



MONTHLY LABOR REVIEW

December 1973

U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics



In this issue: The U.S. economy in 1985: A preview of BLS projections

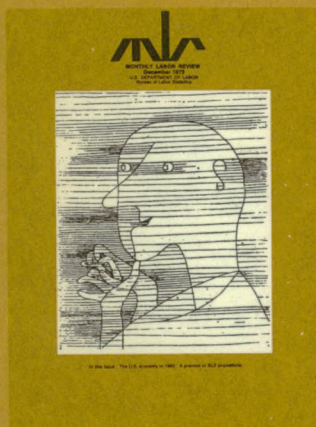


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Subscription price to rise

The cost of subscribing to the *Monthly Labor Review* will increase to \$16.25 a year beginning in January 1974. The additional cost for mailing to most foreign countries will be \$4.10 a year. Single copies will cost \$1.40 each.

The Government Printing Office, which handles printing and distribution of the *Monthly Labor Review* and other U.S. Government publications, is placing the higher prices into effect to cover increasing costs of its operations, including higher postage rates.

The Bureau of Labor Statistics of the Department of Labor, which publishes the *Monthly Labor Review* and pays research, editorial, and most production costs out of its budget, has no voice in setting subscription prices and does not receive any of the sales revenue.

Labor Month in Review



BLS INDICATORS. Third quarter data published by the Bureau of Labor Statistics showed an increase in output per man-hour from the second quarter, following the decline from the first to second quarters. Unit labor costs, wholesale prices, and union wages in the building trades increased at slower rates than they did the preceding quarter. Real compensation fell for most workers as consumer prices continued to climb. Unemployment among Vietnam Era veterans remained unchanged while the overall rate edged down. During the first 9 months of 1973, wage increases set through major collective bargaining were lower than last year's raises. Idleness due to strikes continued at a 9-year low. Price changes are discussed in detail on page 61 in this issue. Other indicators are summarized below.

Productivity and costs. In the total private economy, output per man-hour increased 1.4 percent (at a seasonally adjusted annual rate) during the third quarter, compared with a decline of 0.7 percent in the second. The turn-around reflected a faster rate of growth in output (up to 3.6 percent in the private sector from 2.6 percent during the second quarter) coupled with a slower rate of growth in man-hours (2.2 percent compared with 3.2 percent the quarter before). In manufacturing, productivity advanced 5.5 percent, a significant increase over the 3.8-percent rise which occurred in the previous quarter.

Unit labor costs rose at an annual rate of 7.2 percent during the third quarter, a slowdown from the 7.6-percent rate of the preceding quarter. Hourly compensation rose 8.6 percent in the private sector, but real compensation, which is adjusted for changes in consumer prices, fell by 0.5 percent as consumer prices rose 10.3 percent.

Union wages. First-year wage increases in major collective bargaining settlements concluded during the first 9 months of 1973 averaged 6.0 percent—well below the 7.3 percent average gain recorded for the full year of 1972. Over the life of the contracts settled in the first 9 months of 1973, wages will

rise at an average rate of 5.5 percent a year, compared with 6.4 percent for settlements reached in 1972. (These findings are drawn from 643 settlements in the private nonfarm economy, each affecting 1,000 workers or more.)

The decline from 1972 rates was most notable in nonmanufacturing, where first-year wage increases averaged 5.8 percent, 2 percentage points below last year's level.

Union wage rates for building trades workers in cities of 100,000 inhabitants or more increased 1.7 percent in the third quarter of 1973, in line with the corresponding rise of 1.6 percent in 1972. The increase over the year ending October 1, 1973 (4.9 percent), however, was substantially less than for the previous year (7.1 percent)—continuing a trend observed over the preceding 9 quarters.

Work stoppages. Idleness due to strikes declined to 1.3 working days per thousand during the first 9 months of the year from 1.5 working days per thousand for the same period in 1972. The decline was primarily due to the shorter average duration of stoppages involving 5,000 workers or more—more strikes were in effect and more workers idled in 1973 than the year before. □

Annual Index

This issue of the *Monthly Labor Review* includes the annual index (pp. 123–136), produced this year for the first time with the use of both WYLBUR, a text-editing computer program of the National Institutes of Health, and Linotron, an automated phototypesetting system operated by the Government Printing Office.

The 1973 index was compiled and entered into the WYLBUR system by Olivia G. Amiss, Marion C. Lewis, and Constance S. McEwen, with the aid and guidance of technical support staff, Victor G. Stotland and Eugene C. McKay of the BLS Office of Statistical Operations and Processing.

The United States economy in 1985

An overview of BLS projections

JACK ALTERMAN

TWO SIGNIFICANT DEPARTURES from past trends are suggested by the Bureau of Labor Statistics projections of the U.S. economy to 1985 which are presented in this issue of the *Monthly Labor Review*: (1) a sharp slowdown in overall economic growth and (2) a potential oversupply of college graduates, both to begin in the late 1970's.

The new projections—like earlier ones published by the Bureau of Labor Statistics—are designed to provide a framework for assessing future manpower requirements and to provide information for career guidance of young people. The projections also are used by government, business, and other groups for a variety of planning and policy development purposes.

The projections provide information on long-term changes in the size, composition, and education of the labor force; productivity; hours of work; gross national product and its distribution among the various categories of demand for goods and services; industry output; and employment and occupational requirements. The latest set of projections revises the previously published set of projections to 1980 and extends the estimates to 1985.

This article discusses some findings of the new projections, and summarizes major assumptions and techniques underlying the projections. In addition, a summary comparison of the revised projections to 1980 with earlier estimates for that year is also included.¹ Three other articles in this issue present projections to 1985 of population and the labor force (pp. 8–17), occupational changes (pp. 18–26), and gross national product, final demand, industry output, and employment (pp. 27–42).

More detailed bulletins covering additional statistical detail for individual industries and occupa-

tions and an expanded discussion of findings and methodologies will be published early in 1974.

Some findings

By 1985, the U.S. labor force will reach 108 million; the number of persons employed, 103 million (both totals include military); and gross national product, about \$1.9 trillion (1972 dollars). These results reflect a number of assumptions underlying the projections and in particular a key assumption that basic economic factors will not veer from long-term paths. Despite these assumptions of continuation of underlying economic forces, demographic changes already in the works presage changes in growth and trained manpower.

Perhaps the most important departure from the long-term trend lies in the rather sharp slowdown in economic growth projected to start about 1978 and continue into the 1980's. (Because the projections are for the specific years 1980 and 1985, the slowdown is dated as covering 1980–85).

The expected dampening in the rate of economic growth is almost entirely demographic; that is, caused by changes in the growth of the population 16 and over from which the work force is drawn. For some time, the birth rate has fallen from the peak periods of the late 1950's and early 1960's. The slowdown in births will begin to show up in the smaller number of new entrants into the labor force towards the end of the 1970's.

To put this slowdown into perspective, during the 1955–68 period, the labor force grew at an annual rate of 1.5 percent; during the 1968–80 period, it is projected to grow somewhat faster—1.8 percent a year. During 1980–85, however, it will drop sharply to 1.1 percent and is projected to decline during the late 1980's and possibly beyond.

The slowdown in the rate of increase in the labor

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force, given continuation of long-run rates of increase in labor productivity and declines in hours of work, results directly in a slowdown in the projected increase of real gross national product from about 4 percent a year in 1968-80 to only 3.2 percent in the period after 1980. The 3.2-percent rate is substantially lower than the economic growth rate of the post-World War II period.

It should be emphasized that the dampening in the rate of growth is not due to any assumption regarding failure to achieve high levels of employment. On the contrary, the projections assume 96 percent of the civilian labor force employed in both 1980 and 1985.

The reduction in the rate of economic growth is not inevitable. The slowdown in the growth of the labor force can be offset by either (1) increasing productivity, (2) reversing the long-term decline in hours of work and increasing weekly hours, (3) sharply increasing labor force participation among younger people and women and delaying retirement of older workers, or (4) a combination of all three approaches. It would, however, take a major national effort to modify historical rates of change in productivity, hours of work, and labor force participation rates, given the strength of the basic underlying economic and institutional factors.

The projected reduction in the growth rate obviously has many implications for the entire economy and its parts. It will present major problems in achieving a balanced transition from a higher to a lower sustainable growth rate. Business will have to be much more critical in developing long-range marketing, investment, and staffing plans, avoiding dependence on past trends. Government will have to deal with a slackening in the growth of revenues, resulting in increased pressures on budgets. It is true that demand for governmental functions will also be dampened somewhat as a result of slower growth in the labor force and economic activity, but the situation may still require a more critical evaluation of priorities at all levels of government.

The projected slowdown may have some beneficial aspects, however. Chief among these are a reduction in pollution and waste disposal problems. Similarly, the long-term problems associated with increasing demand for energy and natural resources may be alleviated somewhat. Lastly, a reduced growth rate may make possible an improved balance of payments situation resulting from a decline in imports relative to exports.

The other major departure from historical experience will be the shift in the supply and demand for college graduates. The projections indicate that the nation will be moving from a period (in the 1950's and 1960's) when demand for college graduates outstripped supply to one in the 1970's when supply and demand will be roughly in balance. However, the balance for individual occupations and levels of education may present serious problems. In the 1980's, however, we anticipate the supply of graduates (based on the Office of Education's projections) increasing faster than the demand for them. The surplus may amount to about 140,000 a year during the 1980-85 period, or more than 10 percent of the projected supply.

The surplus does not mean large-scale unemployment among college graduates. Rather, it is quite likely that an increasing proportion of college graduates will take positions other than their first choice. It also may mean a rise in job "requirements" as college graduates become more generally available. If steps are not taken to facilitate the transition from undersupply to oversupply, we may be faced with a large number of disappointed college graduates and another group of workers with less than a college education, concerned about competition from college graduates for promotion to or employment in better paying jobs.

It is possible that the imbalance in the supply-demand situation for college-educated workers may not be as large as projected, because college enrollment will slow down as students become aware of the less favorable job market. This may be offset, however, by continued strength in the belief that the contribution of a college education to personal development and broadened outlook is at least as important as the professional training acquired.

General assumptions

The projections to 1980 and 1985 are based on a number of assumptions; some explicit but others, even more numerous, implicit.

Fiscal, monetary, and manpower training and educational programs will achieve a satisfactory balance between relatively low unemployment and relative price stability, permitting achievement of the long-term economic growth rate. The projections assume a 4-percent unemployment rate (of the civilian labor force) and a 3-percent annual increase in the implicit price deflator for gross national product.

The institutional framework of the American economy will not change radically.

Economic, social, technological, and scientific trends will continue, including values placed on work, education, income, and leisure.

Efforts to solve major domestic problems such as those of air and water pollution, solid waste disposal, urban congestion, inadequate industrial safety, and energy shortages may consume more productive resources but will not have more than a marginal effect on long-term economic growth.

Assumptions directly affecting growth

Population growth is projected to conform to Census Series E projections, which provide that fertility rates remain at the replacement level. The projected labor force is derived from the assumed population by extrapolating future participation rates for each age-sex group from the 1955-72 trend, tapered so that in 50 years all changes are reduced to approximately zero.

Average annual hours are assumed to decline by 0.5 percent a year in the agricultural sector, by 0.3 percent a year in the private nonagricultural sector.

Productivity in the private nonfarm economy is assumed to grow at its long-term rate—2.7 percent a year. This assumption, combined with a similar assumption regarding continuation of the long-term average annual productivity rate of 5.5 percent for the farm sector, yields an annual rate of increase for the total private economy of 2.9 percent during 1968-80 but 2.8 percent in 1980-85, due to the declining relative weight of the farm sector.

Governmental assumptions

All levels of government will expand efforts to meet a variety of domestic needs, but State and local government activity will continue to grow relative to Federal activity. It has been further assumed that Federal, State, and local budgets will be close to balance by 1980 and 1985 as a result of:

No change in Federal tax legislation other than that contained in the Tax Reform Act of 1969.

The tax rate for Social Security remains as currently legislated, but the wage base is allowed to grow with the deflator for consumer expenditures, thus maintaining a constant real wage base.

Federal transfer payments were assumed in line

with the provisions of Federal legislation through 1975. After that, transfer payments are assumed to increase in accord with (a) the rate of increase of the population over 62; (b) the rate of price increase; and (c) an expansion of 3 percent a year to cover increased coverage or real benefits.

Increased Federal revenue resulting from growth in the economy will be used largely to expand Federal grants to State and local governments relative to other categories of expenditures, although at a diminishing rate. The substantial increase in Federal grants will permit State and local governments to slow the rate of increase in their taxes.

Defense expenditures are assumed to continue to decline as a proportion of the Federal budget and of GNP. The size of the Armed Forces will be reduced to about 2 million and kept at that level.

Federal nondefense purchases of goods and services are assumed to increase at rates below that of real GNP, but will account for an increasing share of total Federal purchases of goods and services.

Assumptions about major sectors

In residential construction, estimates assume a meeting of housing goals by 1978. Thereafter, residential construction is a constant proportion of real GNP.

Projected U.S. energy requirements will be roughly in line with those projected by the U.S. Department of the Interior in *U.S. Energy Through the Year 2000*, December 1972. This means major reliance on oil imports to close the energy supply-demand gap. (During the last quarter of 1973, curtailment of oil supplies from the Mideast raised questions regarding use of imports to close the supply-demand energy gap over the next few years. It remains to be seen whether this restriction on oil imports will continue over the long run and what implications this may have for the long-term growth rate and structural changes in the economy resulting from the effort to develop domestic alternatives to oil imports.)

In international trade, it is assumed that by 1980 and 1985 the United States will have achieved a slight surplus in our net export balance, in spite of increased imports of oil.

Projection methodology

Labor force projections. Development of the 1980 and 1985 projections begins with the labor force.

Based on the Bureau of the Census projections of population (Series E), labor force estimates are developed through separate projections of the labor force participation rates for various groups in the population, 16 years and above, by age and sex. The participation rates are then applied to the projected levels of each population group.

Gross national product. GNP is projected as the product of three major variables: (a) employment which is based on the projected labor force and an assumption of a 4-percent civilian unemployment rate; (b) annual hours per job; and (c) output per man-hour. The projections are developed separately for Federal Government, State and local government (excluding government enterprises), the agricultural sector, and the private nonagricultural sector and then aggregated to derive target year GNP.

Distribution of potential GNP. GNP is distributed into major categories of demand through the use of a macroeconomic model which starts with potential GNP and develops estimates of government revenue, personal income, and business income. The estimates are then used, along with selected exogenous estimates, to develop projections of government purchases of goods and services, personal consumption, and investment expenditures.

Conversion of demand into industry employment. (a) Major final demand components are distributed into detailed "bills of goods" item by item. (b) The potential demand for all final goods and services is converted into industry output requirements (135-industry detail) through the use of interindustry (input-output) relationships projected to the target years. (c) Projected industry output is converted into employment requirements based on estimates of annual hours per job and output per man-hour, also projected to the target years.

The projection system contains a number of checkpoints to see that projections made at different stages are mutually consistent. Important among these is the check of employment derived as the aggregate of the industry employment projections with total employment used initially. The results of the input-output employment projections are also checked and reconciled with an independent set of industry employment projections derived by regression techniques.

Conversion of industry employment into occupational needs. This process is based on the use of projected industry occupational patterns and modification of the initial industry employment projections to match the detail of the industry-occupational table (116 industries, 162 occupations). The industry occupational patterns are then applied to the employment projections to derive estimates of occupational needs.

Estimates of job openings. These are developed by combining the growth implied by the occupational projections with estimates of replacement needs. These are developed from tables of working life based on actuarial experience for deaths and general patterns of labor force participation of each age. Withdrawals from the labor force can be projected for men and women separately in each occupation for which age and sex are known. The net effects of interoccupational transfers, however, are not known in systematic fashion; therefore, such data are not included in estimates of total job openings.

Identification of manpower imbalances. Such imbalances are based on analyses of projected occupational requirements and trends in the number of individuals entering educational or training programs designed to prepare them for specific occupations and on trends in the proportion of those who complete their education or training and enter the related occupational field.

Qualifications

Making a set of projections as comprehensive as those described in the articles which follow involves many assumptions, some of which have a great deal of uncertainty attached to them. It would be possible to make alternative assumptions for each of these variables and discern the ramifications. However, the combinations and permutations would quickly make the results incomprehensible. For that reason, the projections discussed in these articles are limited to a basic set of estimates and assumptions. However, some implications of alternative assumptions for growth, output, and employment will be reported in bulletins to be published in 1974.

Even beyond those projections or assumptions for which alternatives could be used, uncertainties concerning these projections exist. While they have

been made with care and the models used, tested, and evaluated, many questions remain. Any model or technique is only a shortcut to capture intricate relationships in the economy. These shortcuts may obscure important structural changes. Also, it is usual in making projections, to tend, when all else fails, to move toward the center of reasonable alternatives, while the economy is never quite that cooperative. Further, in developing projections to years as distant as 1980 and 1985, it is inevitable that in certain areas events will take place which could materially affect the projections.² As one example, it is conceivable that defense expenditures could be drastically increased or reduced as a result of international developments or decisions regarding national priorities. This would affect not only Federal expenditures, but the level and structure of investments and consumer expenditures, input-output relationships, and the relative rates of output and employment growth for selected industries. Consequently, while BLS has taken considerable time and care in developing these projections, before they are used by others they should be evaluated carefully, particularly the assumptions underlying them.

