act restricts Federal employees from participating fully in political affairs. For example, delegates to the convention complained that Federal workers are not allowed to campaign for partisan political candidates, seek elective

office, or actively participate in a political party. They called for reform, but, at the same time, advocated strong protections against partisan political influences on the job.

Collective bargaining. A national collective bargaining law for State and local employees continues to be a primary goal of the Department. Convention delegates claimed that government workers often are denied the same rights to elect union representatives and to bargain collectively that are guaranteed by Federal law to workers in private industry. They adopted resolutions urging Congress to either extend coverage of the National Labor Relations Act to include State and local government employees or to enact legislation that would specify certain minimum collective bargaining standards and procedures.

Proposition 13 and a balanced budget. Tax reform was discussed extensively at the convention. Several speakers commented on the adverse effects of California's Proposition 13 (which severely restricts the growth of property taxes) on various social programs and upon public employee jobs. The Department's representatives described such tax reforms as anti-government and anti-union strategies. In this same vein, some delegates expressed disapproval of efforts to mandate through amendment of the U.S. Constitution a balanced Federal budget. Though proponents of the amendment have urged it as the only way to control the growth of Federal spending, convention delegates saw such action as "anti-union" and resolved to oppose such an amendment, calling it "a serious threat to our representative democracy."

Other resolutions. Assistant Secretary of Labor Eula Bingham, head of the U.S. Department of Labor's Occupational Safety and Health Administration, called for extending private sector health and safety protections to include public employees, a move that the convention heartily endorsed.

The convention also voted for a reduction in the 72-hour workweek of Federal firefighters, removal of residency requirements for local employees, an end to Presidential control over Federal pay and the creation of a pay-setting system based on "true" comparability with the private sector, employee parking to be condition of employment subject to collective bargaining, and the reestablishment of a Senate Post Office and Civil Service Committee. □

—MARCY JACOBS
Economist
Bureau of Labor Statistics

Motors and further improvements were to be made in seven steps, compared with nine steps at General Motors. However, by May 1982, pensions at Chrysler will match those at General Motors.

- Chrysler employees will receive 9 paid personal holidays in 1981 and 11 in 1982. At General Motors, paid holidays total 8 in 1980, 9 in 1981, and 9 in 1982.

Grain workers settle, ending strike

The shipment of grain out of the ports of Duluth, Minn., and Superior, Wis., resumed after members of Local 118 of the Grain Millers ratified the last of eight agreements with companies that load the grain on ships, usually for overseas delivery. The 600 employees, who load about 10 percent of the Nation's grain, had been on strike since early July, forcing operators to store grain outside of already filled elevators.

The main issue in the negotiations was a union demand for an automatic cost-of-living wage escalator clause. The settlements did not provide for such a clause; instead, the workers will receive \$1,000 "productivity bonuses" in each of the 3 contract years. Other provisions included wage increases of 8 percent in the first and second years and 5 percent in the third. An additional increase of up to 3 percent is payable in the third year if the Carter Administration relaxes its pay guideline, and the parties may reopen the contract if the guideline is terminated.

Two union presidents stepping down

President Thomas F. Murphy of the Bricklayers announced that he would resign by the end of 1979 to become chairman of the Mason Industry Committee, a union-management body that engages in lobbying and research to aid the industry. Under the union's constitution, Secretary John T. Joyce will fill the top post for the balance of the 4-year term.

Murphy, 68, started in the union as a special deputy, moved up to treasurer and member of the executive board in 1948, to secretary in 1960, and to the presidency in 1966.

Joyce, 43, has been secretary of the union since 1971, after serving as treasurer for 5 years. Earlier, he served in various positions with Local 21 in Chicago.

In another change of leadership, President William Sidell of the Carpenters announced that he will retire at the end of the year. Under the union's constitution, he will be succeeded by First Vice President William Konyha.

Sidell began his labor career by serving in several elected offices of Local 721 in Los Angeles. He held office in the district council of Carpenters and the Califor-

nia State AFL-CIO, was elected to the union's executive board in 1962, and became a vice president in 1964. He became president in March 1972, after the death of M. A. Hutcheson. He also has been an AFL-CIO vice president since 1972.

Konyha, age 64, started his career in 1932 as an apprentice in Cleveland. He became president of his local, served as a general representative of the Carpenters, and was president of the Ohio State Council of Carpenters from 1962 to 1972. He became first vice president of the union in January 1974.

Coalition of Labor Union Women convenes

At the convention of the Coalition of Labor Union Women, 1,100 delegates pledged intensified efforts to gain ratification of the Equal Rights Amendment; renewed the organization's commitment to affirmative action plans; called for strengthening Federal job safety and health protection; backed the establishment of a national health services program; renewed the Coalition's commitment to obtaining federally financed child-care programs; and called for changes in the social security system to attain more protection for all women.

Coalition President Joyce D. Miller reminded the delegates that women "still have a long way to go . . . women are segregated into low-paying stereotyped jobs and cannot escape the wage ghetto imposed by both economic forces and longstanding patterns of discrimination." Thomas R. Donahue, executive assistant to the AFL-CIO President George Meany, assured the delegates that the entire labor movement shares "your central concern." He told the Coalition that its goal—obtaining job equality for women by using the collective strength of unions—could be aided by making unions "bigger, more effective, and more dynamic."

Garment workers in New York get 3-year contract

A new agreement between the Clothing and Textile Workers and cotton garment manufacturers covered 75,000 workers in the New York City area. The accord calls for wage increases of 90 cents an hour over the 3-year term. In addition, workers will receive a wage escalator adjustment of 4.35 cents an hour for each percentage-point rise in the Consumer Price Index in excess of 8.8 percent from June 1979 to June 1980; the adjustment will rise to 4.65 cents for the year ended in June 1981. Each adjustment is limited to 10 cents.

The employers' combined payments for pensions and insurance benefits will be increased to 17.75 percent of payroll, from 12.5 percent, over the contract term. In addition, trustees of the plans were empowered to raise fund payments to maintain minimum levels. By the end

of the contract term, the pension benefit rate will be increased to \$4.75 a month for each year of service; this will bring the minimum benefit to \$115 a month. Other terms include a 10th paid holiday, beginning in 1981, and a fourth week of vacation for employees with 20 years of service, beginning in 1982.

Federal salary increase

The scheduled annual salary increase for Federal white-collar employees, military personnel, members of Congress, Federal judges, and political and career officials became involved in a clash between the two houses of Congress. The final result was a two-level increase—7 percent for the majority of the Federal employees and 5.5 percent for the remainder.

In August, President Carter proposed to Congress that the salaries of the 1.4 million white-collar employees covered by the General Schedule pay system be raised 7 percent. Earlier, he proposed only a 5.5-percent increase but concluded that the larger amount was now warranted because of the accelerating rate of inflation. Under the Federal Salary Act of 1970, the Senate or the House could have rejected the proposal; this did not happen and the full increase went into effect the first pay period in October for all employees in GS grades 3 to 14 and those in the first seven pay steps of grade 15. (The increase ranged from 6.99 to 9.89 percent for grade 1 and from 7.07 to 9.51 percent for grade 2.) Employees in other steps of grade 15 and all employees in grades 16, 17, and 18 did not receive a 7-percent increase because they were already at the statutory ceiling of \$47,500 a year, but they received a 5.5-percent increase because the ceiling—the rate for the lowest level (level V) of the Executive Schedule for political appointees and certain career officials—was raised by Congress as a result of legislating a raise for its own members.

Under the Executive Salary Cost-of-Living Adjustment Act of 1975, members of Congress, Federal judges, and political and career officials would have automatically received the weighted average amount of the GS increase, which was slightly more than 7 percent. However, both the Senate and the House voted not to appropriate money for an increase of that size. Instead,

they appropriated money to put into effect the 5.5-percent increase they had declined in October 1978. (The measure that had precluded the 5.5-percent increase expired at the end of September, and Congress had not yet acted to prevent the 7-percent automatic increase, with the result that persons covered by the cost-of-living pay act received both increases for a brief period. This raised an issue regarding the 913 judges because the Constitution prohibits any reduction in the salaries of active judges.)

Military personnel received the same increases as GS employees (5.5 percent for top officers and 7 percent for all other officers and all enlisted personnel) under a law that links their pay to GS pay.

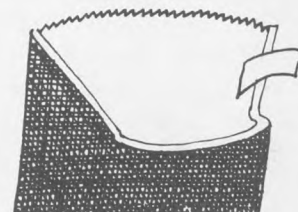
Pay for 530,000 Federal blue-collar employees is adjusted at various times throughout the year based on comparisons with prevailing local pay rates for the same occupations in the private economy. However, special legislation and a presidential order limited the blue-collar employees increase to 5.5-percent during the fiscal year ended September 30, 1979. A similar 7-percent limit applies during the current fiscal year.

Union pension funds invested in nonunion firms

According to a study of the stock holdings of 142 public and private pension plans, billions of dollars in union pension assets are being invested in predominantly nonunion companies whose objectives often conflict with those of the labor movement. The study, "Pension Investment: A Social Audit," was published by Corporate Data Exchange, Inc., a New York City nonprofit research firm, in conjunction with Peoples Business Commission, a Washington, D.C., public education organization.

The study included a listing of pension plan holdings in 99 corporations identified by the authors as primarily nonunion, violators of occupational safety and health rules, violators of equal employment opportunity goals, or investors or lenders to South Africa. Twenty-four of the plans were not collectively bargained, 54 were bargained but controlled by the employer, 44 were bargained and jointly controlled by the employer and union, and 20 plans covered public employees.

Book Reviews



How national are the multinationals?

American Multinationals and American Interests. By C. Fred Bergsten, Thomas Horst, and Theodore H. Moran. Washington, D.C., The Brookings Institution, 1978. 535 pp., index. \$18.95, cloth; \$8.95, paper.

Foreign direct investment has become a larger and larger part of total American business activity. Between 1966 and 1974, foreign expenditures as a share of total U.S. spending on plant and equipment grew from 12 to 18½ percent, according to figures documented in *American Multinationals and American Interests* and, over the same period, foreign earnings as a proportion of total corporate earnings increased from 4.6 to 17.4 percent. Throughout the era, foreign investment was a focus of domestic political debate and a source of international political friction. Domestically, the central issues were job and trade displacement, taxation, and antitrust policy. In the international sphere, there was concern about the role of the multinational corporation in the development efforts of the Third and Fourth Worlds, the impact of multinational investment on the structure of the international economic system, and the relationship between these enterprises and American foreign policy-making.

Through a combination of original research and thorough evaluation of previous studies and casework, Bergsten, Horst, and Moran have produced what should become a standard reference on the multinational corporation as an international economic policy issue. Their book is directed towards specialists in foreign economic policy. The complexity of the field is evident, in that the book considers two schools of economic thought and four schools of international political analysis as they apply to the foreign and domestic sectors of the politics and economics of home and host countries. The authors were faced with 48 analytical dimensions, in at least eight major issue areas. Considering the task, Bergsten, Horst, and Moran have done a very good job in a remarkably readable and concise way.

Space constraints prevent me from providing more than the high points of the analytical content of *American Multinationals and American Interests*. On the eco-

nomie side, traditional neoclassical interpretations, which stress the rationalization of production, employment, and trade as an outcome of free multinational investment, are contrasted with product cycle-industrial organization models, which hold that multinationals invest abroad to create, or maintain, oligopoly positions in the markets for products as they move through product-cycle stages of innovation, maturity, and decline. The latter school often holds that the multinationals exploit the international economic system in the sense that they displace jobs and income from home countries without creating proportional gains in host countries, and then expropriate the surplus.

In their survey of the existing literature, Bergsten, Horst, and Moran find case studies and empirical work that give each side about equal support. Based on this survey, and the results of their own empirical work, which concludes that foreign investment has little or no net effect on U.S. aggregate employment, trade, or production, it is my suspicion that the parties to an essentially ideological dispute have heretofore been using fragmentary and anecdotal evidence to make their cases. Even if it made no other contribution, *American Multinationals and American Interests* does a great service by providing a basically even-handed perspective to these issues. Other important economic conclusions are that multinationals tend to overhedge in the foreign exchange markets, rather than risk destabilizing speculation, as some critics suggest; that no sound judgment can be made concerning the charge that the multinationals have disrupted the balance of payments system; but that multinationals do speed up the pace of change and dislocation in the international economy.

Foreign policy analysts have developed four interpretations of the multinational corporation phenomenon. In neoimperialist interpretations, the nation state and its foreign policy becomes a tool of the corporate search for profits. Neomercantilists believe, conversely, that the corporations become instruments of state policies of national security and interest. The other two interpretations hold that the multinational corporations are in competition with the nation state for power in the world system. The "sovereignty-at-bay" school holds that the multinational has become an increasingly

“anational” entity and, on balance, has been a helpful influence in the world. On the other hand, the “global reach” school, while agreeing with the assertion of growing “anationality”, holds that multinationals have been an exceedingly destructive force in world affairs. Bergsten, Horst, and Moran do not explicitly embrace any of these analytical models, however, their policy statements lead me to believe that, at least implicitly, they hold to a modified, economically-oriented version of the neomercantilist paradigm.

In their policy recommendations, they first set out a number of broad principles: neutrality, especially of taxation, between home and foreign investment; protection of American corporate interests from adverse impacts of other nations’ policies; alleviation of sector-specific domestic costs of generally beneficial foreign investment policy; enhancement of access to raw materials through the encouragement of nonequity forms of foreign investment in extractive industries; comprehensive consideration of antitrust policy to include potentials for new competition from foreign production as well as foreign investment’s impact on domestic concentration; use of the multinational to gain bargaining leverage with the Soviet Union (a classic neomercantilist policy); and the encouragement of better Third and Fourth World relations through a more sensitive policy toward the development impacts of multinational investment (also a typically neomercantilist consideration).

Bergsten, Horst, and Moran’s specific policy recommendations are remarkable only by the quality of research and thinking that preceded them. That is to say, their policy measures are generally well-thought-out responses to specific policy problems, rather than a series of spectacular devices designed to set the whole earth straight. Indeed, if there is any serious shortcoming in their recommendations, it is an excessive acceptance of the current organizational structure, a structure that many analysts feel is a cause of many problems in U.S. international economic policymaking. One innovative proposal was a plan to initiate an “escape clause” mechanism for foreign investment modeled on the present system used in trade policy, while a somewhat troubling recommendation was broader control and licensing of the multinationals’ operations in the Soviet Union, including the specific proposal to base such licensing on political factors. It is my opinion that openly basing nonsensitive commercial licensing on explicitly political consideration is an inappropriate precedent, regardless of what country it is applied to.

American Multinationals and American Interests is an enormously well-researched, closely analyzed, and clearly written book on an intricate, controversial, and important topic. Except for my difficulty with the authors’ overly passive acceptance of the existing foreign economic policymaking structure and a certain distaste for

their implicit assumption that the private multinational corporation should be treated as manipulable instruments of foreign policy, I found little to argue with. I recommend this book very highly to anyone seriously interested in multinational corporations and the complex issues surrounding them.

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Best textbook available

School Finance: The Economics and Politics of Public Education. By Walter I. Garms, James W. Guthrie and Lawrence C. Pierce. Englewood Cliffs, N.J., Prentice-Hall Inc., 1978, 451 pp. \$14.95.

The authors of *School Finance*, all widely experienced and respected in the field, have tried hard to weave the strands of public choice economics, bureaucratic politics, and financial institutions into “a new political economy” of school finance. The resulting fabric by and large is interesting and potentially useful to varied audiences.

Written primarily for classroom use in schools of education, the book also is meant to be a reference work for curious legislators, school board members, educational administrators and citizen leaders in school affairs. There is something for everyone.

All audiences will appreciate the introductory section on values. By focusing especially on the roles of education in achieving greater equality, higher efficiency, and freer choice, the authors illustrate the need to give up some of one goal to get more of another when insufficient numbers of instrumental variables are available to policymakers and administrators. They do not make very clear, alas, the conditions under which more of both may possibly be had.

The role of government in education also is rationalized in the introductory section by use of a soft version of the theory of externalities. Unfortunately, works by Aston and Bowen (Alexander W. Aston, *Four Critical Years*, San Francisco, Jossey-Bass, 1978, and Howard R. Bowen, *Investment in Learning*, San Francisco, Jossey-Bass for the Carnegie Council on Policy Studies in Higher Education, 1977), which array impressively the numerous nonpecuniary social benefits of education, were not available to the authors to clinch the case. Instead, they were forced to assert the external effects, Hansen and Weisbrod notwithstanding.

Section two is a collection of chapters describing the

current organization and patterns of financing public education in the United States. They deal successively with school organization, collective bargaining, revenue structures, the Federal role, and State aid criteria. All are interesting, especially because the authors have chosen to present these institutional materials in the unconventional framework (for educators!) of public choice economics. School boards and educational administrators really do have significant choices to make if they can be taught to think rationally about alternative ways to achieve particular ends. James Buchanan and his colleagues should be pleased to see this affirmation of their work.

Section three is a set of normative chapters proposing and appraising alternatives to the structures described in section two. It begins with *Serrano* and alternative means of achieving greater equality in the distribution of educational benefits; continues with suggestions about accountability, budgeting, simulations, and forecasting as means of enhancing efficiency; and ends with a chapter about the politics of school finance. The authors even propose their own idealized system of public education and its finance.

Finally, section four takes up three topics: the management of capital, the particular problems of urban schools, and financing postsecondary education. Clearly, the book is primarily about financing elementary and secondary rather than higher education.

Qualitatively, the book suffers on two counts. The first is that it is a book about economics written by noneconomists. Some readers will applaud this fact as evidence of the liberation of an important set of tools from an especially narrow perspective. But the tools too easily can be misused, as in the authors' use of the term "efficiency" and their tendency (shared with most political scientists) to assume public choice must always be a zero-sum game.

The book also suffers from having been completed before passage of Proposition 13. To be sure, many reforms in school finance which will be forced on the system by such legislation accord with those implicit in *Serrano et al.* (for example, State assumption of the obligation for at least basic education). But others do not (for example, transfer to the State of even greater control over curriculum, personnel policies, and management systems). June 6, 1978, the day California voters approved Proposition 13, shortened the half life of textbooks in school finance to 1 day.

Even so, *School Finance* is the best textbook available, clearly worthy of careful reading by all those who care about public education.

—GORDON K. DOUGLASS
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Pomona College

Bring back the gold standard?

The Inflation Crisis and How To Resolve It. By Henry Hazlitt. New Rochelle, N.Y., Arlington House, 1978. 192 pp. \$8.95.

When this reviewer was a teenager, he worked for 6 weeks on a neighbor's farm. When the job ended, he was paid \$20.50 in two coins—a \$20 gold piece and a 50-cent silver piece. This summer, many decades later, that gold piece (one ounce) was quoted at \$275, nearly 14 times higher in value. What happened?

The answer is, paper money. In those days paper money was a convenience for the user, but it was convertible into gold on demand. Prices could rise, as in World War I, but they would fall back, as they did in the business recession of 1921, then stabilize in the prosperity of the 1920's.

Then came the depression of the 1930's, which originated in Europe. To help bring the United States out of the depression, President Franklin D. Roosevelt revalued the dollar by pricing gold at \$35 an ounce. Because other nations followed suit, the gold reserves in the world were increased by about 75 percent. However, World War II disorganized world markets and took gold out of circulation as ordinary money.

Henry Hazlitt is an economist who has written extensively on this subject since the end of World War II. This latest book is a call for the return to the gold standard as a cure of inflation.

In Hazlitt's view, gold coins and gold certificates (always backed 100 percent by gold in vaults) could be minted and issued by private industry (presumably banks). Governments could go on issuing national paper currencies as they do now. But they would be under pressure to prevent their currencies from falling in value with respect to gold. Bankers, businessmen, and ordinary consumers would quit dealing in a currency which was seriously depreciating. The private business world could develop a money system which would not only work well, but would also be a guarantee against inflation.

Hazlitt's point is that gold is a scarce metal, with industrial and monetary uses, which has maintained value throughout centuries. Gold would guarantee the purchasing power of money. "Permitting private gold coinage and private gold certificate issues will allow us to bring the world back to a pure gold standard." He believes that this new reform would involve a transition period, during which prices would be quoted in both gold and paper, with an eventual return to the old gold standard for both coins and paper money. The book ends on that note. Hazlitt hopes that he has made a case for a return to the 19th century gold standard.

However, what is needed is another book showing

the world how to get to this goal. Most of the gold supplies throughout the world are in the possession of governments, which occasionally trade them back and forth. The United States has recently been selling some gold to foreign governments in order to keep up the exchange value of the dollar. But there is no longer any guarantee of such exchange value, nor will the United States permit its gold reserves to decline too much. The basic problem will be how to get governments to convert their gold reserves into coins and gold certificates and then to permit these to circulate freely throughout the country—and abroad, if necessary.

Consumer prices in the United States have doubled within the last 10 years and at current rates will double again in 6 years. So Hazlitt's warning has become more urgent. In addition, housing and real estate prices have been skyrocketing as people are striving to protect the domestic purchasing power of their dollars. Housing prices push up the Consumer Price Index. And soaring oil prices are undercutting the purchasing power of the dollar abroad. What can the United States do to bring this dangerous problem under control? Hazlitt proposes a return to the gold standard. The problem is, how to do it?

—EWAN CLAGUE

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former Commissioner of the
Bureau of Labor Statistics

Publications received

Agriculture and natural resources

Murray, Thomas J., "The Wildcatters Are Growling," *Dun's Review*, September 1979, pp. 64–66.

Ridker, Ronald G. and Elizabeth W. Cecelski, *Resources, Environment, and Population: The Nature of Future Limits*. Washington, Population Reference Bureau, Inc., 1979, 43 pp. (Population Bulletin, Vol. 34, No. 3.)

Stobaugh, Robert and Daniel Yergin, "Toward a Balanced Energy Program," *Challenge*, September–October 1979, pp. 3–11.

Stuart, Alexander, "The Rough Road to Making Oil and Gas from Coal," *Fortune*, Sept. 24, 1979, beginning on p. 50.

"The Oil Majors Bet on Coal," *Business Week*, Sept. 24, 1979, beginning on p. 104.

Economic growth and development

"America: 50 Years After the Crash," *Viewpoint, an IUD Quarterly*, 3d Quarter 1979, entire issue.

American Enterprise Institute for Public Policy Research, *Contemporary Economic Problems 1979*. Washington, American Enterprise Institute for Public Policy Research, 1979, 436 pp. \$6.75.

Solow, Robert M., "Alternative approaches to macroeconomic theory: a partial view," *The Canadian Journal of Economics*, August 1979, pp. 339–54.

"The End of the Industrial Society," *Business Week*, Sept. 3, 1979, pp. 2–61.

Economic and social statistics

Hein, John, "The quality of well-being: How do you measure it?" *Across the Board*, October 1979, pp. 75–87.

Hodge, Robert W. and Ricardo Klorman, "Dynamic Social Indicator Models: Some Problems of Theory, Concept, and Data," *Sociology and Social Research*, July 1979, pp. 613–48.

U.S. Department of Health, Education, and Welfare, *Podiatry Workforce, Characteristics of the Provision of Patient Care, United States: 1974*. Hyattsville, Md., Department of Health, Education, and Welfare, National Center for Health Statistics, Public Health Service, Office of Health Research, Statistics, and Technology, 1979, 44 pp. (DHEW Publication [PHS] 79–1817.)

Education

Ashworth, Kenneth H., *American Higher Education in Decline*. College Station, Tex., Texas A&M University Press, 1979, 105 pp. \$7.95.

Hyman, Herbert H. and Charles R. Wright, *Education's Lasting Influence on Values*. Chicago, The University of Chicago Press, 1979, 161 pp., appendix, index. \$12.50.

Massel, Katharine Douglas, "1979: International Year of the Child," *Americas*, August 1979, pp. 9–16.

Industrial relations

Bennett, James T. and Manuel H. Johnson, "Free Riders in U.S. Labour Unions: Artifice or Affliction?" *British Journal of Industrial Relations*, July 1979, pp. 158–72.

Biasatti, Lawrence L. and James E. Martin, "A Measure of the Quality of Union-Management Relationships," *Journal of Applied Psychology*, August 1979, pp. 387–90.

Brooks, William W., Ben F. Sands, Jr., and Kenneth A. Kovach, "A Current Perspective on Military Unionization: Can It Happen Here?" *Journal of Collective Negotiations in the Public Sector*, Vol. 8 No. 2, 1979, pp. 97–104.

Fairley, Lincoln, *Facing Mechanization: The West Coast Longshore Plan*, Los Angeles, University of California Institute of Industrial Relations, 1979, 447 pp. appendix, bibliography. \$8.50.

Freedman, Audrey, *Managing Labor Relations*. New York, The Conference Board, 1979, 92 pp. \$10, associates; \$30, non-associates.

Havelick, Franklin J., ed., *Collective Bargaining: New Dimensions in Labor Relations*. Boulder, Colo., Westview Press, 1979, 183 pp. \$20.

"Hot UAW Issue: 'Quality of work life,'" *Business Week*, Sept. 17, 1979, pp. 120–22.

Rifkin, Bernard and Susan Rifkin, *American Labor Sourcebook*. New York, McGraw-Hill Book Co., 1979, 928 pp. \$39.95.

Robinson, Jerald F. and James K. Mc Collum, "The Rejection of Military Unionization: Analysis of the AFGE

Data," *Journal of Collective Negotiations in the Public Sector*, Vol. 8, No. 2, 1979, pp. 105-15.

U.S. Bureau of Labor Statistics, *Collective Bargaining in the Motor Vehicle and Equipment Industry*. By Marcy Freedman. Washington, 1979, 13 pp. (Report 574.)

— *Major Collective Bargaining Agreements: Wage Incentive, Production-Standard, and Time Study Provisions*. Washington, 1979, 77 pp. (Bulletin 1425-18.) Stock No. 029-001-02378-2. For sale by the Superintendent of Documents, Washington 20402.

Industry and government organization

"Big Steel's Liquidation," *Business Week*, Sept. 17, 1979, beginning on p. 78.

Morgan, Dan, *Merchants of Grain*, New York, The Viking Press, 1979, 387 pp., index, \$14.95.

"Why supply-side economics is suddenly popular," *Business Week*, Sept. 17, 1979, pp. 116-18.

International economics

Brown, Shannon R., "The Ewo Filature: A Study in the Transfer of Technology to China in the 19th Century," *Technology and Culture*, July 1979, pp. 550-68.

Daniel, Philip, *Africanisation, Nationalisation and Inequality: Mining Labour and the Copperbelt in Zambian Development*. New York, Cambridge University Press, 1979, 202 pp. \$29.50, cloth; \$13.50, paper.

Ozawa, Terutomo, *Multinationalism, Japanese Style: The Political Economy of Outward Dependency*. Princeton, N.J., Princeton University Press, 1979, 289 pp. \$16.50.

"The People's Republic of China, 1979," *Current History*, September 1979, entire issue.

"The Soviet Union, 1979," *Current History*, October 1979, beginning on p. 97.

U.S. Bureau of International Labor Affairs, *Country Labor Profile: Japan*. By Solomon B. Levine. *Country Labor Profile: Republic of the Philippines*. By Donald Harris. *Country Labor Profile: Venezuela*. By Martha R. Lowenstern. Washington, U.S. Department of Labor, Bureau of International Labor Affairs, 1979, 7, 7, and 7 pp., respectively. For sale by the Superintendent of Documents, Washington 20402.

Labor and economic history

Blewett, Mary H., "The Union of Sex and Craft in the Haverhill Shoe Strike of 1895," *Labor History*, Summer 1979, pp. 352-75.

Dawson, Andrew, "The Paradox of Dynamic Technological Change and the Labor Aristocracy in the United States, 1880-1914," *Labor History*, Summer 1979, pp. 325-51.

Dodd, Martin H., "Marlboro, Massachusetts and the Shoeworkers' Strike of 1898-1899," *Labor History*, Summer 1979, pp. 376-97.

Meier, August and Elliott Rudwick, *Black Detroit and the Rise of the UAW*. New York, Oxford University Press, 1979, 289 pp., bibliography, index. \$15.

Montgomery, David, *Workers' control in America: Studies in the history of work, technology, and labor struggles*. New York, Cambridge University Press, 1979, 189 pp. bibliography. \$14.95.

Tentler, Leslie Woodcock, *Wage-Earning Women: Industrial Work and Family Life in the United States, 1900-1930*. New York, Oxford University Press, 1979, 266 pp., bibliography, index. \$14.95.

Labor force

Agassi, Judith Buber, *Women on the Job: The Attitudes of Women to Their Work*. Lexington, D.C. Heath and Co., 1979, 263 pp. \$24.95.

Hom, Peter W., "Effects of Job Peripherality and Personal Characteristics on the Job Satisfaction of Part Time Workers," *Academy of Management Journal*, September 1979, pp. 551-65.

Smith, Ralph E., ed., *The Subtle Revolution: Women at Work*. Washington, The Urban Institute, 1979, 279 pp., bibliography. \$7.50.

Management and organization theory

Alderfer, Clayton P. and Richard A. Guzzo, "Life Experiences and Adults' Enduring Strength of Desires in Organizations," *Administrative Science Quarterly*, September 1979, pp. 347-61.

Allio, Robert J. and Malcolm W. Pennington, eds., *Corporate Planning: Techniques and Applications*. New York, AMACOM, A division of American Management Associations, 1979, 436 pp., bibliography. \$19.95.

Atwood, Caleb S., "A work schedule to increase productivity," *The Personnel Administrator*, October 1979, pp. 29-33.

Baytos, Lawrence M., "Easing the Pain of Terminations," *Personnel*, July-August 1979, pp. 64-69.

Butterworth, John, *Debt Collection Letters in Ten Languages: With Notes on Terminology, Practice and Methods of Payment in Different Countries*. New York, AMACOM, A division of American Management Associations, 1979, various pagings. \$54.

Channon, Derek F., with Michael Jalland, *Multinational Strategic Planning*. New York, AMACOM, A division of American Management Associations, 1979, 344 pp. \$35.

Cooke, Kathleen, "A Model for the Identification of Training Needs," *Public Personnel Management*, July-August 1979, pp. 257-61.

Desatnick, Robert L., *The Expanding Role of the Human Resources Manager*. New York, AMACOM, A division of American Management Associations, 1979, 230 pp. \$15.95.

Frease, Michael and Robert A. Zawacki, "Job-sharing: an answer to productivity problems?" *The Personnel Administrator*, October 1979, pp. 35-38.

Howe, Roger J. and Mark G. Mindell, "Motivating the contemporary employee," *Management Review*, September 1979, pp. 51-55.

Jordan, Vernon E., "Human resource perspectives for the '80s," *The Personnel Administrator*, October 1979, pp. 75-82.

Klingner, Donald E., "Changing role of personnel management in the 1980s," *The Personnel Administrator*, September 1979, pp. 41-48.

Lesly, Philip, *How We Discommunicate*. New York, AMACOM, A division of American Management Associations, 1979, 227 pp. \$12.95.

Martin, James E., "Equal Employment Opportunity Complaint Procedures and Federal Union-Management Relations: A Field Study," *The Arbitration Journal*, September 1979, pp. 34-42.

Miller, Howard E. and James R. Terborg, "Job Attitudes of Part-Time and Full-Time Employees," *Journal of Applied Psychology*, August 1979, pp. 380-86.

Moran, Robert T., "Japanese participative management— or how rinji seido can work for you," *S.A.M. Advanced Management Journal*, Summer 1979, pp. 14-22.

Osterman, Elaine Pevar, "The Discipline of Public Employees: The New York State Experience," *The Arbitration Journal*, September 1979, pp. 25-33.

Sleeth, Randall G., "The mediocrity paradox," *The Personnel Administrator*, September 1979, pp. 63-69.

Monetary and fiscal policy

Barber, Clarence L., "Inflation Distortion and the Balanced Budget," *Challenge*, September-October 1979, pp. 44-47.

Floyd, John E., "Government expenditure policies in the small open economy," *The Canadian Journal of Economics*, August 1979, pp. 377-93.

Scherer, Joseph, "Is the Federal Budget Balanced?" *Challenge*, September-October 1979, pp. 41-43.

Sobel, Lester A., ed., *The Great American Tax Revolt*. New York, Facts on File, Inc., 158 pp.

Productivity and technological change

Duncan, Marvin and C. Edward Harshbarger, "Agricultural Productivity: Trends and Implications for the Future," *Economic Review*, Federal Reserve Bank of Kansas City, September-October 1979, pp. 3-12.

Donahue, Thomas R., "Technology: Using It Wisely," *The AFL-CIO American Federationist*, September 1979, pp. 5-8.

Lienhard, John H., "The Rate of Technological Improvement Before and After the 1830s," *Technology and Culture*, July 1979, pp. 515-30.

McLeod, William B., "Public Sector Productivity: A Union Perspective," *CPER* (California Public Employee Relations), September 1979, pp. 12-22.

Stanback, Thomas M., Jr., *Understanding the Service Economy: Employment, Productivity, Location*. Baltimore, The Johns Hopkins University Press, 1979, 122 pp. \$9.50.

Urban affairs

Burrows, Lawrence B., *Growth Management: Issues, Techniques, and Policy Implications*. New Brunswick, Rutgers—The State University of New Jersey, Center for Urban Policy Research, 1978, 141 pp., bibliography.

Frieden, Bernard J., "Regulating the American Dream," *Across the Board*, August 1979, pp. 67-73.

Wages and compensation

Ontario Ministry of Labour, *Hours, Wages and Related Payments in the Ontario Construction Industry, 1979*. Toron-

to, Ontario, Canada, Ontario Ministry of Labor, Research Branch, 1979, 273 pp.

Schlachtmeyer, Albert S. and Robert B. Bogart, "Employee-Choice Benefits—Can Employees Handle It?" *Compensation Review*, Third Quarter 1979, pp. 12-19.

Seeley, Barrett, "The Drift in Workers' Compensation," *The AFL-CIO American Federationist*, September 1979, pp. 19-23.

Todd, Sharon McKinnon, "A Survey of the Fringe on Top," *Business*, September-October 1979, pp. 39-42.

White, William L., "Impact of the Anti-Inflation Program on Executive Compensation," *Personnel*, July-August 1979, pp. 12-27.

Wolf, Wendy C. and Maurice M. MacDonald, "The Earnings of Men and Remarriage," *Demography*, August 1979, pp. 389-99.

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I certify that the statements made by me above are correct and complete.

(Signed) Henry Lowenstern, Editor-in-Chief

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NOTES ON CURRENT LABOR STATISTICS

This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics. A brief introduction to each group of tables provides definitions, notes on the data, sources, and other material usually found in footnotes.

Readers who need additional information are invited to consult the BLS regional offices listed on the inside front cover of this issue of the *Review*. Some general notes applicable to several series are given below.

Seasonal adjustment. Certain monthly and quarterly data are adjusted to eliminate the effect of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might otherwise mask short-term movements of the statistical series. Tables containing these data are identified as "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. For a technical discussion of the method used to make seasonal adjustments, see "Appendix A. The BLS Seasonal Factor Method," *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), pp. 272-78, and *X-11 Variant of the Census Method II Seasonal Adjustment Program*, Technical Paper No. 15 (Bureau of the Census, 1967). Seasonally adjusted employment data in tables 2-7 were last revised in the February 1979 issue of the *Review* to reflect the preceding year's experience. Annual revision of the seasonally adjusted payroll data in tables 11, 13, 16, and 18 was last introduced in the November 1979 issue of the *Review*. New seasonal factors for productivity data in tables 33 and 34 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month to month and from 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 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 1967 = 100, the hourly rate expressed in 1967 dollars is \$2 ($\$3/150 \times 100 = \2). The resulting values are described as "real," "constant," or "1967" dollars.

Availability of information. Data that supplement the tables in this section are published by the Bureau of Labor Statistics in a variety of sources. Press releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule given below. The *Handbook of Labor Statistics 1977*, Bulletin 1966, provides more detailed data and greater historical coverage for most of the statistical series presented in the *Monthly Labor Review*. More information from the household and establishment surveys is provided in *Employment and Earnings*, a monthly publication of the Bureau, and in two comprehensive data books issued annually—*Employment and Earnings, United States and Employment and Earnings, States and Areas*. More detailed information on wages and other aspects of collective bargaining appears in the monthly periodical, *Current Wage Developments*. More detailed price information is published each month in the periodicals, the *CPI Detailed Report* and *Producer Prices and Price Indexes*. Selected key statistical series are presented graphically in the monthly *Chartbook on Prices, Wages, and Productivity*.

Symbols

- p = preliminary. To improve 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 may also reflect other adjustments.
- n.e.c. = not elsewhere classified.

Schedule of release dates for major BLS statistical series

Title and frequency (monthly except where indicated)	Release date	Period covered	Release date	Period covered	MLR table number
Producer Price Indexes	December 6	November	January 10	December	26 - 30
Employment situation	December 7	November	January 11	December	1 - 11
Consumer Price Index	December 21	November	January 25	December	22 - 25
Real earnings	December 21	November	January 25	December	14 - 20
Productivity and costs (quarterly):					
Nonfarm business and manufacturing .....	.....	.....	January	4th quarter	31 - 34
Work stoppages	December 31	November	January 29	December	37
Labor turnover in manufacturing	December 31	November	January 30	December	12 - 13

EMPLOYMENT DATA FROM THE HOUSEHOLD SURVEY

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 56,000 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 are (1) 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 were available for work but did not work because they were on layoff or waiting to start new jobs within the next 30 days 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; the **total labor force** includes military personnel. Persons **not in the labor force** are those not classified as employed or unemployed; this group includes persons retired, those engaged in their own housework, those not

working while attending school, those unable to work because of longterm illness, those discouraged from seeking work because of personal or job market factors, and those who are voluntarily idle. The **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.

Full-time workers are those employed at least 35 hours a week; **part-time workers** are those who work fewer hours. Workers on part-time schedules for economic reasons (such as slack work, terminating or starting a job during the week, material shortages, or inability to find full-time work) are among those counted as being on full-time status, under the assumption that they would be working full time if conditions permitted. The survey classifies unemployed persons in full-time or part-time status by their reported preferences for full-time or part-time work.

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 preceding years. These adjustments affect the comparability of historical data presented in table 1.

Data for periods prior to January 1978 are not strictly comparable with current data because of the introduction of an expansion in the sample and revisions in the estimation procedures. For an explanation of the supplementation procedures and an indication of the differences, see "Revisions in the Current Population Survey in January 1978," *Employment and Earnings*, February 1978, pp. 7-10.

Data in tables 2-7 are seasonally adjusted, based on the seasonal experience through December 1978.

Year	Total non-institutional population	Total labor force		Total	Civilian labor force				Not in labor force	
		Number	Percent of population		Employed			Unemployed		
					Total	Agriculture	Nonagri-cultural industries	Number		Percent of labor force
1950	106,645	63,858	59.9	62,208	58,920	7,160	51,760	3,288	5.3	42,787
1955	112,732	68,072	60.4	65,023	62,171	6,449	55,724	2,852	4.4	44,660
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1964	127,224	75,830	59.6	73,091	69,305	4,523	64,782	3,786	5.2	51,394
1965	129,236	77,178	59.7	74,455	71,088	4,361	66,726	3,366	4.5	52,058
1966	131,180	78,893	60.1	75,770	72,895	3,979	68,915	2,875	3.8	52,288
1967	133,319	80,793	60.6	77,347	74,372	3,844	70,527	2,975	3.8	52,527
1968	135,562	82,272	60.7	78,737	75,920	3,817	72,103	2,817	3.6	53,291
1969	137,841	84,239	61.1	80,733	77,902	3,606	74,296	2,831	3.5	53,602
1970	140,182	85,903	61.3	82,715	78,627	3,462	75,165	4,088	4.9	54,280
1971	142,596	86,929	61.0	84,113	79,120	3,387	75,732	4,993	5.9	55,666
1972	145,775	88,991	61.0	86,542	81,702	3,472	78,230	4,840	5.6	56,785
1973	148,263	91,040	61.4	88,714	84,409	3,452	80,957	4,304	4.9	57,222
1974	150,827	93,240	61.8	91,011	85,936	3,492	82,443	5,076	5.6	57,587
1975	153,449	94,793	61.8	92,613	84,783	3,380	81,403	7,830	8.5	58,655
1976	156,048	96,917	62.1	94,773	87,485	3,297	84,188	7,288	7.7	59,130
1977	158,559	99,534	62.8	97,401	90,546	3,244	87,302	6,855	7.0	59,025
1978	161,058	102,537	63.7	100,420	94,373	3,342	91,031	6,047	6.0	58,521

2. Employment status by sex, age, and race, seasonally adjusted

[Numbers in thousands]

Employment status	Annual Average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
TOTAL															
Total noninstitutional population ¹	158,559	161,058	161,829	162,033	162,250	162,448	162,633	162,909	163,008	163,260	163,469	163,685	163,891	164,106	164,468
Total labor force	99,534	102,537	103,199	103,745	103,975	104,277	104,621	104,804	104,193	104,325	104,604	105,141	105,139	105,590	105,567
Civilian noninstitutional population ¹	156,426	158,941	159,707	159,916	160,142	160,353	160,539	160,819	160,926	161,182	161,393	161,604	161,801	162,013	162,375
Civilian labor force	97,401	100,420	101,077	101,628	101,867	102,183	102,527	102,714	102,111	102,247	102,528	103,059	103,049	103,498	103,474
Employed	90,546	94,373	95,241	95,751	95,855	96,300	96,647	96,842	96,174	96,318	96,754	97,210	96,900	97,513	97,293
Agriculture	3,244	3,342	3,374	3,275	3,387	3,232	3,311	3,343	3,186	3,184	3,260	3,262	3,322	3,400	3,288
Nonagricultural industries	87,302	91,031	91,867	92,476	92,468	93,068	93,335	93,499	92,987	93,134	93,494	93,949	93,578	94,113	94,005
Unemployed	6,855	6,047	5,836	5,877	6,012	5,883	5,881	5,871	5,937	5,929	5,774	5,848	6,149	5,985	6,182
Unemployment rate	7.0	6.0	5.8	5.8	5.9	5.8	5.7	5.7	5.8	5.8	5.6	5.7	6.0	5.8	6.0
Not in labor force	59,025	58,521	58,630	58,288	58,275	58,170	58,012	58,105	58,815	58,935	58,865	58,545	58,752	58,515	58,901
Men, 20 years and over															
Civilian noninstitutional population ¹	65,796	67,006	67,382	67,486	67,800	67,726	67,816	67,939	67,997	68,123	68,227	68,319	68,417	68,522	68,687
Civilian labor force	52,464	53,464	53,593	53,938	54,033	54,333	54,485	54,444	54,243	54,261	54,395	54,567	54,527	54,653	54,686
Employed	49,737	51,212	51,448	51,825	51,838	52,133	52,331	52,284	52,056	52,157	52,299	52,319	52,227	52,382	52,366
Agriculture	2,308	2,361	2,363	2,337	2,403	2,293	2,324	2,355	2,271	2,274	2,306	2,323	2,385	2,395	2,372
Nonagricultural industries	47,429	48,852	49,085	49,488	49,435	49,841	50,007	49,909	49,785	49,883	49,983	49,986	49,843	49,987	49,994
Unemployed	2,727	2,252	2,145	2,113	2,195	2,200	2,154	2,180	2,187	2,105	2,096	2,249	2,300	2,271	2,330
Unemployment rate	5.2	4.2	4.0	3.9	4.1	4.0	4.0	4.0	4.0	3.9	3.9	4.1	4.2	4.2	4.3
Not in labor force	13,332	13,541	13,789	13,548	13,567	13,393	13,331	13,495	13,754	13,862	13,832	13,752	13,890	13,869	14,001
Women, 20 years and over															
Civilian noninstitutional population ¹	74,160	75,489	75,889	76,001	76,119	76,228	76,332	76,476	76,532	76,670	76,784	76,897	77,006	77,124	77,308
Civilian labor force	35,685	37,416	37,860	38,095	38,217	38,185	38,429	38,642	38,345	38,580	38,596	39,010	39,292	39,331	39,317
Employed	33,199	35,180	35,726	35,887	35,990	36,019	36,252	36,440	36,165	36,323	36,373	36,861	36,968	37,178	37,039
Agriculture	537	586	587	571	591	586	608	613	580	543	592	584	596	640	556
Nonagricultural industries	32,662	34,593	35,139	35,316	35,399	35,433	35,644	35,827	35,584	35,780	35,781	36,276	36,371	36,538	36,483
Unemployed	2,486	2,236	2,134	2,208	2,227	2,166	2,177	2,201	2,180	2,237	2,223	2,150	2,324	2,153	2,279
Unemployment rate	7.0	6.0	5.6	5.8	5.8	5.7	5.7	5.7	5.7	5.8	5.8	5.5	5.9	5.5	5.8
Not in labor force	38,474	38,073	38,029	37,906	37,902	38,043	37,903	37,834	38,187	38,110	38,188	37,887	37,714	37,793	37,991
Both sexes, 16 - 19 years															
Civilian noninstitutional population ¹	16,470	16,447	16,436	16,429	16,422	16,400	16,391	16,404	16,397	16,389	16,381	16,387	16,377	16,367	16,370
Civilian labor force	9,252	9,540	9,624	9,595	9,617	9,665	9,613	9,628	9,523	9,426	9,537	9,481	9,230	9,514	9,461
Employed	7,610	7,981	8,067	8,039	8,027	8,148	8,064	8,138	7,953	7,839	8,082	8,031	7,705	7,953	7,888
Agriculture	399	395	424	367	393	354	380	375	335	368	362	355	341	365	360
Nonagricultural industries	7,211	7,586	7,643	7,672	7,634	7,794	7,684	7,763	7,618	7,471	7,720	7,676	7,364	7,588	7,528
Unemployed	1,642	1,559	1,557	1,556	1,590	1,517	1,549	1,490	1,570	1,587	1,455	1,450	1,525	1,561	1,573
Unemployment rate	17.7	16.3	16.2	16.2	16.5	15.7	16.1	15.5	16.5	16.8	15.3	15.3	16.5	16.4	16.6
Not in labor force	7,218	6,907	6,812	6,834	6,805	6,735	6,778	6,776	6,874	6,963	6,844	6,906	7,147	6,853	6,909
WHITE															
Civilian noninstitutional population ¹	137,595	139,580	140,170	140,332	140,507	140,683	140,825	141,063	141,123	141,331	141,492	141,661	141,822	141,981	142,296
Civilian labor force	86,107	88,456	89,067	89,468	89,747	90,093	90,395	90,415	89,923	90,018	90,279	90,554	90,662	91,081	90,997
Employed	80,734	83,836	84,565	85,013	85,125	85,543	85,941	85,938	85,479	85,515	85,871	86,093	85,829	86,395	86,243
Unemployed	5,373	4,620	4,502	4,455	4,622	4,550	4,453	4,478	4,444	4,503	4,409	4,460	4,832	4,687	4,755
Unemployment rate	6.2	5.2	5.1	5.0	5.2	5.1	4.9	5.0	4.9	5.0	4.9	4.9	5.3	5.1	5.2
Not in labor force	51,488	51,124	51,103	50,864	50,760	50,590	50,430	50,648	51,200	51,313	51,213	51,107	51,161	50,900	51,299
BLACK AND OTHER															
Civilian noninstitutional population ¹	18,831	19,361	19,536	19,585	19,635	19,670	19,714	19,755	19,802	19,850	19,901	19,943	19,979	20,032	20,079
Civilian labor force	11,294	11,964	12,122	12,163	12,153	12,077	12,228	12,251	12,175	12,176	12,272	12,364	12,340	12,408	12,546
Employed	9,812	10,537	10,749	10,746	10,758	10,725	10,775	10,878	10,734	10,767	10,883	11,025	10,987	11,095	11,083
Unemployed	1,482	1,427	1,373	1,417	1,395	1,352	1,452	1,374	1,442	1,409	1,389	1,338	1,353	1,313	1,463
Unemployment rate	13.1	11.9	11.3	11.7	11.5	11.2	11.9	11.2	11.8	11.6	11.3	10.8	11.0	10.6	11.7
Not in labor force	7,535	7,397	7,414	7,422	7,482	7,593	7,486	7,504	7,627	7,674	7,629	7,579	7,639	7,264	7,533

¹As in table 1, population figures are not seasonally adjusted.