In general, the projections should be considered as estimates amid uncertainty. Nevertheless, they are believed to be useful in providing indicators of relative future growth of demand, output, employment, and occupations.

Comparison with 1980 projections

The revised 1980 projections are not substantially different from the earlier set of 1980 projections, published in 1970. When both sets are made comparable by use of the 4-percent unemployment rate assumptions and the 1972 price level for the constant dollar estimates of gross national product, the

revised 1968–80 GNP annual growth rate is 4.0 percent, only slightly lower than the earlier projection of 4.1 percent. The slight decline results from changes in two of the factors which affect the overall growth rate being largely offsetting—higher labor force increases and lower annual hours of work. The other major factor—productivity is only slightly lower in the revised projections than in the earlier estimates.

The comparison of the distribution of GNP among major components of demand shows a decline in the relative share of final goods and services preempted by Federal Government purchases, stated in constant prices. This is due in large part to a reduction in the size of the Armed Forces, based on the assumption of an all-volunteer army. The revised projections show a somewhat higher proportion of GNP for each of the other major components of final demand; personal consumption expenditures, private domestic investment, and State and local government purchases of goods and services. The surplus in net exports is smaller.

The new employment projection is about 3 million higher than the earlier estimate, with most of the increase, in terms of number of jobs, in three major sectors—trade; finance, insurance, and real estate; and other services. Revised employment projections for agriculture and construction are lower than earlier estimates.

The current occupational projections show substantially higher estimates for white-collar workers, primarily in clerical occupations, and blue-collar workers, largely among nonfarm laborers. The latter estimate still shows a decline in the relative proportion of nonfarm laborers, but not as much of a decline as projected earlier. The revised estimates for service and farm workers are substantially lower than earlier projections.³ □

—FOOTNOTES—

¹ The earlier projections to 1980 were published in the *Monthly Labor Review*, April 1970, and in a series of BLS Bulletins, as follows:

Patterns of U.S. Economic Growth, Bulletin 1672 (1970)
The U.S. Economy in 1980: A Summary of BLS Projections, Bulletin 1673 (1970)

College Educated Workers, 1968–80, Bulletin 1676 (1970)
Occupational Manpower and Training Needs, Bulletin 1701 (1971)

Tomorrow's Manpower Needs: Volume IV, The National Industry-Occupational Matrix and Other Manpower Data, Bulletin 1737 (1972). Revised 1971.

In addition to the 1980 projections, the Bureau has also developed projections to 1970 and 1975. See *Projections 1970: Interindustry Relationships, Potential Demand, Employment*, Bulletin 1536 (1966), and *Projections of the Post-Vietnam Economy, 1975*, Bulletin 1733 (1972).

² This is one of the reasons the Bureau seeks to update, review, and extend its projections about once every 2½ to 3 years.

³ A more detailed comparison of the revised and earlier 1980 projections will be provided in the reprint of the projection articles and in bulletins to be published in 1974.

The United States economy in 1985

Population and labor force projections

DENIS F. JOHNSTON

THE POSTWAR "BABY BOOM" which pressed heavily on school capacity and subsequently swelled the ranks of younger workers during the late 1960's will have a similar impact on the ranks of workers between 25 and 40 years of age between 1972 and 1985, according to Bureau of Labor Statistics projections of the labor force to 1985. By contrast, the proportion of workers under 25 will fall relative to older groups of workers in the latter part of the 1972 - 85 period. As a result, some of the problems associated with very large numbers of young workers beginning their careers will diminish as these workers move into the older age groups, which generally have fewer employment problems.

Projections of population

These labor force expectations are based on expected changes in population. Between 1972 and 1980, the U.S. population is projected to increase by about 15 million to 224 million. However, if the current rate of child birth continues, the size of the population under 16 years old will decline by over 4 million while the working-age population (16 years and over) will rise by 19 million. Among those of labor force age, the 16- to 19-year-old population remains nearly constant. The prospective increase in the population of young adults (20 to 34 years old) is most important—a rise to 12.5 million, reaching 58 million in 1980. By contrast, the group aged 35 to 54 years will increase by only 1.4 million and the population 55 and over grows by about 5 million. The net effect of these changes is to increase the proportion of the population that is of working age (16 and over) from 71 percent in 1972 to 75 percent in 1980, and to raise the

median age of the population from 28.1 years in 1972 to 29.6 years in 1980, reversing the declining trend observed since the mid-1950's.

Between 1980 and 1985, the population under 16 years old is projected to increase by 3.2 million—reflecting the continuing rise in the number of women of child-bearing age. The 16- to 19-year-old group, in contrast, declines by over 2 million, in line with the decline in the number of births during the late 1960's.¹ While the 20- to 34-year-old group continues to increase by about 3 million during this period, its growth is overshadowed by that of the group 35 to 54 years old, which is expected to increase by 5.4 million. The older population also continues its steady increase during this 5-year period, with the net effect that the total population increases by 11.6 million during the period and the median age reaches 30.6 years by 1985.²

Key population changes between 1972 and 1985 by age group are as follows:

Group	Percent change
Total population	13
Under 16 years	-2
16 years and over	19
16 to 19 years	-12
20 to 34 years	34
35 years and over	16

These major changes in population are expected to strongly influence the growth and age-sex composition of the labor force.

Fertility fluctuations

The most important demographic development in the United States since World War II has been the enormous fluctuation in the fertility rate (births per 1,000 women 15 to 44 years old). It rose from 85.9 in 1945 to a peak of 122.9 in 1957 (up 43 percent) and then declined to 73.4 in 1972 (down 40

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percent).³ The initial effects of the "baby boom" of the 1950's have already been registered in the rising school enrollments of the late 1950's and early 1960's and in the heavy inflow of teenage jobseekers from the mid-1960's onward. The movement of this baby boom generation through the population constitutes the most dynamic feature of the population projections to 1985 and beyond. The 60 million persons born in the 15 years between 1947 and 1961 stand in marked contrast to the 40 million born during the preceding 15 years (1932 to 1946). Ignoring the counteracting effects of mortality and immigration, these 60 million persons were 11 to 25 years old in 1972; they will be 19 to 33 years old by 1980, and 24 to 38 years old by 1985. Furthermore, their number is considerably larger than the approximately 54 million births expected (according to the assumed Series E fertility levels of the U.S. Bureau of the Census) during the following 15-year period, 1962 to 1976. The reverse effects of this "baby bust" are only beginning to be felt in the recent declines in elementary school enrollments.

Expressed in terms of average births per woman, the fertility decline of the past 15 years implies a dramatic shift from a "three child" to a "two child" family norm—a shift which has been associated with profound changes in the roles of adult women, particularly with respect to their interest in, and availability for, paid employment.

The Series E projection of population, which has been adopted in developing the latest projection of labor supply, is summarized in table 1. This projection reflects the assumption that the "two child" norm shall continue to prevail over the projection period. Since current fertility levels are already consistent with (or even slightly below) the level needed to sustain that norm, the adoption of Series E implies the assumption that fertility rates will not continue to decline significantly in the next 12 years. The population series which is adopted has no effect upon the population of working age (16 years and over) until the late 1980's. Prior to that time, all persons in that population have already been born.⁴

Table 1. Total population, by age and sex, July 1, 1960, 1972, and projected to 1980 and 1985

Sex and age	Number (in thousands)				Percent distribution			
	1960	1972	1980	1985	1960	1972	1980	1985
BOTH SEXES								
Total, all ages.....	180,681	208,839	224,134	235,699	100.0	100.0	100.0	100.0
Under 16 years.....	58,857	60,926	56,794	59,979	32.6	29.2	25.3	25.4
16 years and over.....	121,824	147,913	167,340	175,720	67.4	70.8	74.7	74.6
16 to 19 years.....	10,710	15,923	16,397	14,049	5.9	7.6	7.3	6.0
20 to 34 years.....	34,027	45,573	58,030	61,195	18.8	21.8	25.9	26.0
35 to 54 years.....	44,802	46,365	47,777	53,187	24.8	22.2	21.3	22.6
55 years and over.....	32,285	40,052	45,136	47,289	17.9	19.2	20.1	20.1
Median age in years.....	29.4	28.1	29.6	30.6				
MEN								
Total, all ages.....	89,331	102,053	109,240	114,915	49.4	48.9	48.7	48.8
Under 16 years.....	29,917	31,055	28,979	30,632	16.6	14.9	12.9	13.0
16 years and over.....	59,414	70,998	80,261	84,283	32.9	34.0	35.8	35.8
16 to 19 years.....	5,417	8,100	8,339	7,139	3.0	3.9	3.7	3.0
20 to 34 years.....	16,884	22,740	29,187	30,845	9.3	10.9	13.0	13.1
35 to 54 years.....	22,015	22,497	23,249	26,039	12.2	10.8	10.4	11.0
55 years and over.....	15,098	17,661	19,486	20,260	8.4	8.4	8.7	8.6
WOMEN								
Total, all ages.....	91,350	106,786	114,894	120,784	50.6	51.1	51.3	51.2
Under 16 years.....	28,940	29,871	27,815	29,347	16.0	14.3	12.4	12.4
16 years and over.....	62,410	76,915	87,079	91,437	34.5	36.8	38.8	38.8
16 to 19 years.....	5,293	7,823	8,058	6,910	2.9	3.7	3.6	2.9
20 to 34 years.....	17,143	22,833	28,843	30,350	9.5	10.9	12.9	12.9
35 to 54 years.....	22,787	23,868	24,528	27,148	12.6	11.4	10.9	11.5
55 years and over.....	17,187	22,391	25,650	27,029	9.5	10.7	11.4	11.5

SOURCE: For 1960, see Estimates of the Population of the United States, by Age, Color, and Sex: July 1, 1960 to 1965, Current Population Reports, Population Estimates, Series P-25, No. 321 (Bureau of the Census, 1965), table 1. For

1972, 1980, and 1985, see Series P-25, No. 493, table 2 and unpublished single-year age detail.

Projections of labor force

As shown in table 2, the total labor force of the United States is projected to increase by nearly 13 million between 1972 and 1980, from 89 to about 102 million, and by almost 6 million between 1980 and 1985, reaching just under 108 million in 1985.⁵ This projection indicates that the proportion of women workers in the labor force is expected to continue to rise, but at a much more moderate pace than that during the 1960-72 period (32.3 percent to 37.4 percent). By 1980 it is expected to rise to 38.5 percent, with little change by 1985 (38.7 percent). The projection also reveals a major shift in the distribution of the labor force by age, reflecting in large part the impact of past changes in fertility, particularly the movement into the young adult group of the large postwar baby boom cohorts. This shift can be illustrated by means of the ratio of workers 20 to 34 years old to those aged 35 to 54. In 1960, that ratio was .72; by 1972, it had risen to .96; by 1980, it is expected to rise to 1.20; and by 1985, it declines moderately to 1.13.

Another important feature of the projection is the initially rapid increase in the size of the labor force in the 1970's, and the slowdown which begins late in the decade. The projection yields an average annual rate of increase over the entire projection

period (1972-85) of 1.5 percent—1.7 percent between 1972 and 1980, and 1.1 percent, 1980 to 1985.⁶

Over three-fourths of the projected 1972-80 increase in the labor force is expected to occur among the group 20 to 34 years old. This group will grow from 36 percent of the labor force in 1972 to 42 percent by 1980. In absolute numbers, the group rises from 32½ to over 42 million. The groups aged 35 to 54 years old and 55 years old and over will also grow, though more moderately, the former increasing 4.4 percent to about 35 million and the latter 11.1 percent to just over 16 million. By contrast the number of teenage workers (16 to 19) entering the labor force—whose massive growth between 1960 and 1972 helped to create problems of jobs for youth and to bring about a marked decline in the labor force's median age (from 39.8 to 37.2 years)—will peak around 1979, declining slowly thereafter.

Because 20- to 34-year-olds will lead labor force growth between 1972 and 1980, the emphasis in manpower policy may be expected to shift toward concern to provide more permanent career jobs from the past emphasis on entry-level jobs. Expected increases in the number of workers 35 to 54 years (about 150,000 a year during 1972-80) and workers 55 years and over (about 200,000 a

Table 2. Total labor force, by age and sex, annual average 1960, 1972, and projected to 1980 and 1985

Sex and age	Number (in thousands)				Percent distribution			
	1960	1972	1980	1985	1960	1972	1980	1985
BOTH SEXES								
Total, 16 years and over.....	72,142	88,991	101,809	107,716	100.0	100.0	100.0	100.0
16 to 19 years.....	5,246	8,367	8,337	7,165	7.3	9.4	8.2	6.7
20 to 34 years.....	22,749	32,463	42,223	44,758	31.5	36.5	41.5	41.6
35 to 54 years.....	31,562	33,689	35,165	39,463	43.7	37.9	34.5	36.6
55 years and over.....	12,585	14,472	16,084	16,330	17.4	16.3	15.8	15.2
Median age in years.....	39.8	37.2	35.2	35.8				
MEN								
Total, 16 years and over.....	48,870	55,671	62,590	66,017	67.7	62.6	61.5	61.3
16 to 19 years.....	3,184	4,791	4,668	3,962	4.4	5.4	4.6	3.7
20 to 34 years.....	16,019	20,601	26,375	27,896	22.2	23.1	25.9	25.9
35 to 54 years.....	20,974	21,116	21,759	24,361	29.1	23.7	21.4	22.6
55 years and over.....	8,692	9,163	9,788	9,798	12.0	10.3	9.6	9.1
WOMEN								
Total, 16 years and over.....	23,272	33,320	39,219	41,699	32.3	37.4	38.5	38.7
16 to 19 years.....	2,062	3,576	3,669	3,203	2.8	4.0	3.6	3.0
20 to 34 years.....	6,730	11,862	15,848	16,862	9.3	13.3	15.6	15.7
35 to 54 years.....	10,588	12,573	13,406	15,102	14.7	14.1	13.2	14.0
55 years and over.....	3,893	5,309	6,296	6,532	5.4	6.0	6.2	6.1

SOURCE: For 1960 and 1972, U.S. Department of Labor, 1973 Manpower Report of the President, table A-2; for 1980 and 1985, Denis F. Johnston, "The U.S. labor

force: projections to 1990," Monthly Labor Review, July 1973, pp. 3-13.

year) are not markedly different from 1960-72 trends. But the substantial increase in the ratio of young adult workers (20 to 34 years) to those 35 to 54 years may limit promotional opportunities for the younger workers.

Relative labor force growth between men and women is expected to alter sharply and is perhaps the most controversial feature of the new labor force projections. During 1960-72, women made up 60 percent of the net increase in the labor force; between 1972 and 1980, they are projected to account for only 46 percent of net growth. This anticipated slowdown is attributable to (1) the increase in the women's population to 1980 being concentrated in the 25- to 34-year-old group, which has a lower labor force participation rate than the groups (under 25 and 35 to 54) which grew most rapidly in the 1960's, and (2) the assumed halt in the decline in women's fertility rates, which implies that increased labor force participation attributable to declining fertility will not be as evident over the coming years.

Labor force outlook, 1980-85

The baby boom group which causes the 20- to 34-year-olds to lead labor force growth in the 1972-80 period begins to shift into the 35-54 age group during 1980-85. Nearly three-fourths of the projected growth in the labor force during this period is expected to occur in this group, some 4.3

million of the net gain of 5.9 million workers. By contrast, the size of the teenage labor force is projected to fall steadily by about 240,000 a year, reaching 7.2 million in 1985. The young adult labor force (20 to 34 years old) is projected to increase by only 500,000 a year in contrast to 1.2 million a year during the 1972-80 period. Finally, the number of older workers is projected to rise very slowly at this time—with the steady increase in the size of the older population being counterbalanced by the assumed continuation of the declines in their rates of labor force participation.

Projected changes in the rates of labor force participation of the different age-sex groups are instructive (table 3). The gradual rise in the percentage of the population of working age in the labor force (from 59.2 percent in 1960 to 61.3 percent in 1985) reflects both the growing participation rates among women and the growing proportion of the population in the prime working ages for men. Table 3 also reveals the "conservative" nature of the projection—with the sole exception of teenage men, the projected changes in rates of labor force participation (whether positive or negative) are much more modest over the projected period (1972-85) than the actual changes during the 1960-72 period. The discussion which follows suggests reasons for this conservatism, but the root cause is the fact that the labor force projection is "surprise-free," and therefore tends to discount, albeit crudely, the imputed effects of such major "surprises" as the

Table 3. Total labor force participation rates,¹ by age and sex, actual 1960 and 1972 and projected to 1980 and 1985

Sex and age	Total labor force participation rates (in percent)				Percentage point changes in participation rates			
	1960	1972	1980	1985	1960-72	1972-85	1972-80	1980-85
BOTH SEXES								
Total, 16 years and over.....	59.2	60.2	60.8	61.3	1.0	1.1	0.6	0.5
MEN								
Total, 16 years and over.....	82.2	78.4	78.0	78.3	-3.8	-.1	-.4	.3
16 to 19 years.....	58.8	59.1	56.0	55.5	.3	-3.6	-3.1	-.5
20 to 34 years.....	94.9	90.6	90.4	90.4	-4.3	-.2	-.2	.....
35 to 54 years.....	95.3	93.9	93.6	93.6	-1.4	-.3	-.3	.....
55 years and over.....	57.6	51.9	50.2	48.4	-5.7	-3.5	-1.7	-1.8
WOMEN								
Total, 16 years and over.....	37.3	43.3	45.0	45.6	6.0	2.3	1.7	.6
16 to 19 years.....	39.0	45.7	45.5	46.4	6.7	.7	-.2	.9
20 to 34 years.....	39.2	52.0	54.9	55.6	12.8	3.6	2.9	.7
35 to 54 years.....	46.5	52.7	54.6	55.6	6.2	2.9	1.9	1.0
55 years and over.....	22.6	23.7	24.5	24.2	1.1	.5	.8	-.3

¹ Percent of total population in total labor force.