3. Selected employment indicators, seasonally adjusted

[In thousands]

Selected categories	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
CHARACTERISTIC															
Total employed, 16 years and over	90,546	94,373	95,241	95,751	95,855	96,300	96,647	96,842	96,174	96,318	96,754	97,210	96,900	97,513	97,293
Men	53,861	55,491	55,754	56,096	56,072	56,449	56,549	56,559	56,267	56,352	56,638	56,595	56,316	56,653	56,539
Women	36,685	38,882	39,487	39,655	39,783	39,851	40,098	40,283	39,907	39,966	40,116	40,615	40,585	40,860	40,754
Married men, spouse present	38,397	38,688	38,782	38,944	39,039	39,202	39,374	39,291	38,917	38,988	39,055	39,163	39,146	39,175	39,135
Married women, spouse present	20,976	21,881	22,194	22,274	22,297	22,410	22,632	22,700	22,355	22,490	22,580	22,890	22,777	22,965	22,922
OCCUPATION															
White-collar workers	45,187	47,205	47,713	47,888	48,040	48,275	49,001	49,133	49,160	49,104	49,165	49,573	49,615	49,779	49,648
Professional and technical	13,692	14,245	14,307	14,297	14,629	14,743	15,034	15,083	15,226	15,220	15,053	15,063	14,983	15,078	14,929
Managers and administrators, except farm	9,662	10,105	9,968	10,030	10,217	10,322	10,414	10,407	10,409	10,374	10,565	10,675	10,772	10,640	10,648
Salesworkers	5,728	5,951	5,986	6,192	6,092	6,055	6,141	6,067	6,079	6,091	6,065	6,161	6,085	6,114	6,247
Clerical workers	16,106	16,904	17,452	17,369	17,102	17,154	17,412	17,577	17,446	17,418	17,481	17,673	17,774	17,947	17,825
Blue-collar workers	30,211	31,531	31,986	32,202	31,962	32,491	32,331	32,085	31,582	31,826	31,958	31,949	31,767	32,287	32,191
Craft and kindred workers	11,881	12,386	12,556	12,646	12,610	12,842	12,932	12,908	12,697	12,790	13,003	12,832	12,755	13,057	12,974
Operatives, except transport	10,354	10,875	11,178	11,177	10,887	11,047	10,953	11,060	10,651	10,664	10,759	10,853	10,880	10,987	10,989
Transport equipment operatives	3,476	3,541	3,581	3,640	3,640	3,678	3,618	3,565	3,550	3,667	3,596	3,610	3,571	3,622	3,561
Nonfarm laborers	4,501	4,729	4,671	4,739	4,825	4,924	4,829	4,652	4,684	4,706	4,600	4,652	4,561	4,621	4,667
Service workers	12,392	12,839	12,951	13,009	13,007	12,777	12,770	12,856	12,909	12,754	12,946	12,697	12,591	12,796	12,977
Farmworkers	2,756	2,798	2,821	2,739	2,826	2,759	2,742	2,803	2,624	2,600	2,683	2,657	2,703	2,736	2,702
MAJOR INDUSTRY AND CLASS OF WORKER															
Agriculture:															
Wage and salary workers	1,331	1,419	1,423	1,424	1,478	1,365	1,429	1,419	1,362	1,439	1,445	1,403	1,363	1,391	1,373
Self-employed workers	1,570	1,607	1,638	1,563	1,625	1,547	1,550	1,595	1,531	1,490	1,525	1,552	1,632	1,678	1,617
Unpaid family workers	344	316	323	293	318	293	348	324	282	270	293	294	310	327	312
Nonagricultural industries:															
Wage and salary workers	80,804	84,253	85,363	85,578	85,579	86,169	86,346	86,592	86,195	86,129	86,309	86,277	86,227	86,891	87,032
Government	15,153	15,289	15,387	15,373	15,360	15,217	15,293	15,224	15,356	15,635	12,257	15,382	15,260	15,450	15,549
Private industries	65,651	68,966	69,976	70,205	70,219	70,952	71,053	71,368	70,839	70,494	71,051	70,895	70,967	71,441	71,483
Private households	1,376	1,363	1,315	1,335	1,316	1,245	1,334	1,255	1,160	1,177	1,236	1,217	1,205	1,332	1,270
Other industries	64,275	67,603	68,661	68,870	68,903	69,707	69,719	70,112	69,679	69,317	69,816	69,678	69,761	70,109	70,213
Self-employed workers	6,005	6,305	6,314	6,370	6,515	6,529	6,632	6,585	6,468	6,625	6,600	6,753	6,649	6,682	6,814
Unpaid family workers	492	472	453	455	460	478	456	443	471	466	482	529	443	453	421
PERSONS AT WORK¹															
Nonagricultural industries	81,999	85,693	86,511	86,653	87,046	87,490	87,592	87,955	86,345	87,727	87,843	89,074	89,154	88,824	88,487
Full-time schedules	67,262	70,543	71,318	71,394	71,787	72,209	72,250	72,623	71,554	72,476	72,230	73,138	73,222	73,252	73,164
Part time for economic reasons	3,297	3,216	3,164	3,131	3,058	3,159	3,147	3,179	3,312	3,307	3,416	3,340	3,355	3,111	3,230
Usually work full time	1,257	1,249	1,167	1,279	1,209	1,208	1,205	1,235	1,265	1,246	1,416	1,394	1,478	1,255	1,293
Usually work part time	2,040	1,967	1,997	1,852	1,849	1,951	1,942	1,944	2,048	2,061	2,000	1,946	1,877	1,856	1,937
Part time for noneconomic reasons	11,440	11,934	12,029	12,128	12,201	12,122	12,195	12,154	11,479	11,943	12,198	12,597	12,577	12,461	12,093

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

4. Selected unemployment indicators, seasonally adjusted

Employment status	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
CHARACTERISTIC															
Total, 16 years and over	7.0	6.0	5.8	5.8	5.9	5.8	5.7	5.7	5.8	5.8	5.6	5.7	6.0	5.8	6.0
Men, 20 years and over	5.2	4.2	4.0	3.9	4.1	4.0	4.0	4.0	4.0	3.9	3.9	4.1	4.2	4.2	4.3
Women, 20 years and over	7.0	6.0	5.6	5.8	5.8	5.7	5.7	5.7	5.7	5.8	5.8	5.5	5.9	5.5	5.8
Both sexes, 16-19 years	17.7	16.3	16.2	16.2	16.5	15.7	16.1	15.1	16.5	16.8	15.3	15.3	16.5	16.4	16.6
White, total	6.2	5.2	5.1	5.0	5.2	5.1	4.9	5.0	4.9	5.0	4.9	4.9	5.3	5.1	5.2
Men, 20 years and over	4.6	3.7	3.5	3.4	3.5	3.6	3.4	3.4	3.4	3.3	3.4	3.6	3.8	3.7	3.7
Women, 20 years and over	6.2	5.2	4.9	5.0	5.1	5.0	5.0	5.0	4.9	5.1	5.0	4.7	5.2	4.8	5.1
Both sexes, 16-19 years	15.4	13.9	14.0	13.8	14.2	13.7	13.6	13.6	13.9	14.3	13.0	13.3	14.9	14.6	14.4
Black and other, total	13.1	11.9	11.3	11.7	11.5	11.2	11.9	11.2	11.8	11.6	11.3	10.8	11.0	10.6	11.7
Men, 20 years and over	10.0	8.6	8.3	8.3	8.4	7.8	8.6	8.8	8.6	8.4	7.9	8.3	8.3	7.9	9.0
Women, 20 years and over	11.7	10.6	10.1	10.3	10.2	10.6	10.6	9.8	10.8	9.9	10.8	9.8	10.3	9.6	10.1
Both sexes, 16-19 years	38.3	36.3	34.5	36.5	34.9	32.7	35.5	31.5	34.5	36.9	34.0	30.9	30.7	31.5	35.7
Married men, spouse present	3.6	2.8	2.6	2.4	2.5	2.6	2.6	2.6	2.7	2.5	2.6	2.9	3.0	2.8	2.9
Married women, spouse present	6.5	5.5	5.3	5.5	5.6	5.3	5.1	5.1	5.2	5.2	5.2	4.8	5.4	4.7	5.3
Women who head families	9.3	8.5	7.5	7.7	7.7	7.8	8.3	8.3	8.4	8.9	9.1	8.1	7.9	7.6	8.4
Full-time workers	6.5	5.5	5.2	5.2	5.3	5.2	5.2	5.1	5.3	5.2	5.1	5.3	5.4	5.4	5.5
Part-time workers	9.8	9.0	9.0	8.9	9.2	9.1	8.6	9.2	8.8	9.6	8.6	8.2	8.8	8.3	9.0
Unemployed 15 weeks and over	2.0	1.4	1.3	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.1	1.0	1.2	1.1	1.2
Labor force time lost ¹	7.6	6.5	6.2	6.2	6.2	6.2	6.2	6.1	6.5	6.3	6.3	6.4	6.5	6.2	6.4
OCCUPATION															
White-collar workers	4.3	3.5	3.3	3.2	3.5	3.3	3.4	3.4	3.3	3.2	3.4	3.2	3.6	3.3	3.5
Professional and technical	3.0	2.6	2.8	2.4	3.0	2.5	2.3	2.1	2.2	2.0	2.5	2.5	2.6	2.5	2.8
Managers and administrators, except farm	2.8	2.1	1.8	2.2	1.9	2.0	1.9	2.2	2.3	2.2	2.0	1.9	2.3	2.2	2.3
Salesworkers	5.3	4.1	4.1	3.1	3.6	3.8	4.3	4.1	4.0	4.0	4.5	3.5	4.2	3.9	3.8
Clerical workers	5.9	4.9	4.2	4.5	4.6	4.6	4.7	4.9	4.5	4.6	4.6	4.4	5.0	4.5	4.7
Blue-collar workers	8.1	6.9	6.8	6.4	6.8	6.4	6.4	6.6	6.9	6.7	6.5	6.8	7.6	7.1	7.3
Craft and kindred workers	5.6	4.6	4.9	4.0	4.7	4.5	4.7	4.6	4.2	4.0	4.2	4.2	4.9	4.1	4.8
Operatives, except transport	9.5	8.1	7.6	7.5	7.7	7.6	7.6	7.7	8.6	8.3	7.7	8.3	9.3	9.2	9.2
Transport equipment operatives	6.6	5.2	4.8	4.2	5.3	4.9	5.0	5.2	6.0	5.4	5.5	5.2	6.8	6.2	5.6
Nonfarm laborers	12.0	10.7	11.0	11.6	11.0	9.4	9.3	10.3	10.5	11.1	10.3	10.9	11.5	10.8	10.6
Service workers	8.2	7.4	7.1	7.4	7.7	7.9	7.1	7.2	7.4	7.2	7.2	7.2	7.0	6.7	7.0
Farmworkers	4.6	3.8	4.6	3.2	3.4	2.8	3.6	3.2	3.4	3.5	3.1	4.5	3.8	4.2	4.3
INDUSTRY															
Nonagricultural private wage and salary workers ²	7.0	5.9	5.6	5.6	5.8	5.7	5.6	5.5	5.7	5.7	5.6	5.7	6.1	5.8	6.0
Construction	12.7	10.6	11.2	10.8	12.1	10.6	11.5	10.2	10.3	9.6	9.6	9.5	9.5	8.8	10.1
Manufacturing	6.7	5.5	5.1	5.1	5.0	5.0	4.8	5.2	5.4	5.4	5.3	5.8	6.2	6.1	6.2
Durable goods	6.2	4.9	4.6	4.6	4.4	4.4	4.1	4.3	4.6	4.4	4.8	5.5	5.7	5.3	5.6
Nondurable goods	7.4	6.3	6.0	5.8	6.0	5.9	5.8	6.4	6.5	7.0	6.2	6.2	6.9	7.3	7.0
Transportation and public utilities	4.7	3.7	3.4	3.3	3.3	3.5	3.0	4.0	2.9	3.5	3.0	3.9	3.8	4.1	3.8
Wholesale and retail trade	8.0	6.9	6.7	6.5	6.8	6.5	6.6	6.2	6.6	6.4	6.8	6.2	6.6	6.4	6.5
Finance and service industries	6.0	5.1	4.6	5.0	5.1	5.1	4.8	4.7	4.8	5.0	4.7	4.9	5.4	4.7	4.9
Government workers	4.2	3.9	3.9	3.9	4.0	4.0	3.7	4.1	3.6	3.5	3.6	3.5	3.8	3.3	4.1
Agricultural wage and salary workers	11.1	8.8	9.5	7.9	7.7	7.2	8.9	7.7	8.6	9.3	7.7	10.4	9.9	10.3	9.8

¹ Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

² Includes mining, not shown separately.

5. Unemployment rates, by sex and age, seasonally adjusted

Sex and age	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	Total, 16 years and over	7.0	6.0	5.8	5.8	5.9	5.8	5.7	5.7	5.8	5.8	5.6	5.7	6.0	5.8	6.0
16 to 19 years	17.7	16.3	16.2	16.2	16.5	15.7	16.1	15.5	16.5	16.8	15.3	15.3	16.5	16.4	16.6
16 to 17 years	19.9	19.3	19.2	19.3	20.2	18.4	18.4	18.9	19.1	19.2	16.7	17.1	18.1	16.8	18.5
18 to 19 years	16.2	14.2	14.0	14.0	13.8	13.6	14.6	13.1	14.3	15.2	14.1	14.4	15.5	16.0	15.3
20 to 24 years	10.9	9.5	8.6	9.0	9.3	8.6	8.6	8.8	8.5	8.9	8.9	9.0	9.3	9.2	9.5
25 years and over	4.9	4.0	3.9	3.8	3.9	3.9	3.9	3.9	4.0	3.8	3.8	3.9	4.1	3.8	4.0
25 to 54 years	5.1	4.2	4.2	4.0	4.2	4.2	4.1	4.1	4.2	4.0	4.0	4.0	4.3	4.1	4.3
55 years and over	4.1	3.2	3.0	2.9	2.9	2.9	3.0	3.1	3.1	3.2	2.9	3.2	3.2	2.9	2.9
Men, 16 years and over	6.2	5.2	5.1	5.0	5.1	5.1	5.0	5.0	5.1	4.9	4.7	5.0	5.2	5.2	5.2
16 to 19 years	17.3	15.7	16.1	15.9	16.7	16.1	16.5	16.0	16.2	16.1	14.1	14.9	16.0	16.2	15.7
16 to 17 years	19.5	19.2	19.9	20.1	20.7	19.1	19.2	19.9	18.0	19.0	15.8	15.2	17.3	16.6	17.1
18 to 19 years	15.6	13.2	13.2	12.7	13.6	13.5	14.7	13.2	14.2	14.1	13.5	14.9	15.3	15.6	14.6
20 to 24 years	10.7	9.1	8.5	8.5	8.9	8.4	8.2	8.4	7.8	8.0	8.0	8.8	8.9	8.8	9.5
25 years and over	4.2	3.3	3.3	3.1	3.2	3.2	3.2	3.2	3.3	3.1	3.1	3.3	3.5	3.4	3.4
25 to 54 years	4.3	3.4	3.4	3.2	3.4	3.3	3.2	3.3	3.4	3.1	3.1	3.3	3.6	3.5	3.6
55 years and over	3.9	3.1	2.8	2.5	2.6	2.8	2.8	2.8	3.0	2.9	3.1	3.4	3.2	2.9	2.7
Women, 16 years and over	8.2	7.2	6.8	6.9	6.9	6.7	6.7	6.7	6.9	7.0	6.9	6.6	7.0	6.6	7.0
16 to 19 years	18.3	17.0	16.3	16.5	16.3	15.3	15.7	14.8	16.8	17.7	16.6	15.8	17.1	16.7	17.6
16 to 17 years	20.4	19.5	18.4	18.3	19.6	17.5	17.4	17.8	20.2	19.3	17.7	19.2	18.9	17.0	20.0
18 to 19 years	16.8	15.3	14.8	15.5	14.1	13.6	14.4	13.0	14.4	16.4	14.8	13.8	15.8	16.5	16.0
20 to 24 years	11.2	10.1	8.7	9.6	9.7	8.9	9.1	9.4	9.4	9.9	9.9	9.3	9.9	9.7	9.6
25 years and over	6.0	5.1	4.9	4.9	5.0	5.0	4.9	4.8	4.9	5.0	4.8	4.7	5.0	4.6	4.9
25 to 54 years	6.4	5.4	5.2	5.2	5.3	5.4	5.3	5.2	5.2	5.2	5.3	5.0	5.4	4.9	5.3
55 years and over	4.5	3.3	3.3	3.5	3.3	3.1	3.3	3.6	3.1	3.7	2.7	2.9	3.3	3.0	3.4

6. Unemployed persons, by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	1978			1979									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
NUMBER OF UNEMPLOYED													
Lost last job	2,456	2,372	2,442	2,454	2,481	2,440	2,521	2,361	2,358	2,532	2,724	2,608	2,771
On layoff	644	746	715	753	792	789	846	710	796	793	960	836	916
Other job losers	1,812	1,626	1,727	1,701	1,689	1,652	1,675	1,652	1,562	1,739	1,765	1,771	1,855
Left last job	812	825	871	927	829	863	847	951	867	838	894	818	825
Reentered labor force	1,721	1,754	1,937	1,692	1,756	1,788	1,790	1,762	1,738	1,737	1,798	1,785	1,788
Seeking first job	825	872	826	823	874	822	811	841	787	694	720	803	793
PERCENT DISTRIBUTION													
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	42.2	40.7	40.2	41.6	41.8	41.3	42.2	39.9	41.0	43.7	44.4	43.4	44.9
On layoff	11.1	12.8	11.8	12.8	13.3	13.3	14.2	12.0	13.8	13.7	15.6	13.9	14.8
Other job losers	31.1	27.9	28.4	28.9	28.4	27.9	28.1	27.9	27.2	30.0	28.8	29.5	30.0
Job leavers	14.0	14.2	14.3	15.7	14.0	14.6	14.2	16.1	15.1	14.4	14.6	13.6	13.4
Reentrants	29.6	30.1	31.9	28.7	29.6	30.2	29.8	30.2	29.8	29.9	29.3	29.7	29.0
New entrants	14.2	15.0	13.6	14.0	14.7	13.9	13.6	14.2	13.7	12.0	11.7	13.4	12.8
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE													
Job losers	2.4	2.3	2.4	2.4	2.4	2.4	2.5	2.3	2.3	2.5	2.6	2.5	2.7
Job leavers	.8	.8	.9	.9	.8	.8	.8	.9	.8	.8	.9	.8	.8
Reentrants	1.7	1.7	1.9	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7
New entrants	.8	.9	.8	.8	.9	.8	.8	.8	.8	.7	.7	.8	.8

7. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Weeks of unemployment	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Less than 5 weeks	2,856	2,793	2,719	2,833	2,876	2,713	2,743	2,751	2,939	2,787	2,927	2,784	3,226	2,743	2,963
5 to 14 weeks	2,089	1,875	1,789	1,774	1,979	1,877	1,870	1,857	1,874	1,935	1,782	1,970	1,743	2,050	1,965
15 weeks and over	1,911	1,379	1,317	1,196	1,208	1,251	1,260	1,305	1,235	1,213	1,086	1,052	1,191	1,133	1,223
15 to 26 weeks	896	746	732	685	726	728	712	729	692	705	616	600	662	627	703
27 weeks and over	1,015	633	585	511	482	523	548	576	543	508	470	451	529	507	520
Average (mean) duration, in weeks	14.3	11.9	11.8	11.0	10.7	11.2	11.3	11.7	11.0	11.1	10.4	10.0	10.5	10.6	10.5

EMPLOYMENT, HOURS, AND EARNINGS DATA FROM ESTABLISHMENT SURVEYS

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 162,000 establishments representing all industries except agriculture. 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.

LABOR TURNOVER DATA in this section are compiled from personnel records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies. A sample of 40,000 establishments represents all industries in the manufacturing and mining sectors of the economy.

Definitions

Employed persons are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th 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 blue-collar worker supervisors and all nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 14-20 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in transportation and public utilities, in wholesale and retail trade, in finance, insurance, and real estate, and in service industries. 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 excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to eliminate the effects of price change. The **Hourly Earnings Index** is calculated from average hourly earnings data adjusted to exclude the effects of two types of changes that are unrelated to underlying wage-rate developments: fluctuations in overtime premiums in manufacturing (the only sector for which overtime data are available) and the effects of changes and seasonal factors in the proportion of workers in high-wage and low-wage industries. **Spendable earnings** are earnings from which estimated social security and Federal income taxes have been deducted. The Bureau of Labor Statistics computes spendable earnings from gross

weekly earnings for only two illustrative cases: (1) a worker with no dependents and (2) a married worker with three dependents.

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 gross average weekly hours which were in excess of regular hours and for which overtime premiums were paid.

Labor turnover is the movement of all wage and salary workers from one employment status to another. **Accession rates** indicate the average number of persons added to a payroll in a given period per 100 employees; **separation rates** indicate the average number dropped from a payroll per 100 employees. Although month-to-month changes in employment can be calculated from the labor turnover data, the results are not comparable with employment data from the employment and payroll survey. The labor turnover survey measures changes during the calendar month while the employment and payroll survey measures changes from midmonth to midmonth.

Notes on the data

Establishment data collected by the Bureau of Labor Statistics are periodically adjusted to comprehensive counts of employment (called "benchmarks"). The latest complete adjustment was made with the release of September 1979 data, published in the November 1979 issue of the *Review*. Consequently, data published in the *Review* prior to that issue are not necessarily comparable to current data. Complete comparable historical unadjusted and seasonally adjusted data are published in a Supplement to Employment and Earnings (unadjusted data from April 1977 through June 1979 and seasonally adjusted data from January 1974 through June 1979) and in *Employment and Earnings, United States, 1909-78*, BLS Bulletin 1312-11 (for prior periods).

Data on recalls were shown for the first time in tables 12 and 13 in the January 1978 issue of the *Review*. For a detailed discussion of the recalls series, along with historical data, see "New Series on Recalls from the Labor Turnover Survey," *Employment and Earnings*, December 1977, pp. 10-19.

A comprehensive discussion of the differences between household and establishment data on employment appears in Gloria P. Green, "Comparing employment estimates from household and payroll surveys," *Monthly Labor Review*, December 1969, pp. 9-20. See also *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976).

The formulas used to construct the spendable average weekly earnings series reflect the latest provisions of the Federal income tax and social security tax laws. For the spendable average weekly earnings formulas for the years 1977-79, see *Employment and Earnings*, September 1979, pp. 6-8. Beginning with data for January 1978, real earnings data are adjusted using the revised Consumer Price Index for Urban Wage Earners and Clerical Workers. Data prior to January 1978 are based on the unrevised Consumer Price Index for Urban Wage Earners and Clerical Workers.

8. Employment by industry, 1949-78

[Nonagricultural payroll data, in thousands]

Year	Total	Mining	Construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
											Total	Federal	State and local
1949	43,754	930	2,194	14,441	4,001	9,264	2,602	6,662	1,828	5,240	5,856	1,908	3,948
1950	45,197	901	2,364	15,241	4,034	9,386	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1951	47,819	929	2,637	16,393	4,226	9,742	2,727	7,015	1,956	5,547	6,389	2,302	4,087
1952	48,793	898	2,668	16,632	4,248	10,004	2,812	7,192	2,035	5,699	6,609	2,420	4,188
1953	50,202	866	2,659	17,549	4,290	10,247	2,854	7,393	2,111	5,835	6,645	2,305	4,340
1954	48,990	791	2,646	16,314	4,084	10,235	2,867	7,368	2,200	5,969	6,751	2,188	4,563
1955	50,641	792	2,839	16,882	4,141	10,535	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1956	52,369	822	3,039	17,243	4,244	10,858	3,018	7,840	2,389	6,497	7,278	2,209	5,069
1957	52,853	828	2,962	17,174	4,241	10,886	3,028	7,858	2,438	6,708	7,616	2,217	5,399
1958	51,324	751	2,817	15,945	3,976	10,750	2,980	7,770	2,481	6,765	7,839	2,191	5,648
1959 ¹	53,268	732	3,004	16,675	4,011	11,127	3,082	8,045	2,549	7,087	8,083	2,233	5,850
1960	54,189	712	2,926	16,796	4,004	11,391	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1961	53,999	672	2,859	16,326	3,903	11,337	3,133	8,204	2,688	7,620	8,594	2,279	6,315
1962	55,549	650	2,948	16,853	3,906	11,566	3,198	8,368	2,754	7,982	8,890	2,340	6,550
1963	56,653	635	3,010	16,995	3,903	11,778	3,248	8,530	2,830	8,277	9,225	2,358	6,868
1964	58,283	634	3,097	17,274	3,951	12,160	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	60,765	632	3,232	18,062	4,036	12,716	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	63,901	627	3,317	19,214	4,158	13,245	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	65,803	613	3,248	19,447	4,268	13,606	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	67,897	606	3,350	19,781	4,318	14,099	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	70,384	619	3,575	20,167	4,442	14,705	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	70,880	623	3,588	19,367	4,515	15,040	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	71,214	609	3,704	18,623	4,476	15,352	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	73,675	628	3,889	19,151	4,541	15,949	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	76,790	642	4,097	20,154	4,656	16,607	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	78,265	697	4,020	20,077	4,725	16,987	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	76,945	752	3,525	18,323	4,542	17,060	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	79,382	779	3,576	18,997	4,582	17,755	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	82,423	813	3,851	19,682	4,713	18,516	4,708	13,808	4,467	15,303	15,079	2,727	12,352
1978	86,446	851	4,271	20,476	4,927	19,499	4,957	14,542	4,727	16,220	15,476	2,753	12,723

¹Data include Alaska and Hawaii beginning in 1959.

c = Corrected.

9. Employment by State

[Nonagricultural payroll data, in thousands]

State	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P	
Alabama	1,355.3	1,351.9	1,359.9	Montana	287.4	298.8	298.7
Alaska	173.3	173.4	172.0	Nebraska	604.6	613.6	623.0
Arizona	898.5	931.8	952.8	Nevada	366.1	381.7	382.7
Arkansas	740.3	742.6	750.1	New Hampshire	373.9	394.5	391.2
California	9,379.6	9,679.1	9,764.0	New Jersey	3,006.9	3,070.9	3,040.0
Colorado	1,156.2	1,193.6	1,197.7	New Mexico	454.3	470.7	473.0
Connecticut	1,372.8	1,389.5	1,409.8	New York	7,075.0	7,151.5	7,125.6
Delaware	252.9	246.8	249.5	North Carolina	2,292.7	2,321.7	2,361.6
District of Columbia	590.2	611.7	596.4	North Dakota	239.5	248.8	249.9
Florida	3,129.4	3,240.1	3,255.1	Ohio	4,438.2	4,471.1	4,529.1
Georgia	2,002.0	2,015.6	2,022.1	Oklahoma	1,045.3	1,084.1	1,086.4
Hawaii ¹	375.4	398.8	389.5	Oregon	1,026.7	1,056.4	1,064.9
Idaho	344.9	341.0	343.3	Pennsylvania	4,708.6	4,688.1	4,691.5
Illinois	4,797.4	4,904.3	4,888.9	Rhode Island	409.9	407.2	406.8
Indiana	2,229.5	2,252.8	2,261.3	South Carolina	1,145.0	1,165.8	1,168.0
Iowa	1,118.3	1,120.1	1,143.6	South Dakota	236.4	240.1	236.1
Kansas	923.7	944.3	956.0	Tennessee	1,729.2	1,722.0	1,735.8
Kentucky	1,260.5	1,268.8	1,280.1	Texas	5,315.3	5,508.7	5,556.7
Louisiana	1,423.2	1,443.5	1,443.8	Utah	540.6	558.9	570.4
Maine	414.9	422.9	418.1	Vermont	194.1	196.9	199.6
Maryland	1,609.5	1,610.1	1,626.2	Virginia	2,068.1	2,117.9	2,122.8
Massachusetts	2,552.6	2,581.5	2,596.4	Washington	1,532.5	1,620.2	1,634.4
Michigan	3,617.1	3,512.3	3,580.5	West Virginia	628.8	628.5	640.8
Minnesota	1,714.6	1,772.3	1,778.1	Wisconsin	1,922.4	1,978.4	1,995.5
Mississippi	828.0	819.8	834.1	Wyoming	199.2	218.4	220.7
Missouri	1,955.4	1,955.6	1,972.8				

¹ Revised series; not strictly comparable with previously published data.

10. Employment by industry division and major manufacturing group

[Nonagricultural payroll data, in thousands]

Industry division and group	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL	82,423	86,446	88,100	88,622	88,893	87,128	87,331	88,207	88,820	89,671	90,541	89,618	89,673	90,255	90,851
MINING	813	851	913	920	916	910	915	926	932	944	968	976	986	979	975
CONSTRUCTION	3,851	4,271	4,662	4,584	4,402	3,998	3,957	4,226	4,413	4,662	4,881	4,993	5,048	4,978	4,975
MANUFACTURING	19,682	20,476	20,832	20,903	20,902	20,763	20,775	20,887	20,907	20,988	21,234	20,965	20,996	21,199	21,157
Production workers	14,135	14,714	15,003	15,058	15,047	14,910	14,908	14,993	15,002	15,061	15,240	14,946	14,960	15,178	15,172
Durable goods	11,597	12,246	12,508	12,583	12,616	12,561	12,579	12,664	12,687	12,739	12,877	12,712	12,598	12,812	12,775
Production workers	8,307	8,786	8,994	9,057	9,081	9,016	9,018	9,081	9,105	9,129	9,223	9,031	8,907	9,123	9,116
Lumber and wood products	721.9	752.4	763.0	757.2	753.9	739.0	737.7	745.5	748.8	763.8	783.2	776.8	780.0	778.4	776.6
Furniture and fixtures	464.3	491.1	496.2	498.0	498.4	497.0	495.2	491.8	487.8	483.9	484.2	475.5	483.5	486.4	489.0
Stone, clay, and glass products	668.7	698.0	713.3	712.9	703.6	681.6	680.6	697.2	706.6	718.6	733.1	727.1	728.2	723.9	719.4
Primary metal industries	1,181.6	1,212.7	1,227.6	1,236.1	1,243.0	1,243.8	1,244.8	1,251.1	1,259.0	1,258.6	1,274.3	1,260.7	1,244.5	1,245.9	1,235.2
Fabricated metal products	1,582.8	1,673.4	1,707.2	1,717.9	1,723.6	1,716.0	1,715.6	1,719.8	1,723.7	1,727.8	1,749.0	1,715.7	1,716.1	1,736.3	1,745.3
Machinery, except electrical	2,174.7	2,319.2	2,362.1	2,384.5	2,415.7	2,428.7	2,446.4	2,459.5	2,468.0	2,463.6	2,491.2	2,485.1	2,467.1	2,498.8	2,450.2
Electric and electronic equipment	1,878.0	1,999.5	2,042.9	2,057.2	2,062.4	2,060.9	2,071.0	2,082.6	2,086.1	2,095.2	2,128.2	2,111.7	2,089.5	2,133.6	2,145.7
Transportation equipment	1,871.5	1,991.7	2,053.5	2,073.4	2,087.6	2,075.2	2,082.7	2,083.9	2,082.2	2,091.8	2,077.9	2,027.7	1,933.2	2,053.6	2,049.0
Instruments and related products	615.1	653.5	665.4	672.0	675.6	677.5	680.2	683.2	686.5	686.5	698.8	692.9	695.3	691.8	697.4
Miscellaneous manufacturing	438.4	454.0	476.5	473.4	452.3	441.2	444.8	449.0	448.0	448.9	457.4	438.6	460.6	463.1	467.3
Nondurable goods	8,086	8,230	8,324	8,320	8,286	8,202	8,196	8,223	8,210	8,249	8,357	8,253	8,398	8,387	8,382
Production workers	5,828	5,928	6,009	6,001	5,966	5,894	5,890	5,912	5,897	5,932	6,017	5,915	6,053	6,055	6,056
Food and kindred products	1,711.0	1,721.2	1,768.2	1,740.9	1,717.2	1,678.0	1,658.1	1,666.9	1,657.3	1,669.6	1,716.6	1,737.8	1,810.0	1,814.3	1,775.9
Tobacco manufactures	70.7	69.6	76.4	74.2	73.9	69.8	66.4	64.4	62.5	61.9	62.1	62.1	69.0	72.5	73.6
Textile mill products	910.2	900.2	900.0	901.8	899.9	896.3	896.4	894.4	890.4	892.5	900.4	875.5	890.4	889.1	892.4
Apparel and other textile products	1,316.3	1,332.5	1,348.3	1,345.0	1,327.4	1,313.6	1,320.6	1,326.6	1,323.7	1,327.5	1,333.1	1,278.7	1,308.9	1,310.7	1,322.2
Paper and allied products	691.6	700.9	695.0	702.4	704.1	700.0	703.4	708.8	710.8	712.7	724.6	719.6	723.3	718.4	718.3
Printing and publishing	1,141.4	1,193.1	1,201.2	1,215.1	1,226.4	1,221.0	1,225.7	1,229.5	1,231.0	1,234.7	1,243.4	1,245.8	1,245.4	1,245.3	1,256.2
Chemicals and allied products	1,073.7	1,096.3	1,100.6	1,103.2	1,103.0	1,100.0	1,099.7	1,103.9	1,106.7	1,110.9	1,126.6	1,123.0	1,121.2	1,113.1	1,115.2
Petroleum and coal products	202.3	208.7	211.7	210.7	209.0	205.8	206.4	208.3	210.8	212.9	216.8	218.0	218.3	218.2	220.4
Rubber and miscellaneous plastics products	713.5	751.9	766.6	771.9	773.5	771.0	773.8	774.4	772.0	777.0	779.4	767.4	765.8	762.3	765.7
Leather and leather products	254.8	255.6	256.3	255.1	251.5	246.3	245.1	245.7	245.1	249.2	253.7	224.7	245.8	242.6	241.7
TRANSPORTATION AND PUBLIC UTILITIES	4,713	4,927	5,039	5,063	5,084	5,010	5,028	5,060	4,989	5,125	5,231	5,200	5,210	5,243	5,255
WHOLESALE AND RETAIL TRADE	18,516	19,499	19,813	20,095	20,523	19,765	19,548	19,690	19,957	20,119	20,222	20,118	20,137	20,240	20,352
WHOLESALE TRADE	4,708	4,957	5,050	5,069	5,092	5,066	5,067	5,088	5,112	5,146	5,211	5,208	5,211	5,203	5,250
RETAIL TRADE	13,808	14,542	14,763	15,026	15,431	14,699	14,481	14,592	14,845	14,973	15,011	14,910	14,926	15,037	15,102
FINANCE, INSURANCE, AND REAL ESTATE	4,467	4,727	4,788	4,817	4,832	4,829	4,845	4,870	4,900	4,936	5,003	5,032	5,053	5,000	5,020
SERVICES	15,303	16,220	16,497	16,537	16,547	16,353	16,545	16,749	16,897	17,039	17,239	17,314	17,312	17,254	17,325
GOVERNMENT	15,079	15,476	15,556	15,703	15,687	15,500	15,718	15,799	15,825	15,858	15,763	15,020	14,931	15,362	15,792
Federal	2,727	2,753	2,746	2,746	2,733	2,730	2,738	2,740	2,750	2,773	2,824	2,838	2,844	2,787	2,777
State and local	12,352	12,723	12,810	12,957	12,954	12,770	12,980	13,059	13,075	13,085	12,939	12,182	12,087	12,575	13,015

11. Employment by industry division and major manufacturing group, seasonally adjusted

[Nonagricultural payroll data, in thousands]

Industry division and group	1978			1979									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL	87,424	87,840	88,133	88,433	88,700	89,039	89,036	89,398	89,626	89,713	89,762	89,845	90,151
MINING	910	919	922	927	937	940	940	944	949	956	968	972	972
CONSTRUCTION	4,398	4,429	4,469	4,497	4,486	4,614	4,559	4,648	4,662	4,688	4,674	4,665	4,693
MANUFACTURING	20,633	20,772	20,881	20,958	21,025	21,073	21,066	21,059	21,063	21,079	20,957	20,954	20,958
Production workers	14,816	14,933	15,021	15,085	15,128	15,153	15,134	15,112	15,096	15,090	14,956	14,959	14,983
Durable goods	12,419	12,510	12,583	12,640	12,715	12,751	12,752	12,739	12,760	12,786	12,714	12,742	12,686
Production workers	8,908	8,983	9,042	9,085	9,138	9,158	9,146	9,119	9,123	9,124	9,044	9,070	9,029
Lumber and wood products	752	760	765	768	768	769	761	762	757	753	752	760	765
Furniture and fixtures	490	492	494	497	496	493	490	487	485	488	484	481	483
Stone, clay, and glass products	701	704	710	709	712	718	714	715	715	711	710	708	707
Primary metal industries	1,229	1,242	1,247	1,250	1,256	1,259	1,260	1,254	1,257	1,256	1,245	1,237	1,236
Fabricated metal products	1,692	1,706	1,718	1,725	1,733	1,732	1,732	1,730	1,737	1,730	1,714	1,717	1,730
Machinery, except electrical	2,369	2,382	2,404	2,419	2,437	2,450	2,466	2,471	2,484	2,500	2,492	2,499	2,458
Electric and electronic equipment	2,025	2,037	2,050	2,065	2,079	2,093	2,101	2,106	2,124	2,131	2,092	2,115	2,127
Transportation equipment	2,037	2,057	2,063	2,069	2,094	2,094	2,084	2,077	2,057	2,073	2,079	2,087	2,033
Instruments and related products	666	670	674	679	682	685	689	688	693	694	695	691	698
Miscellaneous manufacturing	458	460	458	459	458	458	455	449	451	450	451	447	449
Nondurable goods	8,214	8,262	8,298	8,318	8,310	8,322	8,314	8,320	8,303	8,293	8,243	8,212	8,272
Production workers	5,908	5,950	5,979	6,000	5,990	5,995	5,988	5,993	5,973	5,966	5,912	5,889	5,954
Food and kindred products	1,708	1,725	1,736	1,735	1,729	1,736	1,728	1,725	1,720	1,707	1,696	1,691	1,716
Tobacco manufactures	69	69	69	68	68	69	69	70	69	68	64	66	66
Textile mill products	897	897	899	900	899	897	892	893	892	892	886	884	890
Apparel and other textile products	1,330	1,330	1,333	1,339	1,327	1,324	1,325	1,324	1,312	1,324	1,302	1,295	1,304
Paper and allied products	692	700	703	706	711	716	717	714	715	718	717	714	715
Printing and publishing	1,199	1,212	1,218	1,225	1,229	1,232	1,234	1,236	1,242	1,250	1,247	1,244	1,254
Chemicals and allied products	1,098	1,102	1,106	1,109	1,108	1,108	1,111	1,114	1,119	1,116	1,111	1,109	1,113
Petroleum and coal products	210	210	211	211	212	213	213	213	212	212	213	215	219
Rubber and miscellaneous plastics products	755	763	770	774	779	780	781	784	775	777	764	751	754
Leather and leather products	256	254	253	251	248	247	244	247	247	229	243	243	241
TRANSPORTATION AND PUBLIC UTILITIES	5,014	5,038	5,054	5,071	5,094	5,116	5,024	5,130	5,190	5,169	5,194	5,181	5,229
WHOLESALE AND RETAIL TRADE	19,744	19,829	19,858	19,965	20,016	20,054	20,088	20,129	20,116	20,122	20,126	20,149	20,281
WHOLESALE TRADE	5,025	5,054	5,077	5,102	5,118	5,134	5,138	5,156	5,180	5,182	5,185	5,187	5,224
RETAIL TRADE	14,719	14,775	14,781	14,863	14,898	14,920	14,950	14,973	14,936	14,940	14,941	14,962	15,057
FINANCE, INSURANCE, AND REAL ESTATE	4,793	4,827	4,847	4,868	4,884	4,899	4,915	4,936	4,958	4,972	5,003	4,995	5,025
SERVICES	16,464	16,554	16,630	16,670	16,763	16,833	16,880	16,954	17,051	17,092	17,141	17,220	17,290
GOVERNMENT	15,468	15,472	15,472	15,477	15,495	15,510	15,564	15,598	15,637	15,635	15,699	15,709	15,703
Federal	2,760	2,757	2,734	2,758	2,757	2,757	2,758	2,770	2,788	2,785	2,813	2,798	2,791
State and local	12,708	12,715	12,738	12,719	12,738	12,753	12,806	12,828	12,849	12,850	12,886	12,911	12,912

12. Labor turnover rates in manufacturing, 1976 to date

[Per 100 employees]

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accessions													
1976	3.9	3.9	3.5	4.2	3.9	4.5	4.8	4.2	5.1	4.4	3.5	2.9	2.2
1977	4.0	3.7	3.7	4.0	3.8	4.6	4.9	4.3	5.3	4.6	3.9	3.1	2.4
1978	4.1	3.8	3.2	3.8	4.0	4.7	4.9	4.4	5.4	4.9	4.3	3.3	2.4
1979	...	4.0	3.4	3.8	3.9	4.7	4.8	4.3	4.9	P4.4			
New hires													
1976	2.6	2.1	2.1	2.7	2.6	3.1	3.6	2.9	3.6	3.2	2.5	1.9	1.3
1977	2.8	2.2	2.1	2.6	2.7	3.5	3.7	3.0	4.0	3.5	3.0	2.2	1.6
1978	3.1	2.5	2.2	2.7	2.9	3.6	3.9	3.3	4.2	3.9	3.5	2.6	1.7
1979	...	2.8	2.5	2.8	2.9	3.6	3.8	3.1	3.7	P3.4			
Recalls													
1976	1.0	1.4	1.0	1.2	1.0	1.0	.9	1.1	1.1	.8	.7	.7	.7
1977	.9	1.2	1.3	1.1	.9	.8	.8	.9	1.0	.8	.6	.6	.6
1978	.7	1.0	.7	.8	.8	.8	.7	.8	.9	.7	.6	.5	.5
1979	...	.9	.7	.7	.7	.8	.7	.9	.9	P.7			
Total separations													
1976	3.8	3.7	3.0	3.5	3.6	3.4	3.6	4.3	4.9	4.7	4.1	3.4	3.5
1977	3.8	3.9	3.4	3.4	3.4	3.5	3.5	4.3	5.1	4.9	3.8	3.4	3.4
1978	3.9	3.6	3.1	3.5	3.6	3.7	3.8	4.1	5.3	4.8	4.1	3.5	3.4
1979	...	3.8	3.2	3.6	3.6	3.8	3.9	4.3	5.7	P4.6			
Quits													
1976	1.7	1.3	1.2	1.6	1.7	1.7	1.8	1.9	2.8	2.5	1.7	1.2	1.0
1977	1.8	1.4	1.3	1.6	1.7	1.9	1.9	1.9	3.1	2.8	1.9	1.5	1.2
1978	2.1	1.5	1.4	1.8	2.0	2.1	2.2	2.1	3.5	3.1	2.3	1.7	1.3
1979	...	1.8	1.6	1.9	2.0	2.1	2.1	2.0	3.3	P2.7			
Layoffs													
1976	1.3	1.6	1.0	1.1	1.1	.9	.9	1.6	1.1	1.3	1.5	1.5	1.8
1977	1.1	1.7	1.4	1.0	.9	.8	.8	1.5	1.0	1.1	1.1	1.1	1.5
1978	.9	1.2	.9	.9	.8	.7	.7	1.0	.8	.8	.9	1.0	1.4
1979	...	1.1	.8	.8	.9	.7	.8	1.4	1.3	P1.1			

13. Labor turnover rates in manufacturing, by major industry group

[Per 100 employees]

Major industry group	Accession rates									Separation rates								
	Total			New hires			Recalls			Total			Quits			Layoffs		
	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P	Sept. 1978	Aug. 1979	Sept. 1979 ^P
MANUFACTURING	4.9	4.9	4.4	3.9	3.7	3.4	0.7	0.9	0.7	4.8	5.7	4.6	3.1	3.3	2.7	0.8	1.3	1.1
Seasonally adjusted	4.1	3.7	3.8	3.1	2.7	2.8	...	...	...	3.7	4.3	3.9	2.1	1.9	1.9	.8	1.5	1.2
Durable goods	4.5	4.2	3.9	3.5	3.1	3.0	.6	.8	.6	4.2	5.2	4.0	2.6	2.8	2.2	.6	1.3	.9
Lumber and wood products	6.4	6.7	5.7	5.8	5.8	5.0	.4	.6	.5	7.4	7.7	6.2	5.4	5.5	4.4	.7	.8	.6
Furniture and fixtures	7.4	6.8	5.6	6.8	5.7	5.0	.4	1.0	.5	7.2	7.3	5.4	5.1	4.9	3.5	.7	.9	.6
Stone, clay, and glass products	4.2	4.5	3.8	3.6	3.7	3.1	.4	.6	.6	4.8	5.8	4.5	2.9	3.5	2.6	.8	1.1	1.0
Primary metal industries	2.9	2.7	2.2	2.1	1.7	1.5	.5	.6	.5	3.2	4.4	3.7	1.6	1.9	1.3	.6	1.4	1.5
Fabricated metal products	5.0	4.8	4.7	4.2	3.8	3.6	.5	.7	.8	4.7	5.9	4.5	3.0	3.3	2.5	.6	1.5	1.1
Machinery, except electrical	3.4	3.1	3.0	2.8	2.4	2.4	.3	.3	.3	3.2	3.7	3.1	2.0	2.2	1.6	.3	.6	.6
Electric and electronic equipment	4.1	3.8	3.9	3.2	2.8	3.0	.4	.6	.5	4.1	4.7	3.8	2.3	2.8	2.2	.6	.8	.6
Transportation equipment	5.1	4.6	...	2.9	2.2	...	1.7	1.8	...	3.0	6.0	...	1.6	1.7	...	.6	3.2	...
Instruments and related products	3.2	3.0	3.0	2.8	2.4	2.5	.2	.3	.2	3.5	3.7	3.6	2.4	2.5	2.5	.4	.4	.4
Miscellaneous manufacturing	7.7	6.9	6.9	6.4	5.7	5.9	1.0	1.0	.8	6.8	7.2	6.2	4.4	4.8	3.8	.8	1.0	1.1
Nondurable goods	5.4	6.0	5.2	4.4	4.5	4.0	.8	1.2	.9	5.9	6.3	5.6	3.8	4.1	3.4	1.1	1.2	1.3
Food and kindred products	8.4	10.3	8.3	6.5	7.8	6.1	1.7	2.2	2.0	9.4	8.2	9.1	5.7	5.6	5.2	2.6	1.7	2.7
Tobacco manufacturers	6.1	9.7	...	3.8	4.1	...	2.0	4.4	...	3.1	3.2	...	1.9	1.8	...	.4	.5	...
Textile mill products	5.2	5.8	4.9	4.3	4.6	4.1	.5	.7	.5	5.6	6.5	5.2	4.1	4.4	3.6	.5	.9	.7
Apparel and other products	6.4	6.9	6.2	5.0	4.8	4.4	1.1	1.8	1.6	6.5	8.0	6.3	4.5	4.8	3.9	1.1	2.1	1.6
Paper and allied products	3.3	3.3	2.9	2.9	2.7	2.4	.2	.4	.3	4.0	4.6	3.6	2.5	2.8	2.0	.6	.8	.6
Printing and publishing	4.3	4.0	3.9	3.8	3.4	3.5	.4	.4	.4	4.1	4.8	3.8	2.9	3.4	2.6	.5	.6	.5
Chemicals and allied products	1.9	1.9	1.8	1.5	1.6	1.4	.3	.2	.3	2.3	2.9	2.2	1.3	1.9	1.2	.4	.4	.4
Petroleum and coal products	2.3	2.0	3.7	1.9	1.8	3.5	.2	.1	.1	2.8	3.2	2.8	1.4	1.7	1.5	.6	.5	.6
Rubber and miscellaneous plastics products	5.9	5.5	5.2	5.2	4.5	4.2	.4	.7	.5	6.0	7.4	6.0	4.1	4.5	3.5	.6	1.6	1.3
Leather and leather products	7.9	10.7	6.9	6.5	6.5	5.4	1.1	3.7	1.1	9.2	10.7	8.2	6.2	6.7	5.0	1.9	2.5	2.2

14. Hours and earnings, by industry division, 1947-78

[Gross averages, production or nonsupervisory workers on nonagricultural payrolls]

Year	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings	Average weekly earnings	Average weekly hours	Average hourly earnings
	Total private			Mining			Construction			Manufacturing		
1947	\$45.58	40.3	\$1.131	\$59.94	40.8	\$1.469	\$58.87	38.2	\$1.541	\$49.17	40.4	\$1.217
1948	49.00	40.0	1.225	65.56	39.4	1.664	65.27	38.1	1.713	53.12	40.0	1.328
1949	50.24	39.4	1.275	62.33	36.3	1.717	67.56	37.7	1.792	53.88	39.1	1.378
1950	53.13	39.8	1.335	67.16	37.9	1.772	69.68	37.4	1.863	58.32	40.5	1.440
1951	57.86	39.9	1.45	74.11	38.4	1.93	76.96	38.1	2.02	63.34	40.6	1.56
1952	60.65	39.9	1.52	77.59	38.6	2.01	82.86	38.9	2.13	66.75	40.7	1.64
1953	63.76	39.6	1.61	83.03	38.8	2.14	86.41	37.9	2.28	70.47	40.5	1.74
1954	64.52	39.1	1.65	82.60	38.6	2.14	88.91	37.2	2.39	70.49	39.6	1.78
1955	67.72	39.6	1.71	89.54	40.7	2.20	90.90	37.1	2.45	75.30	40.7	1.85
1956	70.74	39.3	1.80	95.06	40.8	2.33	96.38	37.5	2.57	78.78	40.4	1.95
1957	73.33	38.8	1.89	98.25	40.1	2.45	100.27	37.0	2.71	81.19	39.8	2.04
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.32	39.2	2.10
1959 ¹	78.78	39.0	2.02	103.68	40.5	2.56	108.41	37.0	2.93	88.26	40.3	2.19
1960	80.67	38.6	2.09	105.04	40.4	2.60	112.67	36.7	3.07	89.72	39.7	2.26
1961	82.60	38.6	2.14	106.92	40.5	2.64	118.08	36.9	3.20	92.34	39.8	2.32
1962	85.91	38.7	2.22	110.70	41.0	2.70	122.47	37.0	3.31	96.56	40.4	2.39
1963	88.46	38.8	2.28	114.40	41.6	2.75	127.19	37.3	3.41	99.23	40.5	2.45
1964	91.33	38.7	2.36	117.74	41.9	2.81	132.06	37.2	3.55	102.97	40.7	2.53
1965	95.45	38.8	2.46	123.52	42.3	2.92	138.38	37.4	3.70	107.53	41.2	2.61
1966	98.82	38.6	2.56	130.24	42.7	3.05	146.26	37.6	3.89	112.19	41.4	2.71
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.49	40.6	2.82
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.49	37.3	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	154.80	43.0	3.60	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.83	37.1	3.23	164.40	42.7	3.85	195.45	37.3	5.24	133.33	39.8	3.35
1971	127.31	36.9	3.45	172.14	42.4	4.06	211.67	37.2	5.69	142.44	39.9	3.57
1972	136.90	37.0	3.70	189.14	42.6	4.44	221.19	36.5	6.06	154.71	40.5	3.82
1973	145.39	36.9	3.94	201.40	42.4	4.75	235.89	36.8	6.41	166.46	40.7	4.09
1974	154.76	36.5	4.24	219.14	41.9	5.23	249.25	36.6	6.81	176.80	40.0	4.42
1975	163.53	36.1	4.53	249.31	41.9	5.95	266.08	36.4	7.31	190.79	39.5	4.83
1976	175.45	36.1	4.86	273.90	42.4	6.46	283.73	36.8	7.71	209.32	40.1	5.22
1977	189.00	36.0	5.25	301.20	43.4	6.94	295.65	36.5	8.10	228.90	40.3	5.68
1978	203.70	35.8	5.69	332.11	43.3	7.67	318.32	36.8	8.65	249.27	40.4	6.17
	Transportation and public utilities			Wholesale and retail trade			Finance, insurance, and real estate			Services		
1947				\$38.07	40.5	\$0.940	\$43.21	37.9	\$1.140			
1948				40.80	40.4	1.010	45.48	37.9	1.200			
1949				42.93	40.5	1.060	47.63	37.8	1.260			
1950				44.55	40.5	1.100	50.52	37.7	1.340			
1951				47.79	40.5	1.18	54.67	37.7	1.45			
1952				49.20	40.0	1.23	57.08	37.8	1.51			
1953				51.35	39.5	1.30	59.57	37.7	1.58			
1954				53.33	39.5	1.35	62.04	37.6	1.65			
1955				55.16	39.4	1.40	63.92	37.6	1.70			
1956				57.48	39.1	1.47	65.68	36.9	1.78			
1957				59.60	38.7	1.54	67.53	36.7	1.84			
1958				61.76	38.6	1.60	70.12	37.1	1.89			
1959				64.41	38.8	1.66	72.74	37.3	1.95			
1960				66.01	38.6	1.71	75.14	37.2	2.02			
1961				67.41	38.3	1.76	77.12	36.9	2.09			
1962				69.91	38.2	1.83	80.94	37.3	2.17			
1963				72.01	38.1	1.89	84.38	37.5	2.25			
1964	\$118.78	41.1	\$2.89	74.66	37.9	1.97	85.79	37.3	2.30	\$70.03	36.1	\$1.94
1965	125.14	41.3	3.03	76.91	37.7	2.04	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.39	37.1	2.14	92.13	37.3	2.47	77.04	35.5	2.17
1967	130.82	40.5	3.23	82.35	36.6	2.25	95.72	37.1	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	87.00	36.1	2.41	101.75	37.0	2.75	83.97	34.7	2.42
1969	147.74	40.7	3.63	91.39	35.7	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	96.02	35.3	2.72	112.67	36.7	3.07	96.66	34.4	2.81
1971	168.82	40.1	4.21	101.09	35.1	2.88	117.85	36.6	3.22	103.06	33.9	3.04
1972	187.86	40.4	4.65	106.45	34.9	3.05	122.98	36.6	3.36	110.85	33.9	3.27
1973	203.31	40.5	5.02	111.76	34.6	3.23	129.20	36.6	3.53	117.29	33.8	3.47
1974	217.48	40.2	5.41	119.02	34.2	3.48	137.61	36.5	3.77	126.00	33.6	3.75
1975	233.44	39.7	5.88	126.45	33.9	3.73	148.19	36.5	4.06	134.67	33.5	4.02
1976	256.71	39.8	6.45	133.79	33.7	3.97	155.43	36.4	4.27	143.52	33.3	4.31
1977	278.90	39.9	6.99	142.52	33.3	4.28	165.26	36.4	4.54	153.45	33.0	4.65
1978	302.80	40.0	7.57	153.64	32.9	4.67	178.36	36.4	4.90	163.67	32.8	4.99

¹ Data include Alaska and Hawaii beginning in 1959.

15. Weekly hours, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual Average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE	36.0	35.8	35.9	35.8	36.1	35.2	35.4	35.7	35.1	35.5	35.9	36.0	36.0	35.8	35.6
MINING	43.4	43.3	43.7	43.8	43.4	42.4	42.6	42.9	42.6	42.8	43.3	41.7	43.1	43.5	43.5
CONSTRUCTION	36.5	36.8	37.9	36.5	37.0	34.6	35.4	37.0	35.5	37.2	37.9	37.7	38.0	37.9	37.4
MANUFACTURING	40.3	40.4	40.6	40.9	41.4	40.1	40.2	40.6	38.9	40.1	40.4	39.9	40.0	40.3	40.2
Overtime hours	3.5	3.6	3.8	3.8	3.9	3.5	3.5	3.6	2.5	3.3	3.4	3.2	3.3	3.6	3.4
Durable goods	41.0	41.1	41.4	41.6	42.3	40.9	41.1	41.4	39.3	40.8	41.0	40.4	40.4	40.8	40.7
Overtime hours	3.7	3.8	4.1	4.1	4.3	3.8	3.9	3.9	2.6	3.6	3.6	3.4	3.4	3.6	3.5
Lumber and wood products	39.8	39.8	40.4	39.9	40.1	38.5	39.0	39.7	39.1	39.6	40.2	39.4	39.9	40.1	39.9
Furniture and fixtures	39.0	39.3	39.6	39.4	40.1	38.3	38.1	39.0	37.5	38.2	38.8	38.0	38.6	39.0	39.4
Stone, clay, and glass products	41.3	41.6	42.3	42.1	42.2	40.5	40.6	41.8	41.1	41.9	42.1	41.5	41.7	41.7	41.5
Primary metal industries	41.3	41.8	41.9	42.2	42.5	42.2	42.1	41.9	41.7	41.4	41.6	41.3	40.8	41.2	40.5
Fabricated metal products	41.0	41.0	41.0	41.4	42.2	40.8	40.9	41.3	38.8	40.7	41.0	40.3	40.5	40.9	40.9
Machinery except electrical	41.5	42.0	42.0	42.5	43.6	42.1	42.5	42.6	40.3	41.7	42.0	41.2	41.3	41.8	41.4
Electric and electronic equipment	40.4	40.3	40.4	40.7	41.3	40.3	40.5	40.7	38.8	40.2	40.5	39.6	39.7	40.4	40.5
Transportation equipment	42.5	42.2	42.7	43.0	44.5	41.9	42.1	42.3	37.9	41.6	41.3	40.9	40.5	40.7	41.1
Instruments and related products	40.6	40.9	41.0	41.3	41.7	40.6	41.0	41.3	40.0	40.8	40.7	40.3	40.3	40.8	40.6
Miscellaneous manufacturing	38.8	38.8	39.1	39.4	39.4	38.6	38.6	39.2	37.6	38.5	39.0	38.7	38.9	39.3	39.3
Nondurable goods	39.4	39.4	39.5	39.7	39.9	38.9	38.9	39.3	38.2	39.1	39.4	39.2	39.4	39.6	39.4
Overtime hours	3.2	3.2	3.4	3.3	3.3	3.0	3.0	3.1	2.5	2.9	3.0	3.0	3.2	3.5	3.3
Food and kindred products	40.0	39.7	39.9	40.0	40.3	39.5	39.2	39.6	39.0	39.6	39.8	40.1	40.3	40.6	39.9
Tobacco manufactures	37.8	38.1	37.6	38.7	38.8	36.1	36.2	38.1	37.6	38.9	39.0	36.1	37.6	39.0	38.6
Textile mill products	40.4	40.4	40.3	40.6	40.8	39.9	39.9	40.4	38.6	40.1	40.6	39.9	40.3	40.8	40.8
Apparel and other textile products	35.6	35.6	35.5	35.9	35.8	34.6	34.9	35.4	33.9	35.1	35.6	35.4	35.6	35.3	35.3
Paper and allied products	42.9	42.9	42.8	43.2	43.4	42.6	42.2	42.6	41.6	42.4	42.8	42.5	42.6	42.7	42.9
Printing and publishing	37.7	37.6	37.8	38.1	38.3	37.1	37.3	37.7	36.8	37.3	37.4	37.4	37.9	37.9	37.4
Chemicals and allied products	41.7	41.9	42.0	42.3	42.3	41.7	41.7	41.9	41.9	41.8	41.8	41.7	41.8	41.9	42.0
Petroleum and coal products	42.7	43.6	44.3	44.5	43.7	42.8	42.7	43.8	43.9	43.7	43.4	44.1	43.6	44.7	44.6
Rubber and miscellaneous plastics products	41.0	40.9	41.3	41.4	42.0	41.1	41.2	41.4	39.4	40.5	40.7	40.2	40.0	40.5	40.3
Leather and leather products	36.9	37.1	37.0	37.0	37.1	36.3	35.9	35.9	35.3	36.4	37.1	36.9	36.6	36.6	36.3
TRANSPORTATION AND PUBLIC UTILITIES	39.9	40.0	40.0	39.9	40.2	39.6	39.9	39.8	39.0	39.6	40.0	40.0	40.3	40.1	39.9
WHOLESALE AND RETAIL TRADE	33.3	32.9	32.8	32.5	33.1	32.0	32.1	32.4	32.5	32.4	32.9	33.3	33.2	32.6	32.4
WHOLESALE TRADE	38.8	38.8	39.0	38.8	39.1	38.4	38.4	38.9	38.6	38.9	39.0	39.0	38.9	38.8	38.7
RETAIL TRADE	31.6	31.0	30.8	30.6	31.3	29.9	30.1	30.3	30.6	30.4	31.0	31.5	31.4	30.7	30.4
FINANCE, INSURANCE, AND REAL ESTATE	36.4	36.4	36.6	36.3	36.3	36.4	36.4	36.3	36.4	36.1	36.2	36.4	36.2	36.3	36.4
SERVICES	33.0	32.8	32.7	32.6	32.5	32.4	32.4	32.6	32.5	32.5	32.9	33.3	33.2	32.7	32.5

16. Weekly hours, by industry division and major manufacturing group, seasonally adjusted

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	1978			1979									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE	35.8	35.8	35.8	35.8	35.7	35.9	35.3	35.7	35.6	35.6	35.6	35.7	35.5
MINING	43.1	43.3	43.4	43.4	43.1	43.1	42.9	42.8	43.0	41.6	43.2	43.1	42.9
CONSTRUCTION	36.9	36.8	37.0	37.1	36.6	37.1	35.5	37.1	37.2	36.8	37.2	37.5	36.5
MANUFACTURING	40.5	40.6	40.6	40.6	40.6	40.6	39.1	40.2	40.1	40.2	40.1	40.1	40.1
Overtime hours	3.6	3.7	3.7	3.7	3.7	3.7	2.7	3.5	3.4	3.3	3.2	3.2	3.2
Durable goods	41.3	41.3	41.4	41.4	41.4	41.4	39.5	40.9	40.7	40.7	40.7	40.7	40.7
Overtime hours	3.9	4.0	4.0	4.1	4.1	4.0	2.7	3.8	3.6	3.5	3.3	3.3	3.3
Lumber and wood products	40.0	40.0	39.9	39.9	39.6	40.0	39.1	39.4	39.4	39.3	39.5	39.7	39.5
Furniture and fixtures	39.1	39.1	39.2	38.9	38.8	39.1	38.1	38.5	38.5	38.4	38.3	38.6	38.9
Stone, clay, and glass products	41.9	41.9	41.9	41.8	41.6	42.0	41.2	41.7	41.6	41.4	41.3	41.5	41.1
Primary metal industries	42.2	42.2	42.2	42.3	42.2	42.0	41.8	41.4	41.2	41.3	41.0	40.9	40.7
Fabricated metal products	40.9	41.1	41.3	41.1	41.3	41.3	39.1	40.7	40.7	40.8	40.6	40.8	40.8
Machinery, except electrical	42.0	42.2	42.4	42.3	42.5	42.4	40.5	42.0	42.0	41.9	41.6	41.8	41.4
Electric and electronic equipment	40.4	40.4	40.5	40.5	40.7	40.7	39.0	40.4	40.3	40.2	39.8	40.2	40.5
Transportation equipment	42.7	42.7	42.8	42.8	42.7	42.3	37.9	41.5	40.8	40.9	41.7	40.6	41.1
Instruments and related products	40.9	40.9	40.9	41.1	41.2	41.2	40.3	40.8	40.6	40.7	40.5	40.7	40.5
Miscellaneous manufacturing	38.9	38.9	38.9	39.0	39.0	39.0	37.6	38.6	38.9	39.3	39.1	39.1	39.1
Nondurable goods	39.4	39.5	39.4	39.5	39.3	39.4	38.6	39.2	39.2	39.2	39.2	39.3	39.3
Overtime hours	3.2	3.2	3.2	3.2	3.2	3.3	2.7	3.0	3.0	3.0	3.0	3.1	3.1
Food and kindred products	39.8	39.8	39.9	40.0	39.8	40.0	39.6	39.8	39.8	39.8	39.7	40.0	39.8
Tobacco manufactures	37.1	37.5	38.1	37.2	36.9	38.0	37.6	38.9	37.6	38.5	38.0	38.5	38.1
Textile mill products	40.3	40.4	40.4	40.7	40.1	40.3	38.8	40.0	40.1	40.1	40.1	40.6	40.8
Apparel and other textile products	35.3	35.6	35.5	35.3	35.4	35.4	34.2	35.2	35.2	35.5	35.3	35.2	35.1
Paper and allied products	42.8	43.0	42.8	42.8	42.7	42.8	41.8	42.6	42.5	42.5	42.6	42.4	42.9
Printing and publishing	37.7	37.8	37.6	37.7	37.7	37.7	37.1	37.4	37.4	37.5	37.7	37.5	37.3
Chemicals and allied products	42.0	42.1	41.8	42.0	42.0	41.9	41.7	41.9	41.7	41.9	42.0	41.8	42.0
Petroleum and coal products	43.9	44.1	43.8	43.5	43.6	44.0	43.9	43.7	43.3	43.6	43.7	44.1	44.2
Rubber and miscellaneous plastics products	41.1	41.1	41.2	41.4	41.2	41.3	39.7	40.9	40.7	40.6	40.2	40.3	40.1
Leather and leather products	37.0	36.9	36.7	36.8	36.4	36.3	35.6	36.1	36.4	36.6	36.5	36.8	36.3
TRANSPORTATION AND PUBLIC UTILITIES	40.0	39.9	40.0	40.0	40.0	40.0	39.2	39.8	39.8	39.7	39.9	40.1	39.9
WHOLESALE AND RETAIL TRADE	32.9	32.8	32.8	32.5	32.5	32.7	32.8	32.6	32.6	32.6	32.5	32.6	32.5
WHOLESALE TRADE	38.9	38.8	38.9	38.7	38.7	39.0	38.7	39.0	38.8	38.8	38.7	38.7	38.6
RETAIL TRADE	31.0	30.9	30.9	30.6	30.6	30.7	30.9	30.6	30.6	30.6	30.5	30.7	30.6
FINANCE, INSURANCE, AND REAL ESTATE	36.5	36.4	36.3	36.3	36.4	36.4	36.5	36.1	36.2	36.3	36.1	36.4	36.3
SERVICES	32.7	32.7	32.6	32.6	32.6	32.8	32.7	32.7	32.7	32.8	32.7	32.7	32.5

17. Hourly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE	\$5.25	\$5.69	\$5.87	\$5.88	\$5.91	\$5.97	\$6.00	\$6.02	\$6.03	\$6.09	\$6.12	\$6.16	\$6.19	\$6.30	\$6.31
MINING	6.94	7.67	7.98	8.05	8.06	8.20	8.21	8.27	8.54	8.45	8.49	8.52	8.48	8.55	8.53
CONSTRUCTION	8.10	8.65	8.89	8.89	8.92	8.98	9.02	8.97	9.02	9.14	9.13	9.24	9.32	9.50	9.51
MANUFACTURING	5.68	6.17	6.33	6.38	6.48	6.49	6.52	6.56	6.54	6.63	6.66	6.71	6.69	6.80	6.83
Durable goods	6.06	6.58	6.76	6.82	6.93	6.92	6.96	6.99	6.95	7.07	7.11	7.15	7.12	7.24	7.27
Lumber and wood products	5.10	5.60	5.77	5.75	5.79	5.79	5.83	5.84	5.90	5.97	6.16	6.23	6.23	6.31	6.26
Furniture and fixtures	4.34	4.68	4.78	4.80	4.86	4.87	4.93	4.95	4.94	4.97	5.05	5.04	5.10	5.18	5.20
Stone, clay, and glass products	5.81	6.32	6.49	6.54	6.58	6.57	6.58	6.64	6.73	6.78	6.85	6.89	6.90	6.97	7.02
Primary metal industries	7.40	8.20	8.42	8.52	8.56	8.62	8.75	8.75	8.92	8.83	8.91	9.04	9.10	9.15	9.14
Fabricated metal products	5.91	6.34	6.49	6.54	6.62	6.60	6.65	6.72	6.62	6.77	6.81	6.80	6.83	6.93	6.98
Nondurable goods	5.11	5.53	5.65	5.70	5.75	5.81	5.82	5.85	5.90	5.91	5.94	6.03	6.04	6.11	6.14
Food and kindred products	5.37	5.80	5.89	5.97	6.02	6.09	6.10	6.12	6.19	6.22	6.22	6.28	6.28	6.34	6.38
Tobacco manufactures	5.54	6.13	5.82	6.02	6.18	6.36	6.53	6.64	6.80	6.83	6.82	6.83	6.59	6.54	6.38
Textile mill products	3.99	4.30	4.42	4.45	4.48	4.52	4.51	4.52	4.48	4.52	4.54	4.65	4.77	4.81	4.84
Apparel and other textile products	3.62	3.94	4.02	4.04	4.08	4.17	4.17	4.19	4.19	4.20	4.21	4.23	4.21	4.28	4.32
Paper and allied products	5.9 ^e	6.52	6.68	6.75	6.79	6.80	6.83	6.88	6.92	6.96	7.05	7.17	7.22	7.31	7.36
Printing and publishing	6.12	6.50	6.61	6.66	6.70	6.72	6.73	6.77	6.72	6.83	6.88	6.90	6.94	7.05	7.05
Chemicals and allied products	6.43	7.01	7.19	7.22	7.28	7.32	7.32	7.36	7.50	7.47	7.53	7.60	7.65	7.71	7.77
Petroleum and coal products	7.83	8.63	8.70	8.78	8.89	9.01	9.10	9.31	9.44	9.39	9.32	9.39	9.35	9.51	9.53
Rubber and miscellaneous plastics products	5.17	5.52	5.68	5.71	5.77	5.82	5.84	5.86	5.82	5.90	5.91	5.95	5.94	6.02	6.05
Leather and leather products	3.61	3.89	3.94	3.98	4.01	4.13	4.14	4.17	4.18	4.18	4.19	4.19	4.22	4.29	4.31
TRANSPORTATION AND PUBLIC UTILITIES	6.99	7.57	7.78	7.78	7.85	7.90	7.92	7.90	7.88	7.94	8.03	8.23	8.32	8.43	8.43
WHOLESALE AND RETAIL TRADE	4.28	4.67	4.79	4.80	4.81	4.96	4.97	4.98	5.00	5.00	5.02	5.05	5.06	5.13	5.14
WHOLESALE TRADE	5.39	5.88	6.05	6.07	6.14	6.18	6.21	6.23	6.30	6.29	6.34	6.39	6.41	6.51	6.51
RETAIL TRADE	3.85	4.20	4.29	4.31	4.31	4.47	4.47	4.47	4.49	4.49	4.50	4.51	4.52	4.58	4.59
FINANCE, INSURANCE, AND REAL ESTATE	4.54	4.90	5.02	5.03	5.07	5.13	5.19	5.16	5.23	5.22	5.22	5.29	5.29	5.38	5.37
SERVICES	4.65	4.99	5.11	5.13	5.16	5.23	5.27	5.26	5.29	5.27	5.27	5.29	5.30	5.45	5.47

18. Hourly Earnings Index for production or nonsupervisory workers on private nonagricultural payrolls, by industry division

[Seasonally adjusted data: 1967 = 100]

Industry	1978			1979										Percent change	
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P	Sept. 1979 to Oct. 1979	Oct. 1978 to Oct. 1979
TOTAL PRIVATE (in current dollars)	218.1	219.2	220.9	222.6	224.0	225.2	226.8	227.5	229.0	230.9	232.2	234.2	234.9	0.3	7.7
Mining	248.9	249.9	250.9	252.1	253.7	256.1	264.1	262.7	264.9	266.9	265.6	265.6	267.0	.5	7.3
Construction	210.5	211.6	213.0	213.8	216.7	216.5	218.1	220.4	220.4	222.1	223.1	224.3	224.5	.1	6.6
Manufacturing	220.8	222.4	224.2	225.4	227.2	228.7	231.0	232.3	233.9	235.4	236.9	238.7	240.3	.7	8.8
Transportation and public utilities	235.4	236.3	239.0	240.8	241.7	243.1	241.7	243.7	246.4	251.3	252.6	255.0	255.5	.2	8.5
Wholesale and retail trade	211.7	213.0	214.6	217.7	218.1	219.4	220.9	221.0	222.6	223.8	225.4	226.8	227.1	.1	7.3
Finance, insurance, and real estate	199.6	200.7	202.1	202.4	204.2	204.8	207.5	207.0	208.0	210.8	211.5	214.4	213.3	-.5	6.8
Services	217.2	217.7	219.3	220.8	222.2	223.3	225.0	224.3	225.7	227.0	228.4	231.4	232.0	.2	6.8
TOTAL PRIVATE (in constant dollars)	108.7	108.6	108.7	108.5	107.8	107.3	106.9	106.1	105.7	105.6	105.1	104.8	(¹)	(¹)	(¹)

¹ Not available.

19. Weekly earnings, by industry division and major manufacturing group

[Gross averages, production or nonsupervisory workers on private nonagricultural payrolls]

Industry division and group	Annual average		1978			1979									
	1977	1978	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. P	Oct. P
	TOTAL PRIVATE	\$189.00	\$203.70	\$210.73	\$210.50	\$213.35	\$210.14	\$212.40	\$214.91	\$211.65	\$216.20	\$219.71	\$221.76	\$222.84	\$225.54	$224.84
MINING	301.20	332.11	348.73	352.59	349.80	347.68	349.75	354.78	363.80	361.66	367.62	355.28	365.49	371.93	371.06
CONSTRUCTION	295.65	318.32	336.93	324.49	330.04	310.71	319.31	331.89	320.21	340.01	346.03	348.35	354.16	360.05	355.67
MANUFACTURING	228.90	249.27	257.00	260.94	268.27	260.25	262.10	266.34	254.41	265.86	269.06	267.73	267.60	274.04	274.57
Durable goods	248.46	270.44	279.86	283.71	293.14	283.03	286.06	289.39	273.14	288.46	291.51	288.86	287.65	295.39	295.89
Lumber and wood products	202.98	222.88	233.11	229.43	232.18	222.92	227.37	231.85	230.69	236.41	247.63	245.46	248.58	253.03	249.77
Furniture and fixtures	169.26	183.92	189.29	189.12	194.89	186.52	187.83	193.05	185.25	189.85	195.94	191.52	196.86	202.02	204.88
Stone, clay, and glass products	239.95	262.91	274.53	275.33	277.68	266.09	267.15	277.55	276.60	284.08	288.39	285.94	287.73	290.65	291.33
Primary metal industries	305.62	342.76	352.80	359.54	363.80	363.76	368.38	366.63	371.96	365.56	370.66	373.35	371.28	376.98	370.17
Fabricated metal products	242.31	259.94	266.09	270.76	279.36	269.28	271.99	277.54	256.86	275.54	279.21	274.04	276.62	283.44	285.48
Machinery except electrical	259.79	284.34	291.90	297.93	311.74	298.91	304.30	306.29	286.13	302.33	308.28	302.82	303.56	313.50	310.91
Electric and electronic equipment	217.76	234.55	240.38	242.98	251.52	246.23	248.27	250.71	237.07	249.64	253.13	248.29	252.49	260.98	263.66
Transportation equipment	309.40	333.80	350.57	355.61	374.25	349.45	351.54	356.17	313.05	356.10	352.29	349.70	341.82	349.21	356.75
Instruments and related products	214.77	233.54	237.39	241.19	248.12	243.19	246.82	249.45	241.20	249.29	248.68	248.25	247.44	253.37	254.97
Miscellaneous manufacturing	169.17	181.97	186.12	188.73	191.48	190.30	191.07	194.04	186.50	192.50	194.61	194.66	196.06	199.25	200.82
Nondurable goods	201.33	217.88	223.18	226.29	229.43	226.01	226.40	229.91	225.38	231.08	234.04	236.38	237.98	241.96	241.92
Food and kindred products	214.80	230.26	235.01	238.80	242.61	240.56	239.12	242.35	241.41	246.31	247.56	251.83	253.08	257.40	254.56
Tobacco manufactures	209.41	233.55	218.83	232.97	239.78	229.60	236.39	252.98	255.68	265.69	265.98	246.56	247.78	255.06	246.27
Textile mill products	161.20	173.72	178.13	180.67	182.78	180.35	179.50	182.61	172.93	181.25	184.32	185.54	192.23	196.25	197.47
Apparel and other textile products	128.87	140.26	142.71	145.04	146.06	144.28	145.53	148.33	142.04	147.42	149.88	149.74	149.88	151.08	152.50
Paper and allied products	255.68	279.71	285.90	291.60	294.69	289.68	288.23	293.09	287.87	295.10	302.74	304.73	307.57	312.14	315.74
Printing and publishing	230.72	244.40	249.86	253.75	256.61	249.31	251.03	255.23	247.30	254.76	257.31	258.06	263.03	267.20	263.67
Chemicals and allied products	268.13	293.72	301.98	305.41	307.94	305.24	305.24	308.38	314.25	312.25	314.75	316.92	319.77	323.05	326.34
Petroleum and coal products	334.34	376.27	385.41	390.71	388.49	385.63	388.57	407.78	414.42	410.34	404.49	414.10	407.66	425.10	425.04
Rubber and miscellaneous plastics products	211.97	225.77	234.58	236.39	242.34	239.20	240.61	242.60	229.31	238.95	240.54	239.19	237.60	243.81	243.82
Leather and leather products	133.21	144.32	145.78	147.26	148.77	149.92	148.63	149.70	147.55	152.15	155.45	154.61	154.45	157.01	156.45
TRANSPORTATION AND PUBLIC UTILITIES	278.90	302.80	311.20	310.42	315.57	312.84	316.01	314.42	307.32	314.42	321.20	329.20	335.30	338.04	336.36
WHOLESALE AND RETAIL TRADE	142.52	153.64	157.11	156.00	159.21	158.72	159.54	161.35	162.50	162.00	165.16	168.17	167.99	167.24	166.54
WHOLESALE TRADE	209.13	228.14	235.95	235.52	240.07	237.31	238.46	242.35	243.18	244.68	247.26	249.21	249.35	252.59	251.94
RETAIL TRADE	121.66	130.20	132.13	131.89	134.90	133.65	134.55	135.44	137.39	136.50	139.50	142.07	141.93	140.61	139.54
FINANCE, INSURANCE, AND REAL ESTATE	165.26	178.36	183.73	182.59	184.04	186.73	188.92	187.31	190.37	188.44	188.96	192.56	191.50	195.29	195.47
SERVICES	153.45	163.67	167.10	167.24	167.70	169.45	170.75	171.48	171.93	171.28	173.38	176.16	175.96	178.22	177.78

20. Gross and spendable weekly earnings, in current and 1967 dollars, 1960 to date

[Averages for production or nonsupervisory workers on private nonagricultural payrolls]

Year and month	Private nonagricultural workers						Manufacturing workers					
	Gross average weekly earnings		Spendable average weekly earnings				Gross average weekly earnings		Spendable average weekly earnings			
			Worker with no dependents		Married worker with 3 dependents				Workers with no dependents		Married worker with 3 dependents	
	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars	Current dollars	1967 dollars
1960	\$80.67	\$90.95	\$65.59	\$73.95	\$72.96	\$82.25	\$89.72	\$101.15	\$72.57	\$81.82	\$80.11	\$90.32
1961	82.60	92.19	67.08	74.87	74.48	83.13	92.34	103.06	74.60	83.26	82.18	91.72
1962	85.91	94.82	69.56	76.78	76.99	84.98	96.56	106.58	77.86	85.94	85.53	94.40
1963	88.46	96.47	71.05	77.48	78.56	85.67	99.23	108.21	79.51	86.71	87.25	95.15
1964	91.33	98.31	75.04	80.78	82.57	88.88	102.97	110.84	84.40	90.85	92.18	99.22
1965	95.45	101.01	79.32	83.94	86.63	91.67	107.53	113.79	89.08	94.26	96.78	102.41
1966	98.82	101.67	81.29	83.63	88.66	91.21	112.19	115.42	91.45	94.08	99.33	102.19
1967	101.84	101.84	83.38	83.38	90.86	90.86	114.49	114.49	92.97	92.97	100.93	100.93
1968	107.73	103.39	86.71	83.21	95.28	91.44	122.51	117.57	97.70	93.76	106.75	102.45
1969	114.61	104.38	90.96	82.84	99.99	91.07	129.51	117.95	101.90	92.81	111.44	101.49
1970	119.83	103.04	96.21	82.73	104.90	90.20	133.33	114.64	106.32	91.42	115.58	99.38
1971	127.31	104.95	103.80	85.57	112.43	92.69	142.44	117.43	114.97	94.78	124.24	102.42
1972	136.90	109.26	112.19	89.54	121.68	97.11	154.71	123.47	125.34	100.03	135.57	108.20
1973	145.39	109.23	117.51	88.29	127.38	95.70	166.46	125.06	132.57	99.60	143.50	107.81
1974	154.76	104.78	124.37	84.20	134.61	91.14	176.80	119.70	140.19	94.92	151.56	102.61
1975	163.53	101.45	132.49	82.19	145.65	90.35	190.79	118.36	151.61	94.05	166.29	103.16
1976	175.45	102.90	143.30	84.05	155.87	91.42	209.32	122.77	167.83	98.43	181.32	106.35
1977	189.00	104.13	155.19	85.50	169.93	93.63	228.90	126.12	183.80	101.27	200.06	110.23
1978	203.70	104.30	165.39	84.69	180.71	92.53	249.27	127.63	197.40	101.08	214.87	110.02
1978: October	210.73	105.00	170.45	84.93	185.98	92.67	257.00	128.05	202.57	100.93	220.73	109.98
November	210.50	104.31	170.28	84.38	185.81	92.08	260.94	129.31	205.21	101.69	223.76	110.88
December	213.35	105.15	172.31	84.92	187.95	92.63	268.27	132.22	210.12	103.56	229.40	113.06
1979: January	210.14	102.66	170.88	83.48	187.22	91.46	260.25	127.14	206.40	100.83	225.48	110.15
February	212.40	102.56	172.53	83.31	188.98	91.25	262.10	126.56	207.69	100.28	226.89	109.56
March	214.91	102.68	174.35	83.30	190.93	91.22	266.34	127.25	210.65	100.65	230.10	109.94
April	211.65	99.93	171.98	81.20	188.39	88.95	254.41	120.12	202.32	95.52	221.05	104.37
May	215.20	100.89	175.29	81.80	191.93	89.56	265.86	124.06	210.04	98.14	229.74	107.20
June	219.71	101.30	177.85	82.00	194.67	89.75	269.06	124.05	212.51	97.98	232.17	107.04
July	221.76	101.08	179.35	81.75	196.26	89.45	267.73	122.03	211.61	96.45	231.16	105.36
August	222.84	100.60	180.13	81.32	197.11	88.99	267.60	120.81	211.52	95.49	231.06	104.32
September ^P	225.54	100.82	182.10	81.40	199.15	89.03	274.04	122.50	215.89	96.51	235.94	105.47
October ^P	224.64	(¹)	181.45	(¹)	198.46	(¹)	274.57	(¹)	216.25	(¹)	236.35	(¹)

¹Not available.
c = Corrected.

NOTE: The earnings expressed in 1967 dollars have been adjusted for changes in price level as measured by the Bureau's Consumer Price Index for Urban Wage Earners and Clerical Workers

(revised). These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation", *Employment and Earnings and Monthly Report on the Labor Force*, February 1969, pp. 6-13. See also "Spendable Earnings Formulas, 1977-79" *Employment and Earnings*, September 1979, pp. 6-8.

UNEMPLOYMENT INSURANCE DATA

UNEMPLOYMENT INSURANCE DATA are compiled monthly by the Employment and Training Administration of the U.S. Department of Labor from records of State and Federal unemployment insurance claims filed and benefits paid. Railroad unemployment insurance data are prepared by the U.S. Railroad Retirement Board.

Definitions

Data for **all programs** represent an unduplicated count of insured unemployment under the State, Ex-Servicemen, and UCFE programs, and the Railroad Insurance Act.

Under both State and Federal unemployment insurance programs for civilian employees, insured workers must report the completion of at least 1 week of unemployment before they are defined as unem-

ployed. Persons not covered by unemployment insurance (about one-third of the labor force) and those who have exhausted or not yet earned benefit rights are excluded from the scope of the survey. **Initial claims** are notices filed by persons in unemployment insurance programs to indicate they are out of work and wish to begin receiving compensation. A claimant who continued to be unemployed a full week is then counted in the insured unemployment figure. The **rate of insured unemployment** expresses the number of insured unemployed as a percent of the average insured employment in a 12-month period.

An **application** for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year. **Number of payments** are payments made in 14-day registration periods. The **average amount of benefit payment** is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments. However, **total benefits paid** have been adjusted.