Vietnam buildup and the decline in fertility observed during the recent past. Also omitted from consideration are a number of conceivable socioeconomic or legislative changes which could significantly alter the participation rates of particular groups in the population. For example, any major expansion in the availability of day-care or "child-development" centers would enable more mothers of young children to choose between the labor force and work at home, and would, in addition, create a substantial demand for adults qualified to staff these centers.

The observed and projected annual average rates of change in the population and total labor force are summarized in chart 1. A significant feature which emerges from these computations is that the labor force has grown more rapidly than the population during the 1960-72 period—an average increase of 1.7 percent a year compared with 1.2 percent a year. More recently (1968-72), this relative increase has been greater—2.0 percent for the labor force and 0.9 percent for the population. A similar disparity in growth is in prospect for the remainder of the current decade, with projected average annual growth rates of 1.7 percent in the labor force and 0.9 percent in the population. However, this disparity disappears early in the 1980's. Between 1980

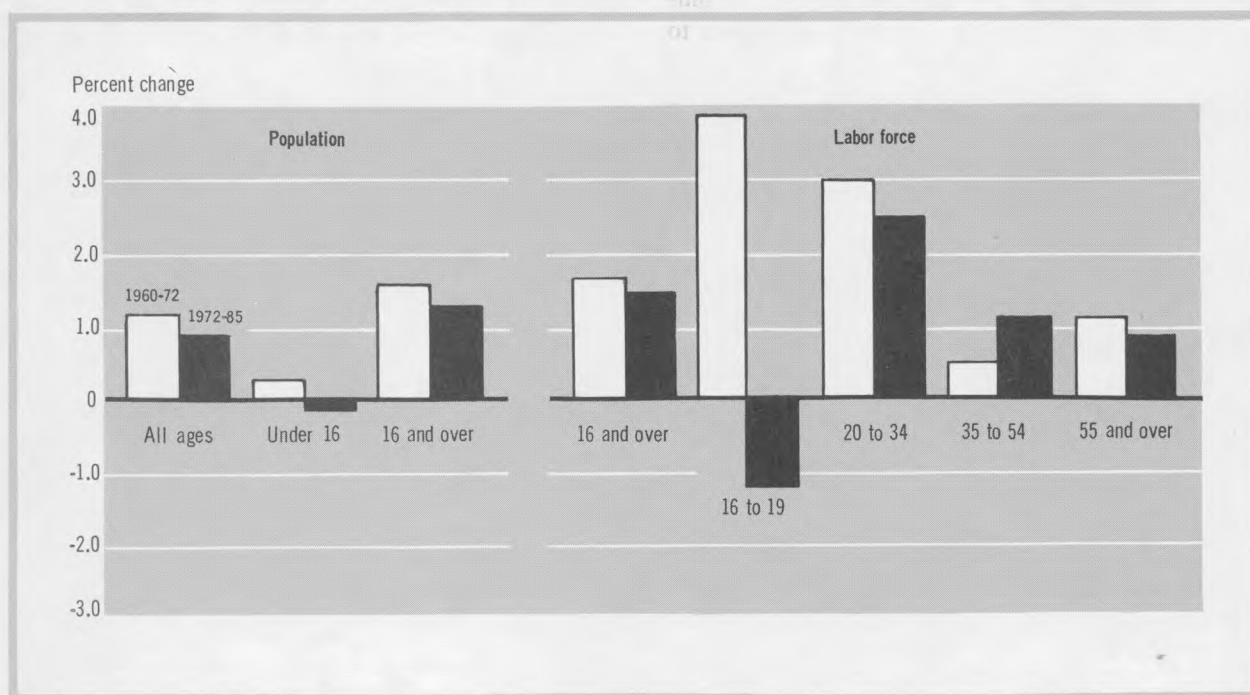
and 1985, the average annual growth rate in the labor force is 1.1 percent compared with 1.0 percent for the population. This reduction in labor force growth relative to that of the population implies that the potential gains in per capita output which stem from a more rapid growth in labor force than in population will not be notable after 1980.⁷

Differences in the projected rates of change in the size of the several age groups in the labor force also suggest that programs and policies designed to meet emerging manpower problems should be developed in anticipation of the changing relative size of the several age-sex groups in the labor force, on the grounds that any group whose rate of growth is significantly higher than the overall average is likely to encounter (and to generate) certain strains at every stage in the working-life cycle.⁸

Projected education of workers

In March 1972, two-thirds of the people 16 years old and over in the civilian labor force had completed at least 4 years of high school, and nearly 1 worker in 7 had completed at least 4 years of college (chart 2). According to the latest projection, over 3 out of 4 persons in the civilian labor force will be high school graduates by 1985 (73 percent

Chart 1. Average annual rates of change in population and labor force, 1960-72 and 1972-85



by 1980 and 77 percent by 1985). At that time nearly 1 worker in 5 will have completed 4 years of college or more.⁹

When fewer women were in the labor force, the educational attainment of women workers was, on average, considerably higher than that of the men. As more women enter the labor force, however, the educational distribution of women workers has become more similar to that of working men, as more women with only average amounts of schooling have been drawn into the labor force. For example, in March 1962, almost three-fifths of women workers had completed 4 years of high school or more compared with roughly half of working men. By March 1972, almost seven-tenths of women workers had that much schooling compared with well over three-fifths of male workers. This convergence is expected to continue; between March 1972 and 1985, the proportion of high school graduates among working men is projected to increase until it almost matches the proportion of women graduates—76.5 percent compared with 77.8 percent.

The outlook for the supply of workers at opposite extremes of the educational ladder is particularly significant. In accordance with long-term trends, both the number and the proportion of workers with 8 years or less of formal schooling is projected to decline rapidly, from about 1 worker in 7 in March 1972 to about 1 in 10 in 1980 and down to 1 in 13 by 1985. Numerically, they will drop from 12.8 million in 1972 to 10.0 million in 1980 and down to 7.9 million in 1985. In contrast, the number of workers with 4 years of college or more is projected to increase from 11.6 million in 1972 to 16.4 million in 1980 and 20.3 million in 1985, when they will account for nearly 1 in 5 workers in the labor force.

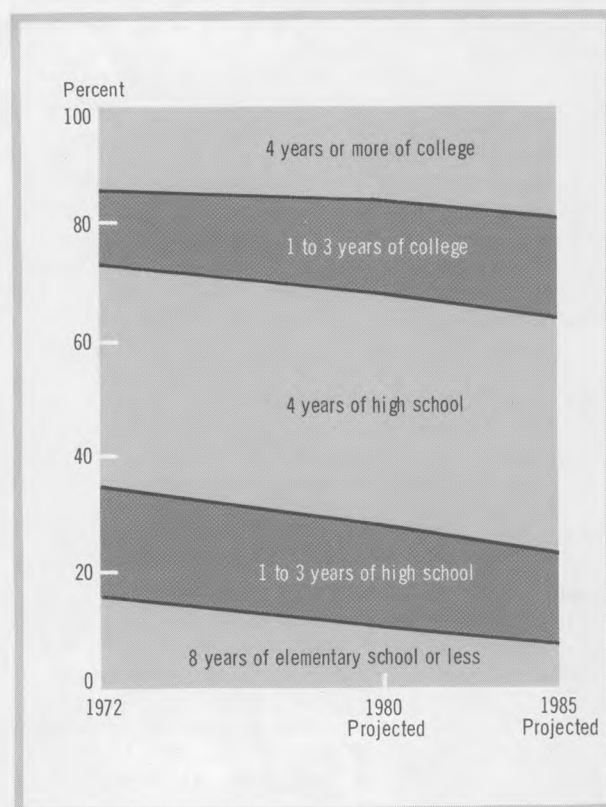
Workers with 1 to 3 years of high school (a group which has typically experienced particularly severe unemployment problems) are also projected to decline in number, but not until after 1980. In March 1972, 16.4 million workers fell in this category. By 1980, their number is projected at 17.3 million, and by 1985, at 16.4 million.

Workers with 4 years of high school completed constitute the largest group in the labor force—nearly 2 in 5 workers in 1972 and just over that in 1980 and 1985. However, the dramatic increase in the educational attainment of the labor force since World War II stems in large part from the enormous rise in the number of persons continuing their

schooling beyond high school. In accordance with this long-term trend, the number of workers with 1 to 3 years of college is projected to increase from 11.6 million in 1972 to 15.8 million in 1980 and 18.1 million in 1985. Thus among those with at least 4 years of high school, the proportion of workers with 1 year of college or more increases from 41 percent in 1972 to 44 percent in 1980 and 47 percent in 1985.

The projected average annual rates of change in the number of workers with different amounts of education display even greater range than those of the several age groups in the labor force. Between March 1972 and 1985, the number of workers with 8 years or less of education is projected to decline by 3.6 percent a year, on average, while the number of college graduates rises an average of 4.2 percent a year over the same period. Thus, the supply of college graduates in the Nation's labor force is projected to increase at over 2½ times the rate of increase of the labor force as a whole. This rapid buildup, it should be noted, is not a new phenomenon; a similar disparity between the growing supply

Chart 2. Educational attainment of the civilian labor force, March 1972 and projected 1980 and 1985



of the college educated and the growth of the labor force as a whole has been characteristic of the entire postwar period. Nevertheless, the expected continuation of this disparity suggests either the need for continued rapid expansion in the kinds of careers for which highly educated workers are qualified or the entry of many college-educated workers into occupations which did not formerly attract many college graduates.

In particular, the supply of women college graduates in the labor force, which is projected to grow by 4.7 percent a year, on average, to 1985, must be considered in the light of the anticipated stabilization of job opportunities in education and related fields. The full utilization of college-educated women may therefore require considerable movement into

occupations formerly dominated by college-educated men. For such mobility to occur, it would be necessary for these types of occupations to expand at a pace considerably faster than the 4.0-percent annual rate needed merely to absorb the anticipated supply of male college graduates between now and 1985. If such a growth rate cannot be maintained, it is likely that employers will continue to upgrade the educational requirements of jobs which need to be filled so as to match the growing supply of highly educated workers. This upgrading would further limit the employment opportunities of noncollege jobseekers, and might, in addition, generate problems of underemployment and job dissatisfaction among workers whose formal education exceeds the actual requirements of their jobs.¹⁰ □

FOOTNOTES

¹ The annual number of births rose steadily from 3.3 million in 1946 to a peak of nearly 4.3 million in 1961. Thereafter, it declined to less than 3.3 million in 1972. According to the fertility levels assumed in these projections (Series E), the annual number of births should again rise slowly, reaching about 4.3 to 4.4 million a year during the early 1980's.

² Even under Series E (with fertility remaining at the bare replacement level), the population continues to increase for about 70 years, though at a diminishing rate. See *Illustrative Population Projections for the United States: The Demographic Effects of Alternate Paths to Zero Growth, Current Population Reports, Population Estimates and Projections*, Series P-25, No. 480 (Bureau of the Census, 1972).

³ The general fertility rate is defined as the number of birth occurring in a given calendar year per 1,000 women 15 to 44 years old at the midpoint of that year.

⁴ Since all the projected population series assume the same trends in mortality and the same amount of net annual immigration, they differ solely with respect to the assumed level of fertility. The four series currently projected (C,D,E, and F) may therefore be identified in terms of the average number of births per woman: Series C=2.8, Series D=2.5, Series E=2.1, and Series F=1.8. Two earlier series of projections (A=3.4 and B=3.1) have now been dropped because they assume implausibly high levels of fertility for the near future. Since Series B is fairly representative of the average fertility of the "baby boom" period, the shift from that level to the current one is conveniently termed a shift from the "three child" to the "two child" norm. See *Projections of the Population of the United States, by Age and Sex: 1970 to 2020, Current Population Reports, Population Estimates and Projections*, Series P-25, No. 493 (Bureau of the Census, 1972).

⁵ Denis F. Johnston, "The U.S. labor force: projections to 1990," *Monthly Labor Review*, July 1973, pp. 3-13, reprinted as Special Labor Force Report 156. These projections supersede those which were presented by Sophia C.

Travis, "The U.S. labor force: projections to 1985," *Monthly Labor Review*, May 1970, pp. 3-12, and reprinted as Special Labor Force Report 119. Information by color or race, which was provided in the earlier report, is not yet available.

⁶ The annual net growth in the labor force is expected to reach a peak in the late 1970's, when the peak birth cohort born in 1961 reaches the age of initial entry into the labor force.

⁷ For further discussion of the implications of these prospective changes, see the article by Ronald E. Kutscher in this issue, pp. 27-42. For a brief discussion of alternative projections of labor force, see appendix A to this article.

⁸ For further discussion, see the *Manpower Report of the President*, March 1973, chapter 3, "Population Changes: A Challenge to Manpower Policy," pp. 59-82. It is also argued, changes in the age-sex distribution of the labor force may exert some effect on the aggregate unemployment rate, apart from the recognized influence of demand conditions on total employment. Rough estimates of this effect can be obtained if we adopt some set of age-sex specific unemployment rates as a "standard" and if we grant the further simplifying assumption that the unemployment rate for each age-sex group is unaffected by changes in its relative size.

The results of such an exercise indicate that the changing age-sex distribution of the labor force may account for an increase of about 0.5 percentage points in the hypothetical total unemployment rate over the 1955-72 period. This effect is, of course, largely attributable to the heavy inflow of teenage and women jobseekers—groups having typically higher unemployment rates—during this period. If this exercise is extended over the projection period, the results indicate no significant change in the hypothetical total unemployment rate between 1972 and 1980, followed by a reduction of perhaps 0.2 percentage points between 1980 and 1985. These results were obtained by using as a "standard" the arithmetic average of the age-sex specific

unemployment rates for the years 1956, 1965, and 1968, when the total unemployment rate was 4.1, 4.5, and 3.6 percent, respectively. These "standard" rates were then applied to the actual or projected age-sex distribution of the civilian labor force as of 1955, 1972, 1980, and 1985.

⁹ Denis F. Johnston, "Education of workers: projections

to 1990," *Monthly Labor Review*, November 1973, pp. 22-31, to be reprinted as a Special Labor Force Report. This article includes a description of the methods and assumptions employed in developing these projections.

¹⁰ This matter is considered more fully in the article by Neal Rosenthal in this issue, pp. 18-26.

APPENDIX A: ALTERNATIVE LABOR FORCE PROJECTIONS

The number of alternative projections of the labor force, even if constrained by generally agreed upon notions of plausibility, is very large. However, the number of possible alternatives is reduced by the fact that the projected population of working age is not affected by postulated differences in fertility until the late 1980's. The number is further reduced if it is assumed that prevailing definitions of economic activity, employment, and unemployment remain unchanged. Nevertheless, the adoption of different methods or periods for extrapolating observed trends in labor force participation rates of the several age-sex groups in the population, or the construction of projection formulas or equation systems reflecting alternative theories as to the underlying causes of these observed trends could yield a virtually unlimited number of alternative projections.

Two sets of alternative projections are presented in this section. The first is designed to illustrate the estimated effect of postulated changes in fertility on the size of the female labor force in 1980 and 1985 (appendix table 1). The second is designed to demonstrate the effect of two alternative projections of the rates of labor force participation of each age-sex group over the same period (appendix table 2). In each set, the "basic" projection is included for purposes of comparison.

As shown in appendix table 1, the higher fertility of women implied by the Series D projection of population implies a higher proportion of women in each age group

16 to 49 years old who would have children under 5 years of age. This in turn implies, *ceteris paribus*, a higher proportion of women having the lower labor force participation rates associated with child-care responsibilities, so that the aggregate number of working women is lower than it would be if fertility levels were lower. The reverse effect is evident in the assumption of the lower fertility levels of the Series F projection of population. This series implies a lower proportion of women with young children, hence it yields a larger proportion having the higher labor force participation rates of women without young children to care for, so that the total number of working women is larger.

In 1980, a shift from the basic projection (Series E) to the higher fertility of Series D results in a total labor force of 101.1 million, nearly 700,000 below that of the basic projection. Alternatively, a shift to the lower fertility of Series F yields a total labor force of 102.2 million, about 360,000 larger than that of the basic projection. By 1985, the corresponding range is from 106.9 million (higher fertility) to 108.2 million (lower fertility). It is assumed here that the labor force rates of men and of women 50 and over are not affected by the postulated changes in fertility.

The range in the projected size of the total labor force (from higher to lower fertility—Series D to Series F), expressed as a percentage of the basic projection, is 1.0 percent in 1980 and 1.2 percent in 1985. Among women

Appendix table 1. Effect on alternative fertility assumptions on projected total labor force, 1980 and 1985 ¹

Sex and age	1980			1985		
	Series D	Series E	Series F	Series D	Series E	Series F
BOTH SEXES						
Total, 16 years and over.....	101,138	101,809	102,166	106,932	107,716	108,247
MEN						
Total, 16 years and over.....	62,590	62,590	62,590	66,017	66,017	66,017
WOMEN						
Total, 16 years and over.....	38,548	39,219	39,576	40,915	41,699	42,230
16 to 24 years.....	10,025	10,261	10,412	9,495	9,726	9,897
25 to 34 years.....	8,874	9,256	9,444	9,856	10,339	10,663
35 to 49 years.....	10,021	10,074	10,092	11,876	11,946	11,982
50 years and over.....	9,628	9,628	9,628	9,688	9,688	9,688

¹ As currently defined by the Bureau of the Census in *Current Population Reports*, Series P-25, No. 493, Series D implies an ultimate completed fertility rate of 2,500; that is, 1,000 women would have, on average, 2,500 births throughout their child-

bearing period. Series E implies a corresponding rate of 2,100, and Series F implies a rate of 1,800. The basic projections in this article assume Series E.