21. Unemployment Insurance and employment service operations

[All items except average benefits amounts are in thousands]

Item	1978					1979							
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
All programs:													
Insured unemployment	2,394	2,064	1,999	2,148	2,567	3,198	3,209	2,921	2,610	2,230	2,119	2,429	2,377
State unemployment insurance program:¹													
Initial claims ²	1,372	1,059	1,289	1,526	1,882	2,421	1,576	1,396	1,591	1,326	1,411	2,010	.....
Insured unemployment (average weekly volume)	2,168	1,860	1,816	2,009	2,421	3,037	3,053	2,750	2,440	2,078	1,991	2,300	2,245
Rate of insured unemployment	3.0	2.6	2.4	2.7	3.2	3.9	4.0	3.6	3.1	2.6	2.5	2.8	2.7
Weeks of unemployment compensated	8,483	6,517	6,405	6,744	7,907	11,371	10,762	11,105	8,956	8,478	7,263	7,875	.....
Average weekly benefit amount for total unemployment	81.53	\$81.90	\$83.42	\$83.99	\$85.34	\$88.28	\$90.31	\$90.28	\$89.25	\$88.23	\$86.93	\$86.24	.....
Total benefits paid	\$677,777	\$520,967	519,726	\$550,691	\$645,084	\$972,820	\$915,146	\$975,641	\$777,699	\$727,106	\$613,324	\$663,131	.....
Unemployment compensation for ex-servicemen:³													
Initial claims ¹	25	23	23	23	24	24	21	21	20	21	24	29	.....
Insured unemployment (average weekly volume)	50	48	49	48	50	54	53	52	48	45	45	51	52
Weeks of unemployment compensated	234	223	203	244	228	262	219	241	207	214	199	218	.....
Total benefits paid	\$21,518	\$18,284	\$18,887	\$20,591	\$21,040	\$24,425	\$20,489	\$22,794	\$19,617	\$20,445	\$19,090	\$21,065	.....
Unemployment compensation for Federal civilian employees:⁴													
Initial claims	16	15	18	16	18	21	13	12	12	12	13	16	.....
Insured unemployment (average weekly volume)	32	31	34	32	34	37	35	33	27	-24	23	2.5	25
Weeks of unemployment compensated	105	115	120	135	136	158	133	143	112	108	95	98	.....
Total benefits paid	\$11,440	\$9,945	\$10,414	\$11,826	\$12,174	\$14,222	\$12,256	\$13,168	\$10,345	\$9,488	\$8,614	\$8,932	.....
Railroad unemployment insurance:													
Applications	16	28	8	15	10	8	6	5	3	3	9	15	8
Insured unemployment (average weekly volume)	36	37	18	17	17	26	24	23	18	10	8	11	12
Number of payments	82	69	53	33	30	50	50	23	40	29	19	20	26
Average amount of benefit payment	\$207.85	\$218.70	\$192.38	\$171.54	\$189.59	\$200.80	\$200.54	\$204.72	\$195.55	\$177.39	\$183.13	\$190.10	\$195.61
Total benefits paid	\$15,080	\$14,318	\$10,070	\$5,394	\$5,678	\$9,634	\$9,871	\$10,538	\$7,276	\$5,681	\$3,314	\$3,699	\$3,767
Employment service:⁵													
New applications and renewals	14,413	15,463	1,670	3,026	414	5,630	.....	8,059	9,180	10,452	11,907	13,186	.....
Nonfarm placements	4,024	4,439	467	827	1,120	1,414	.....	1,991	2,291	2,616	3,051	3,482	.....

¹Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.

²Includes interstate claims for the Virgin Islands. Excludes transition claims under State programs.

³Excludes data on claims and payments made jointly with other programs.

⁴Includes the Virgin Islands. Excludes data on claims and payments made jointly with State programs.

⁵Cumulative total for fiscal year (October 1 - September 30).

NOTE: Data for Puerto Rico included. Dashes indicate data not available.

PRICE DATA

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 (1967 = 100, unless otherwise noted).

Definitions

The **Consumer Price Index** is a monthly statistical measure of the average change in prices in a fixed market basket of goods and services. Effective with the January 1978 index, the Bureau of Labor Statistics began publishing CPI's for two groups of the population. One index, a new CPI for All Urban Consumers, covers 80 percent of the total noninstitutional population; and the other index, a revised CPI for Urban Wage Earners and Clerical Workers, covers about half the new index population. The All Urban Consumers index includes, in addition to wage earners and clerical workers, 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, doctor's and dentist's fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items is kept essentially unchanged between major revisions so that only price changes will be measured. Prices are collected from over 18,000 tenants, 24,000 retail establishments, and 18,000 housing units for property taxes in 85 urban areas across the country. All taxes directly associated with the purchase and use of items are included in the index. Because the CPI's are based on the expenditures of two population groups in 1972-73, they may not accurately reflect the experience of individual families and single persons with different buying habits.

Though the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. Area indexes do not measure differences in the level of prices among cities. They only measure the average change in prices for each area since the base period.

Producer Price Indexes measure average changes in prices received in primary markets of the United States by producers of commodities in all stages of processing. The sample used for calculating these indexes contains about 2,800 commodities and about 10,000 quotations per month selected to represent the movement of prices of all commodities produced in the manufacturing, agriculture, forestry, fishing, mining, gas and electricity, and public utilities sectors. The universe includes all commodities produced or imported for sale in commercial transactions in primary markets in the United States.

Producer Price Indexes can be organized by stage of processing or by commodity. The stage of processing structure organizes products by degree of fabrication (that is, finished goods, intermediate or semifinished goods, and crude materials). The commodity structure organizes products by similarity of end-use or material composition.

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.

In calculating Producer Price Indexes, price changes for the various commodities are averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1972. 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 groupings.

Price indexes for the output of selected SIC industries measure average price changes in commodities produced by particular industries, as defined in the *Standard Industrial Classification Manual 1972* (Washington, U.S. Office of Management and Budget, 1972). These indexes are derived from several price series, combined to match the economic activity of the specified industry and weighted by the value of shipments in the industry. They use data from comprehensive industrial censuses conducted by the U.S. Bureau of the Census and the U.S. Department of Agriculture.

Notes on the data

Beginning with the May 1978 issue of the *Review*, regional CPI's cross classified by population size, were introduced. These indexes will enable users in local areas for which an index is not published to get a better approximation of the CPI for their area by using the appropriate population size class measure for their region. The cross-classified indexes will be published bimonthly. (See table 24.)

For further details about the new and the revised indexes and a comparison of various aspects of these indexes with the old unrevised CPI, see *Facts About the Revised Consumer Price Index*, a pamphlet in the Consumer Price Index Revision 1978 series. See also *The Consumer Price Index: Concepts and Content Over the Years*. Report 517, revised edition (Bureau of Labor Statistics, May 1978).

For interarea comparisons of living costs at three hypothetical standards of living, see the family budget data published in the *Handbook of Labor Statistics, 1977*, Bulletin 1966 (Bureau of Labor Statistics, 1977), tables 122-133. Additional data and analysis on price changes are provided in the *CPI Detailed Report* and *Producer Prices and Price Indexes*, both monthly publications of the Bureau.

As of January 1976, the Wholesale Price Index (as it was then called) incorporated a revised weighting structure reflecting 1972 values of shipments. From January 1967 through December 1975, 1963 values of shipments were used as weights.

For a discussion of the general method of computing consumer, producer, and industry price indexes, see *BLS Handbook of Methods for Surveys and Studies*, Bulletin 1910 (Bureau of Labor Statistics, 1976), chapters 13-15. See also John F. Early, "Improving the measurement of producer price change," *Monthly Labor Review*, April 1978, pp. 7-15. For industry prices, see also Bennett R. Moss, "Industry and Sector Price Indexes," *Monthly Labor Review*, August 1965, pp. 974-82.

22. Consumer Price index for Urban Wage Earners and Clerical Workers, annual averages and changes, 1967-78

[1967 = 100]

Year	All items		Food and beverages		Housing		Apparel and upkeep		Transportation		Medical care		Entertainment		Other goods and services	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1967	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...	100.0	...
1968	104.2	4.2	103.6	3.6	104.0	4.0	105.4	5.4	103.2	3.2	106.1	6.1	105.7	5.7	105.2	5.2
1969	109.8	5.4	108.8	5.0	110.4	6.2	111.5	5.8	107.2	3.9	113.4	6.9	111.0	5.0	110.4	4.9
1970	116.3	5.9	114.7	5.4	118.2	7.1	116.1	4.1	112.7	5.1	120.6	6.3	116.7	5.1	116.8	5.8
1971	121.3	4.3	118.3	3.1	123.4	4.4	119.8	3.2	118.6	5.2	128.4	6.5	122.9	5.3	122.4	4.8
1972	125.3	3.3	123.2	4.1	128.1	3.8	122.3	2.1	119.9	1.1	132.5	3.2	126.5	2.9	127.5	4.2
1973	133.1	6.2	139.5	13.2	133.7	4.4	126.8	3.7	123.8	3.3	137.7	3.9	130.0	2.8	132.5	3.9
1974	147.7	11.0	158.7	13.8	148.8	11.3	136.2	7.4	137.7	11.2	150.5	9.3	139.8	7.5	142.0	7.2
1975	161.2	9.1	172.1	8.4	164.5	10.6	142.3	4.5	150.6	9.4	168.6	12.0	152.2	8.9	153.9	8.4
1976	170.5	5.8	177.4	3.1	174.6	6.1	147.6	3.7	165.5	9.9	184.7	9.5	159.8	5.0	162.7	5.7
1977	181.5	6.5	188.0	6.0	186.5	6.8	154.2	4.5	177.2	7.1	202.4	9.6	167.7	4.9	172.2	5.8
1978	195.3	7.6	206.2	9.7	202.6	8.6	159.5	3.4	185.8	4.9	219.4	8.4	176.2	5.1	183.2	6.4

23. Consumer Price Index for All Urban Consumers and revised CPI for Urban Wage Earners and Clerical Workers, U.S. city average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978	1979						1978	1979					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
All items	199.3	211.5	214.1	216.6	218.9	221.1	223.4	199.1	211.8	214.3	216.9	219.4	221.5	223.7
Food and beverages	210.3	226.3	228.2	229.3	230.7	230.2	231.0	210.1	226.7	228.2	229.3	230.9	230.4	231.2
Housing	207.5	219.8	222.4	225.5	228.4	231.5	234.6	207.0	219.7	222.3	225.5	228.4	231.5	234.5
Apparel and upkeep	161.9	165.4	166.1	165.7	164.3	166.3	169.8	161.9	165.4	165.7	165.3	164.5	166.2	169.3
Transportation	188.7	202.9	207.7	212.6	216.6	219.6	221.4	189.2	203.7	208.6	213.7	217.8	220.7	222.4
Medical care	222.6	235.1	236.3	237.7	239.9	241.8	243.7	222.8	235.2	236.3	238.2	240.5	242.6	244.7
Entertainment	178.3	186.5	187.8	188.2	189.1	190.2	191.1	177.4	185.5	187.1	187.5	188.6	188.9	190.2
Other goods and services	187.8	193.2	193.9	194.5	195.2	197.0	201.7	187.1	193.1	193.8	194.3	195.1	197.2	200.6
Commodities	190.5	203.3	205.8	208.4	210.5	212.2	214.1	190.4	203.6	206.1	208.7	211.0	212.6	214.4
Commodities less food and beverages	178.9	190.1	192.9	196.0	198.4	200.9	203.3	178.7	190.2	193.1	196.3	198.8	201.3	203.5
Nondurables less food and beverages	179.1	191.9	195.7	200.5	204.2	208.8	213.2	179.2	192.7	196.0	201.6	205.6	210.5	214.8
Durables	177.2	187.2	189.2	191.1	192.6	193.6	194.5	177.0	186.8	188.9	190.8	192.2	192.9	193.5
Services	215.6	227.0	229.5	232.1	234.7	237.6	240.7	215.2	227.1	229.7	232.3	235.1	237.9	241.0
Rent, residential	166.4	172.0	173.8	174.7	175.9	177.5	179.0	166.3	171.9	173.7	174.7	175.8	177.3	178.9
Household services less rent	241.8	256.5	260.2	264.5	268.6	272.8	276.7	241.7	257.2	261.1	265.6	269.8	274.1	278.2
Transportation services	198.7	208.2	209.8	210.9	212.6	214.9	216.6	198.8	209.0	210.5	211.6	213.3	215.3	216.8
Medical care services	239.1	253.1	254.4	255.9	258.5	260.6	262.8	239.2	252.9	254.0	256.1	258.8	261.2	263.8
Other services	188.9	196.2	197.6	198.4	199.3	200.5	204.7	188.4	196.4	198.0	198.7	200.1	201.2	204.9
Special Indexes:														
All items less food	195.1	206.3	208.9	211.8	214.2	216.9	219.6	194.8	206.3	209.1	212.0	214.6	217.3	219.8
All items less mortgage interest costs	195.5	206.4	208.7	211.0	213.0	214.7	216.7	195.4	206.8	209.1	211.5	213.7	215.3	217.2
Commodities less food	177.8	188.9	191.6	194.7	197.0	199.5	201.8	177.7	189.0	191.8	194.9	197.4	199.9	202.0
Nondurables less food	177.1	189.6	193.2	197.6	201.1	205.4	209.6	177.2	190.2	194.0	198.6	202.5	207.0	211.0
Nondurables less food and apparel	188.0	205.2	210.2	217.0	222.8	228.3	232.7	188.0	205.8	211.0	218.0	223.9	229.7	234.2
Nondurables	195.4	209.9	212.8	215.7	218.3	220.4	223.1	195.5	210.6	213.2	216.3	219.2	221.3	223.9
Services less rent	224.6	237.1	239.8	242.6	245.6	248.8	252.1	224.2	237.3	240.1	243.0	246.1	249.2	252.6
Services less medical care	211.7	222.7	225.3	228.0	230.6	233.6	236.7	211.3	222.9	225.6	228.2	231.0	233.9	236.9
Domestically produced farm foods	203.9	222.4	224.2	224.9	225.9	223.5	223.7	203.7	222.3	223.9	224.6	225.8	223.4	223.6
Selected beef cuts	211.1	264.0	271.9	268.3	267.8	253.0	255.3	212.0	265.6	273.1	269.9	270.1	255.5	258.0
Energy	225.1	250.2	260.8	275.4	287.1	296.3	304.3	224.9	251.2	262.2	277.3	289.2	298.8	307.0
All items less energy	197.6	208.8	210.7	212.2	213.8	215.4	217.3	197.4	209.0	210.8	212.3	213.9	215.3	217.0
All items less food and energy	192.4	202.3	204.1	205.8	207.3	209.4	211.5	192.1	202.1	204.0	205.5	207.2	209.0	211.0
Commodities less food and energy	173.7	182.1	183.6	184.8	185.6	186.8	188.2	173.6	181.8	183.3	184.5	185.4	186.4	187.5
Energy commodities	217.1	253.2	266.4	284.9	300.8	314.5	325.3	217.3	253.9	267.3	286.2	301.9	315.8	326.5
Services less energy	213.9	225.6	227.8	229.9	232.4	235.4	238.4	213.5	225.8	228.0	230.1	232.7	235.7	238.7
Purchasing power of the consumer dollar, 1967 = \$1	\$0.502	\$0.473	\$0.467	\$0.462	\$0.457	\$0.452	\$0.448	\$0.502	\$0.472	\$0.467	\$0.461	\$0.456	\$0.451	\$0.447

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978	1979						1978	1979					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
BEVERAGES	210.3	226.3	228.2	229.3	230.7	230.2	231.0	210.1	226.7	228.2	229.3	230.9	230.4	231.2
Food	215.6	232.3	234.3	235.4	236.9	236.3	237.1	215.4	232.7	234.2	235.4	237.1	236.5	237.3
Food at home	214.1	231.7	233.4	234.2	235.5	233.9	234.7	213.8	231.4	232.8	233.6	235.0	233.5	234.2
Cereals and bakery products	203.8	214.5	216.2	217.8	220.1	223.7	225.6	204.3	215.2	216.8	218.2	221.1	224.1	226.6
Cereals and bakery products (12/77 = 100)	110.5	114.0	114.6	115.5	116.6	118.5	120.0	110.7	114.1	114.7	115.4	117.0	119.0	120.6
Flour and prepared flour mixes (12/77 = 100)	111.7	114.8	116.7	117.8	119.4	122.5	123.4	112.1	115.5	117.0	118.4	120.3	123.3	125.1
Cereal (12/77 = 100)	109.0	114.6	115.1	115.8	117.0	118.0	118.8	109.4	114.6	115.4	116.0	117.4	118.5	118.7
Rice, pasta, and cornmeal (12/77 = 100)	111.4	112.5	111.9	112.8	113.6	115.7	118.6	111.2	112.2	111.7	111.8	113.4	115.8	119.1
Bakery products (12/77 = 100)	106.9	113.3	114.4	115.2	116.4	118.3	119.2	107.3	113.8	114.7	115.5	117.0	118.5	119.7
White bread	176.5	188.4	189.0	190.3	194.2	198.4	200.7	175.5	188.0	189.0	189.5	194.3	198.0	200.5
Other breads (12/77 = 100)	107.3	112.6	114.9	115.3	116.2	118.6	119.6	108.8	114.2	116.2	117.1	118.5	120.8	122.5
Fresh biscuits, rolls, and muffins (12/77 = 100)	107.4	113.3	114.7	115.8	116.1	118.1	119.0	107.7	113.2	114.5	115.4	115.8	117.7	118.6
Fresh cakes and cupcakes (12/77 = 100)	106.2	112.0	113.3	114.0	114.8	116.6	116.7	106.4	113.0	113.9	114.8	115.9	116.3	116.8
Cookies (12/77 = 100)	105.9	113.1	113.4	114.1	114.8	115.6	115.9	107.1	114.5	114.9	116.2	117.2	117.2	117.8
Crackers and bread and cracker products (12/77 = 100)	107.4	112.4	113.3	112.2	112.7	114.7	114.8	107.0	113.1	113.2	112.7	112.9	114.9	114.9
Fresh sweetrolls, coffee cake, and donuts (12/77 = 100)	105.6	112.0	113.7	115.9	116.0	117.5	118.8	107.5	114.0	115.3	117.8	117.8	119.3	121.6
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers (12/77 = 100)	108.8	114.9	116.6	117.6	119.8	120.8	121.7	108.6	112.9	114.1	113.9	116.5	117.1	118.6
Meats poultry, fish, and eggs	209.9	240.0	242.2	239.8	239.0	230.2	231.0	209.4	239.4	241.2	239.0	238.3	229.6	230.5
Meats, poultry, and fish	214.0	245.1	247.9	246.1	245.0	235.8	236.0	213.5	244.4	246.9	245.3	244.2	235.3	235.4
Meats	212.7	248.3	252.1	249.6	248.0	237.8	238.1	212.3	247.6	250.9	248.8	247.4	237.6	237.7
Beef and veal	209.7	262.5	270.3	266.9	266.4	251.9	254.2	210.6	263.9	271.3	268.2	268.4	254.1	256.4
Ground beef other than canned	209.1	273.7	280.6	278.7	274.5	260.3	261.4	209.7	273.2	280.0	278.8	274.7	261.9	263.5
Chuck roast	208.4	278.5	285.7	279.7	280.5	257.5	261.0	214.8	286.8	293.1	286.0	288.7	264.0	267.9
Round roast	190.8	235.8	244.4	236.8	239.1	222.2	229.2	189.9	237.2	244.1	240.0	242.7	225.9	231.0
Round steak	200.1	247.8	256.5	250.0	248.1	238.1	239.2	197.2	245.1	253.2	247.5	246.4	235.4	235.7
Sirloin steak	212.9	248.4	259.0	259.8	260.7	247.5	251.0	212.4	247.5	259.3	261.1	260.7	247.3	253.9
Other beef and veal (12/77 = 100)	123.1	148.4	152.8	151.3	151.8	145.0	145.6	123.5	149.1	153.4	151.6	152.8	146.0	146.6
Pork	213.7	225.9	222.2	217.2	215.1	207.4	206.5	213.2	225.6	222.6	217.2	214.9	207.6	206.1
Bacon	219.1	220.8	215.8	203.9	200.0	192.5	194.0	220.8	223.2	216.7	206.0	201.6	195.0	195.6
Pork chops	200.5	212.8	210.1	206.4	207.7	195.3	198.1	200.8	214.1	211.3	207.4	209.2	196.2	196.1
Ham other than canned (12/77 = 100)	98.0	103.7	101.8	99.5	97.2	96.4	95.2	98.0	101.5	99.6	97.0	96.1	94.9	94.3
Sausage	265.0	282.0	276.1	276.1	270.4	263.8	258.4	263.6	280.9	274.2	276.0	269.5	263.2	258.4
Canned ham	218.4	234.4	229.5	226.0	224.4	221.1	216.6	213.0	234.3	229.6	226.4	222.3	218.9	215.3
Other pork (12/77 = 100)	117.9	127.8	127.0	124.4	124.2	118.3	117.4	117.4	127.3	126.5	124.4	123.2	118.4	117.5
Other meats	215.7	239.4	244.0	248.9	245.1	243.5	240.2	213.1	236.1	240.0	245.2	241.0	239.9	236.6
Frankfurters	210.9	240.1	245.2	249.3	243.2	241.9	235.9	209.7	238.9	242.4	249.0	243.0	242.6	236.1
Bologna, liverwurst, and salami (12/77 = 100)	119.5	132.5	134.1	136.7	135.4	134.3	133.2	118.3	130.9	132.2	133.4	132.3	129.7	129.5
Other luncheon meats (12/77 = 100)	113.0	121.8	121.8	123.1	122.0	122.7	121.6	110.7	119.0	118.6	120.6	119.4	120.8	119.0
Lamb and organ meats (12/77 = 100)	115.8	131.2	138.5	143.9	141.0	137.6	135.6	115.2	131.2	140.0	145.9	141.1	137.9	136.9
Poultry	177.9	189.9	188.0	187.2	186.2	177.1	174.8	175.5	187.2	186.2	185.1	184.0	174.3	172.8
Fresh whole chicken	180.6	191.5	185.9	185.8	184.1	171.3	169.9	175.4	187.8	183.9	181.5	179.6	166.7	165.8
Fresh and frozen chicken parts (12/77 = 100)	111.7	121.5	120.4	120.3	119.4	112.1	111.8	112.0	121.0	120.2	120.1	119.1	111.1	110.9
Other poultry (12/77 = 100)	116.6	123.0	125.1	123.4	123.6	123.0	119.2	115.3	120.6	122.9	122.7	123.2	122.1	119.8
Fish and seafood	280.0	295.6	297.2	301.0	304.3	306.5	309.7	278.7	292.9	292.7	295.9	298.3	301.4	304.4
Canned fish and seafood (12/77 = 100)	104.9	108.9	109.8	110.3	111.4	112.7	113.9	105.0	107.9	108.6	109.2	110.2	111.5	113.5
Fresh and frozen fish and seafood (12/77 = 100)	107.7	114.8	115.2	117.2	118.6	119.2	120.4	106.9	113.9	113.2	114.9	115.7	116.9	117.5
Eggs	161.9	179.3	172.9	161.9	165.8	161.8	170.7	161.4	179.8	171.5	161.6	165.4	160.5	170.5
Dairy Products	188.8	202.4	203.8	205.5	206.3	208.6	211.3	189.5	203.0	204.3	205.9	206.7	208.9	212.0
Fresh milk and cream (12/77 = 100)	106.5	114.0	114.7	115.7	116.1	117.7	119.0	106.6	114.3	115.2	116.0	116.3	117.9	119.5
Fresh whole milk	174.2	186.5	188.1	189.4	190.0	192.8	195.4	174.6	187.2	188.7	189.8	190.3	193.0	195.6
Other fresh milk and cream (12/77 = 100)	106.6	114.1	114.3	115.6	116.3	117.4	118.1	106.6	114.1	114.9	116.0	116.5	117.7	119.3
Processed dairy products (12/77 = 100)	107.0	114.9	115.8	116.8	117.3	118.2	120.1	107.8	115.3	116.0	117.0	117.6	118.4	120.5
Butter	187.0	196.6	199.4	199.9	200.6	203.0	209.9	187.9	199.1	201.5	202.0	202.6	205.7	212.3
Cheese (12/77 = 100)	106.7	115.5	116.3	116.9	117.7	118.4	120.1	106.9	115.4	116.1	116.3	117.4	118.4	120.2
Ice cream and related products (12/77 = 100)	106.4	114.3	115.2	116.9	117.0	117.8	120.1	108.4	115.3	115.7	117.8	118.4	118.1	120.7
Other dairy products (12/77 = 100)	105.4	111.9	112.7	114.5	114.5	115.4	115.5	106.0	112.0	112.6	114.6	114.3	115.4	115.6
Fruits and vegetables	216.2	226.5	226.8	233.8	238.1	237.8	231.8	214.6	224.6	224.9	231.5	236.6	237.0	229.6
Fresh fruits and vegetables	222.5	230.7	231.0	243.3	249.4	247.5	234.7	219.9	228.5	228.7	240.4	248.1	247.9	232.9
Fresh fruits	248.2	237.1	249.6	266.0	278.2	286.9	271.6	248.4	234.2	245.7	261.1	278.2	288.9	271.2
Apples	246.4	223.1	229.9	232.9	250.2	275.2	244.7	245.8	219.8	224.2	233.7	248.4	275.9	243.1
Bananas	168.2	217.9	212.6	225.3	221.0	202.3	210.3	168.0	213.7	209.1	221.7	218.5	202.5	208.4
Oranges	297.1	267.7	267.1	311.5	313.5	316.2	312.3	285.4	259.9	259.7	293.0	306.1	298.6	291.8
Other fresh fruits (12/77 = 100)	130.0	121.9	135.4	141.4	151.3	157.5	147.1	133.0	121.8	134.7	140.7	154.2	163.5	152.3
Fresh vegetables	198.5	224.7	213.6	222.0	222.4	210.7	200.3	194.3	223.4	213.4	221.8	221.0	211.0	198.4
Potatoes	221.1	197.3	203.9	221.5	225.7	211.4	199.3	216.4	197.1	203.5	224.3	227.9	212.1	193.4
Lettuce	180.2	195.7	194.1	193.1	200.0	235.7	219.6	174.2	196.9	195.1	186.0	195.9	240.3	222.9
Tomatoes	154.4	250.9	219.7	222.0	185.8	187.0	178.5	152.5	250.4	217.9	223.0	189.4	185.6	179.2
Other fresh vegetables (12/77 = 100)	114.1	132.5	122.											

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers						Urban Wage Earners and Clerical Workers (revised)							
	1978	1979					1978	1979						
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
FOOD AND BEVERAGES—Continued														
Food—Continued														
Food at home—Continued														
Fruits and vegetables—Continued														
Cut corn and canned beans except lima (12/77=100)	107.6	112.7	112.2	113.2	114.3	113.9	114.7	106.9	111.4	111.0	112.0	112.4	112.0	112.6
Other canned and dried vegetables (12/77=100)	104.4	106.3	107.4	107.7	108.8	109.7	110.1	102.9	105.0	105.7	106.3	107.5	108.1	108.7
Other foods at home	253.9	264.0	266.0	267.1	269.5	272.8	276.0	253.5	263.7	265.3	266.2	268.7	271.8	274.7
Sugar and sweets	261.8	274.2	276.3	277.4	279.4	281.0	282.0	261.9	273.6	275.6	276.6	278.3	279.9	281.2
Candy and chewing gum (12/77=100)	109.8	116.0	117.1	117.4	118.5	119.4	119.7	110.0	115.8	116.9	117.0	118.1	119.0	119.3
Sugar and artificial sweeteners (12/77=100)	110.5	114.8	115.3	115.4	115.4	115.6	115.9	110.9	115.1	115.4	117.0	118.1	118.5	119.4
Other sweets (12/77=100)	106.5	110.6	111.7	112.6	113.8	114.6	115.3	105.7	109.4	110.4	111.9	112.6	113.6	114.0
Fats and oils (12/77=100)	215.4	222.5	225.3	226.3	227.4	228.9	231.5	216.6	223.0	225.1	226.6	227.6	228.9	230.7
Margarine	231.9	236.7	238.8	239.1	240.2	240.3	245.5	232.6	235.9	236.9	238.4	239.7	239.8	242.8
Nondairy substitutes and peanut butter (12/77=100)	107.0	110.9	112.4	112.8	113.7	114.0	114.6	107.4	111.2	112.1	112.5	113.6	114.0	114.5
Other fats, oils, and salad dressings (12/77=100)	111.1	115.4	117.0	117.8	118.3	119.7	120.6	111.9	115.9	117.4	118.2	118.5	119.6	120.4
Nonalcoholic beverages	339.8	347.7	349.3	350.4	354.6	361.8	367.7	338.7	347.8	348.4	348.5	353.6	360.0	365.0
Cola drinks, excluding diet cola	221.4	234.8	237.4	237.9	238.3	239.2	242.7	220.0	234.1	235.6	234.7	236.5	236.9	240.1
Carbonated drinks, including diet cola (12/77=100)	108.9	114.5	115.1	115.3	115.6	116.2	117.9	107.0	112.2	112.9	112.5	113.0	114.2	115.7
Roasted coffee	377.7	343.6	341.2	347.3	376.5	411.7	425.9	376.1	344.3	340.3	347.3	375.1	406.1	418.2
Freeze dried and instant coffee	349.6	330.8	329.8	330.2	335.6	349.5	359.9	348.6	329.4	328.6	328.9	336.2	349.4	358.9
Other noncarbonated drinks (12/77=100)	107.9	113.3	113.5	113.4	113.1	114.2	114.0	107.5	112.7	112.3	112.3	112.2	113.0	112.7
Other prepared foods	192.6	204.7	206.6	207.8	209.1	210.5	212.6	192.6	204.5	206.5	207.9	208.8	210.4	212.4
Canned and packaged soup (12/77=100)	103.6	110.2	111.4	112.6	113.2	113.2	113.1	103.7	110.3	111.6	112.6	113.1	113.3	113.3
Frozen prepared foods (12/77=100)	108.1	115.9	118.3	119.2	121.4	120.7	123.1	108.0	115.0	117.3	118.6	119.5	118.7	121.1
Snacks (12/77=100)	103.7	112.6	113.1	113.3	114.0	115.7	118.4	103.8	113.0	113.6	113.7	114.8	116.4	119.0
Seasonings, olives, pickles, and relish (12/77=100)	108.3	114.2	114.0	114.4	115.0	115.9	117.4	107.7	113.4	113.6	114.0	114.2	115.4	116.3
Other condiments (12/77=100)	106.8	112.2	113.1	113.6	114.3	115.2	115.9	107.3	113.0	113.9	114.9	115.2	116.2	117.5
Miscellaneous prepared foods (12/77=100)	107.8	112.8	114.5	115.1	115.3	116.3	116.8	107.7	112.7	114.2	114.8	115.2	116.3	116.3
Other canned and packaged prepared foods (12/77=100)	107.7	114.1	114.6	115.6	115.8	116.8	116.7	107.3	113.6	114.2	115.3	115.3	116.7	116.7
Food away from home	223.2	238.4	241.1	242.7	244.9	246.5	247.6	223.2	240.4	242.0	244.4	246.5	248.3	249.3
Lunch (12/77=100)	108.6	116.4	117.7	118.5	119.6	120.3	120.7	108.5	117.6	118.5	119.6	120.4	121.3	121.7
Dinner (12/77=100)	108.1	115.3	116.8	117.7	118.9	119.8	120.3	108.0	115.9	116.8	118.2	119.7	120.5	120.9
Other meals and snacks (12/77=100)	108.0	115.0	115.9	116.6	117.3	117.8	118.6	108.4	116.2	116.6	117.4	118.2	119.1	119.9
Alcoholic beverages	162.0	170.2	171.5	172.1	172.7	173.3	174.2	162.6	170.6	171.9	172.4	173.3	173.6	174.9
Alcoholic beverages at home (12/77=100)														
Beer and ale	156.8	167.7	169.2	170.0	170.3	170.6	172.3	157.5	168.0	169.2	169.8	170.5	170.3	171.8
Whiskey	122.9	125.4	126.5	126.8	127.4	128.4	129.0	124.0	126.8	127.8	128.2	129.2	129.9	130.4
Wine	179.8	190.7	192.7	193.2	194.1	196.0	195.2	183.0	194.1	195.9	196.2	197.8	199.4	202.7
Other alcoholic beverages (12/77=100)	102.5	105.0	104.7	105.2	105.2	105.4	105.5	102.1	104.6	105.0	104.9	105.0	105.1	105.3
Alcoholic beverages away from home (12/77=100)	107.4	112.8	113.7	113.9	114.5	114.6	115.1	106.2	110.2	111.2	111.7	112.3	112.8	113.4
HOUSING	207.5	219.8	222.4	225.5	228.4	231.5	234.6	207.0	219.7	222.3	225.5	228.4	231.5	234.5
Shelter														
Rent, residential	166.4	172.0	173.8	174.7	175.9	177.5	179.0	166.3	171.9	173.7	174.7	175.8	177.3	178.9
Other rental costs	212.0	228.3	230.3	232.3	236.0	238.2	239.3	211.9	228.0	229.6	231.8	235.2	237.6	238.6
Lodging while out of town	218.5	239.7	242.1	244.3	248.8	251.2	251.8	218.0	238.7	240.5	243.1	246.7	249.5	249.9
Tenants' insurance (12/77=100)	102.4	107.1	107.2	108.0	110.9	112.0	113.7	102.4	107.1	107.5	108.2	111.5	112.6	114.1
Homeownership	234.2	251.7	254.9	258.8	263.0	267.6	271.9	234.1	252.7	255.9	259.9	264.2	268.9	273.3
Home purchase	201.2	215.4	217.6	220.9	224.0	226.9	229.8	201.1	215.4	217.6	220.8	224.0	227.0	230.0
Financing, taxes, and insurance	288.9	292.1	297.2	302.2	308.6	316.4	323.0	289.4	294.0	299.2	304.2	310.6	318.7	325.6
Property insurance	287.5	303.2	307.1	310.6	312.6	314.6	316.7	287.1	303.2	306.9	310.1	312.1	314.2	318.5
Property taxes	195.2	181.1	181.2	181.3	181.8	183.1	184.7	195.6	182.6	182.7	182.8	183.3	184.6	186.1
Contracted mortgage interest cost	309.2	350.8	358.4	366.0	375.6	387.2	396.7	309.1	351.1	358.9	366.2	375.8	387.4	397.1
Mortgage interest rates	151.0	160.2	162.0	163.0	164.9	167.7	169.7	151.0	160.3	162.2	163.1	164.9	167.8	169.7
Maintenance and repairs	237.5	250.6	252.4	255.5	257.9	259.7	262.5	235.4	251.7	253.4	256.7	259.1	260.8	263.4
Maintenance and repair services	256.9	271.5	273.2	277.4	280.0	281.8	284.4	254.5	273.8	275.5	290.2	282.8	284.2	287.2
Maintenance and repair commodities	192.2	201.8	203.8	204.4	206.1	208.1	211.5	192.4	202.6	204.0	204.9	206.5	209.0	210.8
Paint and wallpaper, supplies, tools, and equipment (12/77=100)	104.7	110.5	110.7	111.8	112.5	114.3	117.0	104.9	111.3	110.8	112.1	112.8	115.0	116.1
Lumber, awnings, glass, and masonry (12/77=100)	106.5	110.4	112.6	112.9	113.7	113.7	115.2	106.8	111.3	113.3	113.9	114.4	114.8	115.7
Plumbing, electrical, heating, and cooling supplies (12/77=100)	102.4	106.8	108.4	108.6	110.1	110.8	111.9	103.5	108.0	109.5	109.3	110.2	111.5	112.6
Miscellaneous supplies and equipment (12/77=100)	102.9	109.5	110.2	109.3	110.3	111.1	112.9	101.5	107.8	108.6	107.8	109.5	110.3	111.2
Fuel and other utilities	218.8	227.5	232.2	239.0	243.5	247.2	251.2	218.9	227.8	232.5	239.4	244.1	247.7	251.7
Fuels														
Fuel oil, coal, and bottled gas	295.7	349.8	364.3	391.2	412.9	438.6	461.6	295.8	350.3	364.8	391.6	413.5	439.0	462.5
Fuel oil	295.1	358.5	375.3	405.9	429.5	458.2	482.5	295.1	359.1	375.7	406.1	430.0	458.5	483.3
Other fuels (6/78=100)	98.1	99.5	100.1	102.6	106.2	109.3	114.4	98.4	99.4	100.2	102.6	106.5	109.4	114.6
Gas (piped) and electricity	237.9	245.3	251.6	259.9	264.5	266.5	270.1	237.7	245.1	251.4	259.8	264.6	266.5	269.9
Electricity	209.4	210.4	214.3	223.7	227.4	229.2	230.6	209.6	210.7	214.7	224.3	228.0	229.7	231.1
Utility (piped) gas	266.3	286.3	296.8	301.8	307.7	309.7	317.5	265.5	284.8	295.4	300.1	306.5	308.5	315.8

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978	1979						1978	1979					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
HOUSING—Continued														
Fuel and other utilities—Continued														
Other utilities and public services	159.2	158.8	159.0	159.2	159.4	159.8	159.8	159.3	158.9	159.1	159.2	159.4	159.8	159.8
Telephone services	133.3	132.1	132.2	132.0	132.1	132.5	132.4	133.4	132.1	132.2	132.0	132.2	132.5	132.4
Local charges (12/77 = 100)	101.9	100.4	100.6	100.0	100.1	100.5	100.4	102.0	100.5	100.6	100.1	100.2	100.6	100.5
Interstate toll calls (12/77 = 100)	99.1	98.3	98.3	98.4	98.4	98.5	98.4	99.2	98.3	98.3	98.5	98.5	98.5	98.4
Intrastate toll calls (12/77 = 100)	100.4	100.7	100.7	101.2	101.3	101.5	101.4	100.2	100.6	100.6	101.1	101.2	101.4	101.3
Water and sewerage maintenance	235.5	240.2	241.4	243.1	244.0	244.6	245.3	235.7	240.7	241.5	243.3	244.0	244.6	245.5
Household furnishings and operations	180.5	188.6	189.2	190.1	190.4	191.2	192.2	179.0	187.3	188.1	188.8	189.0	189.8	190.6
Housefurnishings	156.4	162.4	162.6	163.1	162.9	163.2	164.1	155.1	161.9	162.4	162.8	162.5	163.0	163.5
Textile housefurnishings	166.2	173.1	173.1	174.9	173.6	172.8	175.3	165.7	174.1	173.1	174.0	171.6	173.0	174.9
Household linens (12/77 = 100)	102.6	106.2	106.1	106.8	104.3	103.6	106.7	102.0	106.3	105.8	105.1	103.1	103.7	106.3
Curtains, drapes, slipcovers, and sewing materials (12/77 = 100)	104.7	109.7	109.7	111.4	112.4	112.0	112.0	104.0	111.1	110.3	112.3	111.4	112.7	112.2
Furniture and bedding	168.9	176.5	176.9	177.5	176.8	177.1	178.3	166.9	175.8	176.4	177.6	177.2	177.3	178.5
Bedroom furniture (12/77 = 100)	105.4	112.7	112.8	112.9	113.2	114.0	114.8	104.0	111.2	110.8	111.7	112.1	112.7	113.0
Sofas (12/77 = 100)	104.2	106.8	106.2	107.8	106.2	106.3	107.1	103.3	107.0	108.4	110.1	108.7	108.2	108.6
Living room chairs and tables (12/77 = 100)	102.4	103.1	103.7	103.5	104.5	104.9	105.1	101.1	104.8	105.4	105.4	106.2	106.1	106.7
Other furniture (12/77 = 100)	107.1	113.8	114.7	114.7	113.3	112.7	113.9	106.2	112.7	112.9	113.3	112.5	112.5	114.2
Appliances including TV and sound equipment	131.7	135.3	135.6	135.6	135.4	135.8	136.2	131.1	135.2	135.8	135.3	135.0	135.5	135.7
Television and sound equipment (12/77 = 100)	102.6	104.2	104.0	104.0	103.9	104.3	104.7	101.6	103.9	103.8	103.3	103.3	104.0	104.4
Television	101.9	103.0	102.8	102.7	102.6	102.8	102.9	100.7	102.3	102.2	102.0	101.6	101.9	101.9
Sound equipment (12/77 = 100)	104.2	106.3	106.1	106.3	106.1	106.8	107.5	103.3	106.2	106.3	105.5	105.8	106.7	107.4
Household appliances	148.8	154.5	155.4	155.4	155.1	155.5	155.8	148.7	154.7	156.0	155.6	154.9	155.1	155.2
Refrigerators and home freezer	147.9	151.4	152.4	151.9	152.9	154.6	154.1	151.1	155.2	156.9	156.0	157.3	157.9	156.5
Laundry equipment (12/77 = 100)	104.4	108.7	109.8	110.8	110.7	110.7	110.9	104.1	108.5	109.9	110.5	110.1	110.2	111.2
Other household appliances (12/77 = 100)	104.6	109.4	109.7	109.5	108.7	108.6	109.1	103.6	108.4	108.8	108.3	107.1	107.1	107.2
Stoves, dishwashers, vacuums, and sewing machines (12/77 = 100)	106.1	110.1	110.0	109.8	109.0	108.5	108.6	104.3	109.5	109.6	108.9	107.6	107.7	107.7
Office machines, small electric appliances, and air conditioners (12/77 = 100)	102.9	108.6	109.3	109.2	108.5	108.8	109.7	102.8	107.2	108.0	107.6	106.5	106.4	106.8
Other household equipment (12/77 = 100)	104.5	109.3	109.3	109.5	110.3	110.7	110.9	103.3	108.5	109.0	109.6	110.4	110.6	110.3
Floor and window coverings, infants' laundry cleaning and outdoor equipment (12/77 = 100)	103.5	109.0	108.5	108.5	109.1	109.5	111.1	97.9	103.9	104.6	104.2	104.6	105.9	105.8
Clocks, lamps, and decor items (12/77 = 100)	102.8	105.6	105.2	105.9	107.5	107.1	108.0	103.6	106.6	105.9	106.3	107.2	106.7	107.0
Tableware, serving pieces, and nonelectric kitchenware (12/77 = 100)	107.6	112.8	113.0	113.2	114.4	115.1	114.7	106.1	110.8	111.7	112.9	114.1	113.9	114.5
Lawn equipment, power tools, and other hardware (12/77 = 100)	102.3	107.2	107.9	107.9	107.6	108.5	107.6	103.0	109.4	110.1	110.6	111.0	111.5	109.5
Housekeeping supplies	206.9	219.7	220.5	221.5	222.3	223.4	224.1	208.0	218.1	219.4	219.9	220.7	221.6	222.6
Soaps and detergents	200.1	210.9	209.6	210.2	210.9	212.5	215.1	199.0	209.6	208.2	208.8	210.5	210.9	214.5
Other laundry and cleaning products (12/77 = 100)	105.6	109.1	110.1	110.7	111.3	112.0	112.3	105.0	108.9	110.0	110.8	111.3	111.9	112.4
Cleansing and toilet tissue, paper towels and napkins (12/77 = 100)	108.2	115.9	116.3	116.7	116.5	116.2	116.4	109.0	116.2	117.1	117.2	116.9	116.3	117.1
Stationery, stationery supplies, and gift wrap (12/77 = 100)	102.9	107.4	107.3	108.2	108.9	109.5	109.9	103.3	106.4	106.7	107.0	107.5	108.5	108.3
Miscellaneous household products (12/77 = 100)	106.5	111.2	111.6	111.8	112.3	112.9	113.3	105.1	109.9	110.4	110.1	110.5	111.3	111.6
Lawn and garden supplies (12/77 = 100)	103.4	110.0	111.7	112.3	113.0	113.8	112.7	100.8	106.8	110.0	110.3	110.4	111.3	109.9
Housekeeping services	231.6	244.5	246.2	248.0	249.7	251.6	253.4	231.4	243.1	244.9	247.0	248.6	250.4	252.1
Postage	257.3	257.3	257.3	257.3	257.3	257.3	257.3	257.2	257.2	257.2	257.2	257.2	257.2	257.2
Moving, storage, freight, household laundry, and drycleaning services (12/77 = 100)	106.6	112.6	113.8	115.1	116.3	117.3	118.1	107.0	112.6	114.1	115.5	116.5	117.7	118.6
Appliance and furniture repair (12/77 = 100)	103.6	108.0	108.5	109.1	109.5	110.7	111.7	103.3	107.1	107.6	108.8	109.4	110.3	111.1
APPAREL AND UPKEEP	161.9	165.4	166.1	165.7	164.3	166.3	169.8	161.9	165.4	165.7	165.3	164.5	166.2	169.3
Apparel commodities	157.9	160.2	160.8	160.2	158.6	160.6	164.2	158.1	160.4	160.6	160.0	159.1	160.7	163.9
Apparel commodities less footwear	156.5	157.9	158.4	157.4	155.6	157.7	161.5	156.8	158.0	158.1	157.2	156.0	157.9	161.2
Men's and boys'	158.7	159.6	160.1	160.4	159.2	159.6	162.7	159.3	160.1	160.8	160.9	160.6	161.1	163.2
Men's (12/77 = 100)	100.8	100.8	101.1	101.1	100.0	100.6	102.7	101.4	101.4	101.8	101.6	101.3	101.9	103.2
Suits, sport coats, and jackets (12/77 = 100)	100.4	99.0	98.5	98.5	98.8	97.1	100.0	99.7	96.7	97.2	96.8	95.8	96.2	98.3
Coats and jackets (12/77 = 100)	99.9	94.4	94.8	94.5	94.4	95.5	96.5	101.8	96.1	97.9	97.8	97.6	99.2	99.1
Furnishings and special clothing (12/77 = 100)	102.2	105.4	107.4	108.1	108.4	109.3	110.6	102.2	104.7	106.1	106.2	106.6	107.0	108.6
Shirts (12/77 = 100)	101.1	103.8	103.9	103.5	100.9	103.2	107.2	102.3	105.0	105.0	104.5	104.1	104.9	107.1
Dungarees, jeans, and trousers (12/77 = 100)	100.2	99.8	100.0	99.9	99.0	98.1	99.0	101.4	101.9	102.1	101.7	101.5	101.9	102.5
Boys' (12/77 = 100)	99.7	102.5	102.8	103.5	104.2	103.3	104.8	99.4	101.5	101.9	103.1	103.5	102.7	103.9
Coats, jackets, sweaters, and shirts (12/77 = 100)	96.7	99.1	99.3	100.0	101.7	101.1	102.7	96.0	97.9	98.1	99.4	101.3	100.3	102.0
Furnishings (12/77 = 100)	101.7	106.5	107.1	108.3	108.0	107.9	109.4	101.2	105.5	106.1	107.8	107.1	107.0	108.8
Suits, trousers, sport coats, and jackets (12/77 = 100)	101.3	103.6	103.8	104.4	104.8	103.1	104.5	101.3	102.8	103.2	104.1	103.9	102.9	103.5
Women's and girls'	152.3	152.5	153.2	150.8	147.8	151.3	155.9	152.1	152.0	149.9	149.9	147.5	150.5	154.4
Women's (12/77 = 100)	101.4	101.7	102.4	100.8	98.4	100.7	103.9	101.5	102.1	102.2	100.6	98.7	100.4	103.0
Coats and jackets	172.0	167.2	164.3	162.4	162.1	170.4	174.1	173.1	175.3	170.2	166.9	166.8	173.1	175.7
Dresses	159.7	165.9	170.4	163.5	157.2	162.8	171.1	160.6	160.8	162.0	156.6	152.8	152.8	158.5
Separates and sportswear (12/77 = 100)	100.6	100.0	99.7	98.4	95.0	96.3	99.8	99.9	98.9	98.7	98.5	98.7	97.7	100.4
Underwear, nightwear, and hosiery (12/77 = 100)	102.5	104.6	105.4	105.6	106.0	106.2	106.2	102.8	105.5	106.1	106.5	106.1	107.0	107.4
Suits (12/77 = 100)	97.3	92.3	93.5	91.7	87.3	89.8	96.7	96.0	95.6	95.6	92.4	87.9	91.0	98.1
Girls' (12/77 = 100)	101.1	100.0	99.1	98.0	96.1	100.5	102.4	99.9	97.4	96.3	95.9	95.5	98.8	101.1
Coats, jackets, dresses, and suits (12/77 = 100)	101.7	101.5	98.1	95.8	96.7	100.8	102.8	98.4	96.7	95.8	93.4	94.6	95.9	98.5
Separates and sportswear (12/77 = 100)	100.8	95.6	96.3	95.7	93.9	98.3	100.3	101.0	92.8	92.2	93.8	92.5	99.7	102.1
Underwear, nightwear, hosiery, and accessories (12/77 = 100)	101.0	105.5	105.8	105.7	104.6	104.1	105.7	100.5	103.3	104.3	103.4	102.0	101.8	103.5