Appendix table 2. Alternative projections of total labor force 16 years old and over, by sex and age, 1980 and 1985

[Numbers in thousands]

Sex and age	1980			1985			Differences		Differences		Differences as a percent of basic projection			
							1980		1985		1980		1985	
	Basic projection (1)	Model A: Constant 1969-71 rates (2)	Model B: projected 1955-72 rates (3)	Basic projection (4)	Model A: Constant 1969-71 rates (5)	Model B: projected 1955-72 rates (6)	Col-umns (1)-(2) (7)	Col-umns (1)-(3) (8)	Col-umns (4)-(5) (9)	Col-umns (4)-(6) (10)	Col-umns (7) ÷ (1) ×100 (11)	Col-umns (8) ÷ (1) ×100 (12)	Col-umns (9) ÷ (4) ×100 (13)	Col-umns (10) ÷ (4) ×100 (14)
BOTH SEXES														
Total, 16 years and over...	101,809	100,408	101,892	107,716	105,811	108,224	1,401	-83	1,905	-508	1.38	-0.08	1.77	-0.47
MEN														
Total, 16 years and over...	62,590	63,858	61,898	66,017	67,679	64,644	-1,268	692	-1,662	1,373	-2.02	1.10	-2.52	2.08
16 to 19 years.....	4,668	4,824	4,686	3,962	4,131	3,954	-156	-18	-169	8	-3.34	-.38	-4.26	.20
20 to 24 years.....	8,852	9,055	8,766	8,496	8,748	8,330	-203	86	-252	166	-2.29	.97	-2.97	1.95
25 to 34 years.....	17,523	17,616	17,432	19,400	19,540	19,235	-93	91	-140	165	-.53	.52	-.72	.85
35 to 44 years.....	11,851	11,921	11,817	14,617	14,734	14,543	-70	34	-117	74	-.59	.29	-.80	.51
45 to 54 years.....	9,908	10,016	9,826	9,744	9,883	9,605	-108	82	-139	139	-1.09	.83	-1.43	1.43
55 to 64 years.....	7,730	7,947	7,613	7,716	8,000	7,487	-217	117	-284	229	-2.81	1.51	-3.68	2.97
65 years and over...	2,058	2,479	1,758	2,082	2,643	1,490	-421	300	-561	592	-20.46	14.58	-26.94	28.43
WOMEN														
Total, 16 years and over...	39,219	36,550	39,994	41,699	38,132	43,580	2,669	-775	3,567	-1,881	6.80	-1.98	8.55	-4.51
16 to 19 years.....	3,669	3,528	3,620	3,203	3,027	3,146	141	49	176	57	3.84	1.34	5.49	1.78
20 to 24 years.....	6,592	5,953	6,524	6,523	5,751	6,578	639	68	772	-55	9.69	1.03	11.84	-.84
25 to 34 years.....	9,256	8,222	9,260	10,339	9,048	10,764	1,034	-4	1,291	-425	11.17	-.04	12.49	-4.11
35 to 44 years.....	6,869	6,499	7,128	8,560	7,921	9,074	370	-259	639	-514	5.39	-3.77	7.46	-6.00
45 to 54 years.....	6,537	6,243	6,933	6,542	6,130	7,137	294	-396	412	-595	4.50	-6.06	6.30	-9.10
55 to 64 years.....	5,057	4,795	5,307	5,213	4,840	5,610	262	-250	373	-397	5.18	-4.94	7.16	-7.62
65 years and over...	1,239	1,310	1,222	1,319	1,415	1,271	-71	17	-96	48	-5.73	1.37	-7.28	3.64

workers, the corresponding range amounts to 2.6 percent in 1980 and 3.2 percent in 1985.

The second set of alternative projections, shown in appendix table 2, demonstrates the implications of two different assumptions with respect to future rates of labor force participation. Model A assumes that the labor force participation rate of each age-sex group remains constant at the average of the actual 1969-71 levels. This model is primarily useful in illustrating the effect of the changing size and age-sex distribution of the projected population on the projected labor force. Model B employs projected rates of labor force participation obtained by linear least-squares extrapolation of the observed participation rates of each age-sex group over the 1955-72 period.

Viewed in the aggregate, the basic projection is less than 0.1 percent below that which would result from linear extrapolation to 1980, and only 0.5 percent below the

linear model in 1985. In contrast, the basic projection is 1.4 percent above the constant rate model in 1980, and 1.8 percent above it in 1985. However, these net effects mask the considerably larger deviations among men and women in the labor force—deviations which tend to be mutually counteracting. For example, by 1985, the basic projection of the male labor force is nearly 1.7 million below that of the constant rates model (Model A) and nearly 1.4 million higher than that of the linear extrapolation (Model B). Conversely, the basic 1985 projection of the female labor force is nearly 3.6 million larger than Model A, and 1.9 million smaller than Model B.

Additional research is planned on this subject in the future, with the aim of developing a number of more detailed and realistic alternatives than the illustrative examples shown here. □

APPENDIX B: ASSUMPTIONS AND METHODS

The Series E population projection reflects the assumption that the cohort of women now beginning their childbearing experience, and all future cohorts, will have, on average, 2.1 children per woman. It assumes, further, that older cohorts of women who have already begun childbearing will record levels of fertility such that their own average completed family size will gradually approach the 2.1

norm. It also assumes a gradual but steady reduction in mortality rates and a net annual immigration of 400,000 persons. As noted previously, only the latter two factors can have any effect on the size of the population of working age before the late 1980's. Nevertheless, variation in any of these fundamental demographic processes can have a considerable effect on population size over time. For

example, under the Series E assumption, the total growth of the U.S. population between 1972 and the year 2000 amounts to about 56 million, of which about one-fourth is attributable to the flow of immigrants and the birth of their offspring. Thus, a reduction of, say, 40 percent in the volume of immigration would reduce total population growth by about 10 percent.

As noted previously, variations in the birth rate cannot affect the size of the population of working age prior to the late 1980's, but they can have a significant impact on the size of the labor force, via changes in the proportion of women of childbearing age who have pre-school age children to care for.¹

The labor force projections reflect anticipated changes in the demographic composition of the population of working age, together with our judgments as to the changes which might be expected in the labor force participation rates of the several age-sex groups in the population. The predominant factor in these projections is the anticipated changes in the size and age-sex distribution of the population; projected changes in participation rates play a relatively minor role. The projections assume no drastic changes in the propensity of various population groups to seek work. They also assume a generally favorable demand situation, together with the absence of major wars or other major

social or economic disturbances. Finally, the projections assume no major legislative or social changes which would alter the conditions under which individuals choose to enter or leave the labor force or which would alter the prevailing definitions of "labor force," "employment," or "unemployment." Unless otherwise specified, the projections relate to the total labor force 16 years old and over, comprising the civilian labor force plus the Armed Forces. The assumed size of the Armed Forces in 1980 and 1985 is 2 million—1.96 million men and 40 thousand women. Thus, as will be indicated in the other articles in this issue, the 1980 projected total labor force of 101,809,000 implies a civilian labor force of 99,809,000. The further assumption of an unemployment rate of 4 percent yields a total employment figure (on the persons concept) of 95,817,000.² □

—APPENDIX FOOTNOTES—

¹ For further details, see Johnston, "The U.S. labor force: projections to 1990."

² Additional information on these underlying assumptions is provided in the article by Jack Alterman in this issue, pp. 3-7.

Impact of smaller families on the roles of women

Women may also turn increasingly to non-familial roles as a consequence of having smaller families. Some may choose to return to school and continue their education, but the more common response would be increased participation of young mothers in the labor force. Actually, this would represent only an acceleration of the current trend. Indeed, the greatest increase in female labor force participation over the past decade has been among young mothers. By 1969, close to half of all married women with children aged 6 to 17 years old (and no children under 6 years of age) were in the labor force; over one-fourth of married women with children of pre-school age were working. The working woman has been very aptly referred to as "one of America's best kept secrets" and this is particularly true of the working mother.

Although female labor force participation is expected to increase as a consequence of smaller families, there is no reason to expect that these women will hold better jobs than they held before starting their families: the sex-typing of jobs produces considerable stability in the kinds of jobs available to women. At this stage of their lives, these women are not as likely as younger women to press for change. Having married and had their children early, the change for them would be primarily one of financial independence, which may serve to improve their status within the family. It may also precipitate divorce at this stage of their lives—whether desired by the husband, wife, or both—since it now becomes economically more feasible.

—HARRIET B. PRESSER,

"Perfect Fertility Control: Consequences for Women and the Family," in Charles F. Westoff and others, *Toward the End of Growth: Population in America* (Englewood Cliffs, N.J., Prentice-Hall, Inc., 1973).

The United States economy in 1985

Projected changes in occupations

NEAL H. ROSENTHAL

MOST LONG-TERM trends in the employment of white-collar, blue-collar, service, and farm workers are expected to continued over the next dozen years, but some important changes will occur in the mix of occupations within these broad categories, according to Bureau of Labor Statistics projections of the U.S. economy to 1985. Technological changes will cause employment to increase in some occupations and to decrease in others. The spread of the computer will continue to be a notable example of this. Also, differences in industrial growth will boost some occupations (for example, those in the health field); while others grow more slowly than in the recent past (the educational field) and still others continue to decline relatively (mining jobs). Another phenomenon is a potential supply that is greater than potential requirements for college graduates beginning in the late 1970's in jobs traditionally held by these workers.

Total employment is expected to increase about a quarter between 1972 and 1985, going from almost 82 million to over 101 million (based on a count of employed persons).¹ (See tables 1 and 2.) Expected changes for major occupational classifications are shown in table 3.

Many factors will cause changes in employment levels of major occupational groups and specific occupations. One of the greatest will be variation in growth rates among industries. Each has a different occupational structure. For example, the health services industry employs mostly physicians, nurses, hospital attendants, and other health workers. A rapid growth in this industry would logically result in rapid growth of health occupations.

Another factor that affects occupational employment is changes in the occupational structure within an industry. These may be caused by technological

innovations in machines or procedures. As a result, individual occupations may expand or contract and new occupations often emerge. For example, the computer resulted in the emergence of programmers, systems analysts, and computer operators but contributed to the decline in relative importance of payroll and inventory clerks and a variety of other clerical occupations. Changes in business operations, such as a shift to self-service in stores and supply-demand conditions in an occupation, can also alter the occupational structure of industries. For example, technicians have been substituted for engineers during periods of engineering shortages.

Growth among white-collar groups

Professional and technical. Employment growth in this major group will continue to be faster than all others, from 11½ million in 1972 to about 17 million by 1985. This is about one and one-half times the annual rate of employment increase projected for all occupations combined. (See table 4.) Despite this, the projected 1972-85 growth is slower than it was between 1960 and 1972. A major reason for this is the expected slowdown in the growth of jobs for elementary and secondary school teachers and engineers (which accounted for over one-fourth of all professional workers in 1972). Opportunities for teachers will slow because growth in the number of pupils will moderate. The rate of increase in engineers' jobs, rapid in the 1960's largely as a result of expanded space exploration and increased research and development, will be reduced because these activities are not expected to have a comparable effect through the mid-1980's. As is the case with all major occupational groups in these projections, the annual rate of growth is expected to be slower between 1980 and 1985 (2.5 percent) than from 1972 to 1980 (3.5 percent) as the slowdown in the rate of growth of the economy also has its effect.²

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Growth in demand for goods and services, resulting from population growth and rising business and personal incomes, will continue to be a major reason underlying job growth among these highly trained workers. As the population continues to concentrate in metropolitan areas, requirements are expected to increase for professional and technical workers in environmental protection, urban renewal, and mass transportation. Requirements for professional workers also should increase because of continuing growth of research in the natural and social sciences, although the rate of growth in these activities as a whole is likely to slow from the very rapid pace of the 1960's. Demand for professional workers to develop and use computer resources also is expected to grow rapidly in the 1972-85 period.

Managers and administrators. Employment in this occupational group is projected to reach 10½ million in 1985, up from 8 million in 1972, representing a much higher average annual rate of growth than occurred during the 1960-72 period. However, a large part of the future growth reflects a catchup because little change in managerial and administrative employment occurred between 1968 and 1972 although total employment increased. The slowdown in growth from 1980 to 1985 largely reflects the deceleration in the rate of growth of trade, a major employer of managers with about two-fifths of the total in 1972.

Table 1. Employment by major occupational group, 1960 and 1972, and projected 1980 and 1985

[in thousands]

Occupational group	1960 ¹	1972	1980	1985
Total.....	65,778	81,703	95,800	101,500
White-collar workers.....	28,351	39,092	49,400	53,700
Professional and technical workers.....	7,236	11,459	15,000	17,000
Managers and administrators.....	7,367	8,032	10,100	10,500
Sales workers.....	4,210	5,354	6,300	6,500
Clerical workers.....	9,538	14,247	17,900	19,700
Blue-collar workers.....	23,877	28,576	31,700	32,800
Craftsmen and kindred workers.....	8,748	10,810	12,200	13,000
Operatives ²	11,380	13,549	15,000	15,300
Nonfarm laborers.....	3,749	4,217	4,500	4,500
Service workers.....	8,354	10,966	12,700	13,400
Private household workers.....	1,965	1,437	1,300	1,100
Other service workers.....	6,387	9,529	11,400	12,300
Farm workers.....	5,196	3,069	2,000	1,600

¹ Data for 1960 were adjusted to reflect the occupational classification in the 1970 census to make it comparable to the 1972 and projected 1980 and 1985 data.

² Includes the 1970 census classification, operatives, except transport and transport equipment operatives.

NOTE: Details may not add to totals because of rounding.

Table 2. Percent distribution of employment, by major occupational group, 1960 and 1972, and projected 1980 and 1985

Occupational group	1960 ¹	1972	1980	1985
Total.....	100.0	100.0	100.0	100.0
White-collar workers.....	43.1	47.8	51.5	52.9
Professional and technical workers.....	11.0	14.0	15.7	16.8
Managers and administrators.....	11.2	9.8	10.5	10.3
Sales workers.....	6.4	6.6	6.6	6.4
Clerical workers.....	14.5	17.4	18.7	19.4
Blue-collar workers.....	36.3	35.0	33.1	32.3
Craftsmen and kindred workers.....	13.3	13.2	12.8	12.8
Operatives ²	17.3	16.6	15.6	15.1
Nonfarm laborers.....	5.7	5.2	4.7	4.4
Service workers.....	12.7	13.4	13.3	13.2
Private household workers.....	3.0	1.8	1.3	1.1
Other service workers.....	9.7	11.6	12.0	12.9
Farm workers.....	7.9	3.8	2.1	1.6

¹ Data for 1960 were adjusted to reflect the occupational classification in the 1970 census to make it comparable to the 1972 and projected 1980 and 1985 data.

² Includes the 1970 census classification, operatives, except transport and transport equipment operatives.

Changes in business size and organization have caused the number of salaried managers to go up while numbers of self-employed managers have declined. Requirements for the salaried are expected to continue to grow rapidly as industry and government increasingly depend on them. Technology will also contribute to their employment growth. For example, an increasing number of technically trained managers will be needed to administer research and development programs and to make decisions on the installation and use of automated machinery and automatic data processing systems.

By contrast, the number of self-employed managers (proprietors) are projected to continue to decline as the trend toward larger firms continues. The expansion of quick-service grocery stores, self-service laundries and drycleaners, and hamburger and frozen custard drive-ins, however, is expected to slow the rate of decline.

Clerical workers. Employment in clerical jobs is expected to grow faster than total employment, rising to almost 20 million in 1985 from over 14 million in 1972. Among the major occupational groups, only professional workers' jobs are expected to grow faster. Nevertheless, the clerical rate of growth is slower than that during 1960-72. The slower annual rate of growth from 1980 to 1985 will be largely because of a projected slowdown in the rate of growth of trade and manufacturing, which combined employed about one-third of all clerical

workers in 1972. However, the projected decline in the 1980-85 growth rate is expected to be less for clerical workers than most major groups.

Clerical workers, the largest major occupational group in 1972, will be greatly affected by developments in computers, office equipment, and communication devices—all of which are expected to retard the growth of employment for some clerical occupations and increase it for others. For example, the use of computers and bookkeeping machines to handle routine, repetitive work is expected to reduce the utilization of clerks in filing, payroll computation, inventory control, and customer billing. On the other hand, the number of clerical workers needed to prepare material for the computer is projected to increase greatly.

Other types of clerical workers, however, are unlikely to be affected significantly by technology. For example, secretaries, typists, and receptionists and others whose tasks involve contact with the public should not be greatly affected. Increased use of secretaries, typists, and receptionists in industries that employ large numbers of them, such as miscellaneous business services and legal services, is projected to account for a growth of 2.5 million during 1972-85 or about half the total growth in the group over this period.

Sales workers. The anticipated expansion of trade is expected to increase the need for sales workers, while changing techniques in merchandising are expected to hold down some of the increase. Employment is projected to rise about 1 million from 1972 to 1985, but the rate of increase is slower than that expected in total employment. As a result, their share of total employment is projected to decrease slightly (0.2 percent). The projected 1972-85 rate of growth, slower than that experi-

enced by this group over the 1960-72 period, is caused by the projected slower growth of trade which employs over two-thirds of all sales workers. The annual rate of growth of sales workers is expected to be slower between 1980-85 than between 1972-80, also following the trend in employment in trade. As stores remain open longer and expand into suburban areas, an increase in demand is expected for retail salesworkers who account for about half of all workers in the group. However, changes in merchandising techniques, such as increased use of self-service, checkout counters, and vending machines will retard the increase.

Growth among blue-collar groups

Craftsmen and kindred workers. Employment in these highly skilled blue-collar occupations is expected to rise from just under 11 million in 1972 to 13.0 million 1985, a slower rate of growth than over the 1960-72 period. Because of the unusual growth in the number of construction craftsmen and mechanics from 1971 to 1972, the rate of increase from 1972 is somewhat slower than the long-term trend.

The rising demand for these workers is expected to stem from the growth in the two major industry groups that employ large numbers of craftsmen—manufacturing and construction. Construction activity has a major effect on the number of craftsmen because 1 out of every 2 workers in this industry are in this group. Expected requirements for construction craftsmen are projected to account for about one-third of the total growth. Because of its much larger size, manufacturing, in which about 1 in 5 workers is a craftsman, employs about an equal number of craftsmen as construction.

Operatives. More blue-collar workers are in this group than in any other. Employment of operatives is projected to rise from 13½ million in 1972 to over 15 million in 1985, a much slower rate of increase than that for total employment. Consequently, the proportion of operatives relative to total employment is expected to slide downward about a percentage point by 1980 and another half point by 1985. Between 1980 and 1985, employment of operatives is expected to grow very slowly, about one-third the rate expected during 1972-80. This reflects the expected slowing down of the growth rate in manufacturing. Three of every five semi-

Table 3. Expected changes in major occupational classifications, 1972-85

Classification	1972		1985		Percent change, 1972-85
	Number of jobs (in millions)	Percent	Number of jobs (in millions)	Percent	
Total employment.....	81.7	100.0	101.5	100.0	24
White-collar workers.....	39.1	47.8	53.4	53.0	37
Blue-collar workers.....	28.6	35.0	32.8	32.3	15
Service workers.....	11.0	13.5	13.3	13.1	24
Farm workers.....	3.1	3.8	1.6	1.6	-48

Table 4. Average annual rate of employment change by major occupational group, 1960–1972 (actual) and 1972–85 (projected)

Occupational group	1960–72	1972–80	1980–85	1972–85
Total.....	1.8	2.0	1.2	1.7
White-collar workers.....	2.7	3.0	1.7	2.5
Professional and technical workers.....	3.9	3.5	2.5	3.1
Managers and administrators.....	.7	2.8	.8	2.0
Sales workers.....	2.0	2.1	.5	1.5
Clerical workers.....	3.4	2.9	1.9	2.5
Blue-collar workers.....	1.5	1.3	.7	1.1
Craftsmen and kindred workers.....	1.8	1.6	1.2	1.4
Operatives.....	1.5	1.6	.5	1.0
Nonfarm laborers.....	1.0	.7	0	.4
Service workers.....	2.3	1.9	1.0	1.6
Private household workers.....	-2.6	-1.7	-3.4	-2.4
Other service workers.....	3.4	2.4	1.4	2.0
Farm workers.....	-4.5	-5.4	-4.4	-5.0

NOTE: All data reflect the occupational classification into major groups used in the 1970 Census. However, operatives, except transport and transport equipment operatives, were combined into one group in this article.

skilled workers in 1972 were employed as operatives in manufacturing. Large numbers were assemblers or inspectors, and many worked as operators of material-moving equipment such as powered forklift trucks. Among the operatives employed outside factories, drivers of trucks, buses, and taxicabs made up the largest group. Through the projected period, sophisticated technological advances are expected to greatly slow employment growth for operatives.

Nonfarm laborers. Employment requirements for laborers are expected to increase slowly between 1972 and 1985, despite the employment rise anticipated in manufacturing and construction, the two industries which employ two-fifths of laborers. This reflects a change from the 1960–72 period when employment of laborers increased nearly 1 percent a year.

Increases in demand for laborers are expected to be offset roughly by rising output per worker resulting from the continuing substitution of machinery for manual labor. For example, power-driven equipment such as forklift trucks, derricks, cranes, hoists, and conveyor belts will take over more of the handling of materials in factories, at freight terminals, and in warehouses. Other power-driven machines will do excavating, ditch digging, and similar work. In addition, integrated systems for processing and handling materials and equipment will be installed in an increasing number of plants.

Service workers

A growing population, expanding business activity, increasing leisure time, and rising levels of disposable personal income are the major factors underlying increased needs for service workers. These occupations encompass a wide variety of jobs and skills. They include such diverse jobs as FBI agent, policeman, beauty operator, and janitor.

Employment of service workers is projected to rise from 11 million in 1972 to over 13 million in 1985, a somewhat slower rate of growth than that projected for total employment. Employment of private household workers, however, which make up a large part of this major group, is projected to decline from 1.4 million to 1.1 million. If private household workers are excluded from the calculations, service workers show a faster rate of growth (29.1 percent) than total employment.

The projected 1972–85 rate of growth of service workers (including private household workers) is slower than that experienced over the 1960–72 period. However, growth between 1960 and 1972 was greatly affected by the very rapid expansion during the 1969–72 period. The projected 1972–80 growth rate is near that experienced over the 1960–69 period. Between 1980 and 1985, the growth rate is expected to be slower than in the 1972–80 period because of the projected slowdown in the rate of growth in the service industries, which employ about two-thirds of these workers.

Farm workers

These workers, who make up nearly 90 percent of all workers in agriculture,³ are expected to decline nearly one-half (3.1 million in 1972 to 1.6 million in 1985). This represents a somewhat faster rate of decline than in the 1960–72 period. Consequently, their share of total employment also is expected to fall between 1972–85 from 3.8 percent to 1.6 percent. The annual rate of decline is expected to be slower between 1980 and 1985 (–4.4 percent) than from 1972 to 1980 (–5.4 percent).

Declining needs for farm workers continue to be related to rising productivity on farms. Improved machinery, fertilizers, seeds, and feed will permit farmers to increase output with fewer employees. For example, improved mechanical harvesters for vegetables and fruits will decrease the need for seasonal or other hired labor. Developments in pack-

ing, inspection, and sorting systems for fruits, vegetables, and other farm products also will reduce employment requirements.

Net occupational openings

Projections of growth of occupations provide only partial insight into the story of future manpower requirements. Of equal (if not greater) importance is the demand for new workers created by the necessity of replacing workers who retire or die. Over the 1972-85 period about twice as many openings will result from replacements as from growth. Over 61 million openings will occur due to occupational growth and replacement needs during 1972-85, an average of about 4.7 million jobs annually. Of these, replacement needs will account for 2 of every 3 job openings. (See table 5.)

Replacement needs will be the most significant source of job openings in each of the major occupational areas—white collar, blue collar, service, and farm. However, in individual occupations expected to increase rapidly, growth requirements are likely to exceed those for replacement. On the other hand, replacement needs are likely to exceed the average in those occupations that (a) employ many women, who frequently leave the labor force to assume family responsibilities, and (b) have a large proportion of older workers who have relatively few years of working life remaining.

Implications for trained manpower

In the past two decades, the rise in the educational level of the labor force was paralleled by rising educational requirements of jobs. This was reflected in a more rapid growth of the major occupational groups with the highest educational attainment. The major apparent gaps were a shortfall of college graduates trained to work in engineering, scientific, teaching, and medical professions during the late 1950's to the mid-1960's. In looking to the future, the question arises as to whether the increasing educational attainment of the population will continue to be matched by an increase in the educational requirements for satisfactory employment. Despite this concern, there is little doubt that employers are seeking people with higher levels of education because many jobs are more complex and require greater skill. Examples of this increasing complexity are the introduction into health occupa-

tions of complicated equipment for chemical analysis, and use of more highly sophisticated equipment in occupations in offices, banks, insurance companies, and government.

A great many of the implications of the new projections stem from the projected supply-demand picture for college graduates. United States colleges and universities—principal suppliers of the country's most trained manpower—are expected to continue turning out record numbers of graduates through the mid-1980's. (See chart 1.) The U.S. Office of Education has projected that a total of 20.1 million degrees will be awarded over the 1972-85 period,⁴ including first professional.⁵

Degree	Number awarded from 1972-85 (millions)	Percent increase, 1972-85
Total	20.1	46
Bachelor's	14.6	44
Master's	4.0	41
Doctorate	.6	66
First professional	.9	85

Not all degree recipients, however, can be considered part of the effective new supply of college-educated workers. Most master's and doctorate degree recipients are employed before receiving their advanced degrees and are already considered part of

Table 5. Job openings¹ by major occupational group, 1972-85

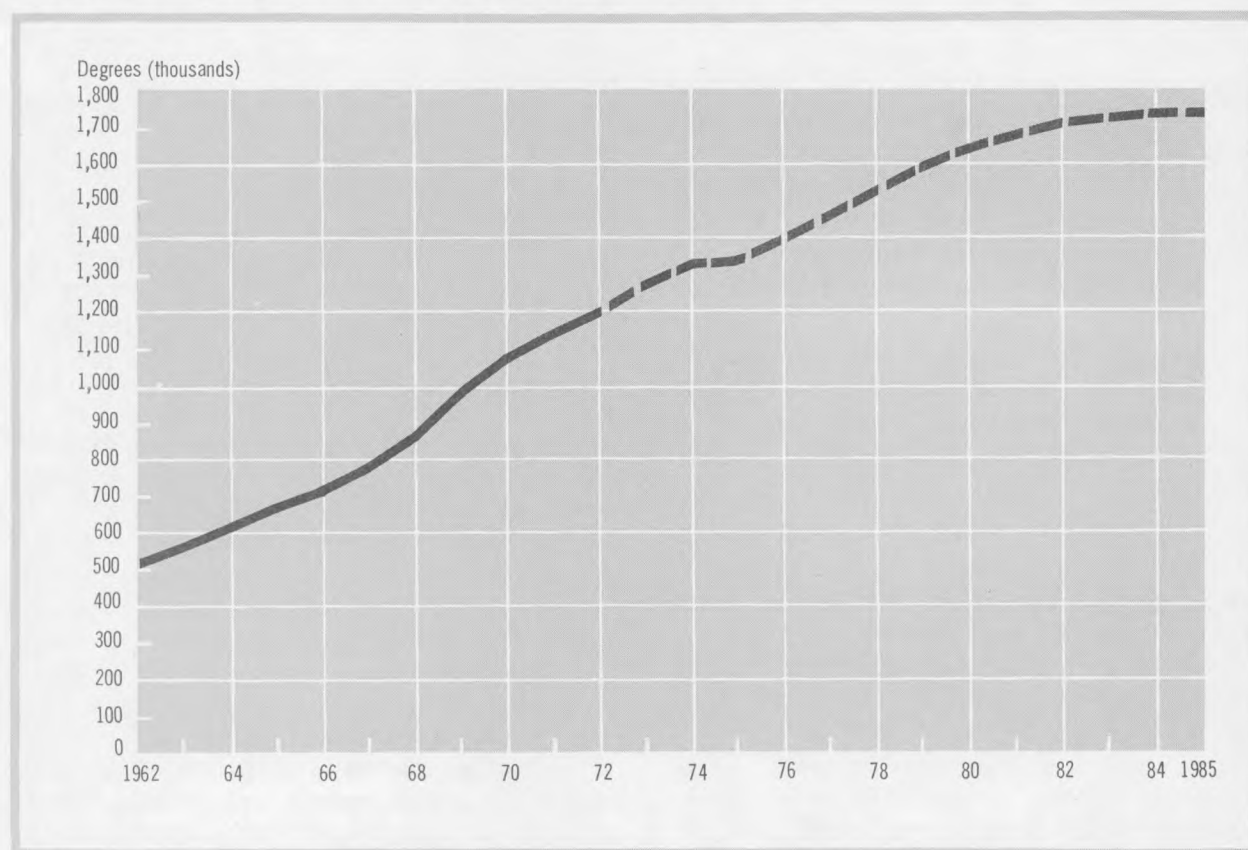
[In thousands]

Occupational group	Total	Growth	Replacement
Total	61,200	19,800	41,400
White-collar workers	38,800	14,600	24,200
Professional and technical	12,000	5,600	6,400
Managers, officials, and proprietors	5,900	2,400	3,500
Sales workers	3,800	1,100	2,700
Clerical and kindred	17,000	5,400	11,600
Blue-collar workers	13,800	4,200	9,600
Craftsmen and kindred	5,300	2,200	3,100
Operatives ²	7,200	1,800	5,500
Nonfarm laborers	1,300	200	1,000
Service workers	8,500	2,400	6,000
Private household workers	700	-400	1,100
Other service workers	7,800	2,800	4,900
Farm workers	50	-1,400	1,400

¹ Resulting from occupational growth and replacement of workers who leave the labor force.

² Includes the 1970 census classification, operatives, except transport and transport equipment operatives.

NOTE: Details may not add to totals because of rounding.

Chart 1. Total degrees awarded, 1962-72, and projected degrees, 1972-85

Source: U.S. Office of Education.

the existing supply of college-educated workers. Other degree recipients, especially at the bachelor's level, delay entry to the labor force to continue their education, enter the Armed Forces, or become full-time housewives.

Relying on past patterns of entry into the labor force, we can estimate 13.2 million persons will enter the civilian labor force between 1972 and 1985 upon receiving their degrees; 11.2 million at the bachelor's level, 1.2 million at the master's, approximately 20,000 at the doctorate level, and 750,000 recipients of first professional degrees. (See table 6.)

In addition, the supply of new graduates will be augmented by more than 2.0 million persons with college-level training who will come into the labor force between 1972 and 1985. These expected additions will consist of over 900,000 immigrants and delayed entrants and reentrants to the labor force—primarily women who delayed seeking a job or who were working in earlier years but withdrew from the labor force—and nearly 1.2 million per-

sons entering the civilian labor force after separation from the military. The new supply of college-educated manpower expected to enter the labor force from 1972-85 will total about 15.3 million.

Job opportunities for college-educated workers will stem generally from three sources: growth in employment of occupations currently requiring a college degree for entry, the need to replace workers in such occupations who die, retire, or leave the

Table 6. Projected supply of college graduates, 1972-85

[In thousands]

Source of entrants	1972-85	1972-80	1980-85
Total.....	15,250	8,850	6,400
New college graduates.....	13,170	7,540	5,630
Bachelor's.....	11,200	6,405	4,795
Master's.....	1,220	700	520
Doctor's.....	20	10	10
First professional.....	750	425	325
Military separations.....	1,150	750	400
Others.....	910	560	350

labor force for other reasons, and the trend toward hiring college graduates for jobs once performed by workers with less educational attainment.

An analysis of growth, replacement, and rising entry requirements indicates that 14.5 million new college graduates will be needed between 1972 and 1985: 7.7 million to take care of occupational growth and rising entry requirements, and 6.8 million for replacements. The following tabulation (in millions) shows proportions for selected periods:

	1972-85	1972-80	1980-85
Total -----	14.5	8.8	5.7
Growth -----	7.7	5.0	2.7
Replacements -----	6.8	3.8	3.0

Thus, the available supply, 15.3 million, will be about 750,000 above projected job requirements. This prospective situation will affect workers across the entire occupational spectrum.

The situation in which potential supply is greater than prospective requirements is projected to be more acute in 1980-85 than in 1972-80. The prospective "gap" is roughly 50,000 for the 1972-80 period and 700,000 for the 1980-85 period, or 140,000 a year. This will not result from an increase in degrees over the 1980-85 period. Actually, the annual increase, both in absolute and in relative terms, will be less over 1980-85 than from 1972 to 1980. (See table 7.) Rather, the prospective difference stems from the slowdown in the rate of growth of the economy in 1980-85 from that in 1972-80. Average annual openings in the later period will be only slightly higher (40,000) than in the earlier period, but because of the continuing increase in degrees, the average annual number of degrees awarded will be 300,000 more in the latter period and, therefore, the gap greater.

The data have implications for what has been described statistically as "rising entry requirements."

Table 7. Average annual number of earned degrees, actual 1962-72, and projected for selected periods, 1972-85

Period	Total	Bachelor's	Master's	Doctor's	First professional
1962-72.....	855,900	633,000	166,500	22,800	33,600
1972-80.....	1,441,100	1,043,500	292,100	44,700	67,200
1980-85.....	1,718,200	1,248,600	333,800	55,000	80,900
1972-85.....	1,547,700	1,122,400	304,200	48,600	74,700

There are job-related reasons why employers will require increasing proportions of workers in many occupations to have a college degree. However, employers have traditionally preferred to hire persons with the highest educational qualifications available, especially for white-collar jobs, even when the educational attainment of the individual hired is above that really needed to perform the job. Thus, college graduates are expected to continue to have a competitive advantage over those with less education in competing for employment. Despite the apparent surplus of college graduates for the 1980-85 period, which is generated by statistics based on past patterns, it is unlikely that the unemployment rate of college graduates will be affected significantly. Rather, it is likely that college graduates will obtain jobs previously held by individuals with less than 4 years of college. In general, graduates have reacted to changes in the job situation in the past by taking the best available job, and there is no reason to assume that this will change. Problems for college graduates will more likely be underemployment and job dissatisfaction, resulting in increasing occupational mobility rather than unemployment.