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978		1979					1978		1979				
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
APPAREL AND UPKEEP—Continued														
Apparel commodities—Continued														
Apparel commodities less footwear—Continued														
Infants' and toddlers'	220.4	220.7	221.2	220.9	219.0	221.2	223.4	217.8	222.0	223.6	223.9	221.9	224.2	226.0
Other apparel commodities	159.6	166.8	166.9	167.3	167.9	169.8	172.6	162.1	167.8	167.3	167.8	168.4	170.2	174.9
Sewing materials and notions (12/77 = 100)	98.0	101.9	101.2	101.0	101.3	102.3	102.3	97.7	99.0	96.4	95.7	95.6	96.8	100.4
Jewelry and luggage (12/77 = 100)	105.4	110.4	110.7	111.3	111.7	113.0	115.6	108.1	112.8	113.5	114.3	114.9	116.1	118.9
Footwear	165.7	174.2	175.0	176.7	176.6	177.5	180.1	164.7	174.2	175.2	176.0	176.6	176.9	179.4
Men's (12/77 = 100)	104.2	110.8	111.8	114.0	113.4	114.5	115.0	105.0	111.1	112.2	113.2	114.5	115.2	116.3
Boys' and girls' (12/77 = 100)	102.7	108.9	109.3	110.3	111.0	112.0	111.6	102.2	109.3	109.8	110.0	111.2	111.4	111.6
Womens' (12/77 = 100)	104.2	108.0	108.3	108.4	108.3	108.1	112.0	102.3	107.3	107.7	107.9	106.9	106.5	109.6
Apparel services	188.3	201.8	203.1	204.8	205.7	207.7	210.2	187.1	201.1	202.6	203.6	204.9	206.7	208.7
Laundry and drycleaning other than coin operated (12/77 = 100)	107.9	117.6	118.4	119.7	120.6	122.1	123.6	107.9	117.5	118.4	119.2	120.3	121.8	123.2
Other apparel services (12/77 = 100)	106.3	110.4	111.2	111.4	111.2	111.9	113.0	104.7	110.1	110.9	111.1	111.2	111.5	112.3
TRANSPORTATION														
Private	188.3	203.2	208.1	213.3	217.4	220.4	222.0	188.8	203.7	208.8	214.1	218.3	221.2	222.7
New cars	153.5	164.3	165.8	166.3	166.7	166.6	166.1	153.1	163.9	165.3	165.9	166.6	166.3	165.9
Used cars	195.9	200.0	205.4	208.9	209.2	207.0	202.9	195.9	200.0	205.4	208.9	208.2	207.0	202.9
Gasoline	201.5	234.7	247.7	265.0	290.0	292.0	301.0	204.4	235.4	248.5	266.2	281.0	293.3	302.3
Automobile maintenance and repair	224.4	238.2	240.1	242.0	244.0	245.7	247.1	224.8	238.7	240.5	242.3	244.2	246.0	247.5
Body work (12/77 = 100)	107.1	113.3	114.1	116.0	117.4	118.6	119.4	107.4	114.4	115.2	116.0	117.6	118.6	119.2
Automobile drive train, brake, and miscellaneous mechanical repair (12/77 = 100)	107.4	113.8	114.9	115.8	116.7	117.4	118.1	108.3	114.8	115.8	116.7	117.5	118.2	119.0
Maintenance and servicing (12/77 = 100)	106.5	113.5	114.3	115.0	115.9	116.3	116.9	106.1	113.0	113.8	114.6	115.3	116.0	116.8
Power plant repair (12/77 = 100)	106.2	112.3	113.1	113.9	114.8	116.0	116.7	106.3	112.6	113.3	114.3	115.2	116.3	117.0
Other private transportation	185.3	194.8	196.4	197.3	198.5	200.5	201.7	185.7	195.5	196.9	197.7	199.1	201.0	202.3
Other private transportation commodities	160.8	170.2	171.0	171.8	173.3	175.1	177.7	163.3	171.4	172.1	172.6	174.4	176.1	178.7
Motor oil, coolant, and other products (12/77 = 100)	103.6	109.4	109.9	110.3	110.5	112.2	114.4	103.6	107.3	108.6	109.3	109.9	112.0	114.5
Automobile parts and equipment (12/77 = 100)	104.0	110.1	110.6	111.2	112.3	113.4	114.9	105.8	111.3	111.6	111.9	113.2	114.1	115.7
Tires	143.2	151.2	151.4	151.9	153.7	154.7	156.4	146.2	153.1	153.8	153.7	155.7	156.1	158.1
Other parts and equipment (12/77 = 100)	104.9	111.7	113.0	114.1	114.8	116.7	119.1	105.8	112.6	112.4	113.4	114.3	116.8	118.6
Other private transportation services	193.7	203.3	205.1	206.0	207.1	209.1	210.1	193.5	203.8	205.4	206.3	207.6	209.6	210.6
Automobile insurance	217.0	224.7	226.5	227.3	229.1	232.3	233.5	217.2	224.7	226.4	227.2	229.0	232.3	233.5
Automobile finance charges (12/77 = 100)	103.2	114.1	115.5	116.3	116.8	117.2	117.7	102.6	113.5	114.8	115.6	116.4	116.4	117.0
Automobile rental, registration, and other fees (12/77 = 100)	103.0	105.6	106.5	106.8	106.9	107.5	107.8	102.9	106.4	106.8	107.2	107.3	108.1	108.4
State registration	143.7	144.0	144.0	144.0	144.0	144.0	144.0	143.5	143.9	143.9	143.9	143.9	143.9	143.9
Drivers' license (12/77 = 100)	104.0	104.5	104.5	104.5	104.5	104.5	104.5	103.8	104.3	104.3	104.3	104.3	104.3	104.3
Vehicle inspection (12/77 = 100)	109.3	112.0	112.7	114.6	114.6	114.6	114.6	110.6	112.8	113.5	115.5	115.5	115.5	115.5
Other vehicle related fees (12/77 = 100)	104.9	110.9	113.0	113.6	114.0	115.5	116.1	105.3	114.8	115.8	116.6	116.9	119.3	120.3
Public	189.2	192.6	193.3	194.0	197.1	200.8	205.2	188.5	193.6	194.2	194.8	197.6	200.6	204.1
Airline fare	189.6	192.5	193.7	194.3	198.5	205.2	214.1	189.1	192.1	193.2	193.8	198.4	205.2	214.2
Inter-city bus fare	242.6	249.2	250.1	253.9	258.8	263.2	268.0	242.7	248.5	249.2	253.2	258.5	263.0	268.0
Intra-city mass transit	182.9	187.8	187.9	188.4	189.8	190.5	190.5	182.6	187.9	188.0	188.4	189.7	190.2	190.2
Taxi fare	205.3	215.0	216.2	217.2	220.6	224.7	228.5	208.1	220.7	221.8	223.3	226.5	230.3	233.9
Inter-city train fare	201.8	205.0	205.2	205.3	216.1	220.6	221.0	201.1	205.0	205.2	205.2	217.1	220.8	221.3
MEDICAL CARE														
Medical care commodities	145.1	151.6	152.4	153.3	154.1	155.0	155.8	145.5	152.5	153.3	154.5	155.3	156.2	156.7
Prescription drugs	132.9	140.0	140.6	141.3	141.9	142.8	143.5	133.6	140.8	141.5	142.4	143.0	143.7	144.4
Anti-infective drugs (12/77 = 100)	104.6	110.2	110.7	112.0	112.0	112.5	113.1	105.6	111.0	111.7	112.9	113.0	113.2	114.1
Tranquillizers and sedatives (12/77 = 100)	105.4	112.6	113.3	113.7	114.0	114.6	114.9	105.4	113.1	113.7	114.2	114.4	114.8	115.0
Circulatories and diuretics (12/77 = 100)	104.0	107.5	107.9	108.3	108.6	109.3	109.3	104.5	108.5	108.5	109.2	109.1	109.7	110.0
Hormones, diabetic drugs, biologicals, and prescription supplies (12/77 = 100)	109.9	117.3	117.5	117.9	118.9	120.3	120.9	110.7	117.3	117.5	118.0	119.3	120.4	120.8
Pain and symptom control drugs (12/77 = 100)	105.6	111.2	111.8	112.1	113.1	113.7	114.8	105.5	112.0	112.9	113.4	114.7	115.2	116.0
Supplements, cough and cold preparations, and respiratory agents (12/77 = 100)	104.6	108.5	109.2	109.4	109.5	110.3	110.9	105.1	109.6	110.1	110.9	111.0	111.7	112.2
Nonprescription drugs and medical supplies (12/77 = 100)	104.8	108.8	109.4	110.2	110.8	111.4	112.0	105.0	109.6	110.3	111.2	111.9	112.5	112.8
Eyeglasses (12/77 = 100)	103.3	106.2	106.7	107.4	108.2	108.7	109.2	103.2	106.5	107.0	107.7	108.5	108.9	109.3
Internal and respiratory over-the-counter drugs	161.1	168.1	169.3	170.3	171.3	172.2	173.0	161.2	169.4	170.6	172.0	173.2	174.3	174.7
Nonprescription medical equipment and supplies (12/77 = 100)	104.1	107.6	108.1	109.1	109.7	110.4	110.8	104.9	108.7	109.3	110.3	110.7	111.3	111.2
Medical care services	239.1	253.1	254.4	255.9	258.5	260.6	262.8	239.2	252.9	254.0	256.1	258.8	261.2	263.8
Professional services	211.7	222.9	224.3	225.7	227.6	228.9	230.3	212.5	224.2	225.3	227.3	229.3	231.1	233.1
Physicians' services	226.7	239.1	240.7	241.8	224.7	246.6	248.4	227.1	240.0	241.4	243.6	246.8	248.7	251.5
Dental services	200.6	211.4	212.4	214.3	215.2	216.0	217.2	202.2	213.7	214.6	216.5	217.1	219.0	220.7
Other professional services (12/77 = 100)	105.0	109.4	110.2	110.6	111.5	111.9	112.4	104.8	109.1	109.4	110.0	111.0	111.5	111.7
Other medical care services	272.2	289.6	290.9	292.5	295.8	299.0	302.0	271.6	287.8	289.0	291.2	294.9	298.1	301.3
Hospital and other medical services (12/77 = 100)	108.1	115.2	115.6	116.2	117.3	118.6	119.6	107.9	114.3	114.7	115.3	116.6	117.8	118.9
Hospital room	338.3	362.4	363.9	366.0	369.7	374.2	376.4	337.6	360.2	361.3	362.9	367.5	371.7	374.1
Other hospital and medical care services	107.9	114.5	114.7	115.2	116.4	117.4	118.8	107.6	113.4	113.7	114.3	115.6	116.7	118.0

23. Continued—Consumer Price Index—U.S. city average

[1967 = 100 unless otherwise specified]

General summary	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978	1979						1978	1979					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
ENTERTAINMENT	178.3	186.5	187.8	188.2	189.1	190.2	191.1	177.4	185.5	187.1	187.5	188.6	188.9	190.2
Entertainment commodities	178.9	187.4	188.1	188.7	189.7	191.0	192.0	177.7	185.7	186.8	187.4	188.2	188.4	189.9
Reading materials (12/77 = 100)	104.4	109.5	109.4	109.5	110.0	111.1	111.9	104.1	109.2	109.1	109.1	109.5	110.7	111.4
Newspapers	202.2	211.5	212.2	211.6	212.6	214.0	214.5	201.8	211.1	211.7	211.1	212.2	213.7	214.2
Magazines, periodicals, and books (12/77 = 100)	106.1	111.7	111.2	111.6	112.0	113.7	115.0	106.2	111.6	111.0	111.6	111.7	113.5	114.8
Sporting goods and equipment (12/77 = 100)	102.6	108.6	109.2	109.3	110.0	110.4	111.3	100.3	105.4	106.4	106.6	107.0	105.4	107.5
Sport vehicles (12/77 = 100)	102.1	110.1	110.6	110.3	110.8	111.3	112.3	99.4	105.7	107.0	107.0	106.9	103.9	106.7
Indoor and warm weather sport equipment (12/77 = 100)	103.0	105.3	105.9	106.1	106.7	105.9	106.1	100.3	102.9	102.9	103.3	104.7	104.7	104.7
Bicycles	153.7	158.0	158.7	160.1	162.2	163.8	165.6	152.2	157.2	158.1	160.0	161.8	162.9	164.7
Other sporting goods and equipment (12/77 = 100)	101.9	105.7	106.8	106.9	107.8	108.6	109.3	100.7	104.1	104.7	105.4	106.5	107.2	108.5
Toys, hobbies and other entertainment (12/77 = 100)	103.4	107.6	108.2	108.9	109.4	110.2	110.4	103.6	107.7	108.6	109.0	109.6	110.2	110.4
Toys, hobbies and music equipment (12/77 = 100)	103.6	108.6	108.9	109.2	109.3	110.0	110.4	102.7	108.4	109.0	109.0	109.1	109.8	109.6
Photographic supplies and equipment (12/77 = 100)	103.7	106.5	107.3	107.6	108.4	108.2	108.9	104.3	106.2	107.1	107.3	107.7	107.6	108.8
Pet supplies and expense (12/77 = 100)	102.9	106.8	107.5	109.2	110.3	111.8	111.6	105.0	107.5	108.6	110.0	111.6	112.6	112.9
Entertainment services	177.9	185.4	187.6	187.9	188.6	189.4	190.2	177.7	186.1	188.5	188.8	190.1	190.7	191.8
Fees for participant sports (12/77 = 100)	105.0	109.5	111.6	111.6	111.9	112.3	113.0	105.3	109.4	111.6	111.5	112.1	112.3	113.4
Admissions (12/77 = 100)	107.1	112.8	113.2	113.3	114.3	114.7	115.2	107.4	112.8	113.9	113.2	115.3	115.9	116.3
Other entertainment services (12/77 = 100)	104.9	107.6	108.1	109.0	109.1	109.7	109.4	102.6	108.4	108.8	111.0	110.5	110.9	110.9
OTHER GOODS AND SERVICES	187.8	193.2	193.9	194.5	195.2	197.0	201.7	187.1	193.1	193.8	194.3	195.1	197.2	200.6
Tobacco products	180.8	186.1	186.3	186.4	186.8	189.9	190.9	180.8	186.1	186.3	186.5	186.9	190.1	190.9
Cigarettes	183.5	188.6	188.6	188.8	189.2	192.6	193.6	183.6	188.8	188.9	189.0	189.4	193.1	193.7
Other tobacco products and smoking accessories (12/77 = 100)	105.3	109.5	110.3	110.3	110.8	111.1	112.2	104.9	108.8	109.4	109.8	110.3	110.0	111.0
Personal care	184.9	192.7	193.9	195.0	196.4	197.5	199.0	184.2	192.3	193.7	194.6	196.0	197.6	198.4
Toilet goods and personal care appliances	179.5	185.8	187.3	187.9	188.6	189.7	191.4	178.2	186.2	187.7	187.8	188.1	190.2	191.0
Products for the hair, hairpieces and wigs (12/77 = 100)	104.4	106.4	107.1	108.8	109.4	111.1	111.6	102.0	105.3	107.0	108.9	108.5	110.5	110.6
Dental and shaving products (12/77 = 100)	105.8	110.6	111.5	112.6	113.2	113.6	114.3	105.0	109.7	110.7	110.2	111.0	112.1	112.5
Cosmetics, bath and nail preparations, manicure and eye makeup implements (12/77 = 100)	104.0	107.6	109.5	108.6	109.5	108.9	110.4	103.3	108.5	108.7	107.8	109.0	110.0	110.6
Other toilet goods and small personal care appliances (12/77 = 100)	102.8	107.5	107.1	106.9	106.2	107.6	108.6	104.4	109.7	110.4	109.8	108.8	109.7	110.3
Personal care services	190.3	199.4	200.4	202.0	203.9	205.0	206.4	190.2	198.5	199.8	201.4	204.0	205.0	205.8
Beauty parlor services for women	191.9	201.1	202.4	203.7	205.2	206.1	207.7	192.2	200.8	202.0	203.6	205.9	206.7	207.4
Haircuts and other barber shop services for men (12/77 = 100)	106.1	111.1	111.4	112.6	114.1	115.1	115.5	106.5	110.0	110.7	111.7	113.6	114.2	114.7
Personal and educational expenses	205.7	208.4	208.8	209.1	209.3	210.8	223.3	205.9	208.8	209.3	209.6	209.8	211.2	223.5
School books and supplies	187.3	191.6	191.6	191.6	191.6	192.6	201.5	189.1	194.2	194.2	194.2	194.2	195.2	205.0
Personal and educational services	210.4	212.8	213.2	213.6	213.8	215.4	228.6	210.3	212.8	213.4	213.7	214.0	215.5	228.4
Tuition and other school fees	108.2	108.7	108.7	108.8	108.9	109.4	117.7	108.1	108.6	108.6	108.7	108.8	109.4	117.9
College tuition (12/77 = 100)	108.3	108.9	108.9	109.1	109.2	109.7	116.9	108.3	108.9	108.9	109.1	109.2	109.7	116.8
Elementary and high school tuition (12/77 = 100)	107.4	107.5	107.5	107.5	107.5	108.3	120.9	107.3	107.4	107.4	107.4	107.4	108.4	120.7
Personal expenses (12/77 = 100)	106.7	111.0	112.3	112.6	113.0	114.8	115.1	106.8	111.1	112.3	112.6	113.0	114.4	114.4
Special indexes:														
Gasoline, motor oil, coolant and other products	200.0	232.5	245.1	261.9	276.6	288.2	297.1	199.9	233.0	245.8	263.1	277.5	289.5	298.3
Insurance and finance	241.9	260.5	264.5	268.2	272.8	278.7	283.5	241.2	260.5	264.4	267.9	272.5	278.3	283.1
Utilities and public transportation	202.0	205.8	208.8	212.7	215.3	217.0	219.3	202.2	206.2	209.3	213.2	215.9	217.4	219.5
Housekeeping and home maintenance services	251.2	265.4	267.1	270.2	272.5	274.4	276.6	249.6	266.0	267.8	271.4	273.7	275.3	277.8

24. Consumer Price Index for All Urban Consumers: Cross classification of region and population size class by expenditure category and commodity and service group

[December 1977 = 100]

Category and group	Size class A (1.25 million or more)			Size class B (385,000 - 1.250 million)			Size class C (75,000 - 385,000)			Size class D (75,000 or less)		
	1979			1979			1979			1979		
	Apr.	June	Aug.	Apr.	June	Aug.	Apr.	June	Aug.	Apr.	June	Aug.
Northeast												
EXPENDITURE CATEGORY												
All items	110.8	113.2	115.0	113.1	115.3	117.3	114.8	117.2	120.2	112.9	115.5	116.9
Food and beverages	115.7	117.3	117.9	116.3	118.5	118.9	119.3	120.8	121.7	117.1	119.3	120.4
Housing	110.1	112.9	114.8	113.5	114.5	116.7	116.4	118.7	122.5	113.0	114.9	116.1
Apparel and upkeep	104.6	103.8	104.9	105.4	106.2	106.1	102.6	102.8	104.3	105.5	106.2	103.4
Transportation	110.4	115.6	119.6	113.6	119.6	123.4	113.9	119.1	123.6	112.9	118.5	122.5
Medical care	110.9	112.0	113.6	112.2	112.5	115.3	112.2	112.8	114.8	112.4	114.0	114.8
Entertainment	109.1	109.2	110.6	107.9	108.3	110.9	108.1	108.4	110.4	107.8	112.4	113.6
Other goods and services	106.6	107.1	108.3	109.0	110.0	111.4	109.9	111.4	113.0	107.4	108.5	109.2
COMMODITY AND SERVICE GROUP												
Commodities	112.2	114.7	116.6	113.9	116.7	119.0	114.8	117.6	120.8	113.1	116.0	117.7
Commodities less food and beverages	110.0	113.2	115.8	112.7	115.9	119.0	112.6	116.1	120.4	111.1	114.4	116.5
Services	109.0	111.2	113.0	111.9	112.9	114.6	114.9	116.5	119.1	112.5	114.8	115.7
North Central												
EXPENDITURE CATEGORY												
All items	115.7	118.2	121.0	115.1	118.0	120.5	114.0	116.8	119.0	114.1	116.6	119.5
Food and beverages	118.5	120.0	120.2	116.6	117.6	118.6	118.5	120.2	120.4	118.8	121.4	122.0
Housing	119.1	121.8	125.8	117.3	121.2	124.1	114.5	117.3	120.3	114.0	115.9	120.5
Apparel and upkeep	102.3	101.7	102.8	105.1	104.0	104.6	102.8	104.0	105.3	103.8	103.7	104.0
Transportation	113.8	118.8	122.8	114.0	118.8	122.9	114.2	120.5	123.7	113.6	120.1	123.2
Medical care	111.6	112.9	115.0	113.4	114.5	117.2	113.1	114.1	116.4	113.9	115.7	117.5
Entertainment	108.6	110.8	111.9	107.4	108.2	109.2	110.5	110.9	110.5	109.6	110.8	111.3
Other goods and services	107.3	108.0	109.0	112.0	114.4	114.9	108.0	108.5	110.0	109.6	110.5	112.7
COMMODITY AND SERVICE GROUP												
Commodities	115.7	118.2	120.7	113.9	117.0	119.4	113.6	117.1	119.1	113.6	116.2	118.9
Commodities less food and beverage	114.4	117.3	120.9	112.7	116.7	119.7	111.5	115.8	118.5	110.9	114.0	117.6
Services	115.6	118.4	121.5	117.0	119.7	122.4	114.5	116.3	118.8	114.8	117.2	120.4
South												
EXPENDITURE CATEGORY												
All items	113.7	116.9	118.7	114.4	117.5	120.1	114.9	117.5	119.9	113.0	115.6	118.5
Food and beverages	118.6	120.6	121.1	118.3	119.5	120.3	119.2	120.5	121.6	118.9	119.7	120.0
Housing	113.6	118.0	119.9	114.9	118.8	122.4	116.6	119.7	122.7	112.3	115.1	119.3
Apparel and upkeep	107.3	108.0	107.5	107.5	107.2	107.3	104.0	103.3	104.5	101.7	103.8	102.8
Transportation	113.4	118.7	122.6	114.2	119.8	123.5	113.1	118.2	121.8	112.9	118.2	122.4
Medical care	111.0	111.6	113.3	112.5	114.0	115.7	113.6	114.1	115.5	114.9	115.9	118.5
Entertainment	107.4	107.7	108.1	110.7	111.5	111.9	109.6	111.1	111.8	111.8	112.4	115.9
Other goods and services	109.8	110.2	111.5	109.2	109.9	110.8	109.3	109.6	111.4	110.5	111.7	114.3
COMMODITY AND SERVICE GROUP												
Commodities	113.9	117.3	118.9	114.2	117.1	119.3	114.3	116.9	119.3	113.0	115.9	118.6
Commodities less food and beverages	111.9	115.8	118.0	112.5	116.1	118.9	112.1	115.3	118.3	110.5	114.3	118.0
Services	112.9	116.5	118.4	114.7	118.1	121.2	115.9	118.5	120.8	112.9	115.1	118.5
West												
EXPENDITURE CATEGORY												
All items	113.3	116.0	118.7	115.2	118.7	120.9	114.1	116.9	119.5	112.7	115.1	118.8
Food and beverages	118.8	119.8	119.4	119.6	121.6	121.4	117.3	119.6	120.1	117.7	119.2	121.6
Housing	112.3	115.3	119.0	115.5	119.5	122.4	114.9	117.4	120.5	111.0	112.6	117.8
Apparel and upkeep	104.6	106.0	104.8	107.2	108.3	108.8	102.5	103.4	103.9	105.7	109.4	109.5
Transportation	115.4	120.5	125.3	115.1	121.0	124.8	115.8	121.4	125.0	113.8	119.2	123.1
Medical care	113.0	114.7	116.8	112.2	114.6	116.6	112.0	113.8	116.5	114.4	116.9	119.0
Entertainment	107.0	108.2	109.3	112.4	113.2	114.4	106.8	109.9	112.6	113.5	114.5	115.7
Other goods and services	110.4	110.2	112.4	109.7	110.9	112.5	109.2	109.4	110.7	110.1	113.0	114.4
COMMODITY AND SERVICE GROUP												
Commodities	114.3	117.1	118.7	115.8	119.3	120.8	114.5	117.4	119.4	112.9	116.1	119.1
Commodities less food and beverage	112.4	116.0	118.3	114.2	118.3	120.6	113.3	116.5	119.1	110.9	114.8	118.0
Services	111.9	114.5	118.8	114.4	117.9	121.0	113.6	116.3	119.6	112.3	113.6	118.5

25. Consumer Price Index—U.S. city average, and selected areas

[1967 = 100 unless otherwise specified]

Area ¹	All Urban Consumers							Urban Wage Earners and Clerical Workers (revised)						
	1978	1979						1978	1979					
	Sept.	Apr.	May	June	July	Aug.	Sept.	Sept.	Apr.	May	June	July	Aug.	Sept.
U.S. city average ²	199.3	211.5	214.1	216.6	218.9	221.1	223.4	199.1	211.8	214.3	216.9	219.4	221.5	223.7
Anchorage, Alaska (10/67 = 100)	193.2	...	203.5	...	207.4	...	213.2	192.8	...	202.5	...	206.4	...	210.9
Atlanta, Ga. ....	...	206.7	...	212.6	...	216.9	...	...	208.3	...	214.5	...	219.0	...
Baltimore, Md.	203.5	...	215.3	...	221.0	...	224.9	203.3	...	216.0	...	221.4	...	224.9
Boston, Mass.	195.8	...	208.5	...	214.2	...	218.1	195.5	...	208.7	...	213.7	...	217.9
Buffalo, N.Y. ....	...	206.6	...	209.3	...	214.6	...	...	207.2	...	209.7	...	215.3	...
Chicago, Ill.-Northwestern Ind.	193.8	208.7	210.1	213.5	217.4	218.6	221.3	193.0	208.1	209.6	213.2	216.8	218.2	220.6
Cincinnati, Ohio-Ky.-Ind.	203.7	...	221.5	...	224.8	...	229.0	203.6	...	223.1	...	226.5	...	230.8
Cleveland, Ohio ....	...	215.1	...	219.9	...	221.4	...	...	216.1	...	221.2	...	222.6	...
Dallas-Ft. Worth, Tex. ....	...	211.0	...	217.5	...	222.9	...	...	211.4	...	218.0	...	223.0	...
Denver-Boulder, Colo.	207.0	...	231.1	...	236.5	...	240.8	207.9	...	233.2	...	239.3	...	243.6
Detroit, Mich.	197.7	213.2	213.9	215.4	219.5	222.2	223.7	198.2	213.3	214.1	215.5	219.8	222.6	223.5
Honolulu, Hawaii ....	...	200.7	...	204.4	...	207.2	...	...	200.0	...	203.6	...	207.2	...
Houston, Tex. ....	...	228.1	...	235.5	...	240.6	...	...	227.7	...	234.5	...	239.0	...
Kansas City, Mo.-Kansas ....	...	211.5	...	219.5	...	224.6	...	...	211.0	...	218.4	...	223.1	...
Los Angeles-Long Beach, Anaheim, Calif.	197.3	207.8	211.0	212.9	214.7	217.5	220.7	196.9	208.8	212.4	214.5	216.8	218.6	223.0
Miami, Fla. (11/77 = 100)	106.6	...	112.5	...	115.7	...	117.4	107.0	...	113.8	...	116.9	...	118.7
Milwaukee, Wis.	198.4	...	217.1	...	222.7	...	226.0	200.2	...	219.5	...	225.0	...	228.7
Minneapolis-St. Paul, Minn.-Wis. ....	...	215.9	...	222.3	...	227.0	...	...	216.0	...	223.4	...	228.5	...
New York, N.Y.-Northeastern N.J.	198.9	208.3	210.5	212.5	214.0	215.4	218.1	197.7	208.1	210.3	212.2	214.1	215.3	217.8
Northeast, Pa. (Scranton)	195.0	...	207.3	...	211.7	...	215.4	195.4	...	209.6	...	213.4	...	217.1
Philadelphia, Pa.-N.J.	197.8	207.7	210.6	213.8	216.1	217.7	219.5	198.2	209.1	211.4	214.5	216.9	218.1	220.3
Pittsburgh, Pa. ....	...	212.0	...	214.5	...	219.1	...	...	212.3	...	215.0	...	220.0	...
Portland, Oreg.-Wash.	203.2	...	220.7	...	227.4	...	232.2	204.3	...	221.9	...	227.9	...	232.6
St. Louis, Mo.-Ill.	196.1	...	211.1	...	216.9	...	222.2	194.7	...	210.3	...	217.4	...	222.5
San Diego, Calif.	206.5	...	228.3	...	236.1	...	240.4	205.4	...	226.1	...	233.1	...	237.7
San Francisco-Oakland, Calif. ....	...	208.8	...	212.5	...	218.3	...	...	209.3	...	213.7	...	218.6	...
Seattle-Everett, Wash.	201.0	...	212.4	...	217.5	...	222.6	199.7	...	210.9	...	215.9	...	221.0
Washington, D.C.-Md.-Va.	200.8	...	216.0	...	220.4	...	222.9	202.8	...	217.8	...	221.9	...	224.4

¹The areas listed include not only the central city but the entire portion of the Standard Metropolitan Statistical Area, as defined for the 1970 Census of Population, except that the Standard Consolidated Area is used for New York and Chicago.

²Average of 85 cities.

26. Producer Price Indexes, by stage of processing

[1967 = 100]

Commodity grouping	Annual average 1978	1978			1979									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FINISHED GOODS														
Finished goods	194.6	199.6	200.3	202.5	205.4	207.7	209.1	211.4	212.7	213.7	215.8	217.3	220.4	223.7
Finished consumer goods	192.6	197.5	197.9	200.5	203.7	206.3	207.9	210.2	211.6	212.7	215.2	217.2	221.3	224.1
Finished consumer goods	206.7	212.0	211.7	215.8	220.2	225.1	226.3	227.8	226.6	223.6	224.6	223.2	227.8	226.7
Crude	215.5	212.9	220.8	232.1	236.7	257.2	244.6	241.8	226.7	227.1	224.9	231.6	213.9	215.4
Processed	204.1	209.9	209.0	212.5	216.9	220.5	222.8	224.6	224.4	221.3	222.5	220.5	226.8	225.4
Other nondurable goods	195.4	199.7	201.1	202.7	205.4	207.2	209.8	213.1	217.1	221.7	226.9	233.0	238.9	243.0
Durable goods	165.8	170.9	170.7	173.0	175.2	176.2	176.8	178.4	179.5	180.4	180.9	181.2	182.0	187.4
Capital Equipment	199.1	204.4	206.1	207.0	208.3	210.8	211.7	214.0	215.1	215.8	216.9	217.1	217.7	222.5
INTERMEDIATE MATERIALS														
Intermediate materials, supplies, and components	215.5	220.8	222.0	223.0	225.7	228.5	231.5	235.8	238.2	240.3	244.2	247.1	250.7	254.6
Materials and components for manufacturing	208.3	213.9	215.0	215.6	218.6	221.6	224.5	229.0	230.9	232.1	235.5	237.4	240.5	243.9
Materials for food manufacturing	202.3	210.1	207.9	210.7	214.4	217.3	218.6	222.2	222.5	222.3	226.4	225.1	228.6	225.3
Materials for nondurable manufacturing	195.8	200.3	201.0	201.2	203.2	205.3	208.7	213.7	216.7	218.1	222.1	224.5	227.3	231.2
Materials for durable manufacturing	237.2	244.5	245.9	246.4	252.0	256.8	260.0	266.0	267.2	268.9	272.9	274.8	278.7	284.5
Components for manufacturing	189.1	193.3	195.4	196.2	197.2	199.0	200.3	203.1	204.5	205.3	207.0	208.8	210.9	212.5
Materials and components for construction	224.4	230.2	232.1	232.5	236.1	239.0	241.3	244.5	245.2	245.6	247.4	249.0	251.6	254.4
Processed fuels and lubricants	296.4	297.6	297.6	300.4	302.0	304.8	312.9	323.9	336.8	349.5	364.2	384.1	399.4	410.5
Manufacturing industries	270.4	269.9	268.0	268.7	268.3	269.0	275.4	280.7	287.4	293.8	303.5	310.4	317.2	322.5
Nonmanufacturing industries	320.0	323.1	325.2	330.3	334.0	339.1	348.9	365.9	385.5	404.9	424.8	458.6	483.0	500.4
Containers	212.5	221.2	221.7	222.6	223.9	224.3	229.3	231.8	234.5	234.9	235.2	237.2	237.1	240.8
Supplies	196.9	202.2	204.0	206.1	207.4	209.6	211.1	212.8	213.7	216.1	219.3	219.1	220.8	224.4
Manufacturing industries	183.6	189.0	190.4	192.0	193.1	194.3	197.4	199.4	201.5	202.7	203.9	208.3	209.1	211.8
Nonmanufacturing industries	204.0	209.2	211.2	213.6	215.0	217.7	218.4	219.9	220.3	223.2	227.5	224.9	227.0	231.1
Manufactured animal feeds	200.2	204.3	209.1	216.9	215.9	221.6	219.3	219.5	214.6	226.2	241.6	221.1	224.3	229.2
Other supplies	201.9	207.3	208.6	209.7	211.6	213.6	215.0	216.8	218.3	219.2	221.0	222.5	224.3	228.1
CRUDE MATERIALS														
Crude materials for further processing	240.1	249.2	248.4	252.5	260.2	270.4	276.6	279.9	282.3	283.0	287.3	281.7	287.9	289.2
Foodstuffs and feedstuffs	215.3	224.0	220.9	224.8	233.0	243.7	247.4	251.5	251.9	248.2	254.1	243.6	248.7	247.1
Nonfood materials	286.7	296.7	300.2	304.6	311.5	320.7	331.6	333.3	339.6	348.7	350.0	353.5	362.1	368.9
Nonfood materials except fuel	235.4	243.5	246.6	249.6	255.6	264.7	275.5	276.5	276.6	286.6	285.1	286.1	293.3	298.6
Manufacturing industries	240.8	249.4	252.7	255.9	261.8	271.9	283.8	284.8	284.7	295.9	294.0	294.9	302.8	308.5
Construction	185.7	189.5	191.8	192.1	198.8	200.4	201.9	203.6	204.5	205.4	207.0	208.5	209.9	212.2
Crude fuel	463.7	480.1	485.0	495.1	504.3	513.9	525.2	529.2	556.8	563.1	573.9	586.0	599.4	611.4
Manufacturing industries	481.9	499.1	505.6	518.0	529.6	541.6	555.4	560.0	593.8	601.3	614.4	628.9	646.0	660.5
Nonmanufacturing industries	459.6	475.5	479.0	487.2	494.9	502.7	512.1	515.8	538.8	544.3	553.4	563.5	574.2	584.4
SPECIAL GROUPINGS														
Finished goods excluding foods	188.9	193.7	194.8	196.4	198.8	200.2	201.7	204.2	206.3	208.5	211.0	213.4	215.9	220.6
Finished consumer goods excluding Foods	183.7	188.3	189.1	191.0	193.3	194.9	196.7	199.3	202.1	205.2	208.4	212.1	215.9	220.6
Intermediate materials, supplies, and Components, excluding intermediate materials for food manufacturing and manufactured animal feeds	216.4	221.7	222.0	223.7	226.5	229.1	232.3	236.7	238.8	241.3	245.0	248.6	252.1	256.4
Intermediate foods and feeds	201.0	207.6	207.7	212.2	214.3	218.2	218.9	220.7	219.3	223.0	230.9	223.2	226.6	226.0
Crude materials for further processing excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco	316.6	326.8	331.0	335.9	344.2	356.4	370.6	372.4	379.2	389.5	392.6	396.8	407.6	416.5

NOTE: Data for June 1979 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

27. Producer Price Indexes, by commodity groupings¹

[1967 = 100 unless otherwise specified]

Code	Commodity group and subgroup	Annual average 1978	1978			1979									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	All commodities	209.3	214.9	215.7	217.5	220.8	224.1	226.7	230.0	232.0	233.5	236.6	238.1	241.7	245.2
	All commodities (1957-59 = 100)	222.1	232.7	228.9	230.8	234.2	237.7	240.5	243.7	245.7	247.7	251.0	252.3	256.1	260.2
	Farm products and processed foods and feeds	206.6	213.2	212.3	216.2	221.1	227.2	229.0	244.0	230.8	229.0	232.0	227.3	231.7	230.6
	Industrial commodities	209.4	214.7	216.0	217.2	220.0	222.5	225.4	229.0	231.6	234.0	237.2	240.3	243.8	248.5
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products	212.5	219.4	218.2	222.7	230.4	240.9	242.8	223.3	245.4	242.8	246.8	238.5	241.0	239.5
01-1	Fresh and dried fruits and vegetables	216.5	214.2	207.0	221.6	233.7	263.0	235.7	234.7	228.2	226.4	226.6	241.6	208.2	217.8
01-2	Grains	182.5	182.0	189.0	184.7	184.4	189.3	192.0	198.3	210.3	218.7	247.4	229.1	224.4	229.0
01-3	Livestock	220.1	235.1	222.4	230.1	247.3	266.5	275.8	284.0	280.7	284.0	256.0	240.2	256.4	251.7
01-4	Live poultry	199.8	184.9	192.4	198.5	206.0	217.8	217.6	209.4	216.3	182.9	183.8	171.9	173.5	162.0
01-5	Plant and animal fibers	193.4	210.3	211.5	212.8	213.6	205.1	197.8	197.8	207.6	219.5	207.6	207.9	211.3	212.9
01-6	Fluid milk	219.7	231.8	235.8	241.2	241.8	244.6	243.7	242.4	242.0	243.8	247.0	250.0	258.5	258.5
01-7	Eggs	158.6	156.3	177.9	189.0	178.5	176.7	199.9	185.5	163.8	170.7	167.6	166.8	175.4	155.9
01-8	Hay, hayseeds, and oilseeds	215.8	221.4	227.7	234.0	240.1	246.1	249.5	248.3	240.7	258.4	260.1	251.9	240.6	235.1
01-9	Other farm products	274.9	276.5	285.9	271.0	269.7	253.6	254.6	255.1	264.1	281.0	311.9	310.8	315.9	317.6
02	Processed foods and feeds	202.6	209.0	208.2	211.8	215.2	218.9	220.5	222.3	222.0	220.6	223.0	220.3	225.7	224.8
02-1	Cereal and bakery products	190.3	193.3	196.2	196.8	197.2	199.1	200.1	203.0	204.9	206.3	210.5	215.1	217.7	219.2
02-2	Meats, poultry, and fish	217.1	228.2	220.9	229.2	240.3	248.5	250.6	253.0	250.4	241.4	237.7	225.5	239.8	234.4
02-3	Dairy products	188.4	197.0	199.6	202.8	203.5	203.2	204.9	207.1	207.9	208.0	209.0	215.2	218.3	218.2
02-4	Processed fruits and vegetables	202.6	210.1	216.3	218.4	218.5	219.5	219.6	220.5	221.4	221.5	223.1	224.4	225.0	223.3
02-5	Sugar and confectionery	197.8	205.4	202.6	204.5	204.8	208.4	208.4	208.7	207.6	211.1	215.7	218.3	217.3	218.6
02-6	Beverages and beverage materials	200.0	201.1	201.4	201.0	200.9	201.1	201.2	201.5	205.3	208.5	213.7	215.9	217.9	219.2
02-7	Fats and oils	225.3	232.9	227.6	227.6	229.7	237.5	238.6	246.2	241.8	243.6	253.5	251.9	253.5	246.2
02-8	Miscellaneous processed foods	199.0	200.3	203.8	204.1	206.7	208.0	217.5	219.3	220.2	211.1	212.7	217.6	218.8	220.6
02-9	Manufactured animal feeds	197.4	201.1	205.3	211.9	211.3	217.2	215.7	215.6	210.8	220.5	235.2	216.5	219.5	224.3
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel	159.8	162.3	163.2	163.6	164.1	164.2	165.2	166.4	167.2	168.4	169.2	170.4	171.3	171.9
03-1	Synthetic fibers (12/75 = 100)	109.6	109.4	110.6	110.6	113.0	113.5	113.6	115.1	117.4	118.5	119.8	120.9	123.9	125.6
03-2	Processed yarns and threads (12/75 = 100)	102.4	104.0	105.3	104.7	105.3	105.3	107.0	106.8	107.8	108.6	109.5	110.3	111.7	112.2
03-3	Gray fabrics (12/75 = 100)	118.6	126.5	126.7	125.9	125.6	123.2	123.1	124.5	124.7	125.4	128.1	128.9	128.7	129.8
03-4	Finished fabrics (12/75 = 100)	103.8	104.5	104.8	106.0	103.5	104.1	105.4	105.9	107.0	107.6	107.9	108.9	109.0	108.7
03-81	Apparel	152.4	154.1	155.3	155.5	157.4	157.6	158.3	159.8	159.8	160.2	160.1	161.1	161.6	162.1
03-82	Textile housefurnishings	178.6	181.0	180.5	183.4	181.8	186.0	187.4	188.0	188.0	189.3	189.9	190.5	193.9	194.6
04	Hides, skins, leather, and related products	200.0	213.0	215.8	216.2	223.4	232.2	253.3	258.9	269.6	268.0	262.2	258.0	250.7	253.6
04-1	Hides and skins	360.5	427.9	417.0	401.3	452.8	497.8	639.6	642.2	666.9	611.0	566.5	511.9	465.3	478.8
04-2	Leather	238.6	269.4	278.7	279.6	292.8	309.2	371.9	393.6	429.4	414.6	385.2	365.9	330.0	343.6
04-3	Footwear	183.0	190.7	192.2	194.3	196.4	203.0	209.9	212.0	216.3	221.1	222.3	225.6	226.2	226.9
04-4	Other leather and related products	177.0	180.4	185.1	185.3	190.7	192.2	195.9	200.4	209.1	212.3	212.1	211.0	210.2	209.8
05	Fuels and related products and power	322.5	328.5	329.7	334.3	338.1	342.5	350.9	361.5	377.6	393.7	411.7	432.5	454.4	468.8
05-1	Coal	430.0	443.9	442.2	443.7	443.6	444.0	445.3	447.1	450.8	452.0	452.8	454.5	452.8	454.9
05-2	Coke	411.8	418.8	418.8	418.8	421.2	423.7	428.5	430.1	430.6	430.6	430.6	430.6	430.6	431.2
05-3	Gas fuels ¹	428.7	429.2	433.9	444.6	449.9	458.1	471.0	477.4	507.2	522.3	549.9	569.0	599.7	619.1
05-4	Electric power	250.6	252.7	250.3	250.7	251.0	251.1	257.3	260.6	265.9	269.9	275.0	279.0	280.5	283.6
05-61	Crude petroleum ²	300.1	307.5	310.5	312.4	316.4	322.3	324.2	326.2	335.7	356.4	370.5	385.7	422.1	436.7
05-7	Petroleum products, refined ³	321.0	329.4	331.9	338.2	343.9	350.0	360.3	378.6	400.0	423.6	449.2	482.8	513.6	534.4
06	Chemicals and allied products	198.8	201.6	202.3	202.3	205.0	207.3	209.9	215.1	218.0	219.2	224.3	227.3	230.3	233.5
06-1	Industrial chemicals ⁴	225.6	228.1	227.4	229.1	234.0	237.4	239.7	248.2	255.6	259.3	269.8	275.6	278.9	284.2
06-21	Prepared paint	192.3	192.6	196.5	198.7	198.9	202.3	202.3	203.3	201.3	201.3	205.3	205.3	206.0	206.7
06-22	Paint materials	212.7	219.2	219.5	220.7	222.5	224.3	227.0	231.6	236.1	239.5	244.3	245.1	251.2	253.5
06-3	Drugs and pharmaceuticals	148.1	150.3	162.1	153.2	155.4	156.2	156.6	157.5	157.7	159.0	159.2	159.6	161.1	162.9
06-4	Fats and oils, inedible	315.8	340.0	361.2	332.9	336.1	367.9	398.5	448.7	418.3	374.1	381.6	376.4	379.9	366.9
06-5	Agricultural chemicals and chemical products	198.4	203.4	202.3	201.9	201.7	203.1	206.3	209.8	210.0	209.2	210.4	213.5	217.9	223.7
06-6	Plastic resins and materials	199.8	199.4	199.3	201.1	204.2	206.3	210.9	220.6	228.5	230.1	241.7	246.2	252.2	259.2
06-7	Other chemicals and allied products	181.8	184.0	184.3	182.3	184.3	184.7	186.5	186.9	188.9	190.5	191.9	193.9	195.8	196.5
07	Rubber and plastic products	174.8	178.1	179.4	179.7	180.8	183.2	185.9	188.8	190.8	193.1	195.5	197.9	200.3	202.4
07-1	Rubber and rubber products	185.3	190.4	192.5	192.8	194.7	197.6	199.4	201.2	202.6	204.8	208.9	212.4	216.7	219.7
07-11	Crude rubber	187.2	193.9	197.3	197.3	197.9	201.1	204.8	211.6	214.2	222.0	225.4	232.2	231.2	235.2
07-12	Tires and tubes	179.2	184.5	187.7	188.8	191.5	194.1	195.0	196.1	197.3	198.9	205.4	210.1	214.6	217.9
07-13	Miscellaneous rubber products	189.6	194.0	199.2	193.7	195.1	198.1	200.3	201.3	202.6	203.5	205.0	206.1	211.7	214.2
07-2	Plastic products (6/78 = 100)	101.5	101.8	102.0	102.3	103.5	105.7	108.0	109.5	111.0	111.5	112.3	112.8	113.6	
08	Lumber and wood products	276.0	284.2	290.0	288.6	290.2	293.9	300.5	304.9	302.8	299.8	300.2	304.4	309.7	308.8
08-1	Lumber	322.4	334.5	342.0	339.1	336.6	339.9	350.5	355.4	354.8	354.8	355.2	365.2	373.8	370.2
08-2	Millwork	235.4	239.8	241.4	241.6	244.5	251.5	257.8	266.0	261.6	258.9	252.3	249.2	250.9	255.6
08-3	Plywood	235.6	240.3	250.0	249.0	257.4	257.1	254.7	252.4	249.3	238.6	249.9	253.9	258.1	254.4
08-4	Other wood products	211.8	220.6	221.5	222.1	223.2	226.2	232.2	235.5	238.4	238.5	237.4	237.4	238.0	237.7

See footnotes at end of table.