The apparent abundance of college graduates as a whole does not imply that all supply-demand imbalances in the professions will be eliminated. Much depends on the number of students who prepare for each professional field. This will depend not only on the choices students make, but also on the capacity of schools of medicine, engineering, and other fields where the number of students that can be accommodated is relatively inflexible over the short run.

It is difficult to predict the number of job opportunities in a given field in relation to the number of individuals who will choose careers in the field, but it is useful to trace what would happen if recent trends in the number of students who elect to study and enter each field continued through the mid-1980's. Extrapolation of past experience indicates potential sharp differences in supply-demand situations among occupations. For example, if past trends continue, personnel shortages can be anticipated in some professions, notably medicine, chemistry, and engineering, along with pronounced oversupply in others, particularly teaching and the biological sciences. Imbalances of this kind may be intensified unnecessarily, if shortrun job situations are allowed to outweigh the long-range employment outlook in making educational and career decisions. In engineering, for example, freshman enrollments

dropped 11 percent between 1970 and 1971, according to data of the Engineers Joint Council. Yet manpower requirements are expected to rise substantially in engineering over the 1970-80 decade as a whole, implying a replay of the 1960's scarcity of personnel in the profession unless the downtrend in enrollments is quickly ended.

By contrast, indications are that the softened demand for Ph. D.'s which characterized the employment situation in the last few years may not improve as the decade progresses. Projections of the National Science Foundation suggest that the oversupply of Ph. D.'s in the sciences and engineering could range between 15,000 and 60,000 by 1980.⁶ Other studies⁷ have indicated that the country may produce more Ph. D.'s in all fields than will be required. As with college graduates in general, a greater number of Ph. D.'s than available jobs traditionally requiring the degree implies underemployment, if employed in the occupational area for which the Ph. D.'s trained, or the necessity for Ph. D.'s to shift to another occupation with a better supply-demand situation. The result in either case is likely to be job dissatisfaction, however, rather than unemployment. However, this does not mean employment problems will not exist. There is some evidence that employers in private industry may not want to employ scientists and engineers with Ph. D.'s in jobs not requiring that level of education.⁸ They may not want to hire workers who will be dissatisfied and leave their jobs or who require too high a salary compared to lesser trained workers who can perform the same job.

The availability of more college-trained workers is expected to have an adverse effect on many of the less educated. It is likely to mean that, in the future, workers with less than a college education will have less chance of advancing to professional positions, as many could do in the past, particularly in professions such as engineering and accounting. They will also have less opportunity for promotion to higher level positions in sales, managerial, and some clerical and service occupations. This is essentially a problem of credentials. If the required educational qualifications for a job rise more rapidly than the actual education required to perform the job, the availability of more college-educated workers will limit advancement of workers with fewer years of schooling. Such situations are very likely in sales.

College graduates, however, will not be in a more favorable position in all occupations. In the crafts, workers in greatest demand will be those who have vocational training rather than a college education; as in the past, persons with college degrees will make little inroad in the crafts. Similarly, employers seeking operatives and laborers will be reluctant to hire college graduates except for some part-time or temporary jobs because of the obvious potential for job dissatisfaction. Moreover, in another broad occupational area closely related to professional work—paraprofessional and technical work—college graduates are likely to face stiffer competition. Community and junior colleges and other postsecondary schools have proven they can train workers for many occupations in this category through 2-year programs or less, and the number of students completing these career educational programs is expected to increase even more rapidly than college graduates.

Based on a continuation of trends, it is projected that only about one-fourth (23.7 percent) of all openings over the 1972-85 period would require 4 years of college or more. However, trends indicate that a somewhat greater proportion of entrants to the labor force will have such training. Thus, the continuing emphasis on higher education could pose a threat to the flow of energetic, intelligent manpower to manual occupations. If continued, this emphasis could result in job dissatisfaction for those who out of necessity enter manual jobs and make it difficult for employers to fill many of the less desirable jobs. This could result in a greater proportion of college graduates seeking self-employment in their field, perhaps as a consultant or in a private research agency, rather than accepting a job in another occupation.

Another condition which may arise is that young people in high school will become aware of the plight of new college graduates who are not able to enter the field of their choice and, thereby, change their aspiration for a college education. Because current society esteems a college degree and recognizes the benefit of a college education to aspects of life other than work, such changed aspirations are not anticipated in great numbers. The complexity of the problem suggests the need for growing emphasis on vocational guidance to provide young people with the background needed to make a satisfactory choice for education and career. □

—FOOTNOTES—

¹ Statistics on employment in this article are based on the concept used in the Current Population Survey in which each individual is counted once in his major occupation. The data for total employment here, therefore, differ from the data in the article in this issue by Ronald E. Kutscher, pp. 27–42, which presents a count of jobs. Since a worker may hold more than one job, the job count data is greater than that presented here. Additional differences between the totals occur because the job count is based primarily on data from a survey of establishments collected by State agencies in a cooperative program with the Bureau of Labor Statistics and the count of individuals is based on a survey of households conducted by the Bureau of the Census for the Bureau of Labor Statistics. The reasons that cause the employment count to differ between these two surveys are indicated in Gloria P. Green, "Comparing Employment Estimates from Household and Payroll Series," *Monthly Labor Review*, December 1969, pp. 9–20.

² See the article by Ronald E. Kutscher in this issue for a discussion of the difference in the rate of growth in total employment between 1972 and 1980 and 1980 and 1985.

³ This estimate is based on total and occupational employment in agriculture as reported in the Current Population Survey, in which each individual is counted once in his major occupation.

⁴ These projections are based on a continuation in the patterns of enrollments in college by the college-age population. See *Projections of Educational Statistics to 1980–81*, OE 72–99, for additional details on the basic assumptions used by the Office of Education in developing projections of earned degrees.

⁵ First professional degrees include degrees in law, medicine, dentistry, etc.

⁶ *1969 and 1980 Science and Engineering Doctorate Supply and Utilization* (Washington, National Science Foundation, 1971), NSF 71–20.

⁷ See, for example, Deal Wolfe and Charles V. Kidd, "The Future Market for Ph. D.'s," *Science*, Aug. 27, 1971, pp. 784–93, and Allan M. Cartter, "Scientific Manpower for 1970–85," *Science*, Apr. 9, 1971, pp. 132–40.

⁸ *Ph. D. Scientists and Engineers in Private Industry, 1968–80*, Bulletin 1648 (Bureau of Labor Statistics, 1970).

A classical view of the purposes of education

De liberalibus studiis quid sentiam, scire desideras: nullum suspicio, nullum in bonis numero, quod ad aes exit.

You have been wishing to know my views with regard to liberal studies. My answer is this: I respect no study, and deem no study good, which results in money-making.

—LUCIUS ANNAEUS SENECA,
Epistulae morales, LXXXVIII, 1
(Tr. R. M. Gummere)

The United States economy in 1985

Projections of GNP, income, output, and employment

RONALD E. KUTSCHER

GROSS NATIONAL PRODUCT is projected to increase slightly faster during 1968–80 than it did during the previous 15 years, but then to slow down considerably during 1980–85, according to projections of the U.S. economy to 1985 by the Bureau of Labor Statistics.¹ This increase and the later sharp slowdown in the rate of economic growth reflect changes in the pace of labor force growth. By contrast, productivity or output per man-hour in the total private economy is expected to drift down very slowly during the 1968–80 period.

The slight increase in economic growth in the 1970's followed by a sharp slowdown in the early 1980's is an important factor influencing many elements of the economy. The following shows the 1980–85 projected slowdown (as measured by the average annual rate of increase) compared with the rates for 1955–68 and 1968–80 for selected growth components:

	1955–68	1968–80	1980–85
Gross national product (1972 dollars) -----	3.7	4.0	3.2
Personal income (current dollars) -----	6.3	8.0	6.5
Private gross national product per man-hour (1972 dollars) -----	3.0	2.9	2.8
Employment (count of jobs) -----	1.6	1.9	1.2

Projected economic growth

Real gross national product in 1972 dollars is projected to grow at 4.0 percent per year² compared with 3.7 percent in 1955–68. On the other hand, the 1980–85 growth is appreciably slower at 3.2 percent a year.³ The projected 1968–80

increase in the growth rate over that of 1955–68 is consistent with previous BLS projections and derives from the projected accelerated growth in the labor force in the 1970's.

From 1972 to 1980, a rate of growth of 4.6 percent is projected, as shown in table 1. This rate, which is substantially higher than the 1968–80 rate, is derived because the 1972 unemployment rate was higher than 4.0 percent and because of the shortfall in productivity growth during 1968–72. Both are reflected in the slow GNP growth during 1968–72.

These projections indicate that if estimates of GNP were made for each year of the projection rather than for two points in time (1980 and 1985), the slowing in the rate of increase in GNP would begin about 1978 and continue at least through 1985. This slowdown reflects the labor force entry of children born in the late 1950's and 1960's when the birth rate was declining sharply.

Another change from the recent past is the relative growth of the public versus the private sector. The projected rate of increase in government GNP during 1968–85 is 1.6 percent per year. This slowdown from the 1955–68 rate of 3.1 is overstated by the choice of 1968—a peak year of our Vietnam involvement—as a reference year. Much of the slowdown will result from a decline in military and related civilian employment, but State and local employment also will increase more slowly than in the 1955–68 period. In contrast to the slow rate of growth in government gross national product, 1968–80 growth in the private sector is expected to be 4.3 percent a year, up from 3.8 percent a year during 1955–68. It will slow down again as labor force growth slows in the early 1980's.

Labor force. Economic growth depends on the size of the labor force and employment, of hours of work and productivity. To provide some perspective on expected growth of the labor force during the pro-

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Table 1. Changes in labor force, employment, productivity, and gross national product, selected years 1955-72 and projected to 1980 and 1985

Category	Actual				Projected		Average annual rate of growth ¹					
	1955	1960	1968	1972	1980	1985	1955-68	1968-72	1968-85	1968-80	1972-80	1980-85
Total labor force (including military).....	68,072	72,142	82,272	88,991	101,809	107,716	1.47	1.98	1.60	1.79	1.70	1.13
Unemployed.....	2,852	3,852	2,817	4,840	3,992	4,229	-0.09	14.49	2.42	2.95	-2.38	1.16
Employed (persons concept) ²	65,220	68,290	79,455	84,151	97,817	103,487	1.53	1.45	1.57	1.75	1.90	1.13
Adjustment factor (persons to jobs).....	4,032	3,502	5,418	4,355	6,259	6,622	2.30	-5.31	1.19	1.21	4.64	1.13
Employment (jobs concept) ²	69,252	71,792	84,873	88,506	104,076	110,109	1.54	1.05	1.54	1.71	2.05	1.13
Government ³	9,475	10,234	14,453	14,786	17,470	19,600	3.30	.57	1.81	1.59	2.10	2.33
Federal.....	4,741	4,261	5,609	4,423	4,070	4,100	1.30	-5.77	-1.83	-2.64	-1.03	.15
Military.....	3,025	2,516	3,517	2,403	2,000	2,000	1.17	-9.08	-3.27	-4.59	-2.27	.00
Civilian.....	1,716	1,745	2,092	2,020	2,070	2,100	1.54	-.87	.02	-.09	.31	.29
State and local.....	4,734	5,973	8,844	10,363	13,400	15,500	4.93	4.04	3.36	3.52	3.26	2.95
Private.....	59,777	61,558	70,420	73,720	86,606	90,509	1.27	1.15	1.49	1.74	2.03	.89
Agriculture.....	6,434	5,389	3,816	3,450	2,300	1,900	-3.94	-2.49	-4.02	-4.13	-4.94	-3.75
Nonagriculture.....	53,343	56,169	66,604	70,270	84,306	88,609	1.72	1.35	1.69	1.98	2.30	1.00
Average annual man-hours (private) ⁴	2,130	2,067	2,000	1,965	1,920	1,888	-.48	-.44	-.34	-.34	-.29	-.34
Agriculture.....	2,480	2,366	2,314	2,267	2,180	2,127	-.53	-.51	-.49	-.50	-.49	-.49
Nonagriculture.....	2,088	2,039	1,982	1,950	1,913	1,883	-.40	-.41	-.30	-.29	-.24	-.32
Total private man-hours (millions).....	127,344	127,265	140,870	144,824	166,291	170,892	.78	.69	1.14	1.39	1.74	.55
Agriculture.....	15,959	12,750	8,830	7,822	5,014	4,041	-4.45	-2.98	-4.61	-4.59	-5.41	-4.22
Nonagriculture.....	111,385	114,515	132,040	137,002	161,277	166,851	1.32	.93	1.39	1.68	2.06	.68
Private GNP per man-hour (1972 dollars).....	4.36	4.88	6.42	7.04	9.02	10.34	3.02	2.33	2.84	2.87	3.15	2.77
Agriculture.....	1.83	2.40	3.69	4.40	7.04	9.18	5.54	4.50	5.51	5.53	6.05	5.45
Nonagriculture.....	4.72	5.15	6.60	7.19	9.09	10.37	2.61	2.16	2.69	2.70	2.97	2.67
Total GNP (billions of 1972 dollars).....	\$645.9	\$717.1	\$1,038.6	\$1,155.2	\$1,657.9	\$1,942.5	3.72	2.69	3.75	3.97	4.62	3.22
Government.....	90.7	96.5	134.3	135.4	157.3	174.9	3.07	.20	1.57	1.33	1.89	2.14
Federal.....	51.9	47.5	61.7	50.3	47.2	47.6	1.34	-4.98	-1.51	-2.21	-.79	.17
Military.....	28.2	23.5	32.8	22.4	18.7	18.7	1.17	-9.09	-3.25	-4.57	-2.23	.00
Civilian.....	23.7	24.1	28.8	27.8	28.5	28.9	1.51	-.88	.02	-.09	.31	.28
State and local.....	38.8	49.0	72.7	85.1	110.1	127.3	4.95	4.02	3.35	3.52	3.27	2.95
Private.....	555.2	620.6	904.3	1,019.7	1,500.6	1,767.6	3.82	3.05	4.02	4.31	4.95	3.33
Agriculture.....	29.2	30.6	32.6	34.4	35.3	37.1	.85	1.25	.76	3.67	.33	1.00
Nonagriculture.....	526.0	590.0	871.7	985.3	1,465.3	1,730.5	3.96	3.11	4.12	4.42	5.09	3.38

¹ Compound interest rate between terminal years.

² Employment using a persons concept is a count of the number of persons holding jobs or looking for them. Employment based on a jobs concept is a count of the number of jobs held by people. Therefore, if persons hold more than one job, they are counted more than once.

³ The government employment data shown here are from the U.S. Department of

Commerce, Bureau of Economic Analysis, and are used to be consistent with the national income and product data. Government employment data shown elsewhere are consistent with BLS employment data.

⁴ Limited to private because of the concept used to compute productivity and the assumption of no change in hours in government.

jected period, the following shows average annual rates of growth in the total labor force during selected periods:

Period	Annual growth (in percent)
1955-68	1.5
1968-80	1.8
1980-85	1.1

Chart 1 shows annual changes in the labor force from 1951 to 1985, particularly the graphic slow-down during 1980-85.