27. Continued—Producer Price Indexes, by commodity groupings¹

[1967 = 100 unless otherwise specified]

Code	Commodity groups and subgroups	Annual average 1978	1978					1979									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.		
INDUSTRIAL COMMODITIES—Continued																	
09	Pulp, paper, and allied products	195.6	202.4	203.9	205.2	207.0	208.8	212.3	215.0	216.2	216.6	218.1	221.9	222.8	227.2		
09-1	Pulp, paper, and products, excluding building paper and board	195.6	202.6	204.2	205.7	207.7	209.5	213.2	216.0	217.2	217.8	219.3	223.2	224.1	228.6		
09-11	Woodpulp	266.5	282.0	281.6	281.6	291.3	291.4	294.3	303.8	306.9	308.3	321.2	322.5	322.5	339.4		
09-12	Wastepaper	191.2	188.4	191.5	192.2	192.9	194.1	203.2	206.5	206.2	207.2	207.9	206.6	206.7	206.7		
09-13	Paper	206.1	213.0	214.0	214.6	217.9	221.2	223.3	226.3	227.2	227.5	228.4	229.6	230.6	239.0		
09-14	Paperboard	179.6	186.1	186.9	187.4	188.5	190.2	192.9	197.9	199.2	199.8	201.5	205.0	209.5	211.2		
09-15	Converted paper and paperboard products	185.6	193.1	195.3	197.4	198.3	199.8	204.1	205.8	207.0	207.6	208.3	213.7	213.9	216.5		
09-2	Building paper and board	187.4	189.5	188.7	186.6	184.1	183.6	182.6	183.4	183.3	180.8	179.7	180.9	184.4	185.5		
10	Metals and metal products	227.1	234.1	235.5	236.6	241.9	247.3	251.7	256.0	256.2	258.2	260.6	261.6	263.6	269.4		
10-1	Iron and steel	253.6	259.9	261.7	263.2	272.4	274.9	279.9	280.2	279.5	283.2	286.2	285.9	285.3	289.0		
10-13	Steel mill products	254.5	262.1	262.0	262.1	271.5	271.8	272.5	275.0	276.7	277.3	284.2	284.6	284.8	288.4		
10-2	Nonferrous metals	207.8	217.1	218.2	219.0	223.5	239.2	246.6	259.6	258.2	259.7	261.5	262.3	269.3	282.8		
10-3	Metal containers	243.4	254.6	254.5	254.4	256.8	256.8	264.5	270.1	268.5	267.3	267.5	267.7	267.0	276.7		
10-4	Hardware	200.4	205.9	208.4	210.7	211.3	213.3	214.2	215.8	216.9	217.1	219.1	220.3	221.4	223.8		
10-5	Plumbing fixtures and brass fittings	199.1	202.3	202.2	203.6	204.3	207.8	209.7	212.0	213.8	217.0	219.2	222.2	222.9	223.4		
10-6	Heating equipment	174.4	176.9	177.2	179.1	180.1	180.9	183.4	183.8	185.7	185.2	186.1	187.9	191.3	191.9		
10-7	Fabricated structural metal products	226.4	231.5	232.4	233.5	238.4	240.5	241.3	243.8	247.0	248.2	250.6	252.3	253.2	255.6		
10-8	Miscellaneous metal products	212.0	218.1	219.9	220.8	222.0	223.4	225.2	227.0	228.5	230.1	232.6	236.3	237.4	239.1		
11	Machinery and equipment	196.1	200.5	202.7	203.8	205.1	206.5	207.9	209.8	211.4	212.4	214.2	215.7	217.6	219.6		
11-1	Agricultural machinery and equipment	213.1	218.6	220.6	221.9	222.8	223.9	224.8	226.4	228.3	229.4	230.0	232.4	236.6	238.8		
11-2	Construction machinery and equipment	232.9	240.4	242.3	243.8	245.5	247.9	248.7	251.7	253.7	254.0	256.5	258.0	258.5	262.9		
11-3	Metalworking machinery and equipment	217.0	223.8	226.3	228.2	230.4	232.0	233.0	235.3	237.6	239.1	241.1	243.2	246.1	249.1		
11-4	General purpose machinery and equipment	216.6	221.5	223.8	225.1	226.3	227.7	230.4	232.6	234.0	235.1	236.5	237.8	239.6	242.1		
11-6	Special industry machinery and equipment	223.0	230.2	232.8	233.9	236.2	237.0	239.1	243.4	245.1	246.1	249.5	250.8	251.5	253.9		
11-7	Electrical machinery and equipment	164.9	167.5	169.6	170.5	171.2	172.8	173.8	175.0	176.5	177.6	179.3	181.0	182.7	184.1		
11-9	Miscellaneous machinery	194.7	198.4	200.2	200.6	202.7	203.4	204.0	205.4	207.1	207.4	209.4	209.8	211.8	212.9		
12	Furniture and household durables	160.4	162.9	163.5	164.6	166.6	167.9	168.3	168.7	169.6	170.2	170.1	170.7	171.7	174.1		
12-1	Household furniture	173.5	177.9	178.8	179.3	181.0	181.3	181.8	182.7	184.8	185.3	185.8	186.2	188.0	189.3		
12-2	Commercial furniture	201.5	204.5	204.9	207.3	214.4	221.2	221.2	221.7	221.9	221.8	222.7	222.7	222.7	223.3		
12-3	Floor coverings	141.6	142.0	142.0	142.3	143.4	143.6	144.0	144.4	146.0	146.5	148.9	149.9	150.3	151.8		
12-4	Household appliances	153.0	154.5	155.6	155.7	157.0	158.3	158.8	158.7	159.3	160.0	161.0	161.9	162.7	163.2		
12-5	Home electronic equipment	90.2	91.3	91.5	92.3	92.2	92.3	92.3	92.3	92.4	92.8	87.7	87.7	87.8	87.8		
12-6	Other household durable goods	203.1	208.0	208.7	212.3	216.0	216.6	217.9	218.6	219.5	220.6	222.8	224.8	227.4	244.1		
13	Nonmetallic mineral products	222.8	229.1	230.0	231.1	238.3	240.5	240.8	243.4	245.6	246.9	249.2	249.6	252.2	255.6		
13-11	Flat glass	172.8	173.6	174.0	178.7	181.1	183.1	183.1	183.1	183.1	184.0	184.0	184.1	184.5	184.7		
13-2	Concrete ingredients	217.7	221.1	223.4	223.5	235.9	238.2	239.8	242.0	242.5	243.3	243.9	244.7	245.6	246.9		
13-3	Concrete products	214.0	222.2	222.9	224.2	235.6	236.4	237.8	240.5	241.6	243.7	245.2	246.4	248.6	249.4		
13-4	Structural clay products excluding refractories	197.2	202.4	204.4	206.5	209.7	210.7	212.8	214.8	215.7	216.5	220.3	222.4	223.8	221.1		
13-5	Refractories	216.5	225.4	226.1	226.1	227.5	227.8	228.3	228.4	228.5	232.6	241.6	242.4	243.1	245.0		
13-6	Asphalt roofing	292.0	305.2	305.2	305.2	306.8	317.8	303.1	316.4	317.9	323.0	328.2	322.2	332.7	334.0		
13-7	Gypsum products	229.1	236.8	242.1	242.7	247.6	250.6	251.0	252.2	248.8	251.3	251.8	252.3	254.9	255.3		
13-8	Glass containers	244.4	250.7	250.7	250.7	250.7	250.7	250.7	250.7	265.2	265.2	265.5	265.5	265.5	265.5		
13-9	Other nonmetallic minerals	275.6	283.2	283.6	283.6	288.8	293.7	294.5	300.0	303.0	302.0	310.1	309.9	318.8	341.2		
14	Transportation equipment (12/68 = 100)	173.5	179.2	180.1	180.5	182.7	183.5	183.8	186.8	187.2	187.5	188.0	187.2	186.2	193.6		
14-1	Motor vehicles and equipment	176.0	181.8	182.5	182.8	185.0	185.9	186.1	189.4	189.8	190.1	190.4	189.2	188.1	196.3		
14-4	Railroad equipment	252.8	260.3	261.5	261.8	266.4	268.0	268.9	271.7	271.6	274.7	280.5	280.9	281.6	286.3		
15	Miscellaneous products	184.3	190.8	189.2	193.6	197.7	199.8	200.6	201.4	203.3	205.2	206.1	208.2	212.3	216.8		
15-1	Toys, sporting goods, small arms, ammunition	163.2	165.1	165.3	164.8	170.4	171.0	171.5	173.2	174.3	174.7	176.9	177.9	179.9	181.2		
15-2	Tobacco products	198.5	203.9	204.0	204.0	213.5	213.6	214.0	214.4	214.4	214.4	214.6	221.1	221.7	221.9		
15-3	Notions	182.0	183.4	183.4	183.4	188.2	188.2	190.2	190.2	190.6	190.6	192.2	192.1	192.1	195.8		
15-4	Photographic equipment and supplies	145.7	148.7	148.7	148.7	150.1	150.2	150.2	150.1	150.6	151.6	152.1	152.0	154.1	157.3		
15-51	Mobile Homes (12/74 = 100)	126.4	129.5	130.3	130.8	131.7	132.5	133.8	135.2	137.2	137.9	136.5	137.7	139.5	142.5		
15-9	Other miscellaneous products	210.6	225.1	218.7	234.8	238.7	244.0	245.5	246.1	250.6	255.8	257.6	260.1	270.5	280.9		

¹ Prices for natural gas are lagged 1 month.

² Includes only domestic production.

³ Most prices for refined petroleum products are lagged 1 month.

⁴ Some prices for industrial chemicals are lagged 1 month.

⁵ Not available.

NOTE: Data for June 1979 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

28. Producer Price Indexes, for special commodity groupings

[1967 = 100 unless otherwise specified]

Commodity grouping	Annual average 1978	1978			1979									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All commodities — less farm products	208.4	213.8	214.8	216.3	219.3	222.0	224.7	228.0	230.1	232.0	235.0	237.3	241.0	244.9
All foods	206.4	212.5	211.7	215.5	219.9	225.0	225.9	227.7	226.4	223.8	225.0	224.5	226.2	226.8
Processed foods	206.7	213.6	211.9	215.7	219.8	223.5	225.6	227.8	227.5	224.7	226.1	224.5	230.6	228.9
Industrial commodities less fuels	197.2	202.4	203.6	204.6	207.3	209.6	211.9	214.7	216.0	217.0	218.7	220.1	221.6	225.4
Selected textile mill products (Dec. 1975 = 100)	108.8	109.7	110.0	110.9	109.1	110.8	111.6	112.3	112.8	113.5	113.9	115.0	115.7	116.0
Hosiery	106.3	105.2	109.1	108.7	110.1	109.9	110.5	112.5	112.5	112.7	114.1	113.0	112.7	113.0
Underwear and nightwear	158.9	160.2	160.3	162.5	164.6	166.3	167.1	167.3	167.7	168.3	168.5	170.8	170.8	171.2
Chemicals and allied products, including synthetic rubber and manmade fibers and yarns	190.5	192.7	193.1	193.6	196.3	198.0	200.0	204.1	207.6	209.5	214.4	217.4	220.5	223.7
Pharmaceutical preparations	140.6	142.8	144.7	145.8	148.1	149.0	149.4	150.0	150.1	151.7	151.7	152.0	153.6	155.6
Lumber and wood products, excluding millwork and other wood products	298.3	308.1	313.9	314.1	314.8	317.0	323.7	326.4	325.1	321.7	325.5	333.7	341.0	337.4
Special metals and metal products	209.6	216.1	217.1	217.9	220.0	225.6	228.2	232.7	232.4	233.7	235.2	235.4	236.1	242.9
Fabricated metal products	216.2	222.1	223.5	224.5	227.0	228.6	230.6	232.9	234.6	235.7	237.8	240.1	241.0	243.7
Copper and copper products	155.6	161.2	161.6	164.1	168.8	188.2	197.9	212.1	199.0	193.0	191.9	196.6	200.5	211.5
Machinery and motive products	190.4	195.5	196.8	197.7	199.6	200.8	201.7	204.1	205.3	206.0	207.2	207.7	208.3	212.8
Machinery and equipment, except electrical	214.3	219.8	221.7	223.0	224.9	226.1	227.7	230.0	231.8	232.6	234.6	235.9	237.8	240.2
Agricultural machinery, including tractors	216.3	222.6	224.2	225.2	227.6	228.5	229.6	230.8	232.1	233.8	234.2	237.1	242.6	244.7
Metalworking machinery	228.8	237.7	239.9	242.5	245.2	247.4	248.9	251.2	254.3	256.8	259.8	261.5	265.3	269.5
Numerically controlled machine tools (Dec. 1971 = 100)	179.1	182.6	186.2	186.3	188.9	190.9	192.6	192.7	195.7	196.8	201.0	204.4	206.6	208.7
Total tractors	228.7	236.6	236.9	238.3	240.8	242.5	243.1	245.4	247.7	248.2	249.9	252.5	254.8	259.4
Agricultural machinery and equipment less parts	212.7	217.2	220.1	221.2	223.5	224.4	225.5	226.7	228.1	229.5	230.0	232.5	237.5	239.5
Farm and garden tractors less parts	216.1	223.1	223.3	224.6	225.6	225.8	226.7	228.5	230.5	231.8	233.3	237.0	243.4	246.3
Agricultural machinery excluding tractors less parts	216.7	222.5	225.2	225.9	229.5	230.9	232.1	233.0	233.6	235.7	235.3	237.4	242.2	243.7
Industrial valves	232.3	237.5	239.1	240.7	245.4	247.8	249.5	252.4	255.0	255.8	255.0	257.0	259.1	260.3
Industrial fittings	232.7	236.6	244.5	244.5	249.9	249.9	252.0	255.5	259.3	260.4	260.8	260.8	262.8	271.7
Abrasive grinding wheels	208.1	217.2	220.2	220.2	220.2	220.2	220.3	221.6	222.8	222.8	222.8	224.6	224.6	235.3
Construction materials	228.3	234.2	236.3	237.0	241.4	244.1	246.9	250.0	250.3	250.3	252.4	254.1	256.6	258.2

NOTE: Data for June 1979 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

29. Producer Price Indexes, by durability of product

[1967 = 100]

Commodity grouping	Annual average 1978	1978			1979									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total durable goods	204.9	210.7	212.1	213.0	216.3	218.9	221.0	223.9	224.7	225.8	227.2	228.0	229.7	234.0
Total nondurable goods	211.9	217.3	217.6	219.9	223.4	227.3	230.4	234.1	236.9	238.8	243.5	245.5	250.8	253.5
Total manufactures	204.2	209.7	210.6	212.0	215.0	217.5	219.7	223.1	225.0	226.5	229.4	231.5	234.9	238.6
Durable	204.7	210.5	211.8	212.7	215.8	218.0	219.8	222.7	223.8	224.6	226.2	227.2	229.0	233.3
Nondurable	203.0	208.0	208.5	210.5	213.4	216.1	219.0	222.8	225.6	227.8	232.2	235.0	240.9	243.7
Total raw or slightly processed goods	234.6	240.7	241.1	244.3	250.2	258.5	263.3	266.1	268.2	269.7	274.4	271.8	276.6	278.6
Durable	209.6	214.3	219.7	225.0	235.4	253.9	273.6	272.5	262.9	272.8	265.3	259.8	255.7	259.0
Nondurable	235.6	241.8	241.9	244.9	250.4	258.0	261.6	264.7	267.6	268.5	274.1	271.8	277.2	279.1

NOTE: Data for June 1979 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

30. Producer Price Indexes for the output of selected SIC Industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry Description	Annual average 1978	1978			1979									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
MINING															
1011	Iron ores (12/75 = 100)	121.9	125.2	127.3	127.3	127.3	127.3	127.3	131.9	131.9	136.0	136.0	138.8	138.1	140.2
1092	Mercury ores (12/75 = 100)	126.6	126.7	125.4	136.2	153.3	168.7	178.3	202.1	237.5	277.0	270.8	245.8	252.1	275.0
1211	Bituminous coal and lignite	430.2	444.3	442.6	441.0	444.0	444.4	445.7	447.5	451.3	452.5	453.4	455.1	453.2	455.4
1311	Crude petroleum and natural gas	358.2	369.8	373.9	380.6	388.2	397.2	403.8	407.6	427.2	444.1	459.0	475.8	506.8	522.0
1442	Construction sand and gravel	194.6	199.0	199.6	200.2	208.0	210.4	210.9	214.1	216.0	217.0	219.2	219.9	220.9	223.5
	Kaolin and ball clay (6/76 = 100)	111.8	111.8	123.2	123.2	125.4	125.4	125.4	125.4	125.4	125.5	125.5	125.5	125.5	126.7
MANUFACTURING															
2011	Meat packing plants	216.7	230.2	218.6	226.8	243.6	250.8	256.6	265.0	259.2	249.1	243.8	229.3	247.2	239.1
2013	Sausages and other prepared meats	215.2	230.2	225.9	228.7	223.8	230.4	235.6	224.4	227.7	217.1	214.6	203.3	211.6	213.0
2016	Poultry dressing plants	192.5	182.7	187.0	192.1	194.6	204.6	206.1	199.7	203.5	177.8	178.4	169.6	171.2	163.1
2021	Creamery butter	205.2	216.8	225.3	227.0	211.9	211.1	216.1	224.7	225.3	225.3	227.5	237.9	240.6	240.1

See footnotes at end of table.

30. Continued—Producer Price Indexes for the output of selected SIC Industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1978	1978			1979										
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	
MANUFACTURING—Continued																
2022	Cheese natural and processed (12/72 = 100)	169.6	181.2	182.9	184.4	184.2	179.4	182.5	186.8	185.2	185.6	186.3	195.4	200.8	196.8	
2024	Ice cream and frozen desserts (12/72 = 100)	154.8	158.3	160.0	162.1	166.2	166.7	167.3	171.0	171.5	171.5	175.0	176.1	177.5		
2033	Canned fruits and vegetables	193.2	198.9	201.3	202.8	203.3	204.4	205.2	206.2	207.2	207.5	209.7	210.5	211.9	213.0	
2034	Dehydrated food products (12/73 = 100)	131.3	153.9	178.3	179.6	179.6	181.2	180.9	181.7	182.1	181.0	180.6	180.7	170.0	158.2	
2041	Flour mills (12/71 = 100)	147.0	153.3	159.0	156.8	155.8	160.5	157.5	158.1	166.7	174.6	189.1	176.9	183.4	184.6	
2044	Rice milling	207.6	164.5	166.0	168.6	163.6	166.6	171.0	206.8	206.8	206.8	206.8	218.7	223.5	227.3	
2048	Prepared foods, n.e.c. (12/75 = 100)	107.3	107.7	110.8	114.7	115.6	118.4	118.3	117.5	115.2	118.9	128.5	119.7	121.2	123.9	
2061	Raw cane sugar	190.7	207.5	193.0	196.2	191.6	198.2	195.7	197.5	195.6	207.0	208.0	216.8	216.7	224.3	
2063	Beet sugar	188.5	190.4	194.3	194.4	197.0	197.0	198.6	199.3	199.7	199.7	201.9	199.2	200.2	202.6	
2067	Chewing gum	218.0	222.6	222.7	241.5	241.6	242.5	242.5	242.6	242.2	242.2	242.2	242.9	242.9	242.9	
2074	Cottonseed oil mills	183.1	194.5	192.3	196.4	198.7	204.5	202.8	198.5	192.5	210.4	224.5	214.1	217.9	214.9	
2075	Soybean oil mills	225.6	231.5	224.0	237.7	233.1	241.2	242.0	244.7	237.7	251.1	262.9	250.0	248.4	244.8	
2077	Animal and marine fats and oils	287.9	309.7	323.1	305.1	300.5	344.5	362.6	393.1	363.8	335.3	352.0	321.4	333.8	333.7	
2083	Malt	181.5	180.7	180.7	180.8	180.8	190.8	190.8	190.8	190.8	201.4	201.4	201.4	201.4	214.9	
2085	Distilled liquor, except brandy (12/75 = 100)	106.7	107.7	107.8	108.9	108.9	108.4	109.4	109.4	113.6	113.6	113.6	116.2	117.1	117.1	
2091	Canned and cured seafoods (12/73 = 100)	136.4	137.0	137.2	137.4	137.3	137.9	138.5	139.2	140.9	142.1	146.4	146.1	150.8	151.1	
2092	Fresh or frozen packaged fish	303.8	323.3	331.6	339.0	338.1	361.9	359.4	375.8	382.4	397.6	404.6	392.4	390.1	400.9	
2095	Roasted coffee (12/72 = 100)	262.3	246.1	241.8	235.7	229.4	222.5	221.6	220.5	231.7	244.2	271.0	276.6	279.2	280.0	
2098	Macaroni and spaghetti	176.9	182.1	184.7	184.7	184.7	184.7	184.7	184.7	186.6	188.6	192.7	195.7	199.5	210.4	
2111	Cigarettes	204.6	210.7	210.7	210.7	221.1	221.2	221.3	221.4	221.4	221.4	221.4	228.9	229.1	229.2	
2121	Cigars	141.4	142.0	142.0	141.7	142.8	143.0	145.0	145.4	145.4	145.3	147.3	147.6	147.6	147.4	
2131	Chewing and smoking tobacco	222.0	224.0	224.7	225.1	235.3	236.4	240.9	245.9	245.9	245.9	246.4	246.4	255.8	260.4	
2211	Weaving mills, cotton (12/72 = 100)	181.1	184.4	186.1	187.9	188.8	190.1	190.4	191.8	192.7	194.3	196.0	196.8	198.6	200.7	
2221	Weaving mills, synthetic (12/77 = 100)	109.0	116.1	116.1	115.5	114.5	112.7	112.4	113.3	113.6	114.1	116.3	116.3	116.3	116.9	
2251	Women's hosiery, except socks (12/75 = 100)	91.5	90.0	95.7	94.8	95.1	94.3	94.4	97.3	97.3	97.6	99.6	98.1	97.5	98.0	
2254	Knit underwear mills	164.1	164.9	165.1	166.9	169.3	169.9	172.6	172.8	173.1	173.3	172.9	174.0	174.0	174.3	
2257	Circular knit fabric mills (6/76 = 100)	98.5	99.2	98.8	99.2	91.2	91.7	93.9	93.2	94.1	95.8	95.9	96.3	96.0	96.4	
2261	Finishing plants, cotton (6/76 = 100)	111.0	111.3	114.2	115.9	116.5	117.4	118.2	119.0	120.8	120.9	122.5	123.2	124.0	126.1	
2262	Finishing plants, synthetics, silk (6/76 = 100)	101.4	103.5	104.1	105.4	104.6	105.0	105.2	105.9	106.3	107.0	107.4	107.9	108.3	109.2	
2271	Woven carpets and rugs (12/75 = 100)	114.7	115.8	115.8	115.8	115.8	115.8	116.0	116.0	116.7	117.1	(¹)	(¹)	(¹)	(¹)	
2272	Tufted carpets and rugs	125.3	125.5	125.5	125.8	125.8	126.0	126.5	127.0	127.7	128.1	127.4	128.5	129.0	129.5	
2281	Yarn mills, except wool (12/71 = 100)	167.4	170.8	170.6	170.5	170.9	171.4	172.7	173.1	174.5	175.7	177.4	177.2	179.4	181.2	
2282	Throwing and winding mills (6/76 = 100)	99.2	99.5	103.3	101.7	103.1	102.7	106.0	104.4	106.3	107.5	108.5	109.8	111.3	111.0	
2284	Thread mills (6/76 = 100)	114.6	119.1	119.1	119.2	120.3	120.3	120.3	120.4	120.4	120.4	120.5	125.7	128.1	128.3	
2298	Cordage and twine (12/77 = 100)	99.3	98.4	98.4	98.4	98.5	98.6	98.6	101.7	102.8	105.4	105.4	113.5	115.1	114.9	
2311	Men's and boys' suits and coats	194.3	202.3	202.5	200.5	199.3	199.6	199.9	203.9	204.2	204.5	204.1	206.4	206.4	206.6	
2321	Men's and boys' shirts and nightwear	180.8	181.8	185.3	187.7	191.2	191.4	191.6	191.8	192.4	193.5	194.2	195.9	195.8	194.5	
2322	Men's and boys' underwear	180.6	181.1	181.2	182.6	184.5	184.6	188.7	188.7	188.7	188.7	188.7	190.0	190.0	190.0	
2323	Men's and boys' neckwear (12/75 = 100)	102.3	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	110.9	110.9	
2327	Men's and boys' separate trousers	152.7	156.6	157.4	157.4	157.7	157.8	157.8	162.3	162.3	162.5	162.5	162.7	162.7	162.9	
2328	Men's and boys' work clothing	195.2	190.1	195.4	195.7	198.5	199.8	200.0	206.5	206.5	209.0	208.7	210.5	210.7	213.1	
2331	Women's and misses' blouses and waists (6/78 = 100)	102.2	102.2	102.3	102.6	99.1	99.2	99.1	100.3	100.5	102.6	102.7	102.8	102.8	103.0	
2335	Women's and misses' dresses (12/77 = 100)	100.7	101.1	101.1	101.1	105.0	104.9	106.6	106.6	105.9	105.9	106.6	107.5	108.3	108.7	
2341	Women's and children's underwear (12/72 = 100)	132.1	133.5	133.7	138.7	141.2	142.3	142.3	142.6	143.3	143.3	144.2	145.3	145.3	146.7	
2342	Brassieres and allied garments (12/75 = 100)	111.7	112.4	112.4	112.5	113.5	116.0	116.0	116.1	116.2	117.5	117.5	117.8	117.8	117.8	
2361	Children's dresses and blouses (12/77 = 100)	(¹)	104.0	105.7	105.4	105.4	105.4	105.5	106.7	106.7	102.1	102.4	102.4	103.7	105.7	
2381	Fabric dress and work gloves	214.4	217.4	226.2	226.4	227.3	232.2	232.2	241.5	243.9	243.9	245.4	245.4	245.4	245.4	
2394	Canvas and related products (12/77 = 100)	99.6	97.7	98.5	99.6	105.9	105.9	105.9	105.9	105.9	106.9	108.4	108.4	111.4	111.4	
2396	Automotive and apparel trimmings (12/77 = 100)	106.3	107.1	107.1	107.1	107.1	107.1	107.1	107.1	107.1	114.3	114.3	114.3	114.3	114.3	
2421	Sawmills and planing mills (12/71 = 100)	228.9	238.3	244.1	240.1	239.5	241.9	249.5	252.5	251.6	250.9	251.3	259.0	265.6	262.2	
2436	Softwood veneer and plywood (12/75 = 100)	150.1	152.7	158.8	157.6	164.2	162.2	160.1	157.3	151.1	140.7	148.4	153.2	156.2	153.3	
2439	Structural wood members, n.e.c. (12/75 = 100)	136.2	139.7	142.3	142.3	148.1	148.3	150.1	150.1	150.0	150.0	149.9	150.8	150.8	158.2	
2448	Wood pallets and skids (12/75 = 100)	149.4	158.7	158.9	158.8	160.6	161.8	163.8	166.8	166.7	167.0	166.9	166.8	167.9	167.9	
2451	Mobile homes (12/74 = 100)	126.5	129.6	130.3	130.8	131.8	132.5	133.8	135.3	137.3	138.0	136.5	137.7	139.6	142.5	
2492	Particleboard (12/75 = 100)	159.7	152.3	150.0	146.9	143.0	141.9	142.7	143.8	141.6	137.4	134.3	134.7	138.5	139.6	
2511	Wood household furniture (12/71 = 100)	152.4	156.6	158.4	158.5	160.3	160.3	160.9	162.7	164.6	164.0	164.5	164.6	167.1	168.1	
2512	Upholstered household furniture (12/71 = 100)	143.1	145.6	145.7	145.8	146.9	146.9	147.6	147.4	149.2	149.4	150.1	150.3	151.6	151.8	
2515	Mattresses and bedsprings	156.3	157.7	157.5	160.0	162.3	162.9	162.9	163.1	163.2	164.1	164.3	165.7	165.7	168.8	
2521	Wood office furniture	194.4	199.6	200.4	200.5	207.2	213.1	213.1	214.2	214.3	214.2	216.8	216.8	216.8	217.6	
2611	Pulp mills (12/73 = 100)	178.5	184.3	183.7	183.7	187.1	187.3	189.9	192.5	195.2	196.6	206.2	207.4	207.5	215.2	
2621	Paper mills, except building (12/74 = 100)	115.7	120.6	121.2	121.5	123.7	124.7	126.0	128.5	129.3	129.5	130.3	131.2	131.6	135.2	
2631	Paperboard mills (12/74 = 100)	106.4	110.3	110.8	111.1	112.0	112.9	114.4	117.1	118.1	118.5	119.7	121.4	123.6	125.4	
2647	Sanitary paper products	251.4	255.9	262.9	267.3	267.4	267.6	269.2	270.8	271.7	271.9	273.8	283.6	283.6	286.4	
2654	Sanitary food containers	170.8	174.2	175.5	177.1	178.8	179.4	179.5	184.1	189.1	189.1	189.6	189.6	191.0	195.8	
2655																

30. Continued—Producer Price Indexes for the output of selected SIC Industries

[1967 = 100 unless otherwise specified]

1972 SIC code	Industry description	Annual average 1978	1978			1979									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
3021	Rubber and plastic footwear (12/71 = 100)	158.7	164.1	164.1	164.1	168.7	169.0	169.0	169.0	169.5	169.6	171.2	173.2	173.4	173.4
3031	Reclaimed rubber (12/73 = 100)	154.3	155.4	155.4	156.4	161.3	161.3	162.1	164.5	167.6	169.1	167.3	167.3	170.5	171.7
3079	Miscellaneous plastic products (6/78 = 100)	101.4	101.8	102.0	102.1	103.4	105.4	107.5	109.0	110.7	111.6	112.4	112.9	113.9	
3111	Leather tanning and finishing (12/77 = 100)	119.1	134.7	139.8	140.1	135.9	143.7	173.8	182.9	201.3	195.8	181.8	172.9	155.2	161.9
3142	House slippers (12/75 = 100)	122.5	127.1	127.2	127.1	129.6	134.7	136.3	136.3	138.5	142.0	143.2	136.2	136.2	136.9
3143	Men's footwear, except athletic (12/75 = 100)	127.1	132.2	133.9	133.9	135.2	141.0	145.6	147.6	152.8	155.4	155.4	158.2	159.0	159.3
3144	Women's footwear, except athletic	164.1	172.5	173.7	173.7	176.3	178.4	189.2	190.3	192.2	195.4	198.2	201.5	201.6	202.3
3171	Women's handbags and purses (12/75 = 100)	111.4	114.3	114.3	114.3	123.0	123.0	123.0	123.0	131.7	131.8	131.8	131.8	131.8	131.8
3211	Flat glass (12/71 = 100)	142.7	143.5	143.5	147.5	149.0	150.8	150.8	150.8	150.8	151.8	151.8	151.9	152.3	152.6
3221	Glass containers	244.3	250.6	250.9	250.6	250.7	250.7	250.7	250.7	265.2	265.2	265.4	265.4	265.4	265.4
3241	Cement, hydraulic	251.2	256.2	256.0	256.0	275.4	278.8	280.3	283.1	283.2	283.7	282.8	282.8	282.8	282.8
3251	Brick and structural clay tile	230.8	239.3	240.7	243.9	248.9	250.9	252.8	256.7	258.3	259.7	260.9	236.3	260.9	260.4
3253	Ceramic wall and floor tile (12/75 = 100)	107.7	108.4	111.5	111.5	111.6	111.6	113.0	113.0	113.0	113.0	120.2	120.2	120.2	120.1
3255	Clay refractories	221.4	230.9	231.7	231.7	233.4	233.2	234.1	234.4	234.6	236.9	247.9	248.1	248.5	251.7
3259	Structural clay products, n.e.c.	176.3	179.4	179.4	179.6	184.1	184.4	186.7	186.8	186.8	187.8	188.2	192.5	192.5	193.2
3261	Vitreous plumbing fixtures	189.7	192.9	192.6	194.3	195.1	198.6	198.9	201.6	204.6	206.8	209.2	212.4	212.8	214.5
3262	Vitreous china food utensils	268.8	284.1	284.1	284.4	284.4	290.6	290.6	290.6	290.6	290.6	297.5	297.5	297.5	297.9
3263	Fine earthenware food utensils	228.1	236.9	237.1	242.4	242.4	237.0	237.0	237.1	237.1	236.4	238.6	238.6	238.6	245.8
3269	Pottery products, n.e.c. (12/75 = 100)	122.2	127.9	127.9	129.6	129.6	129.2	129.2	129.2	129.2	129.0	130.9	130.9	130.9	133.2
3271	Concrete block and brick	202.0	208.2	211.8	211.9	223.0	223.1	227.0	230.8	232.6	232.7	232.7	235.7	237.8	240.0
3273	Ready-mixed concrete	217.6	225.8	225.9	227.7	240.0	241.1	241.7	244.5	245.2	247.5	249.6	250.5	252.2	253.0
3274	Lime (12/75 = 100)	129.5	131.3	131.6	133.1	136.2	136.6	137.5	139.8	140.1	141.9	142.9	144.3	144.7	147.7
3275	Gypsum products	229.5	237.2	242.5	243.1	248.1	251.1	251.5	252.7	249.4	251.9	252.3	252.8	255.4	255.9
3291	Abrasive products (12/71 = 100)	172.3	176.8	178.9	178.9	181.1	182.2	182.4	184.0	185.1	185.8	187.7	188.6	190.3	193.9
3297	Nonclay refractories (12/74 = 100)	133.6	138.6	139.0	139.0	139.8	140.3	140.4	140.5	140.5	143.9	148.1	149.1	149.7	150.1
3312	Blast furnaces and steel mills	262.3	270.3	270.5	270.7	279.9	280.3	281.1	283.5	285.3	285.8	292.6	292.9	293.2	296.3
3313	Electrometallurgical products (12/75 = 100)	94.8	96.3	96.3	98.4	103.5	104.0	104.0	106.8	111.7	112.3	116.5	116.5	116.0	116.2
3316	Cold finishing of steel shapes	241.0	247.4	247.4	247.4	258.1	258.3	258.4	259.1	259.8	261.3	270.6	271.0	271.0	271.9
3317	Steel pipes and tubes	255.2	261.6	258.6	258.7	265.0	265.1	265.8	265.0	264.5	264.9	268.9	270.2	271.4	272.8
3321	Gray iron foundries (12/68 = 100)	233.5	238.0	240.0	240.0	244.9	244.7	249.4	253.9	253.3	254.5	251.4	252.6	253.6	265.6
3333	Primary zinc	223.2	240.2	243.2	243.2	243.2	260.6	260.9	274.2	274.5	275.2	281.1	285.1	284.2	285.2
3334	Primary aluminum	217.4	220.2	220.3	220.3	220.3	226.1	232.4	235.8	237.4	238.5	241.6	244.2	248.2	256.0
3351	Copper rolling and drawing	170.2	175.6	177.2	179.0	184.2	199.9	211.0	220.1	215.6	211.7	211.2	213.4	216.8	223.3
3353	Aluminum sheet plate and foil (12/75 = 100)	137.6	141.6	142.4	143.2	145.8	146.4	146.5	148.0	148.7	148.8	149.5	149.7	150.0	150.8
3354	Aluminum extruded products (12/75 = 100)	134.3	135.8	137.3	138.6	141.1	141.6	142.5	146.1	147.5	147.6	149.9	151.8	152.2	153.5
3355	Aluminum rolling, drawing, n.e.c. (12/75 = 100)	119.7	121.7	121.9	122.8	125.2	126.5	127.5	129.6	131.5	131.6	131.5	132.2	133.5	136.8
3411	Metal cans	238.5	249.1	248.3	248.3	252.7	253.9	260.9	264.4	263.8	262.2	263.2	263.1	261.0	270.2
3425	Hand saws and saw blades (12/72 = 100)	147.9	149.4	153.8	155.5	157.7	157.8	157.9	159.6	161.9	162.5	162.6	165.7	166.2	166.9
3431	Metal sanitary ware	209.1	213.0	213.0	214.1	214.7	217.4	219.2	220.8	222.2	224.1	226.3	228.9	229.2	230.1
3465	Automotive stampings (12/75 = 100)	118.8	122.2	123.0	123.0	123.6	125.0	125.7	126.2	127.0	127.1	128.0	131.2	131.9	132.7
3482	Small arms ammunition (12/75 = 100)	119.5	120.4	121.2	124.2	129.3	129.3	125.9	128.3	130.4	131.4	138.3	138.3	138.3	137.5
3493	Steel springs, except wire	204.6	209.4	210.6	210.7	210.9	212.6	216.7	218.1	218.7	220.5	221.5	222.1	222.7	223.5
3494	Valves and pipe fittings (12/71 = 100)	185.5	189.3	192.8	193.4	196.1	197.6	199.0	201.4	203.6	204.2	204.0	205.0	206.4	209.5
3498	Fabricated pipe and fittings	265.5	274.3	276.4	276.4	276.6	276.7	276.8	284.9	288.2	290.7	294.8	294.8	294.9	297.0
3519	Internal combustion engines, n.e.c.	220.1	226.5	288.5	228.4	232.7	233.8	234.0	237.1	239.0	239.2	241.4	244.6	249.5	252.8
3531	Construction machinery (12/76 = 100)	114.0	117.5	118.5	119.2	120.0	121.1	121.6	123.0	123.9	124.0	125.3	126.0	126.3	128.4
3532	Mining machinery (12/72 = 100)	209.5	215.1	217.5	218.1	222.5	223.4	224.2	228.0	228.4	226.4	231.2	231.4	232.7	233.1
3533	Offroad machinery and equipment	246.2	272.0	274.6	275.6	279.5	281.4	281.8	283.5	288.4	290.0	292.1	293.2	296.7	300.5
3534	Elevators and moving stairways	204.2	209.5	210.8	211.5	211.7	214.1	213.4	213.8	213.6	214.2	215.1	214.6	216.5	216.8
3542	Machine tools, metal forming types (12/71 = 100)	213.6	223.9	225.5	228.8	231.6	233.3	234.1	237.9	238.8	240.6	244.5	245.0	247.9	249.6
3546	Power driven hand tools (12/76 = 100)	111.1	113.4	114.1	114.4	115.4	116.3	116.9	117.7	117.8	118.7	118.9	119.9	120.3	121.9
3552	Textile machinery (12/69 = 100)	179.9	184.1	184.7	186.4	189.0	189.6	190.4	191.6	191.7	192.6	195.0	196.8	198.2	199.2
3553	Woodworking machinery (12/72 = 100)	168.1	172.2	173.9	174.1	177.9	177.3	179.2	181.0	183.2	184.5	186.3	188.1	188.4	193.0
3576	Scales and balances, excluding laboratory	179.7	184.0	185.3	188.8	188.8	191.1	191.1	191.3	192.8	193.7	194.8	195.3	195.4	192.9
3592	Carburetors, pistons, rings, valves (6/76 = 100)	128.2	131.4	133.7	134.3	135.0	135.7	136.9	137.6	138.6	138.7	138.9	139.2	140.3	141.5
3612	Transformers	158.3	160.1	164.1	163.1	163.2	165.4	167.0	168.5	168.0	168.5	167.8	167.8	168.6	171.4
3623	Welding apparatus, electric (12/72 = 100)	178.1	181.6	182.6	184.0	184.8	186.0	186.6	187.3	191.5	191.9	193.1	193.8	194.9	196.2
3631	Household cooking equipment (12/75 = 100)	114.8	116.0	117.9	118.3	119.1	119.2	120.2	120.3	120.7	120.9	121.8	123.3	124.2	124.3
3632	Household refrigerators, freezers (6/76 = 100)	109.6	110.7	110.7	110.7	111.4	112.5	112.7	111.8	111.9	112.8	113.3	114.0	114.7	114.8
3633	Household laundry equipment (12/73 = 100)	141.0	142.6	144.4	144.4	145.4	146.3	146.9	146.9	147.0	147.2	149.9	151.1	151.8	152.1
3635	Household vacuum cleaners	135.5	137.4	137.5	137.6	138.1	138.1	140.4	140.4	141.2	141.5	141.6	141.6	141.9	144.3
3636	Sewing machines (12/75 = 100)	111.2	112.8	115.4	115.4	119.8	119.8	119.8	121.1	121.1	121.1	121.3	121.6	121.6	122.0
3641	Electric lamps	214.7	222.3	226.1	226.1	226.6	226.8	227.1	229.8	229.8	229.7	240.6	244.4	242.7	244.8
3644	Noncurrent-carrying wiring devices (12/72 = 100)	185.8	193.4	193.9	195.6	196.1	197.1	198.0	200.4	202.6	203.0	204.9	206.9	211.4	212.8
3646	Commercial lighting fixtures (12/75 = 100)	112.7	115.7	117.2	117.2	117.6	119.6	121.2	124.3	126.8	127.4	128.3	128.4	129.5	130.3
3648	Lighting equipment, n.e.c. (12/75 = 100)	114.6	117.6	118.3	118.3	121.2	121.9	122.3	123.5	124.0	124.6	127.6	127.7	128.3	129.3
3671	Electron tubes receiving type	200.9	210.1	210.5	210.6	210.8	210.9	211.0	211.2	211.3	226.4	226.5	226.6	227.2	227.2
3674	Semiconductors and related devices	85.3	84.1	84.2	84.4	84.1	84.2	84.4	84.7	84.7	84.7	83.8	83.9	84.4	84.7
3675	Electronic capacitors (12/75 = 100)	111.5	112.2	112.6	112.2	112.7	114.4	115.9	119.8	120.1	122.1	122.1	129.1	133.6	134.0
3676	Electronic resistors (12/75 = 100)	118.3	121.4	122.6	122.7	122.7	122.8	123.1	123.2	123.2	123.2	127.9	128.6	130.2	127.8
3678	Electronic connectors (12/75 = 100)	118.9	121.6	123.7	123.6	123.7	125.4	125.6	125.8	126.6	126.9	130.7	134.1	137.6</	

PRODUCTIVITY DATA

PRODUCTIVITY DATA are compiled by the Bureau of Labor Statistics from establishment data and from estimates of compensation and output supplied by the U.S. Department of Commerce and the Federal Reserve Board.