When resources are fully utilized, changes in historical and projected growth rates come about largely because of changes in the rate of increase in the labor force (assuming no sharp departure from the long-term trend in productivity and hours of work). Thus the annual growth in gross national

product of 3.7 percent during 1955-68 was associated with an annual increase in the labor force of 1.5 percent. The diminution in economic growth expected during 1980-85 is associated with a sharply lower annual rate of increase in the labor force. It should be noted that the 1980-85 increase in gross national product (3.2 percent a year) is slower than most periods of comparable length in the postwar era, especially if those years with less than full (about 4-percent) unemployment are not considered.⁴

Employment. To project economic growth to 1985, it was necessary to estimate employment by assuming an unemployment rate. It was assumed the rate would be 4.0 percent by the mid-1970's and would remain there through the projection period. Separate

employment estimates were made for each level of government and for the private farm and nonfarm sectors, because all have widely differing levels and rates of increase in labor productivity.⁵ Federal civilian employment is projected to increase modestly throughout the 1972–85 period, but because of a projected decline in the military, overall Federal employment shows a slight decrease. State and local government employment is expected to continue to increase, but more slowly than it did during 1955–68. Then a surge of pupil enrollment (the baby boom) contributed to an employment expansion in public education, where about half of State and local employees work. Farm employment is expected to continue its long-term rate of decline—about 4 percent a year—with little change. Private nonfarm employment, largest component in the employment picture, is expected to rise about 2.0 percent a year during 1968–80, slowing to 1.0 percent a year during 1980–85. Employment growth for selected components is shown in the following tabulation:

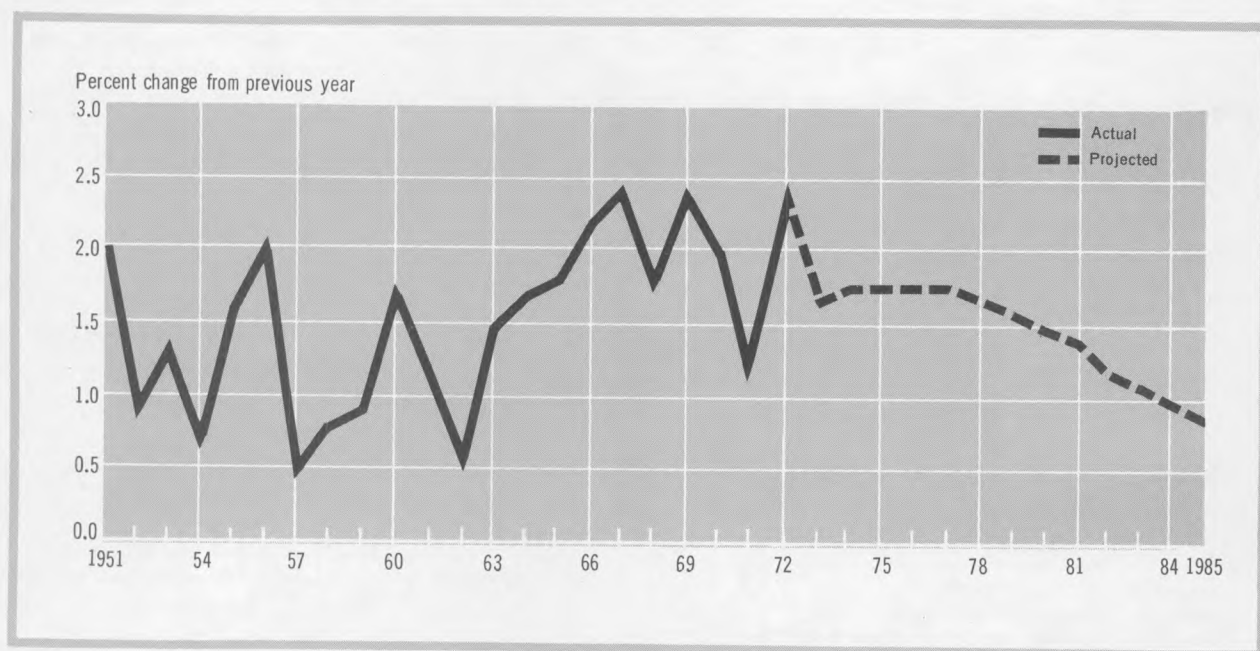
	1968–80	1972–80	1980–85
Public employment ----	1.6	2.1	2.3
Federal -----	-2.6	-1.0	.2
State and local ---	3.5	3.3	3.0
Private -----	1.7	2.0	.9

Average annual hours. The projected rate of decline in farm hours will continue at the long-term rate of about 0.5 percent a year.⁶ However, the projected decline in hours in the private nonfarm sector of 0.3 percent a year is somewhat less than the 0.6 percent a year experienced in that sector over the 1965–72 period, but more in line with the longer term trend. This results from an expected retardation in the rate of increase in part-time employment, a major factor in the sharp decline in average hours in the 1960's.

Output per man-hour. Productivity growth in the farm sector is expected to continue in the range of 5.5 percent a year over the 1968–85 period (table 1). Productivity in the nonfarm sector is projected to continue at 2.7 percent a year. Because of the 1968–72 shortfall in productivity growth, the rate for 1972–80 is higher—nearly 3.0 percent a year.⁷

The rate of growth of productivity in the private sector (combined farm and nonfarm) in the postwar period has been 3.0 percent. When these sectors are combined for the projected period, the rates of productivity gradually decline to 2.9 percent a year during 1968–80 and 2.8 percent a year during 1980–85. As a consequence of the farm sector growing smaller in employment terms, the rate of productivity growth for the total private economy is expected to gradually approach that of the nonfarm sector.

Chart 1. Year-to-year change in total labor force, 1951–85



Gross national product as income

Gross national product is a measure of the flow of goods and services produced and consumed annually. It can, therefore, be measured as it is produced or as it is consumed. Gross national product measured at the point of production—*income GNP*—consists of the earning of the factors of production. In this article, it is shown as the sources and uses of income by persons, business, and government.⁸

Personal income: sources and disposition. Personal income, the largest income category, is projected to increase at 8.0 percent a year from 1968 to 1980 (stated in current prices) or appreciably faster than over the 1955–68 period. This reflects both faster real growth and a projected faster rate of price increase. Growth in personal income slows down from 1980 to 1985 because of the expected slowing in growth of real GNP and because of a somewhat lower rate of price increase. (See table 2 for the relationships between the sources of personal income and its disposition.)

Most categories of personal income (wages, salaries, dividends, government transfers) follow the same pattern of growth as gross national product—

appreciably faster during 1968–80 than during 1955–68, then slowing from 1980 to 1985 to a rate more nearly comparable to the 1955–68 period. The one major category not expected to follow this pattern is government transfers to persons, which are projected to grow at the 1955–68 rate over the 1968–80 period while the slowdown during 1980–85 is much sharper than for other income categories. Broadened social security coverage and more individuals on welfare contributed to recent sharp increases in transfer payments. In the projected period, such payments are expected to increase only as real benefits or prices increase.

Personal income goes for consumption, savings, interest, and taxes. Personal consumption expenditures will be discussed in detail in the next section. In the 1968–80 period, differences between growth in personal income and personal taxes is small because of tax reductions in the Tax Reform Act of 1969 and a slowing in the rate of growth in State and local tax collections. However, because of the progressive nature of the income tax system and the growth in social insurance contributions, taxes continue to take an increasing share of income. Over the 1980–85 period, the growth in taxes and the resulting increase in its share of income is more pro-

Table 2. Personal income: sources and disposition, selected years 1955–72 and projected to 1980 and 1985

[Billions of current dollars]

Component	Actual				Projected		Average annual rate of change ¹					
	1955	1960	1968	1972	1980	1985	1955–68	1968–72	1968–85	1968–80	1972–80	1980–85
Personal income: sources.....	\$310.9	\$401.0	\$688.9	\$939.2	\$1,736.5	\$2,376.9	6.3	8.1	7.6	8.0	8.0	6.5
Compensation of employees ²	218.6	282.8	490.3	668.6	1,195.7	1,655.9	6.4	8.1	7.4	7.8	7.6	6.7
Government transfers to persons.....	16.1	26.6	56.1	98.3	178.4	227.6	10.1	15.1	8.6	10.1	7.7	5.0
Other sources ³	87.3	112.3	189.6	246.0	484.6	650.1	6.1	6.7	7.5	8.2	8.9	6.0
Less total contributions for social insurance.....	11.1	20.7	47.1	73.7	129.3	164.1	11.8	12.6	7.6	8.8	7.2	4.9
Personal income: disposition.....	310.9	401.0	688.9	939.2	1,736.5	2,376.9	6.3	8.1	7.6	8.0	8.0	6.5
Personal tax and nontax payments.....	35.5	50.9	97.9	142.2	269.3	397.0	8.1	9.8	8.6	8.8	8.3	8.1
Personal outlays.....	259.5	330.0	551.2	747.2	1,365.9	1,845.6	6.0	7.9	7.4	7.9	7.8	6.2
Personal consumption expenditures.....	254.4	325.2	536.2	726.5	1,321.2	1,783.2	5.9	7.9	7.3	7.8	7.8	6.2
Interest paid by consumers.....	4.7	7.3	14.3	19.7	43.9	61.6	8.9	8.3	9.0	9.8	10.5	7.0
Personal transfers to foreigners.....	.5	.5	.8	1.0	.8	.8	3.7	5.7	-----	-----	-2.8	-----
Personal savings.....	15.8	17.0	39.8	49.7	101.3	134.3	7.4	5.7	7.4	8.1	9.3	5.8
Other items:												
Disposable personal income (DPI).....	275.3	350.0	591.0	797.0	1,467.2	1,979.8	6.1	7.8	7.4	7.9	7.9	6.2
Saving rate (as percent of DPI).....	5.7	4.9	6.7	6.2	6.9	6.8	1.3	-1.9	-1.1	-1.3	1.4	.3
DPI per capita (current dollars).....	1,659.1	1,937.3	2,944.6	3,816.4	6,546.5	8,399.6	4.5	6.7	6.4	6.9	7.0	5.1
DPI per capita (constant 1972 dollars).....	2,477.6	2,610.5	3,432.8	3,816.4	5,113.0	5,719.4	2.5	2.7	3.0	3.3	3.7	2.3

¹ Compound interest rates between terminal years.

² Covers wage and salary income and other labor income.

³ Covers proprietors, income, rental income of persons, dividends, and personal interest income.

SOURCES: Historical data: U.S. Department of Commerce, Bureau of Economic Analysis; projections: Bureau of Labor Statistics.

nounced because the effect of the 1969 tax change is no longer a factor. Saving, on the other hand, has had and is projected to continue to have a rather constant share of income. At the same time, interest has shown a modest increase in its share of income both historically and in the projected period. The result of the increase in the portion of income going to taxes and interest, and a fixed share to saving, is for personal consumption, past and projected, to represent a declining share of income. The percent distribution of income is highlighted in the following tabulation:

	1955	1968	1972	1980	1985
Personal income ----	100.0	100.0	100.0	100.0	100.0
Taxes (personal and social insurance contributions) -----	11.4	14.2	15.1	15.5	16.7
Savings -----	5.1	5.8	5.3	5.3	5.3
Other (interest and foreign transfers) ----	1.7	2.2	2.2	3.0	3.0
Personal consumption expenditures -----	81.8	77.8	77.4	76.2	75.0

Another interesting statistic derived from these projections is disposable personal income per capita, crudely used as a measure of the standard of living. Per capita disposable income in current dollars has grown from \$1,659¹ in 1955 to \$3,816 in 1972 (table 2). It is projected to increase to \$6,546 in 1980 and to \$8,400 by 1985. In constant (1972)

dollars, the change is from \$3,816 to \$5,719 in 1985 or 3.1 percent a year—reflecting a truer measure of improving standards of living. However, this expansion—as is true with other elements of the projections—has an uneven pattern of growth within the projected period.

Gross saving and investment. In the projections, the 1968–80 growth in investment is appreciably higher than the 1955–68 rate—8.5 percent compared with 5.0 percent (current prices). While part of this is attributable to projected price increases of investment goods and an expansion in the rate of real growth in nonresidential investment, an additional factor is the projected increase in residential construction. The major question concerning the financing of this investment is the portion which is projected to come from personal savings compared to that from business (undistributed profits and capital consumption allowances). Over the 1968–80 period the business share of gross savings is expanding while the personal savings share is declining. In the 1980–85 period this is not true, principally because the personal savings growth is more nearly normal (table 3). The changing percent distribution of gross savings is highlighted in the following tabulation:

	1955	1968	1972	1980	1985
Gross savings --	100.0	100.0	100.0	100.0	100.0
Personal --	24.4	31.0	28.9	29.8	29.7
Business --	71.5	74.3	72.7	74.3	73.3
Government (surplus or deficit) --	4.2	-5.3	-1.6	-4.1	-3.0

Table 3. Gross saving and investment, selected years 1955–72 and projected to 1980 and 1985

[Billions of current dollars]

Component	Actual				Projected		Average annual rate of change ¹					
	1955	1960	1968	1972	1980	1985	1955–68	1968–72	1968–85	1968–80	1972–80	1980–85
Gross investment	\$66.9	\$76.5	\$125.6	\$170.6	\$340.2	\$452.8	5.0	8.0	7.8	8.7	9.0	5.9
Gross private domestic investment	67.4	74.8	126.0	178.3	344.6	445.3	4.9	9.1	7.7	8.5	8.2	5.9
Net foreign investment	-.5	1.7	-.4	-7.6	5.6	7.5	1.7	(2)	(2)	(2)	(2)	6.0
Gross saving	64.8	77.5	128.4	172.1	340.2	452.8	5.4	7.6	7.7	8.3	8.9	5.9
Personal saving	15.8	17.0	39.8	49.7	101.3	134.3	7.4	5.7	7.4	7.3	8.1	5.8
Government surplus or deficit	2.7	3.7	-6.8	-2.8	-13.8	-13.4	(2)	(2)	(2)	(2)	(2)	(2)
Other ³	46.3	58.6	95.4	125.2	252.6	331.9	5.7	7.0	7.3	8.5	9.2	5.6
Statistical discrepancy	2.1	-1.0	-2.7	-1.5	0.0	0.0	(2)	(2)	(2)	(2)	(2)	(2)

¹ Compound interest rate between terminal years.

² Not applicable.

³ Includes wage accruals less disbursements, undistributed profits, corporate inventory valuation adjustment, capital consumption allowances and capital grants received by the U.S.

SOURCES: Historical data: U.S. Department of Commerce, Bureau of Economic Analysis; projections: Bureau of Labor Statistics.

Government expenditures and revenues. Over the 1968–80 period the projected rate of increase in Federal expenditures is a little less than revenues, with both projected to increase about 7½ percent a year (current prices), moderately less than the 1955–68 rate (table 4).⁹ The implied 1972–80 rate is not appreciably different although revenues increase somewhat faster than expenditures. Between 1980 and 1985, both Federal expenditures and revenues are projected to grow at about 6 percent a year, in line with the expected slowing in the economy. By contrast, over the 1955–68 period, Federal expenditures increased somewhat faster than revenues.

Federal purchases of goods and services have been growing at a lower rate than that of all Federal expenditures. In the 1968–80 projections, Federal purchases of goods and services are projected to slow further to 4.5 percent, largely reflecting the projected lessening of the rate of expansion of military expenditures in the 1970's, particularly when measured from the peak Vietnam war year 1968. (See table 4.) On the other hand, transfer payments to persons and Federal grants-in-aid to State and local government are projected to continue to increase in the 1970's at rates very close to those prevailing over the 1955–68 period, although slower than 1968–72. Between 1980 and 1985, both transfers and grants slow as Federal revenues slacken. Purchases are not expected to show any significant fall off because defense requirements are not that directly affected by swings in the rate of growth.

The projections call for State and local government expenditures to increase at better than 10 percent a year (in current prices) for both revenues

and expenditures.¹⁰ (See table 4.) Between 1980 and 1985 the rate of increase of State and local revenues and expenditures slows to somewhat less than 8 percent a year.

Prices. The GNP deflator used in the projections was, by assumption, set at a 3.0-percent increase a year. The reduction to this rate would not be reached until 1975 but would remain at this rate through 1985. This implies an increase of 3.2 percent a year during 1972–80, considerably below the 1968–72 rate but above the longer term 1955–68 rate. Because of changes in the economy, particularly the shift away from goods-producing industries toward services and public sector employment, the earlier lower average level of price increase will be more difficult to achieve. Also, while there may be considerable discussion about what the long-term price outlook (consistent with a 4-percent rate of unemployment) might be, the crucial factor for these projections is the impact on the structure of demand. Evaluations made of various alternative rates of inflation show little difference in the structure of real demand. This follows because, in general, no particular changes in the pattern of prices among the major components of GNP are projected as they tend to keep their respective relationship to the total GNP deflator.¹¹

Purchasers of GNP

GNP can be measured alternatively in terms of final purchasers of all goods and services. These purchasers are consumers, business, foreign purchasers, and government.

Table 4. Government revenues and expenditures, selected years and projected to 1980 and 1985

[Billions of current dollars]

Component	Actual				Projected		Average annual rate of growth ¹					
	1955	1960	1968	1972	1980	1985	1955–68	1968–72	1968–85	1968–80	1972–80	1980–85
Federal Government												
Expenditures ²	\$68.094	\$93.016	\$181.509	\$244.576	\$431.7	\$574.5	7.8	7.7	7.0	7.5	7.4	6.0
Purchases of goods and services.....	44.090	53.531	98.768	104.446	166.6	218.5	6.4	1.4	4.8	4.5	6.0	5.6
Transfers and net interest.....	19.382	23.398	59.945	96.336	167.8	210.6	9.1	12.6	7.7	9.0	7.2	4.7
Grants to State and local government.....	3.120	6.521	18.675	37.677	90.2	137.5	14.8	19.2	12.5	14.0	11.5	8.8
Receipts.....	72.086	96.478	175.025	228.684	421.1	570.0	7.1	6.9	7.2	7.6	7.9	6.2
State and local government												
Expenditures.....	32.663	49.636	107.466	164.023	353.0	514.7	9.6	11.2	9.7	10.4	10.1	7.8
Receipts.....	31.393	49.856	107.120	177.155	349.8	505.8	9.9	13.4	9.6	10.4	8.9	7.7

¹ Compound interest rates between terminal years.

² Total Federal expenditures include subsidies less current surplus of government enterprises which is not shown separately.

SOURCE: Historical data: U.S. Department of Commerce, Bureau of Economic Analysis; projections: Bureau of Labor Statistics.

Personal consumption expenditures. Consumers purchase nearly two-thirds of gross national product. The growth of consumer expenditures usually does not deviate substantially for very long periods from total GNP growth. The projected expansion of consumer expenditures is in keeping with the long-run trend—expansion at rates slightly faster than growth in gross national product. Between 1972 and 1980, growth in personal consumption expenditures is projected at 4.6 percent a year (1972 dollars), reflecting a catch up from the appreciable slowdown in gross national product and personal consumption during 1968–72 (table 5). The 1980–85 rate of increase for consumer expenditures is expected to slow to 3.3 percent a year.

The three major components of personal consumption expenditures—durables, nondurables, and services—each show the same pattern of strong growth during 1968–80, somewhat slower during 1980–85.¹² However, the relative amount of slowing varies among the three components (rates of growth in 1972 dollars):

	1955–68	1968–80	1972–80	1980–85
Total -----	3.9	4.3	4.5	3.3
Durables -----	5.0	5.1	4.4	3.1
Nondurables -----	3.1	3.6	3.9	2.8
Services -----	4.4	4.6	5.0	3.8

The marked 1980–85 slowdown in durable consumer goods is projected for each of the durable goods categories; however, the slowdown for automobiles is even more pronounced and is the major factor behind the very slow 1980–85 growth in durables. This slowdown in the growth of automobile purchases is partially attributable to the slowing in the growth in income, but also reflects the assumption that congestion in urban areas, energy shortages, pollution problems, and slower growth in the younger population all will work toward a dampening in auto purchases.