Definitions

Output is the constant dollar gross domestic product produced in a given period. Indexes of **output per hour of labor input**, or labor productivity, measure the value of goods and services produced per hour of labor. **Compensation per hour** includes wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. The data also include an estimate of wages, salaries, and supplementary payments for the self-employed, except for nonfinancial corporations, in which there are no self-employed. **Real compensation per hour** is compensation per hour adjusted by the Consumer Price Index for All Urban Consumers.

Unit labor cost measures the labor compensation cost required to produce one unit of output and is 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 the current dollar gross domestic product and dividing by output. In these tables, **Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits. **Unit profits** include corporate profits and inventory valuation adjustments per unit of output.

The **implicit price deflator** is derived by dividing the current dollar estimate of gross product by the constant dollar estimate, making the deflator, in effect, a price index for gross product of the sector reported.

The use of the term "man-hours" to identify the labor component of productivity and costs, in tables 31 through 34, has been discontinued. **Hours of all persons** is now used to describe the labor input of payroll workers, self-employed persons, and unpaid family workers. **Output per all-employee hour** is now used to describe labor productivity in nonfinancial corporations where there are no self-employed.

Notes on the data

In the private business sector and the nonfarm business sector, the basis for the output measure employed in the computation of output per hour is Gross Domestic Product rather than Gross National Product. Computation of hours includes estimates of nonfarm and farm proprietor hours.

Output data are supplied by the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Quarterly manufacturing output indexes are adjusted by the Bureau of Labor Statistics to annual estimates of output (gross product originating) from the Bureau of Economic Analysis. Compensation and hours data are from the Bureau of Economic Analysis and the Bureau of Labor Statistics.

Beginning with the September 1976 issue of the *Review*, tables 31-34 were revised to reflect changeover to the new series—private business sector and nonfarm business sector—which differ from the previously published total private economy and nonfarm sector in that output imputed for owner-occupied dwellings and the household and institutions sectors, as well as the statistical discrepancy, are omitted. For a detailed explanation, see J. R. Norsworthy and L. J. Fulco, "New sector definitions for productivity series," *Monthly Labor Review*, October 1976, pages 40-42.

31. Indexes of productivity and related data, selected years, 1950-78

[1967 = 100]

Item	1950	1955	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978
Private business sector:													
Output per hour of all persons	61.0	70.3	78.7	95.0	104.2	107.7	111.4	113.6	110.1	112.4	116.4	¹ 118.6	¹ 119.2
Compensation per hour	42.4	55.8	71.9	88.7	123.1	131.4	139.7	151.2	164.9	181.3	197.2	¹ 213.0	¹ 231.2
Real compensation per hour	58.9	69.6	81.1	93.8	105.8	108.3	111.5	113.6	111.7	112.5	115.6	¹ 117.3	¹ 118.3
Unit labor cost	69.6	79.4	91.3	93.3	118.2	122.0	125.4	133.1	149.8	161.3	169.4	¹ 179.6	¹ 194.0
Unit nonlabor payments	73.2	80.5	85.5	95.9	105.8	113.0	119.0	124.9	130.4	150.4	158.0	¹ 165.6	¹ 174.3
Implicit price deflator	70.8	79.8	89.3	94.2	113.9	118.9	123.2	130.3	143.1	157.5	165.5	174.8	187.2
Nonfarm business sector:													
Output per hour of all persons	66.9	74.3	80.9	95.9	103.0	106.2	110.1	112.0	108.5	110.5	114.4	¹ 116.2	¹ 116.8
Compensation per hour	45.4	58.7	74.2	89.4	121.7	129.9	138.4	149.2	162.8	178.9	193.8	¹ 209.3	¹ 227.3
Real compensation per hour	63.0	73.2	83.7	94.6	104.6	107.1	110.4	112.1	110.2	111.0	113.7	¹ 115.3	¹ 116.3
Unit labor cost	67.9	79.1	91.7	93.2	118.1	122.3	125.7	133.2	150.0	161.8	169.4	180.1	¹ 194.5
Unit nonlabor payments	71.5	80.1	84.5	95.8	106.0	113.1	117.5	117.8	124.7	146.0	156.0	¹ 163.9	¹ 169.9
Implicit price deflator	69.1	79.4	89.2	94.1	114.0	119.2	122.9	127.9	141.4	156.4	164.8	174.5	186.1
Nonfinancial corporations:													
Output per hour of all employees	(¹)	(¹)	80.2	96.8	103.5	107.0	110.5	112.8	108.5	111.9	115.5	¹ 116.8	¹ 117.9
Compensation per hour	(¹)	(¹)	75.7	90.0	121.5	129.0	136.7	147.5	161.4	177.4	192.2	¹ 207.6	¹ 224.8
Real compensation per hour	(¹)	(¹)	85.4	95.3	¹ 104.4	106.4	109.1	110.8	109.3	110.1	112.7	¹ 114.4	¹ 115.0
Unit labor cost	(¹)	(¹)	94.3	93.0	117.4	120.6	123.7	130.7	148.8	158.6	166.4	177.7	190.6
Unit nonlabor payments	(¹)	(¹)	90.8	100.1	103.5	111.1	¹ 114.8	116.8	124.8	148.1	156.8	164.4	170.6
Implicit price deflator	(¹)	(¹)	93.1	95.5	112.5	117.2	120.5	125.8	140.2	154.9	163.0	173.0	183.5
Manufacturing:													
Output per hour of all persons	65.0	74.1	78.9	98.3	104.5	110.1	115.7	118.8	112.6	118.2	123.4	¹ 127.2	¹ 128.0
Compensation per hour	45.1	60.5	77.1	91.0	121.8	129.5	136.6	146.4	161.1	180.2	195.1	¹ 212.0	¹ 229.5
Real compensation per hour	62.5	75.4	87.0	96.3	104.7	106.7	109.0	110.0	109.1	111.8	114.5	¹ 116.8	¹ 117.5
Unit labor cost	69.4	81.6	97.7	92.6	116.5	117.6	118.1	123.2	143.1	152.4	158.2	166.6	179.4
Unit nonlabor payments	82.4	88.6	92.4	103.3	96.2	105.0	107.4	106.4	105.6	128.4	139.6	147.4	¹ 152.4
Implicit price deflator	73.3	83.8	96.1	95.9	110.3	113.7	114.8	118.0	131.6	145.1	152.5	160.7	171.1

¹ Not available.

32. Annual percent change in productivity and related data, 1968-78

Item	Year											Annual rate of change	
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1950-78	1960-78
Private business sector:													
Output per hour of all persons	3.3	0.2	0.7	3.3	3.5	1.9	-3.0	2.1	3.5	1.9	0.5	2.6	2.2
Compensation per hour	7.6	6.8	7.1	6.7	6.3	8.2	9.1	9.9	8.8	8.0	8.5	5.8	6.8
Real compensation per hour	3.3	1.4	1.1	2.4	2.9	1.9	-1.7	.7	2.8	1.5	0.8	2.6	2.1
Unit labor cost	4.1	6.6	6.4	3.3	2.8	6.2	12.5	7.7	5.0	6.0	8.0	3.2	4.5
Unit nonlabor payments	3.5	1.0	1.2	6.8	5.2	5.0	4.4	15.3	5.1	4.8	5.3	2.8	4.0
Implicit price deflator	3.9	4.7	4.7	4.4	3.6	5.8	9.8	10.1	5.0	5.6	7.1	3.1	4.3
Nonfarm business sector:													
Output per hour of all persons	3.2	-3	.1	3.1	3.7	1.7	-3.1	1.9	3.5	1.6	0.5	2.2	2.0
Compensation per hour	7.3	6.3	6.7	6.7	6.5	7.8	9.1	9.9	8.3	8.0	8.6	5.5	6.5
Real compensation per hour	3.0	.9	.7	2.3	3.1	1.5	-1.7	.7	2.4	1.4	0.9	2.3	1.9
Unit labor cost	4.0	6.7	6.5	3.5	2.8	6.0	12.7	7.9	4.7	6.3	8.0	3.2	4.5
Unit nonlabor payments	3.9	.4	1.6	6.7	3.8	.3	5.9	17.1	6.9	5.0	3.7	2.8	3.9
Implicit price deflator	4.0	4.5	4.9	4.5	3.1	4.1	10.5	10.6	5.4	5.9	6.6	3.1	4.3
Nonfinancial corporations:													
Output per hour of all employees	3.3	.3	-.1	3.4	3.3	2.1	-3.8	3.1	3.2	1.1	1.0	(1)	2.0
Compensation per hour	6.8	6.7	6.7	6.2	5.9	7.9	9.4	10.0	8.3	8.0	8.3	(1)	6.3
Real compensation per hour	2.5	1.2	.7	1.9	2.5	1.6	-1.4	.7	2.4	1.5	0.6	(1)	1.7
Unit labor cost	3.4	6.3	6.8	2.7	2.5	5.7	13.8	6.6	4.9	6.8	7.3	(1)	4.2
Unit nonlabor payments	3.0	0	.5	7.3	3.3	1.8	6.8	18.7	5.8	4.9	3.8	(1)	3.4
Implicit price deflator	3.3	4.1	4.6	4.2	2.8	4.4	11.5	10.5	5.2	6.1	6.1	(1)	3.9
Manufacturing:													
Output per hour of all persons	3.6	1.1	-.3	5.3	5.1	2.7	-5.2	4.9	4.4	3.1	.6	2.6	2.6
Compensation per hour	7.0	6.4	6.9	6.3	5.5	7.2	10.1	11.8	8.3	8.6	8.3	5.4	6.3
Real compensation per hour	2.7	1.0	.9	2.0	2.1	.9	-.8	2.4	2.4	2.0	.6	2.2	1.6
Unit labor cost	3.3	5.2	7.2	.9	.4	4.3	16.1	6.6	3.8	5.3	7.7	2.7	3.6
Unit nonlabor payments	3.9	-4.4	-3.2	9.2	2.3	-1.0	-.7	21.6	8.8	5.5	3.4	1.8	2.3
Implicit price deflator	3.5	2.3	4.2	3.1	1.0	2.8	11.5	10.2	5.1	5.4	6.5	2.5	3.3

¹ Not available.

33. Indexes of productivity, hourly compensation, unit costs, and prices, seasonally adjusted

[1967 = 100]

Item	Annual average		Quarterly indexes										
			1977				1978				1979		
	1977	1978	I	II	III	IV	I	II	III	IV	I	II	III
Private business sector:													
Output per hour of all persons	118.6	119.2	118.5	117.9	119.4	118.8	118.4	119.0	119.7	119.8	118.9	118.2	P 118.3
Compensation per hour	213.0	231.2	207.7	210.8	215.3	218.5	224.2	228.5	233.6	238.4	244.8	250.3	P 255.4
Real compensation per hour	117.3	118.3	117.2	116.7	117.6	117.9	118.1	118.2	118.6	118.0	118.0	116.9	P 115.7
Unit labor cost	179.6	194.0	175.2	178.8	180.2	183.8	189.4	192.1	195.2	199.0	205.9	211.7	P 216.0
Unit nonlabor payments	165.6	174.3	161.4	164.7	167.9	168.6	164.8	173.9	177.0	181.3	180.8	183.7	P 187.5
Implicit price deflator	174.8	187.2	170.5	173.9	176.0	178.6	180.9	185.8	188.9	192.9	197.2	202.0	P 206.2
Nonfarm business sector:													
Output per hour of all persons	116.2	116.8	116.4	115.8	116.7	116.3	116.0	116.5	117.3	117.6	116.6	115.4	P 115.5
Compensation per hour	209.3	227.3	204.1	207.3	211.2	214.8	220.6	224.6	229.4	234.3	240.2	244.8	P 249.6
Real compensation per hour	115.3	116.3	115.2	114.7	115.4	115.9	116.8	116.1	116.1	116.0	115.8	114.3	P 113.1
Unit labor cost	180.1	194.5	175.4	179.0	180.9	184.7	190.2	192.7	195.6	199.3	206.0	212.1	P 216.2
Unit nonlabor payments	163.9	169.9	159.1	163.2	167.1	166.0	161.1	169.2	173.0	176.1	174.3	177.6	P 183.0
Implicit price deflator	174.5	186.1	169.8	173.6	176.2	178.3	180.2	184.7	187.8	191.4	195.1	200.3	P 204.8
Nonfinancial corporations:													
Output per hour of all employees	116.8	117.9	116.8	116.5	117.4	116.7	116.7	117.8	118.4	118.8	118.1	117.3	NA
Compensation per hour	207.6	224.8	202.5	205.7	209.5	212.8	218.5	222.3	226.9	231.3	237.4	242.1	NA
Real compensation per hour	114.4	115.0	114.3	113.8	114.5	114.8	115.7	114.9	114.8	114.5	114.5	113.1	NA
Total unit costs	181.8	193.3	177.7	180.5	182.4	186.3	190.8	191.6	194.0	196.8	202.3	208.0	NA
Unit labor cost	177.7	190.6	173.4	176.6	178.4	182.3	187.3	188.7	191.5	194.8	201.0	206.4	NA
Unit nonlabor costs	194.3	201.8	191.0	192.4	194.8	198.7	201.5	200.8	201.6	203.1	206.5	213.2	NA
Unit profits	122.7	127.2	114.1	123.3	130.9	122.2	107.1	129.2	132.7	138.7	130.3	129.2	NA
Implicit price deflator	173.0	183.5	168.3	172.0	174.7	176.8	178.3	182.3	184.9	188.2	191.6	196.3	NA
Manufacturing:													
Output per hour for all persons	127.2	128.0	125.4	127.3	128.4	127.8	125.7	127.2	129.2	129.8	129.0	130.0	P 131.0
Compensation per hour	212.0	229.5	206.4	209.7	214.1	217.5	223.2	226.6	231.4	236.5	242.4	248.2	P 253.0
Real compensation per hour	116.8	117.5	116.5	116.1	117.0	117.4	118.1	117.1	117.0	117.1	116.9	115.9	P 114.6
Unit labor cost	166.6	179.4	164.6	164.7	166.7	170.2	177.5	178.1	179.1	182.2	187.9	190.9	P 193.1

34. Percent change from preceding quarter and year in productivity, hourly compensation, unit costs, and prices, seasonally adjusted at annual rate.

[1967 = 100]

Item	Quarterly percent change at annual rate						Percent change from same quarter a year ago					
	I 1978 to II 1978	II 1978 to III 1978	III 1978 to IV 1978	IV 1978 to I 1979	I 1979 to II 1979	II 1979 to III 1979 ^P	II 1977 to II 1978	III 1977 to III 1978	IV 1977 to IV 1978	I 1978 to I 1979	II 1978 to II 1979	III 1978 to III 1979 ^P
Private business sector:												
Output per hour of all persons	'2.0	'2.4	'0.3	'-3.0	'-2.2	0.1	'0.9	'0.2	'0.8	'0.4	'-0.6	-1.2
Compensation per hour	'7.9	'9.2	'8.5	'11.1	9.3	8.5	'8.4	'8.5	'9.1	'9.2	'9.5	9.4
Real compensation per hour	-2.1	'3	'-7	'1	-3.8	-3.9	'1.2	0.4	'1	'-6	'-1.0	-2.1
Unit labor cost	5.8	6.6	8.1	14.6	'11.8	8.3	'7.4	'8.3	8.3	'8.7	'10.2	10.7
Unit nonlabor payments	24.0	7.4	9.9	-1.0	6.5	8.6	'5.6	'5.4	'7.5	'9.7	'5.6	5.9
Implicit price deflator	11.2	6.9	8.7	9.3	'10.1	8.4	6.8	7.4	8.0	9.0	8.7	9.1
Nonfarm business sector:												
Output per hour of all persons	'1.9	'2.7	'8	'-3.2	'-4.1	2	'6	'5	'1.1	-5	'-1.0	-1.6
Compensation per hour	'7.5	'8.8	'8.8	'10.4	'7.9	8.2	'8.4	'8.7	'9.1	'8.9	'9.0	8.8
Real compensation per hour	'-2.5	'0	'-4	'-6	'-5.0	4.2	'1.2	'6	'1	'-8	'-1.5	2.6
Unit labor cost	'5.4	6.0	8.0	'14.0	'12.5	7.9	'7.7	8.1	'7.9	8.3	10.1	10.6
Unit nonlabor payments	'21.5	'9.4	'7.3	'-4.0	'7.8	12.6	'3.7	'3.5	'6.1	'8.2	5.0	-5.8
Implicit price deflator	'10.2	7.0	7.8	8.1	11.0	9.3	6.4	6.6	7.3	8.3	8.5	9.0
Nonfinancial corporations:												
Output per hour of all employees	'4.1	'2.0	'1.1	'-2.1	'-2.8	(¹)	'1.2	'0.8	'1.8	'1.3	'5	(¹)
Compensation per hour	'7.2	'8.4	'8.1	'11.0	8.0	(¹)	'8.1	'8.3	'8.7	'8.7	'8.9	(¹)
Real compensation per hour	'-2.7	'-4	'-1.0	'0	'-4.9	(¹)	0.9	'2	'-3	'-1.0	'-1.6	(¹)
Total unit costs	1.8	5.1	5.9	11.7	11.8	(¹)	6.2	6.4	5.6	6.1	'8.6	(¹)
Unit labor costs	2.9	6.2	6.9	13.4	11.2	(¹)	6.8	7.4	6.8	7.3	'9.4	(¹)
Unit nonlabor costs	-1.3	1.7	2.9	6.8	'13.5	(¹)	4.3	3.5	2.2	2.5	'6.2	(¹)
Unit profits	111.3	11.4	19.5	-22.1	'-3.4	(¹)	4.7	1.4	13.6	21.7	'0	(¹)
Implicit price deflator	9.3	5.7	7.3	7.6	'10.2	(¹)	6.0	5.8	6.4	7.5	7.7	(¹)
Manufacturing:												
Output per hour of all persons	'4.8	'6.3	2.0	'-2.4	'2.9	3.2	'-1	'6	'1.6	'2.6	'2.2	1.4
Compensation per hour	6.3	'8.7	9.3	'10.3	'9.8	8.0	'8.0	'8.1	'8.7	'8.6	'9.5	9.4
Real compensation per hour	-3.5	'-1	'0	'-6	'-3.4	-4.3	'9	'0	'-3	'-1.1	'1.0	-2.1
Unit labor cost	1.4	2.2	7.1	13.0	'6.7	4.6	8.1	7.4	7.1	5.9	'7.2	7.8

¹ Not available.

LABOR-MANAGEMENT DATA

MAJOR COLLECTIVE BARGAINING DATA are obtained from contracts on file at the Bureau of Labor Statistics, direct contact with the parties, and from secondary sources. Additional detail is published in *Current Wage Developments*, a monthly periodical of the Bureau. Data on work stoppages are based on confidential responses to questionnaires mailed by the Bureau of Labor Statistics to parties involved in work stoppages. Stoppages initially come to the attention of the Bureau from reports of Federal and State mediation agencies, newspapers, and union and industry publications.

Definitions

Data on wage changes apply to private nonfarm industry agreements covering 1,000 workers or more. Data on wage and benefit changes *combined* apply only to those agreements covering 5,000 workers or more. **First-year wage settlements** refer to pay changes going into effect within the first 12 months after the effective date of

the agreement. **Changes over the life of the agreement** refer to total agreed upon settlements (exclusive of potential cost-of-living escalator adjustments) expressed at an average annual rate. **Wage-rate changes** are expressed as a percent of straight-time hourly earnings, while **wage and benefit changes** are expressed as a percent of total compensation.

Effective wage-rate adjustments going into effect in major bargaining units measure changes actually placed into effect during the reference period, whether the result of a newly negotiated increase, a deferred increase negotiated in an earlier year, or as a result of a cost-of-living escalator adjustment. Average adjustments are affected by workers receiving no adjustment, as well as by those receiving increases or decreases.

Work stoppages include all known strikes or lockouts involving six workers or more and lasting a full shift or longer. Data cover all workers idle one shift or more in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments whose employees are idle owing to material or service shortages.

35. Wage and benefit settlements in major collective bargaining units, 1973 to date

[In percent]

Sector and measure	Annual average						Quarterly average						
	1973	1974	1975	1976	1977	1978	1978			1979			
							II	III	IV	I	II	III	
Wage and benefit settlements, all industries:													
First-year settlements	7.1	10.7	11.4	8.5	9.6	8.3	6.8	7.2	6.1	2.5	10.6	9.0	
Annual rate over life of contract	6.1	7.8	8.1	6.6	6.2	6.3	6.0	5.9	5.2	5.2	7.7	6.0	
Wage rate settlements, all industries:													
First-year settlements	5.8	9.8	10.2	8.4	7.8	7.6	6.9	7.5	7.4	4.8	9.0	6.6	
Annual rate over life of contract	5.1	7.3	7.8	6.4	5.8	6.4	6.2	6.4	5.9	6.6	7.0	4.8	
Manufacturing:													
First-year settlements	5.9	8.7	9.8	8.9	8.4	8.3	7.1	8.4	9.5	8.7	9.9	6.2	
Annual rate over life of contract	4.9	6.1	8.0	6.0	5.5	6.6	5.8	7.2	7.4	8.6	8.1	4.6	
Nonmanufacturing (excluding construction):													
First-year settlements	6.0	10.2	11.9	8.6	8.0	8.0	7.7	7.4	6.4	2.3	8.5	9.1	
Annual rate over life of contract	5.4	7.2	8.0	7.2	5.9	6.5	6.9	5.9	5.1	5.6	5.7	5.8	
Construction:													
First-year settlements	5.0	11.0	8.0	6.1	6.3	6.5	6.4	7.0	8.4	11.0	9.1	10.4	
Annual rate over life of contract	5.1	9.6	7.5	6.2	6.3	6.2	6.0	7.2	7.1	7.7	8.2	9.1	

36. Effective wage adjustments going into effect in major collective bargaining units, 1973 to date

[In percent]

Sector and measure	Average annual changes						Average quarterly changes								
	1973	1974	1975	1976	1977	1978	1977	1978				1979			
							IV	I	II	III	IV	I	II	III	
Total effective wage rate adjustment, all industries	7.0	9.4	8.7	8.1	8.0	8.2	1.1	1.3	2.6	2.7	1.4	1.4	2.4	2.9	
Change resulting from—															
Current settlement	3.0	4.8	2.8	3.2	3.0	2.0	.5	.5	.6	.5	.4	.2	1.0	.9	
Prior settlement	2.7	2.6	3.7	3.2	3.2	3.7	.3	.6	1.4	1.2	.5	.6	.9	1.0	
Escalator provision	1.3	1.9	2.2	1.6	1.7	2.4	.3	.3	.6	1.0	.5	.6	.5	1.0	
Manufacturing	7.3	10.3	8.5	8.5	8.4	8.6	1.4	1.4	2.2	2.9	1.9	1.4	2.2	2.6	
Nonmanufacturing	6.7	8.6	8.9	7.7	7.6	7.9	.8	1.3	2.9	2.5	1.1	1.4	2.6	3.2	

NOTE: Because of rounding and compounding, the sums of individual items may not equal totals.

37. Work stoppages, 1947 to date						
Month and year	Number of stoppages		Workers involved		Days idle	
	Beginning in month or year	In effect during month	Beginning in month or year (thousands)	In effect during month (thousands)	Number (thousands)	Percent of estimated working time
1947	3,693		2,170		34,600	.30
1948	3,419		1,960		34,100	.28
1949	3,606		3,030		50,500	.44
1950	4,843		2,410		38,800	.33
1951	4,737		2,220		22,900	.18
1952	5,117		3,540		59,100	.48
1953	5,091		2,400		28,300	.22
1954	3,468		1,530		22,600	.18
1955	4,320		2,650		28,200	.22
1956	3,825		1,900		33,100	.24
1957	3,673		1,390		16,500	.12
1958	3,694		2,060		23,900	.18
1959	3,708		1,880		69,000	.50
1960	3,333		1,320		19,100	.14
1961	3,367		1,450		16,300	.11
1962	3,614		1,230		18,600	.13
1963	3,362		941		16,100	.11
1964	3,855		1,640		22,900	.15
1965	3,963		1,550		23,300	.15
1966	4,405		1,960		25,400	.15
1967	4,595		2,870		42,100	.25
1968	5,045		2,649		49,018	.28
1969	5,700		2,481		42,869	.24
1970	5,716		3,305		66,414	.37
1971	5,138		3,280		47,589	.26
1972	5,010		1,714		27,066	.15
1973	5,353		2,251		27,948	.14
1974	6,074		2,778		47,991	.24
1975	5,031		1,746		31,237	.16
1976	5,648		2,420		37,859	.19
1977	5,506		2,040		35,822	.17
1978: September	453	854	448	551	4,446	.25
October	389	740	106	205	2,277	.12
November	290	591	63	135	1,776	.10
December	157	408	49	139	1,440	.08
1979: January	301	405	101	177	1,810	.09
February	326	528	105	251	1,465	.09
March	447	664	169	280	1,501	.08
April	553	822	411	520	5,193	.28
May	598	919	157	370	3,768	.18
June	543	873	162	277	3,335	.17
July	554	900	202	324	3,128	.16
August	493	899	135	286	3,423	.16
September	513	842	174	282	2,693	.15

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Pettus v. American Airlines. 1979 Dec. 51-52.
Sears, Roebuck Co. v. San Diego County District Council of Carpenters. 1979 Dec. 51-52.
Slagle v. Parker. 1979 Dec. 51-52.
Smith v. Arkansas State Highway Employees, Local 1315. 1979 July 41.
Transit Authority v. Beazer. 1979 May 53.
Vance v. Bradley. 1979 May 53.
Vergara v. Chairman, Merit Systems Protection Board. 1979 July 41.

Council on Wage and Price Stability Act

AFL-CIO v. Kahn. 1979 Aug. 57.

Employee Retirement Security Act of 1974

Teamsters v. Daniel. 1979 Mar. 62-63.

Executive Order 11935

Vergara v. Chairman, Merit Systems Protection Board. 1979 July 41.

Executive Order 12092

AFL-CIO v. Kahn. 1979 Aug. 57.

Federal Property and Administrative Services Act of 1949

AFL-CIO v. Kahn. 1979 Aug. 57.

Foreign Service Retirement Act of 1946

Vance v. Bradley. 1979 May 53.

Landrum-Griffin Act

Gabauer v. Woodcock. 1979 Dec. 51-52.
International Brotherhood of Electrical Workers v. Foust. 1979 Sept. 59.

Longshoremen's and Harbor Workers' Compensation Act

Pettus v. American Airlines. 1979 Dec. 51-52.

National Labor Relations Act

Detroit Edison Co. v. NLRB. 1979 June 44.
Ford Motor Co. v. NLRB. 1979 Sept. 58.
International Brotherhood of Electrical Workers v. Foust. 1979 Sept. 59.
New York Telephone Co. v. New York State Dept. of Labor. 1979 May 52.
NLRB v. Baptist Hospital. 1979 Nov. 54.
NLRB v. Catholic Bishop of Chicago. 1979 May 52-53.
Sears, Roebuck & Co. v. San Diego County District Council of Carpenters. 1979 Dec. 51-52.

Occupational Safety and Health Act of 1970

Marshall v. Daniel Construction Co. 1979 Mar. 61; Dec. 51-52.
Marshall v. Whirlpool Corp. 1979 June 44-45; Dec. 51-52.

Railway Labor Act

International Brotherhood of Electrical Workers v. Foust. 1979 Sept. 59.

Railroad Retirement Act of 1974

Hisquierdo v. Hisquierdo. 1979 Apr. 60.

Rehabilitation Act of 1973

Southeastern Community College v. Davis. 1979 Oct. 70.
Transit Authority v. Baezer. 1979 May 53-54.

Securities Exchange Act of 1934

Teamsters v. Daniel. 1979 Mar. 62-63.

Social Security Act

Califano v. Boles. 1979 Oct. 70.
Califano v. Westcott. 1979 Oct. 69.
Chapman v. Texas Dept. of Human Resources. 1979 Nov. 55-56.
New York Telephone Co. v. New York State Dept. of Labor. 1979 May 52.

State laws

Ambach v. Norwick. 1979 July 40-41.
Babbitt v. United Farm Workers National Union. 1979 Nov. 54-55.
Boggs v. Blue Diamond Coal Co. 1979 Dec. 51-52.
Chapman v. Texas Dept. of Human Resources. 1979 Nov. 55-56.
Dodson Insurance Group v. Maloney. 1979 Dec. 51-52.
Dougherty Cty. Bd. of Education v. White. 1979 Apr. 61.
Foley v. Connelie. 1979 July 40-41.
Graham v. Richardson. 1979 July 40-41.
Harrah Independent Sch. Dist. v. Martin. 1979 May 54.
Hisquierdo v. Hisquierdo. 1979 Apr. 60.
Industrial Commission of Wisconsin v. McCartin. 1979 Dec. 51-52.
Magnolia Petroleum Co. v. Hunt. 1979 Dec. 51-52.
New York Telephone Co. v. New York State Dept. of Labor. 1979 May 52.
Oscar Mayer & Co. v. Evans. 1979 Sept. 59.
Personnel Administrator of Massachusetts v. Feeney. 1979 Aug. 57-58.
Pettus v. American Airlines. 1979 Dec. 51-52.
Sears, Roebuck & Co. v. San Diego County District Council of Carpenters. 1979 Dec. 51-52.
Slagle v. Parker. 1979 Dec. 51-52.

Voting Rights Act of 1965

Dougherty Cty. Bd. of Education v. White. 1979 Apr. 61.

Other court decisions

Board of Education, City of New York v. Nyquist. 1979 Apr. 62.

DECISIONS, NLRB

Abilities and Goodwill, Inc. and Abilities and Goodwill Association of Professional Employees. 1979 July 41-42.
General Knit of California, Inc. and United Steel Workers of America. 1979 Apr. 60-61.

DISCOURAGED WORKERS

Two-fifths of discouraged sought work during prior 6-month period. 1979 March 58-60.

**DISCRIMINATION (See Equal Employment Opportunity.)
EARNINGS AND WAGES**

General

- Changes in marital and family characteristics of workers, 1970-78. 1979 Apr. 49-52.
- Computer and data processing services, March 1978. 1979 July 34.
- Do area wages reflect area living costs? 1979 Nov. 24-29.
- Effect of unemployment on family income in 1977, The. 1979 Dec. 42-44.
- Employment Cost Index up 7.7 percent in 1978. 1978 July 28-31.
- Fair Labor Standards Act: changes of four decades. 1979 July 10-16.
- Federal pay comparability: facts to temper the debate. 1979 June 18-28.
- Fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
- Heavy bargaining again in 1980. 1979 Dec. 20-28.
- Labor requirements for college housing construction. 1979 May 28-34.
- Long hours and premium pay, May 1978. 1979 May 41-45.
- Linking unemployment insurance to mobility and family income. 1979 Apr. 42-44.
- Median earnings in 1977 reported for year-round full-time workers. 1979 June 35-39.
- Minimum wage today: how well does it work? 1979 July 17-21.
- More wives in the labor force have husbands with 'above average' incomes. 1979 June 40-42.
- Prevalence of incentives in major bargaining agreements. 1979 July 32-34.
- Real after-tax annual earnings from the Current Population Survey. 1979 Aug. 42-45.
- Scheduled wage increases and escalator provisions in 1979. 1979 Jan. 20-25.
- Two divergent measures of purchasing power. 1979 Aug. 25-30.
- Wage increases of 1978 absorbed by inflation. 1979 June 10-13.
- Weekly and hourly earnings of U.S. workers, 1967-78. 1979 Aug. 31-41.
- White-collar pay rise for 1979 nearly matches 1978 increase. 1979 Nov. 49-50.
- Working wives' contribution to family income in 1977. 1979 Oct. 62-64.

Specified industries and occupations

- Cleaning services, July 1977. 1979 Feb. 64-65.
- Communications workers, October 1977. 1979 Nov. 52-53.
- Department stores, May 1977. 1979 Apr. 56-57.
- Dress manufacturing, August 1977. 1979 Apr. 54-56.
- Grain milling industries, September 1977. 1979 Apr. 57.
- Metal mining industries, 1977. 1979 May 45.
- Nonelectrical machinery manufacturing, January 1978. 1978 Nov. 51-52.
- Oil and gas extraction industries, September 1977. 1979 May 45-46.
- Papermaking industries, 1977. 1979 May 46-47.
- Semiconductor industry, September 1977. 1979 Feb. 64.

ECONOMIC POLICIES AND PROGRAMS

- Influence of energy on industry output and employment, The. 1979 Dec. 3-10.
- Structural unemployment without quotation marks. 1979 June 29-34.
- The 1980 census: countdown for a complete count. 1979 Sept. 3-13.
- Unemployment rate as an economic indicator, The. 1979 March 24-35.

EDUCATION AND TRAINING

- Back to school at 35 and over, October 1978. 1979 Aug. 53-55.
- Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.
- Has BLS underestimated business Ph. D. demand? 1979 Sept. 42-46.

- It is 'back to school' for new youth programs. 1979 Apr. 48.
- Minorities, high-school dropouts benefit least from CETA programs. 1979 Mar. 60.
- Structural unemployment without quotation marks. 1979 June 29-34.

EMPLOYMENT

- Black labor force during the 1975-78 recovery, The. 1979 May 3-7.
- Difference a year makes in the Nation's youth work force, The. 1979 Oct. 34-38.
- Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.
- Employment and commuting patterns: a residential analysis. 1979 July 3-9.
- Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.
- Employment and unemployment in the first half of 1979. 1979 Aug. 3-7.
- Evaluation of BLS projections of 1975 production and employment, An. 1979 Aug. 8-19.
- Has BLS underestimated business Ph. D. demand? 1979 Sept. 42-46.
- How likely are individuals to enter the labor force? 1979 Sept. 28-34.
- Industry output and employment: BLS projections to 1990. 1979 Apr. 3-14.
- Influence of energy on industry output and employment, The. 1979 Dec. 3-10.
- Labor and material requirements for new school construction. 1979 Apr. 38-41.
- Labor-management relations and the coal industry. 1979 May 23-27.
- Labor market experience of black youth, 1954-78, The. 1979 Oct. 19-27.
- Long hours and premium pay, May 1978. 1979 May 41-45.
- Multiple jobholding holds steady in 1978. 1979 Feb. 59-61.
- 'Quick' special purpose surveys passed test during coal strike. 1979 Feb. 62-64.
- System for individual equity in equal employment opportunity, A. 1979 Apr. 46-47.
- Two-fifths of discouraged sought work during prior 6-month period. 1979 Mar. 58-60.
- Vietnam veterans in the labor market of the 1970's. 1979 Nov. 3-11.
- Work experience of the population in 1977. 1979 Mar. 53-57.
- Young and marginal: an overview of youth employment. 1979 Oct. 4-18.

ENERGY

- Energy buoys double-digit inflation, food price surge ebbs in second quarter. 1979 Sept. 49-55.
- Influence of energy on industry output and employment, The. 1979 Dec. 3-10.
- Industry output and employment: BLS projections to 1990. 1979 Apr. 3-14.
- Labor-management relations and the coal industry. 1979 May 23-27.

EQUAL EMPLOYMENT OPPORTUNITY

- Comparing arbitration and litigation in employment discrimination cases. 1979 May 35-36.
- Labor and the Supreme Court: significant decisions of 1977-78. 1979 Jan. 51-57.
- System for individual equity in equal employment opportunity, A. 1979 Apr. 46-47.

ESCALATOR CLAUSES

- Cost-of-living adjustment: keeping up with inflation? 1979 June 14-17.
- Heavy bargaining again in 1980. 1979 Dec. 20-28.
- Industrial relations in 1978: some bargaining highlights. 1979 Jan. 58-64.
- Scheduled wage increases and escalator provisions in 1979. 1979 Jan. 20-25.

Wage increases of 1978 absorbed by inflation. 1979 June 10-13.

FAIR LABOR STANDARDS ACT

Fair Labor Standards Act: changes of four decades. 1979 July 10-16.

FARMING (See Agriculture.)

FEDERAL EMPLOYEES (See Public employees.)

FEDERAL PAY COMPARABILITY ACT OF 1970

Federal pay comparability: facts to temper the debate. 1979 June 18-28.

FRANCE

Recent labor market trends in nine industrial nations. 1979 May 8-16.

GERMANY

Recent labor market trends in nine industrial nations. 1979 May 8-16.

GOVERNMENT WORKERS (See Public employees.)

GREAT BRITAIN (See United Kingdom.)

HEALTH AND SAFETY

First work-injury data available from new BLS study, The. 1979 Jan. 76-80.

Occupational skin disease continues to plague industry. 1979 Feb. 17-22.

HOURS OF WORK

Absent workers and lost work hours, May 1978. 1979 Aug. 49-53.

American workers evaluate the quality of their jobs. 1979 Jan. 3-12.

Labor requirements for college housing construction. 1979 May 28-34.

Long hours and premium pay, May 1978. 1979 May 41-45.

Weekly and hourly earnings of U.S. workers, 1967-78. 1979 Aug. 31-41.

Workers on late shifts in a changing economy. 1979 Sept. 14-22.

HOUSING (See Construction.)

INCOME (See Earnings and wages.)

INDEXES

Cost-of-living indexes for Americans living abroad. 1979 Jan. 81; Apr. 59; July 39; Oct. 67-68.

Employment Cost Index up 7.7 percent in 1978. 1978 July 28-31.

INDUSTRIAL RELATIONS (See Labor-management relations.)

INDUSTRIAL RELATIONS RESEARCH ASSOCIATION

Papers from 31st annual meeting, August 1978. 1979 Jan. 65-75; Feb. 33-40; Apr. 42-48; May 35-40; June 29-34.

INFLATION

Cost-of-living adjustment: keeping up with inflation? 1979 June 14-17.

New inflation-fighting program. 1979 Jan. 59.

Pension improvements since 1974 reflect inflation, new U.S. law. 1979 Apr. 32-37.

Price changes in 1978--an analysis. 1979 March 3-12.

Wage increases of 1978 absorbed by inflation. 1979 June 10-13.

INTERNATIONAL COMPARISONS

Recent labor market trends in nine industrial nations. 1979 May 8-16.

Will West European unions embrace the union shop? 1979 July 35-39.

INTERNATIONAL LABOR ORGANIZATION

Highlights of the 1979 ILO Conference. 1979 Oct. 65-67.

INTERNATIONAL YEAR OF THE CHILD 1979

A special section on young workers and families. 1979 Oct. 3-56.

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Recent labor market trends in nine industrial nations. 1979 May 8-16.

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Recent labor market trends in nine industrial nations. 1979 May 8-16.

JOB SATISFACTION

American workers evaluate the quality of their jobs. 1979 Jan. 3-12.

JOB SECURITY

Job tenure declines as work force changes. 1979 Dec. 48-50.

Providing assistance to displaced workers. 1979 May 17-22.

JOBSEEKING METHODS

Age and the job-hunting methods of the unemployed. 1979 Jan. 68-69.

Job search of recipients of unemployment insurance. 1979 Feb. 49-54.

LABOR COSTS (See Unit labor cost.)

LABOR FORCE

Black labor force during the 1975-78 recovery, The. 1979 May 3-7.

BLS labor force projections: a review of methods and results. 1979 Apr. 15-22.

Changes in marital and family characteristics of workers, 1970-78. 1979 Apr. 49-52.

Changing character of unionism in traditionally organized sectors, The. 1979 Feb. 36-38.

Difference a year makes in the Nation's youth work force, The. 1979 Oct. 34-38.

Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.

Effect of demographic changes on the Nation's unemployment rate, The. 1979 Mar. 13-23.

Employment and commuting patterns: a residential analysis. 1979 July 3-9.

Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.

Employment and unemployment in the first half of 1979. 1979 Aug. 3-7.

How American workers view labor unions. 1979 Apr. 23-31.

How likely are individuals to enter the labor force? 1979 Sept. 28-34.

Industry output and employment: BLS projections to 1990. 1979 Apr. 3-14.

Jobless insurance inequities deepen as more women enter the labor force. 1979 Apr. 44-45.

Job tenure declines as work force changes. 1979 Dec. 48-50.

Labor force participation differs significantly for the rural woman. 1979 Jan. 71-73.

Labor force patterns of single women. 1979 Aug. 46-49.

Labor force status of older workers, The. 1979 Nov. 12-18.

Multiple jobholding holds steady in 1978. 1979 Feb. 59-61.

Occupational mobility during 1977. 1979 Dec. 44-48.

Sources of bias in labor force data. 1979 Jan. 67-68.

Two-fifths of discouraged sought work during prior 6-month period. 1979 Mar. 58-60.

Unemployment among recipients of food stamps and AFDC. 1979 Mar. 47-52.

Unemployment rate as an economic indicator, The. 1979 Mar. 24-35.

Using National Longitudinal Surveys to track young workers. 1979 Oct. 28-33.

Vietnam veterans in the labor market of the 1970's. 1979 Nov. 3-11.

Weekly and hourly earnings of U.S. workers, 1967-78. 1979 Aug. 31-41.

What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.

Work experience of the population in 1977. 1979 Mar. 53-57.

LABOR LAW

- Has a labor protection law accelerated mass transit costs? 1979 Apr. 58.
- Management's hard line: 'class war' or labor's chance to reform? 1979 Feb. 34-36.
- State labor legislation enacted in 1978. 1979 Jan. 26-42.
- Workers' compensation laws--key State amendments of 1978. 1979 Jan. 43-50.

LABOR-MANAGEMENT RELATIONS

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- Fair Labor Standards Act: changes of four decades. 1979 July 10-16.
- How American workers view labor unions. 1979 Apr. 23-31.
- Industrial relations in 1978: some bargaining highlights. 1979 Jan. 58-64.
- Industrial relations in Spain: a status report. 1979 May 48-51.
- Labor and the Supreme Court: significant decisions of 1977-78. 1979 Jan. 51-57.
- Labor-management relations and the coal industry. 1979 May 23-27.
- Management's hard line: 'class war' or labor's chance to reform? 1979 Feb. 34-36.
- Political and legal issues of binding arbitration in government, The. 1979 Sept. 35-41.
- Scheduled wage increases and escalator provisions in 1979. 1979 Jan. 20-25.
- Successful public-sector labor relations: managers' attitudes may matter most. 1979 May 36-38.
- Unionization of court employees has raised legal, practical questions. 1979 Aug. 20-24.
- Union-shop deauthorization poll: a new look after 20 years, The. 1979 Nov. 36-40.
- What factors influence the outcome of decertification elections? 1979 Nov. 32-36.

LABOR MARKET

- Effect of demographic changes on the Nation's unemployment rate, The. 1979 Mar. 13-23.
- Labor market experience of black youth, 1954-78, The. 1979 Oct. 19-27.
- Minimum wage today: how well does it work? 1979 July 17-21.
- Recent labor market trends in nine industrial nations. 1979 May 8-16.
- Unemployment among family men: a 10-year longitudinal study. 1979 Nov. 19-23.
- Vietnam veterans in the labor market of the 1970's. 1979 Nov. 3-11.
- Work and socioeconomic life cycles: an agenda for longitudinal research. 1978 Feb. 23-27.

LABOR ORGANIZATIONS

- Can unions meet the needs of a 'new' work force. 1979 Feb. 33-34.
- Changing character of unionism in traditionally organized sectors, The. 1979 Feb. 36-38.
- Decertification elections increase but remain no major burden to unions. 1979 Nov. 30-32.
- Unionization of court employees has raised legal, practical questions. 1979 Aug. 20-24.
- Union-shop deauthorization poll: a new look after 20 years, The. 1979 Nov. 36-40.
- What factors influence the outcome of decertification elections? 1979 Nov. 32-36.
- Will West European unions embrace the union shop? 1979 July 35-39.

LABOR REQUIREMENTS

- How American workers view labor unions. 1979 Apr. 23-31.
- Labor and material requirements for federally aided highways. 1979 Dec. 29-34.
- Labor and material requirements for new school construction. 1979 Apr. 38-41.

- Labor requirements for college housing construction. 1979 May 28-34.

MINIMUM WAGE

- Unemployment rate as an economic indicator, The. 1979 Mar. 24-35.
- What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.

MINORITY WORKERS

- Black labor force during the 1975-78 recovery, The. 1979 May 3-7.
- Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.
- Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.
- Employment and unemployment in the first half of 1979. 1979 Aug. 3-7.
- Historical profile of demographic, economic changes among U.S. blacks. 1979 Nov. 53.
- Job tenure declines as work force changes. 1979 Dec. 48-50.
- Labor force participation differs significantly for the rural woman. 1979 Jan. 71-73.
- Labor force status of older workers, The. 1979 Nov. 12-18.
- Labor market experience of black youth, 1954-78, The. 1979 Oct. 19-27.
- Minorities, high-school dropouts benefit least from CETA programs. 1979 Mar. 60.
- The 1980 census: countdown for a complete count. 1979 Sept. 3-13.
- Vietnam veterans in the labor market of the 1970's. 1979 Nov. 3-11.
- Work experience of the population in 1977. 1979 Mar. 53-57.
- Working mothers in the 1970's: a look at the statistics. 1979 Oct. 39-49.
- Young and marginal: an overview of youth employment. 1979 Oct. 4-18.

MOBILITY

- Employment and commuting patterns: a residential analysis. 1979 July 3-9.
- Occupational mobility during 1977. 1979 Dec. 44-48.

NLRB ELECTIONS

- Levitan Commission: Report highlights. 1979 Feb. 2.
- The rise in NLRB election delays: measuring business' new resistance. 1979 Feb. 38-40.

NATIONAL LABOR RELATIONS BOARD (See Decisions, NLRB.)

- OCCUPATIONS
- Occupational mobility during 1977. 1979 Dec. 44-48.
- Occupational skin disease continues to plague industry. 1979 Feb. 17-22.

OLDER WORKERS

- Job tenure declines as work force changes. 1979 Dec. 48-50.
- Labor force status of older workers, The. 1979 Nov. 12-18.
- Occupational mobility during 1977. 1979 Dec. 44-48.

PART-TIME WORK

- Fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
- Work experience of the population in 1977. 1979 Mar. 53-57.

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- Private pensions fall far short of preretirement income levels. 1979 Feb. 28-32.

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- The 1980 census: countdown for a complete count. 1979 Sept. 3-13.

PRICES

- Consumer prices rise at a 13-percent rate for the third consecutive quarter. 1979 Dec. 35-41.
Energy buoys double-digit inflation, food price surge ebbs in second quarter. 1979 Sept. 49-55.
First-quarter food and fuel prices propel inflation rate to 5-year high. 1979 June 3-9.
Measuring prices. 1979 July 2.
Price changes in 1978--an analysis. 1979 Mar. 3-12.
Producer Price Index revision: overview and pilot survey. 1979 Dec. 11-19.

PRODUCER PRICE INDEXES

- Consumer prices rise at a 13-percent rate for the third consecutive quarter. 1979 Dec. 35-41.
Producer Price Index revision: overview and pilot survey. 1979 Dec. 11-19.

PRODUCTIVITY

- Evaluation of BLS projections of 1975 production and employment, An. 1979 Aug. 8-19.
First-quarter productivity drop follows marginal growth in 1978. 1979 Oct. 57-61.
Improving the concepts and techniques of productivity measurement. 1979 Sept. 23-27.
Productivity increased in all major sectors in the third quarter. 1979 Feb. 41-45.
Substantial productivity gains in the fluid milk industry. 1979 July 22-27.
Technology in telecommunications: its effect on labor and skills. 1979 Jan. 13-19.

PROJECTIONS

- BLS labor force projections: a review of methods and results. 1979 Apr. 15-22.
Evaluation of BLS projections of 1975 production and employment, An. 1979 Aug. 8-19.
Has BLS underestimated business Ph. D. demand? 1979 Sept. 42-46.
Industry output and employment: BLS projections to 1990. 1979 Apr. 3-14.

PUBLIC EMPLOYEES

- Binding arbitration can put public employers in a bind. 1979 Jan. 73-75.
Federal pay comparability: facts to temper the debate. 1979 June 18-28.
Political and legal issues of binding arbitration in government, The. 1979 Sept. 35-41.
Successful public-sector labor relations: managers' attitudes may matter most. 1979 May 36-38.
Unionization of court employees has raised legal, practical questions. 1979 Aug. 20-24.

RETIREMENT

- Labor force status of older workers, The. 1979 Nov. 12-18.
Pension improvements since 1974 reflect inflation, new U.S. law. 1979 Apr. 32-37.
Private pensions fall far short of preretirement income levels. 1979 Feb. 28-32.

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SENIORITY

- Age and the job-hunting methods of the unemployed. 1979 Jan. 68-69.

SOCIAL WELFARE

- Developing a definition for 'economic hardship.' 1979 Jan. 65-66.
The 1980 census: countdown for a complete count. 1979 Sept. 3-13.
Work and socioeconomic life cycles: an agenda for longitudinal research. 1978 Feb. 23-27.

SOCIOECONOMIC GOALS

- Child-care arrangements of working parents. 1979 Oct. 50-56.
Minimum wage today: how well does it work? 1979 July 17-21.
Providing assistance to displaced workers. 1979 May 17-22.

SPAIN

- Industrial relations in Spain: a status report. 1979 May 48-51.

SPECIAL LABOR FORCE REPORTS

- Absent workers and lost work hours, May 1978. 1979 Aug. 49-53.
Back to school at 35 and over, October 1978. 1979 Aug. 53-55.
Changes in marital and family characteristics of workers, 1970-78. 1979 Apr. 49-52.
Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.
Effect of unemployment on family income in 1977, The. 1979 Dec. 42-44.
Job search of recipients of unemployment insurance. 1979 Feb. 49-54.
Labor force patterns of single women. 1979 Aug. 46-49.
Long hours and premium pay, May 1978. 1979 May 41-45.
Median earnings in 1977 reported for year-round full-time workers. 1979 June 35-39.
Multiple jobholding holds steady in 1978. 1979 Feb. 59-61.
Occupational mobility during 1977. 1979 Dec. 44-48.
Workers on late shifts in a changing economy. 1979 Sept. 14-22.

STATE GOVERNMENT

- State labor legislation enacted in 1978. 1979 Jan. 26-42.
State unemployment insurance: changes during 1978. 1979 Feb. 13-16.
Workers' compensation laws--key State amendments of 1978. 1979 Jan. 43-50.

STATISTICAL PROGRAMS AND METHODS

- Another measure of flow and duration as jobless rate components: reply. 1979 Sept. 48.
Another measure of flow and duration as unemployment rate components. 1979 Sept. 46-48.
Data for allocation. 1979 Aug. 2.
Exploiting the micro-data foundation of the current population survey. 1979 Feb. 46-48.
Fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
Improving the concepts and techniques of productivity measurement. 1979 Sept. 23-27.
Producer Price Index revision: overview and pilot survey. 1979 Dec. 11-19.
The 1980 census: countdown for a complete count. 1979 Sept. 3-13.
Two divergent measures of purchasing power. 1979 Aug. 25-30.

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- 'Quick' special purpose surveys passed test during coal strike. 1979 Feb. 62-64.

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SUPPLEMENTAL BENEFITS

- Fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
Jobless insurance inequities deepen as more women enter the labor force. 1979 Apr. 44-45.
Linking unemployment insurance to mobility and family income. 1979 Apr. 42-44.
Some in families of those receiving jobless aid are forced to seek work. 1979 Apr. 45-46.
Workers' compensation laws--key State amendments of 1978. 1979 Jan. 43-50.

SURVEYS

- Effect of demographic changes on the Nation's unemployment rate, The. 1979 Mar. 13-23.
Family expenditure data to be available on a continuing basis. 1979 Apr. 53-54.
First BLS survey of pay levels in computer and data processing services. 1979 July 34.

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Recent labor market trends in nine industrial nations. 1979 May 8-16.

TECHNOLOGICAL CHANGE

Labor and material requirements for federally aided highways. 1979 Dec. 29-34.

Technology in telecommunications: its effect on labor and skills. 1979 Jan. 13-19.

TRADE UNIONS (See Labor organizations.)

TRAINING (See Education and training.)

UNDEREMPLOYMENT (See Employment; Unemployment.)

UNEMPLOYMENT (See also Employment; Labor force.)

Age and the job-hunting methods of the unemployed. 1979 Jan. 68-69.

Another measure of flow and duration as jobless rate components: reply. 1979 Sept. 48.

Another measure of flow and duration as unemployment rate components. 1979 Sept. 46-48.

Black labor force during the 1975-78 recovery, The. 1979 May 3-7.

Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.

Effect of demographic changes on the Nation's unemployment rate, The. 1979 Mar. 13-23.

Effect of unemployment on family income in 1977, The. 1979 Dec. 42-44.

Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.

Employment and unemployment in the first half of 1979. 1979 Aug. 3-7.

How likely are individuals to enter the labor force? 1979 Sept. 28-34.

Job search of recipients of unemployment insurance. 1979 Feb. 49-54.

Minimum wage today: how well does it work? 1979 July 17-21.

'Quick' special purpose surveys passed test during coal strike. 1979 Feb. 62-64.

Recent labor market trends in nine industrial nations. 1979 May 8-16.

Some in families of those receiving jobless aid are forced to seek work. 1979 Apr. 45-46.

Structural unemployment without quotation marks. 1979 June 29-34.

Teenage conundrum. 1979 Apr. 2.

Today's teenage unemployed--tomorrow's working poor? 1979 Jan. 69-71.

Two-fifths of discouraged sought work during prior 6-month period. 1979 Mar. 58-60.

Unemployment among family men: a 10-year longitudinal study. 1979 Nov. 19-23.

Unemployment among recipients of food stamps and AFDC. 1979 Mar. 47-52.

What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.

Work experience of the population in 1977. 1979 Mar. 53-57.

Young and marginal: an overview of youth employment. 1979 Oct. 4-18.

UNEMPLOYMENT INSURANCE

Jobless insurance inequities deepen as more women enter the labor force. 1979 Apr. 44-45.

Job search of recipients of unemployment insurance. 1979 Feb. 49-54.

Linking unemployment insurance to mobility and family income. 1979 Apr. 42-44.

Some in families of those receiving jobless aid are forced to seek work. 1979 Apr. 45-46.

State unemployment insurance: changes during 1978. 1979 Feb. 13-16.

What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.

UNION MEMBERSHIP AND ELECTIONS

Decertification elections increase but remain no major burden to unions. 1979 Nov. 30-32.

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UNIT LABOR COST

First-quarter productivity drop follows marginal growth in 1978. 1979 Oct. 57-61.

Improving the concepts and techniques of productivity measurement. 1979 Sept. 23-27.

Productivity increased in all major sectors in the third quarter. 1979 Feb. 41-45.

UNITED FOOD AND COMMERCIAL WORKERS INTERNATIONAL (UFCW)

Merger of Retail Clerks, Meat Cutters creates union exceeding 1.2 million.

UNITED KINGDOM

Recent labor market trends in nine industrial nations. 1979 May 8-16.

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Scheduled wage increases and escalator provisions in 1979. 1979 Jan. 20-25.

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Median earnings in 1977 reported for year-round full-time workers. 1979 June 35-39.

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Real after-tax annual earnings from the Current Population Survey. 1979 Aug. 42-45.

Working mothers in the 1970's: a look at the statistics. 1979 Oct. 39-49.

Working wives' contribution to family income in 1977. 1979 Oct. 62-64.

WORKERS' COMPENSATION

Fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.

Workers' compensation laws--key State amendments of 1978. 1979 Jan. 43-50.

WORKING LIFE

American workers evaluate the quality of their jobs. 1979 Jan. 3-12.

Job tenure declines as work force changes. 1979 Dec. 48-50.

Labor force status of older workers, The. 1979 Nov. 12-18.
Unemployment among family men: a 10-year longitudinal study.
1979 Nov. 19-23.
Work and socioeconomic life cycles: an agenda for longitudinal research. 1979 Feb. 23-27.

WORK INJURIES AND ILLNESSES

First work-injury data available from new BLS study, The. 1979 Jan. 76-80.
Occupational skin disease continues to plague industry. 1979 Feb. 17-22.

WORK MOTIVATION

American workers evaluate the quality of their jobs. 1979 Jan. 3-12.
Can unions meet the needs of a 'new' work force. 1979 Feb. 33-34.

YOUTH

A special section on young workers and families. 1979 Oct. 3-56.
International Year of the Child 1979.
Young and marginal: an overview of youth employment.
The labor market experience of black youth, 1954-78.
Using National Longitudinal Surveys to track young workers.
The difference a year makes in the Nation's youth work force.
Working mothers in the 1970's: a look at the statistics.
Child-care arrangements of working parents.
It is 'back to school' for new youth programs. 1979 Apr. 48.
Teenage conundrum. 1979 Apr. 2.
Today's teenage unemployed--tomorrow's working poor? 1979 Jan. 69-71.

DEPARTMENTS

Anatomy of Price Change. September and December issues.
Book Reviews. Each issue. (See Book Reviews by author of book.)
Communications. September and November issues.
Conference Papers. January, February, April, May, June issues.
Conventions. September issue.
Current Labor Statistics. Each issue.
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Productivity Reports. February and October issues.
Research Summaries. Each issue except August, September, October.
Significant Decisions in Labor Cases. Each issue except January and February.
Special Labor Force Reports--Summaries. February, March, April, June, August, October issues.
Technical Note. February and November issues.

BOOK REVIEWS (listed by author of book)

Adams, Arvil V. and Garth L. Mangum. *The Lingering Crisis of Youth Unemployment*. 1979 May 60.
Bergsten, C. Fred, Thomas Horst, Theodore H. Moran. *American Multinationals and American Interest*. 1979 Dec. 59-60.
Bird, Caroline. *The Two-Paycheck Marriage: How Women at Work Are Changing Life in America*. 1979 Oct. 75-76.
Brooks, Thomas R. *Communications Workers of America: The Story of a Union*. 1979 Jan. 83-84.
Collins, Lynn D. and Thomas Sowell, eds. *American Ethnic Groups*. 1979 Nov. 64-65.
Dam, Kenneth W. and George P. Shultz. *Economic Policy Beyond the Headlines*. 1979 Apr. 68.
Edwards, Richard. *Contested Terrain: The Transformation of the Workplace in the Twentieth Century*. 1979 Nov. 62-63.
Eskenazi, Samuel I. with Gordon L. Weil. *The Welfare Debate of 1978*. 1979 Aug. 64-65.
Farley, Jennie. *Affirmative Action and the Woman Worker: Guidelines for Personnel Management*. 1979 Oct. 76-77.
Foner, Philip S. *The Great Labor Uprising of 1877*. 1979 June 51-52.

Galbraith, John Kenneth. *The Nature of Mass Poverty*. 1979 Sept. 64-65.
Garms, Walter I., James W. Guthrie, Lawrence C. Pierce. *School Finance: The Economics and Politics of Public Education*. 1979 Dec. 60-61.
Garraty, John A. *Unemployment in History: Economic Thought and Public Policy*. 1979 July 47-48.
Guthrie, James W., Lawrence C. Pierce, Walter I. Garms. *School Finance: The Economics and Politics of Public Education*. 1979 Dec. 60-61.

Hagburg, Eugene C. and Marvin J. Levine. *Labor Relations: An Integrated Perspective*. 1979 Apr. 69.
Harkess, Shirley and Ann H. Stromberg, eds. *Women Working: Theories and Facts in Perspective*. 1979 Nov. 63-64.
Hazlitt, Henry. *The Inflation Crisis and How to Resolve It*. 1979 Dec. 60-61.
Horst, Thomas, Theodore H. Moran, C. Fred Bergsten. *American Multinationals and American Interest*. 1979 Dec. 59-60.

Levine, Marvin J. and Eugene C. Hagburg. *Labor Relations: An Integrated Perspective*. 1979 Apr. 69.
Mangum, Garth L. and Arvil V. Adams. *The Lingering Crisis of Youth Unemployment*. 1979 May 60.
Mitchell, Daniel J. B. and Arnold R. Weber. *The Pay Board's Progress: Wage Controls in Phase II*. 1979 Jan. 84-85.
Moran, Theodore H., C. Fred Bergsten, Thomas Horst. *American Multinationals and American Interest*. 1979 Dec. 59-60.

Palmer, John L., ed. *Creating Jobs: Public Employment Programs and Wage Subsidies*. 1979 June 50-51.

Perlman, Robert and Roland L. Warren. *Families in the Energy Crisis: Impacts and Implications for Theory and Policy*. 1979 Feb. 69.

Pierce, Lawrence C., Walter I. Garms, James W. Guthrie. *School Finance: The Economics and Politics of Public Education*. 1979 Dec. 60-61.

Popkin, Joel, ed. *Analysis of Inflation: 1965-1974*. 1979 May 60-61.

Schmidman, John. *Unions in Postindustrial Society*. 1979 Aug. 63-64.
Seidel, Stephen R. *Housing Costs and Government Regulations: Confronting the Regulatory Maze*. 1979 Mar. 69.

Shultz, George P. and Kenneth W. Dam. *Economic Policy Beyond the Headlines*. 1979 Apr. 68.

Sosnick, Stephen H. *Hired Hands: Seasonal Farm Workers in the United States*. 1979 July 48-49.

Sowell, Thomas and Lynn D. Collins, eds. *American Ethnic Groups*. 1979 Nov. 64-65.

Stromberg, Ann H. and Shirley Harkess, eds. *Women Working: Theories and Facts in Perspective*. 1979 Nov. 63-64.

Swart, J. Carroll. *A Flexible Approach to Working Hours*. 1979 Jan. 83.

Warren, Roland L. and Robert Perlman. *Families in the Energy Crisis: Impacts and Implications for Theory and Policy*. 1979 Feb. 69.

Weber, Arnold R. and Daniel J. B. Mitchell. *The Pay Board's Progress: Wage Controls in Phase II*. 1979 Jan. 84-85.

Weil, Gordon L. with Samuel I. Eskenazi. *The Welfare Debate of 1978*. 1979 Aug. 64-65.

World Bank. *World Development Report, 1978*. 1979 Sept. 65-66.

AUTHORS

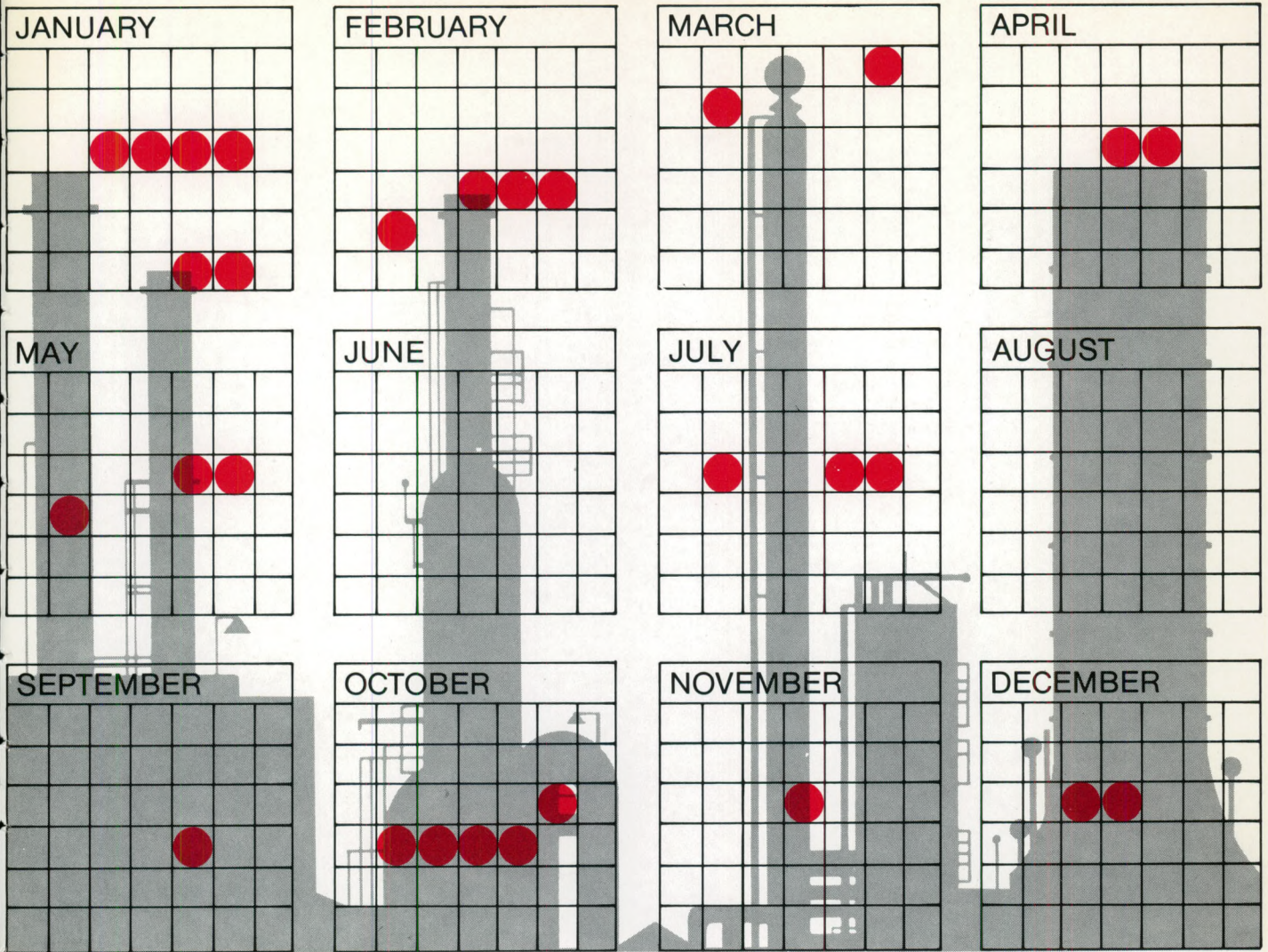
Alexander, Robert J. Book review. 1979 Jan. 83-84.
Anderson, John C., Gloria Busman, Charles A. O'Reilly III. What factors influence the outcome of decertification elections? 1979 Nov. 31-36.
Andrews, Mary A. and Winston Tillery. Heavy bargaining again in 1980. 1979 Dec. 20-28.
Antos, Joseph, Wesley Mellow, Jack E. Triplett. What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.
Aram, John D. and Paul F. Salipante, Jr. A system for individual equity in equal employment opportunity. 1979 Apr. 46-47.

- Bane, Mary Jo and others. Child-care arrangements of working parents. 1979 Oct. 50-56.
- Barclay, Lizabeth A., Lawrence L. Biasatti, James E. Martin. Successful public-sector labor relations: managers' attitudes may matter most. 1979 May 36-38.
- Barnes, William F. Book review. 1979 June 50-51.
- Becker, Brian E. and Stephen M. Hills. Today's teenage unemployed--tomorrow's working poor? 1979 Jan. 69-71.
- Bednarzik, Robert W. Book review. 1979 June 51-52.
- Belous, Richard S. and Sar A. Levitan. The minimum wage today: how well does it work? 1979 July 17-21.
- Biasatti, Lawrence L., James E. Martin, Lizabeth A. Barclay. Successful public-sector labor relations: managers' attitudes may matter most. 1979 May 36-38.
- Bingham, Barbara J. Labor requirements for college-housing construction. 1979 May 28-34.
- Bornstein, Leon. Industrial relations in 1978: some bargaining highlights. 1979 Jan. 58-64.
- Borum, Joan D. Wage increases of 1978 absorbed by inflation. 1979 June 10-13.
- Brown, Scott Campbell. Educational attainment of workers--some trends from 1975 to 1978. 1979 Feb. 54-59.
- and Carl Rosenfeld. The labor force status of older workers. 1979 Nov. 12-18.
- Buckley, John E. Do area wages reflect area living costs? 1979 Sept. 24-29.
- Burgess, Paul L. and Jerry L. Kingston. Some in families of those receiving jobless aid are forced to seek work. 1979 Apr. 45-46.
- Busman, Gloria, Charles A. O'Reilly III, John C. Anderson. What factors influence the outcome of decertification elections? 1979 Nov. 32-36.
- Cain, Glen G. The unemployment rate as an economic indicator. 1979 Mar. 24-35.
- Chauhan, D. S. The political and legal issues of binding arbitration in government. 1979 Sept. 35-41.
- Christy, Paul T. and Karen J. Horowitz. An evaluation of BLS projections of 1975 production and employment. 1979 Aug. 8-19.
- Clague, Ewan. Book review. 1979 Dec. 60-61.
- Clem, Andrew, Eddie Lamb, Craig Howell. Energy buoys double-digit inflation, food price surge ebbs in second quarter. 1979 Sept. 49-55.
- Corcoran, Mary and Martha S. Hill. Unemployment among family men: a 10-year longitudinal study. 1979 Nov. 19-23.
- Darmstadter, Joel. Book review. 1979 Feb. 69.
- Davis, C. Howard and others. 'Quick' special purpose surveys passed test during coal strike. 1979 Feb. 62-64.
- Devens, Richard M. Book review. 1979 Aug. 64-65; Dec. 59-60.
- . Unemployment among recipients of food stamps and AFDC. 1979 Mar. 47-52.
- Douglass, Gordon K. Book review. 1979 Dec. 60-61.
- Douty, H. M. Book review. 1979 Apr. 69.
- Ducat, Janet L. Book review. 1979 Nov. 63-64.
- Dworkin, James B. and Marian M. Extejt. The union-shop deauthorization poll: a new look after 20 years. 1979 Nov. 36-40.
- and Peter Feuille. Does Wisconsin's final offer arbitration offer only 'intertemporal compromise?' 1979 May 39-40.
- Dymmel, Michael D. Technology in telecommunications: its effect on labor and skills. 1979 Jan. 13-19.
- Early, John F. Book review. 1979 Jan. 84-85.
- . The Producer Price Index revision: overview and pilot survey. 1979 Dec. 11-19.
- Elder, Peyton K. and Heidi D. Miller. The Fair Labor Standards Act: changes of four decades. 1979 July 10-16.
- Extejt, Marian M. and James B. Dworkin. The union-shop deauthorization poll: a new look after 20 years. 1979 Nov. 36-40.
- Feuille, Peter and James B. Dworkin. Does Wisconsin's final-offer arbitration offer only 'intertemporal compromise?' 1979 May 39-40.
- Fineshriber, Phyllis H. Jobless insurance inequities deepens as more women enter the labor force. 1979 Apr. 44-45.
- Flaim, Paul O. The effect of demographic changes on the Nation's unemployment rate. 1979 Mar. 13-23.
- Fleming, R. W. Binding arbitration can put public employers in a bind. 1979 Jan. 73-75.
- Frumkin, Robert and Donald Schmitt. Pension improvements since 1974 reflect inflation, new U.S. law. 1979 Apr. 32-37.
- Fluco, Lawrence J. First-quarter productivity drop follows marginal growth in 1978. 1979 Oct. 57-61.
- . Productivity increased in all major sectors in the third quarter. 1979 Feb. 41-45.
- Gilroy, Curtis. Sources of bias in labor force data. 1979 Jan. 67-68.
- Ginsburg, Helen. Book review. 1979 July 47-48.
- Glazer, Daniel. Exploiting the micro-data foundation of the Current Population Survey. 1979 Feb. 46-48.
- Goldberg, Joseph P. Book review. 1979 Aug. 63-64.
- Grossman, Allyson Sherman. Labor force patterns of single women. 1979 Aug. 46-53.
- Hamel, Harvey R. Two-fifths of discouraged sought work during prior 6-month period. 1979 Mar. 58-60.
- Hayghe, Howard. The effect of unemployment on family income in 1977. 1979 Dec. 42-44.
- . Working wives' contribution to family income in 1977. 1979 Oct. 62-64.
- Heaton, Cris and Philip Martin. Labor force participation differs significantly for the rural woman. 1979 Jan. 71-73.
- Hedges, Janice Neipert. Book review. 1979 Jan. 83.
- and Earl F. Mellor. Weekly and hourly earnings of U.S. workers, 1967-78. 1979 Aug. 31-41.
- and Edward S. Sekscenski. Workers on late shifts in a changing economy. 1979 Sept. 14-22.
- Henle, Peter. Book review. 1979 Apr. 68.
- Herriot, Roger A. The 1980 census: countdown for a complete count. 1979 Sept. 3-13.
- Hill, Martha S. and Mary Corcoran. Unemployment among family men: a 10-year longitudinal study. 1979 Nov. 19-23.
- Hills, Stephen M. and Brian E. Becker. Today's teenage unemployed--tomorrow's working poor? 1979 Jan. 69-71.
- Hofer, Michael and Norman Root. The first work-injury data available from new BLS study. 1979 Jan. 76-80.
- Horowitz, Karen J. and Paul T. Christy. An evaluation of BLS projections of 1975 production and employment. 1979 Aug. 8-19.
- Howell, Craig and others. Consumer price rise again tops 13 percent in third quarter. 1979 Dec. 35-41.
- and others. Price changes in 1978--an analysis. 1979 Mar. 3-12.
- , Andrew Clem, Eddie Lamb. Energy buoys double-digit inflation, food price surge ebbs in second quarter. 1979 Sept. 49-55.
- , William Thomas, Eddie Lamb. First-quarter food and fuel prices propel inflation rate to 5-year high. 1979 June 3-9.
- Jacobs, Eva. Family expenditure data to be available on a continuing basis. 1979 Apr. 53-54.
- Job, Barbara Cottman. How likely are individuals to enter the labor force? 1979 Sept. 28-34.
- . The black labor force during the 1975-78 recovery. 1979 May 3-7.
- Johnson, Beverly L. Changes in marital and family characteristics of workers, 1970-78. 1979 Apr. 49-52.
- Juris, Hervey A. and Myron Roomkin. The changing of unionism in traditionally organized sectors. 1979 Feb. 36-38.
- Kassalow, Everett M. Labor-management relations and the coal industry. 1979 May 23-27.
- . Will West European unions embrace the union shop? 1979 July 35-39.
- Killingsworth, Charles C. Structural unemployment without quotation marks. 1979 June 29-34.
- Kingston, Jerry L. and Paul L. Burgess. Some in families of those receiving jobless aid are forced to seek work. 1979 Apr. 45-46.
- Kipps, John. Cost-of-living indexes for Americans living abroad. 1979 Jan. 81; Apr. 59; July 39; Oct. 67-68.
- Kochan, Thomas, A. How American workers view labor unions. 1979 Apr. 23-31.
- Kohler, Daniel. Employment Cost Index up 7.7 percent in 1978. 1979 July 28-31.

- Krislov, Joseph. Decertification elections increase but remain no major burden to unions. 1979 Nov. 30-32.
- Kutscher, Ronald E. The influence of energy on industry output and employment. 1979 Dec. 3-10.
- Lamb, Eddie, Craig Howell, Andrew Clem. Energy buoys double-digit inflation, food price surge ebbs in second quarter. 1979 Sept. 49-55.
- , Craig Howell, William Thomas. First-quarter food and fuel prices propel inflation rate to 5-year high. 1979 June 3-9.
- LaVan, Helen and Margaret Oppenheimer. Comparing arbitration and litigation in employment discrimination cases. 1979 May 35-36.
- LeGrande, Linda. Merger of Retail Clerks, Meat Cutters creates union exceeding 1.2 million. 1979 Sept. 56-57.
- Leon, Carol. Employment and unemployment in the first half of 1979. 1979 Aug. 3-7.
- and Philip L. Rones. Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.
- Levin, Beth A. Scheduled wage increases and escalator provisions in 1979. 1979 Jan. 20-25.
- Levitan, Sar A. and Richard Belous. The minimum wage today: how well does it work? 1979 July 17-21.
- McGee, William S. and Joseph H. Wex. Unionization of court employees has raised legal, practical issues. 1979 Aug. 20-24.
- Martin, Benjamin. Industrial relations in Spain: a status report. 1979 May 48-52.
- Martin, James E., Lizabeth A. Barclay, Lawrence L. Biasatti. Successful public-sector labor relations: managers' attitudes may matter most. 1979 May 36-38.
- Martin, Philip and Cris Heaton. Labor force participation differs significantly for the rural woman. 1979 Jan. 71-73.
- Mayer, Henry C. Book review. 1979 Nov. 64-65.
- Mellor, Earl F. and Janice Neipert Hedges. Weekly and hourly earnings of U.S. workers, 1967-78. 1979 Aug. 31-41.
- Mellow, Wesley, Jack E. Triplett, Joseph Antos. What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.
- Millen, Bruce H. Providing assistance to displaced workers. 1979 May 17-22.
- Miller, Heidi D. and Peyton K. Elder. The Fair Labor Standards Act: changes of four decades. 1979 July 10-16.
- Minor, Gerri. Workers' compensation laws--key State amendments of 1978. 1979 Jan. 43-50.
- Mounts, Gregory J. Labor and the Supreme Court: significant decisions of 1977-78. 1979 Jan. 51-57.
- Moy, Joyanna. Recent labor market trends in nine industrial nations. 1979 May 8-16.
- Nash, Charles E. Book review. 1979 Sept. 64-65.
- Nelson, Richard R. State labor legislation enacted in 1978. 1979 Jan. 26-42.
- Newman, Morris J. The labor market experience of black youth, 1954-78. 1979 Oct. 19-27.
- Olsen, John G. Labor and material requirements for new school construction. 1979 Apr. 38-41.
- Olson, Craig A. Does 'final offer' allow the bargaining that conventional arbitration chills? 1979 May 38-39.
- Oppenheimer, Margaret and Helen LaVan. Comparing arbitration and litigation in employment discrimination cases. 1979 May 35-36.
- O'Reilly, Charles A. III, John C. Anderson, Gloria Busman. What factors influence the outcome of decertification elections? 1979 Nov. 32-36.
- Persigehl, Elmer S. and James D. York. Substantial productivity gains in the fluid milk industry. 1979 July 22-27.
- Personick, Valerie A. Industry output and employment: BLS projections to 1990. 1979 Apr. 3-14.
- Pestillo, Peter J. Can unions meet the needs of a 'new' work force? 1979 Feb. 33-34.
- Peterson, James L. Work and life cycles: agenda for longitudinal research. 1979 Feb. 23-27.
- Prier, Robert J. Labor and material requirements for federally aided highways. 1979 Dec. 29-34.
- Prosten, Richard. The rise in NLRB election delays: measuring business' new resistance. 1979 Feb. 38-40.
- Pursell, Donald E. and William D. Torrence. Age and the job-hunting methods of the unemployed. 1979 Jan. 68-69.
- Quackenbush, James H. Highlights of the 1979 ILO Conference. 1979 Oct. 65-67.
- Quinn, Robert P. and Graham L. Staines. American workers evaluate the quality of their jobs. 1979 Jan. 3-12.
- Raskin, A. H. Management's hard line: 'class war' or labor's chance to reform? 1979 Feb. 34-36.
- Rees, Albert. Improving the concepts and techniques of productivity measurement. 1979 Sept. 23-27.
- Riche, Martha Farnsworth. Book review. 1979 Oct. 75-76.
- Rieg, Mary Kay. Pay factors displayed in dress manufacturing. 1979 Apr. 54-56.
- Rones, Philip L. and Carol Leon. Employment and unemployment during 1978: an analysis. 1979 Feb. 3-12.
- Roomkin, Myron and Hervey A. Juris. The changing character of unionism in traditionally organized sectors. 1979 Feb. 36-38.
- Root, Norman and Michael Hoefer. The first work-injury data available from new BLS study. 1979 Jan. 76-80.
- Rosenfeld, Carl. Multiple jobholding holds steady in 1978. 1979 Feb. 59-61.
- . Occupational mobility during 1977. 1979 Dec. 44-48.
- and Scott Campbell Brown. The labor force status of older workers. 1979 Nov. 12-18.
- Runner, Diana. State unemployment insurance: changes during 1978. 1979 Feb. 13-16.
- Ruttan, Vernon W. Book review 48-49.
- Ryscavage, Paul M. BLS labor force projections: a review of methods and results. 1979 Apr. 15-22.
- . More wives in the labor force have husbands with 'above-average' incomes. 1979 June 40-42.
- . Two divergent measures of purchasing power. 1979 Aug. 25-30.
- Salipante, Paul F., Jr., and John B. Aram. A system for individual equity in equal employment opportunity. 1979 Apr. 46-47.
- Schmitt, Donald and Robert Frumkin. Pension improvements since 1974 reflect inflation, new U.S. law. 1979 Apr. 32-37.
- Schulz, James H. and others. Private pensions fall far short of retirement income levels. 1979 Feb. 28-32.
- Sekscenski, Edward S. Job tenure declines as work force changes. 1979 Dec. 48-50.
- and Janice Neipert Hedges. Workers on late shifts in a changing economy. 1979 Sept. 14-22.
- Sieling, Mark S. Interpreting pay structures through matrix application. 1979 Nov. 41-45.
- Sproat, Kezia. Using National Longitudinal Surveys to track young workers. 1979 Oct. 28-33.
- Staines, Graham L. and Robert P. Quinn. American workers evaluate the quality of their jobs. 1979 Jan. 3-12.
- Stamas, George D. Long hours and premium pay, May 1978. 1979 May 41-45.
- . Real after-tax annual earnings from the Current Population Survey. 1979 Aug. 42-45.
- Stelluto, George L. Federal pay comparability: facts to temper the debate. 1979 June 18-28.
- Stinson, John F., Jr. Vietnam veterans in the labor market of the 1970's. 1979 Nov. 3-11.
- Struyk, Raymond J. Book review. 1979 Mar. 69.
- Sveikauskas, Catherine Defina. Book review. 1979 Sept. 65-66.
- Taggart, Robert. Book review. 1979 May 60.
- Taylor, Daniel E. Absent workers and lost work hours, May 1978. 1979 Aug. 51-53.
- Thomas, William, Eddie Lamb, Craig Howell. First-quarter food and fuel prices propel inflation rate to 5-year high. 1979 June 3-9.
- Thurston, Lawrence. Another measure of flow and duration as unemployment rate components. 1979 Sept. 46-48.
- Tillery, Winston and Mary A. Andrews. Heavy bargaining again in 1980.

- Torrence William D. and Donald E. Pursell. Age and the job-hunting methods of the unemployed. 1979 Jan. 68-69.
- Triplett, Jack E., Joseph Antos, Wesley Mellow. What is a current equivalent to unemployment rates of the past? 1979 Mar. 36-46.
- Tuckman, Howard P. and William D. Vogler. The fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
- Van Auken, Kenneth G., Jr. Book review. 1979 Nov. 62-63.
- Volger, William D. and Howard P. Tuckman. The fringes of a fringe group: part-timers in academe. 1979 Nov. 46-49.
- Vroman, Wayne. Linking unemployment insurance to mobility and family income. 1979 Apr. 42-44.
- Waldman, Elizabeth and others. Working mothers in the 1970's: a look at the statistics. 1979 Oct. 39-49.
- Wang, Chao Ling. Occupational skin disease continues to plague industry. 1979 Feb. 17-22.
- Warren, Ronald S., Jr. Another measure of flow and duration as jobless rate components: reply. 1979 Sept. 48.
- Westcott, Diane N. Book review. 1979 Oct. 76-77.
- . Developing a definition for 'economic hardship.' 1979 Jan. 65-66.
- . Employment and commuting patterns: a residential analysis. 1979 July 3-9.
- Westfield, Fred M. Book review. 1979 May 60-61.
- Wex, Joseph H. and William S. McGee. Unionization of court employees has raised legal, practical issues. 1979 Aug. 20-24.
- White, Rudolph A. Has BLS underestimated business Ph. D. demand? 1979 Sept. 42-46.
- Wurzberg, Gregory K. It is 'back to school' for new youth programs. 1979 Apr. 48.
- York, James D. and Elmer S. Persigehl. Substantial productivity gains in the fluid milk industry. 1979 July 22-27.
- Young, Anne McDougall. Back to school at 35 and over, October 1978. 1979 Aug. 53-55.
- . Job search of recipients, of unemployment insurance 1979 Feb. 49-54.
- . Median earnings in 1977 reported for year-round, full-time workers. 1979 June 35-39.
- . The difference a year makes in the Nation's youth work force. 1979 Oct. 34-38.
- . Work experience of the population in 1977. 1979 Mar. 53-57.
- Zoltek, Robin. White-collar pay rise for 1979 nearly matches 1978 increase. 1979 Nov. 49-50.

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Analysis of Work Stoppages

U.S. Department of Labor
Bureau of Labor Statistics

This bulletin provides a detailed statistical presentation of work stoppages in 1977, including historical comparisons. Stoppages are tabulated by industry, occupation, location, type of settlement, and impasse procedures as well as four major characteristics: (1) size, (2) duration, (3) contract status, and (4) major issue.

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