Nondurable goods, largely food and clothing, do not exhibit the same dramatic slowing. In general, these goods are relatively insensitive to changes in income, implying that as income increases a smaller part of the increase goes for food and clothing. Therefore, historically, consumers' purchases of nondurable goods have expanded slower than overall consumer expenditures.

No particular service dominates the category of services as automobiles dominate among durable goods and to some extent food among nondurables.

The projected 1968–80 growth in services is expected to be faster than that for nondurable but slower than that for durable goods. This was the situation in the past, particularly in 1955–68. However, during 1980–85 growth for services is higher than the other consumption categories.

Investment. Another major part of private demand is gross private domestic investment which covers residential and nonresidential construction, producers' durable equipment, and the change in business inventories. While significantly smaller than consumption, having ranged from about 13 to 17 percent of gross national product, investment is still an important part of GNP because it represents the Nation's current commitment to future growth in the economy. It continues to play an important role in the capacity of the economy to maintain the rate of increase in productivity. The following shows the average annual rate of change in private investment (in 1972 dollars):

	1955–68	1968–72	1968–80	1972–80	1980–85
Total -----	2.4	4.0	4.7	5.1	3.0
Nonresidential ---	4.1	2.3	4.9	6.3	3.2
Structures ---	2.9	.5	4.0	6.3	3.1
Equipment --	5.0	3.9	5.5	6.2	3.3
Residential -----	-.7	10.6	4.2	1.1	3.4

Growth in construction of residential buildings during 1968–80 is projected at 4.2 percent a year and should be sufficient to permit enough housing starts to meet the housing goals.¹³ Between 1968 and 1972, a very significant residential building expansion has already taken place so that the implied 1972–80 increase from this high level is only 1.1 percent a year (table 5). The 1980–85 rate for residential construction slows compared with the 1968–80 rate.

Nonresidential investment—business investment in equipment (trucks, computers, machinery) as well as in plants, commercial offices, shopping centers, and so forth—is projected to expand in keeping with the overall expansion in the rate of growth in gross national product during this period. The pattern of most of the postwar period has been for the investment in buildings to increase at a lower rate than equipment. In the projections, this pattern is continued although the difference between the two is narrowed sharply, primarily because of large outlays on structures projected for utilities, chiefly electric. Growth in producer durable equipment in the

Table 5. Gross national product and major components by purchasers, selected years 1955-72 and projected to 1980 and 1985

[Billions of 1972 dollars]

Component	Actual				Projected	
	1955	1960	1968	1972	1980	1985
Gross national product (demand concept).....	\$645.9	\$717.1	\$1,038.6	\$1,155.2	\$1,657.9	\$1,942.5
Personal consumption.....	379.9	438.2	625.1	726.5	1,032.0	1,214.2
Durable goods.....	48.8	50.5	91.5	117.4	165.4	192.3
Nondurable goods.....	178.8	202.2	266.9	299.9	408.7	469.0
Services.....	152.3	185.5	266.7	309.2	457.9	552.9
Gross private domestic investment.....	112.3	106.9	152.6	178.3	266.1	309.0
Fixed investment.....	103.8	102.5	144.2	172.3	250.9	294.3
Nonresidential.....	64.4	68.4	108.1	118.2	192.0	224.7
Structures.....	29.5	31.4	42.5	41.7	68.0	79.1
Producer durable equipment.....	34.9	37.0	65.6	76.5	123.9	145.5
Residential.....	39.4	34.1	36.1	54.0	58.9	69.7
Changed in business inventory.....	8.4	4.5	8.4	6.0	15.3	14.7
Net exports of goods and services.....	3.6	4.8	.3	-4.6	3.8	3.8
Exports.....	27.2	35.4	59.4	73.5	133.6	169.7
Imports.....	23.6	30.7	59.7	78.1	129.8	166.0
Government purchases of goods and services.....	150.2	167.2	261.2	255.0	356.1	415.5
Federal government.....	87.0	87.9	133.9	104.5	126.4	140.0
National defense.....	76.2	73.8	106.2	74.4	85.8	93.1
Other.....	10.8	14.1	27.7	30.1	40.7	46.9
State and local government.....	63.1	79.3	127.3	150.5	229.6	275.5
Percent distribution						
Gross national product (demand concept).....	100.0	100.0	100.0	100.0	100.0	100.0
Personal consumption.....	58.8	61.1	60.2	62.9	62.2	62.5
Durable goods.....	7.6	7.0	8.8	10.2	10.0	9.9
Nondurable goods.....	27.7	28.2	25.7	26.0	24.7	24.1
Services.....	23.6	25.9	25.7	26.8	27.6	28.5
Gross private domestic investment.....	17.4	14.9	14.7	15.4	16.1	15.9
Fixed investment.....	16.1	14.3	13.9	14.9	15.1	15.2
Nonresidential.....	10.0	9.5	10.4	10.2	11.6	11.6
Structures.....	4.6	4.4	4.1	3.6	4.1	4.1
Producer durable equipment.....	5.4	5.2	6.3	6.6	7.5	7.5
Residential.....	6.1	4.8	3.5	4.7	3.6	3.6
Changed in business inventory.....	1.3	.6	.8	.5	.9	.8
Net exports of goods and services.....	.6	.7	-0.0	-.4	.2	.2
Exports.....	4.2	4.9	5.7	6.4	8.1	8.7
Imports.....	3.7	4.3	5.7	6.8	7.8	8.5
Government purchases of goods and services.....	23.3	23.3	25.1	22.1	21.5	21.4
Federal government.....	13.5	12.3	12.9	9.0	7.6	7.2
National defense.....	11.8	10.3	10.2	6.4	5.2	4.8
Other.....	1.7	2.0	2.7	2.6	2.5	2.4
State and local government.....	9.8	11.1	12.3	13.0	13.8	14.2
Average annual rate of change ¹						
	1955-68	1968-72	1968-80	1968-85	1972-80	1980-85
Gross national product (demand concept).....	3.7	2.7	4.0	3.8	4.6	3.2
Personal consumption.....	3.9	3.8	4.3	4.0	4.5	3.3
Durable goods.....	5.0	6.4	5.1	4.5	4.4	3.1
Nondurable goods.....	3.1	3.0	3.6	3.4	3.9	2.8
Services.....	4.4	3.8	4.6	4.4	5.0	3.8
Gross private domestic investment.....	2.4	4.0	4.7	4.2	5.1	3.0
Fixed investment.....	2.6	4.6	4.7	4.3	4.8	3.3
Nonresidential.....	4.1	2.3	4.9	4.4	6.3	3.2
Structures.....	2.9	-.5	4.0	3.7	6.3	3.1
Producer durable equipment.....	5.0	3.9	5.5	4.8	6.2	3.3
Residential.....	-.7	10.6	4.2	3.9	1.1	3.4
Changed in business inventory.....	-0.0	-8.0	5.1	3.4	12.4	-.8
Net exports of goods and services.....	(2)	(2)	(2)	(2)	(2)	-.1
Exports.....	6.2	5.5	7.0	6.4	7.8	4.9
Imports.....	7.4	7.0	6.7	6.2	6.6	5.0
Government purchases of goods and services.....	4.4	-.6	2.6	2.8	4.3	3.1
Federal government.....	3.4	-6.0	-.5	.3	2.4	2.1
National defense.....	2.6	-8.5	-1.8	-.8	1.8	1.7
Other.....	7.5	2.1	3.2	3.1	3.8	2.9
State and local government.....	5.5	4.3	5.0	4.7	5.4	3.7

¹ Compound interest rate between terminal years.² Not applicable.

SOURCE: Historical data: U.S. Department of Commerce, Bureau of Economic Analysis; projections: Bureau of Labor Statistics.

projected period is led by computers and the ubiquitous photocopying equipment.

Net exports. The final component of private demand is net exports of goods and services. Both imports and exports are projected to increase faster than gross national product, thus over time constituting a gradually increasing share of GNP. Over the 1968–85 period, U.S. exports are projected to expand rapidly with agricultural exports and the nonmerchandise component, principally return on investments, leading the expansion. These increases are expected to offset the very large increase projected in oil imports. (See table 5.)

The projected turnaround in our import-export position is expected to flow, at least in the near term, from the recent devaluations of the U.S. dollar and revaluations of currencies of some of our major trading partners. Also, our exports, particularly agricultural products, are expected to increase in the new markets of Russia and China. At the same time, currency realignments will make U.S. imports more expensive, slowing the very high rates of increase recently experienced. An additional factor in the slowdown is the return of U.S. military expenditures abroad to pre-Vietnam levels.

The projections of imports for most industries assume that the 1972 ratio of imports to total supply will remain through 1980 and 1985. The exception to this is the crude petroleum and refined petroleum sectors, which are both increased significantly in line with Interior Department projections on use of imported crude and to a greater extent imported refined petroleum to meet our energy needs.¹⁴ For exports, the projections are for return on investment to continue to be an increasing part of U.S. exports. Among individual industries, exports of aircraft, computers, office machines, and agricultural products are expected to have an increasingly important place.

Government. Public purchases of goods and services, projected separately for Federal, and State and local government, will change at the following average annual rates (computed in 1972 dollars):

	1955–68	1968–80	1972–80	1980–85
Total -----	4.4	2.6	4.3	3.1
Federal -----	3.4	— .5	2.4	2.1
Defense -----	2.6	—1.8	1.8	1.7
Nondefense -----	7.5	3.2	3.8	2.9
State and local -----	5.5	5.0	5.4	3.7

While Federal purchases of goods and services show little change during 1968–80, this results from defense and nondefense purchases moving in opposite directions, as the tabulation shows.¹⁵ The slower growth projected for nondefense purchases than prevailed in 1955–68 follows from the peaking of the space program and the low growth potential which it offers for the future. Since military and civilian defense-related manpower will be at the same or lower levels, the increase in defense purchases is projected to be directed toward an increasingly sophisticated and costly military hardware, particularly ships as we replace our obsolete fleets. The projections for 1980–85 show defense purchases growing at less than 2 percent, nondefense purchases at about 3 percent a year.

State and local government purchases have been, over the past 15 years, one of the fastest growing components of demand. The anticipated slowing of the rate of increase masks some major changes in the pattern of expenditures. Perhaps the most important is the diminished role of educational services relative to other purchases. The number of students enrolled in public schools (elementary through college) is expected to peak in 1974 and decrease slowly for at least the next 5 years. Even allowing for significant quality improvements in the educational system (at least measured by real expenditures per pupil), real educational expenditures are projected to increase at an average annual rate of only 3.4 percent in the 1970's compared with 6.0 percent in the 1963–70 period.

Spending on the construction of streets and highways was actually less in real terms in 1970 than in 1963, and little growth is projected through 1980 and 1985. This follows from completion of the major portion of the Interstate Highway System, public resistance to further construction in urban areas, and increased emphasis on mass transit.¹⁶

The trends in these two major areas of traditional State and local responsibility—schools and highways—are, of course, offset to some extent by greatly increased demands for other public services (water and sanitary services, health care, mass transit, power generation, airport facilities, urban renewal and public housing, and parks and recreational facilities).

Output and employment

Composition of output by sector. Output shifts projected for 1968–85 are shown in table 6.¹⁷ Overall,

Table 6. Gross product originating¹ in various sectors of the private economy, selected years 1955-72 and projected to 1980 and 1985

Sector	1955	1960	1968	1972	1980	1985
Billions of 1972 dollars						
Total.....	555.2	620.6	904.3	1,019.7	1,500.6	1,767.6
Agriculture.....	29.2	30.6	32.6	34.4	35.3	37.1
Nonagriculture.....	526.0	590.0	871.7	985.3	1,465.3	1,730.5
Mining.....	13.7	14.0	17.4	18.2	20.2	20.4
Contract construction.....	47.1	49.3	54.0	56.0	71.5	77.9
Manufacturing.....	159.6	168.1	261.9	290.7	428.6	499.1
Durable.....	98.2	98.5	160.4	170.7	268.5	313.5
Nondurable.....	61.4	69.6	101.5	119.9	160.1	185.6
Transportation, communication and public utilities.....	46.6	53.7	84.5	102.3	164.7	202.0
Transportation.....	27.9	28.5	42.1	45.8	71.8	83.6
Communication.....	8.2	11.0	20.3	28.5	50.5	64.8
Public utilities.....	10.5	14.2	22.1	28.0	42.4	53.6
Trade.....	100.5	115.0	167.8	194.5	281.1	318.9
Wholesale.....	34.5	42.1	67.0	77.7	116.0	132.6
Retail.....	66.0	72.9	100.8	116.7	165.1	186.3
Finance, insurance, and real estate.....	82.1	99.9	148.4	163.8	250.5	303.5
Other services.....	72.0	88.0	123.8	135.9	223.6	269.9
Government enterprises.....	8.9	9.3	15.3	18.0	25.8	30.9
Rest of world plus statistical discrepancy.....	-4.5	-7.3	-1.4	6.0	-7.7	7.8
Percent distribution						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture.....	5.3	4.9	3.6	3.4	2.4	2.1
Nonagriculture.....	94.7	95.1	96.4	96.6	97.6	97.9
Mining.....	2.5	2.3	1.9	1.8	1.3	1.2
Contract construction.....	8.5	7.9	6.0	5.5	4.8	4.4
Manufacturing.....	28.7	27.1	29.0	28.5	28.6	28.2
Durable.....	17.7	15.9	17.7	16.7	17.9	17.7
Nondurable.....	11.1	11.2	11.2	11.8	10.7	10.4
Transportation, communication, and public utilities.....	8.4	8.7	9.3	10.0	11.0	11.4
Transportation.....	5.0	4.6	4.7	4.5	4.8	4.7
Communication.....	1.5	1.8	2.2	2.8	3.4	3.7
Public utilities.....	1.9	2.3	2.4	2.7	2.8	3.0
Trade.....	18.1	18.5	18.6	19.1	18.7	18.0
Wholesale.....	6.2	6.8	7.4	7.6	7.7	7.5
Retail.....	11.9	11.7	11.1	11.4	11.0	10.5
Finance, insurance, and real estate.....	14.8	16.1	16.4	16.1	16.7	17.2
Other services.....	13.0	14.2	13.7	13.3	14.9	15.3
Government enterprises.....	1.6	1.5	1.7	1.8	1.7	1.7
Rest of world plus statistical discrepancy.....	-0.8	-1.2	-0.2	0.6	0.0	0.4
Average annual rate of change ²						
	Actual		Projected			
	1955-68	1968-72	1968-85	1968-80	1972-80	1980-85
Total.....	3.8	3.0	4.0	4.3	4.9	3.3
Agriculture.....	.9	1.4	.8	.7	.3	1.0
Nonagriculture.....	4.0	3.1	4.1	4.4	5.1	3.4
Mining.....	1.9	1.1	.9	1.3	1.3	.2
Contract construction.....	1.1	.9	2.2	2.4	3.1	1.7
Manufacturing.....	3.9	2.6	3.9	4.2	5.0	3.1
Durable.....	3.8	1.6	4.0	4.4	5.8	3.1
Nondurable.....	3.9	4.3	3.6	3.9	3.7	2.9
Transportation, communication, and public utilities.....	4.7	4.9	5.3	5.7	6.1	4.2
Transportation.....	3.2	2.1	4.1	4.5	5.8	3.1
Communication.....	7.2	8.9	7.1	7.9	7.4	5.1
Public utilities.....	5.9	6.1	5.4	5.6	5.3	4.8
Trade.....	4.0	3.8	3.8	4.4	4.7	2.6
Wholesale.....	5.2	3.8	4.1	4.7	5.1	2.7
Retail.....	3.3	3.7	3.6	4.2	4.4	2.4
Finance, insurance, and real estate.....	4.7	2.5	4.3	4.5	5.5	3.9
Other services.....	4.3	2.4	4.7	5.1	6.4	3.8
Government enterprises.....	4.3	4.1	4.2	4.5	4.6	3.7

¹ The concept of gross product originating attributes to each industry only that part of income gross national product originating there.² Compound interest between terminal years.

SOURCES: Historical data: U.S. Department of Commerce, Bureau of Economic Analysis; projections: Bureau of Labor Statistics.

total private gross national product is projected, particularly during 1968–80, to grow more rapidly than during 1955–72. Thus, all other things being equal, most sectors will grow somewhat faster than in the past. However, within the speeding up (1972–80) and slowing down (1980–85), important shifts in the relative importance of sectors takes place. Agriculture and mining will continue to decline, but the decline in the relative importance of construction will be checked, principally by the projected expansion in residential housing and nonresidential structures. Manufacturing, which has accounted for about 27 to 29 percent of output over the past 15 years, is not expected to move outside that range in the projected period.

Wholesale and retail trade's share of total gross product originating, on the other hand, is expected to show a moderate decline—at least from the 1972 level—particularly in 1980–85 as the economy slows down and the amount of goods moved through trade channels moderates even more. With business and professional services and medical services all showing strong growth, services is projected to expand in the future. At the same time, finance, insurance, and real estate's share of gross national product has increased appreciably in the past and is expected to increase further during 1972–85. Thus, the shift to a service economy, which is particularly true of employment, is at least partially attributable

to output shifts. The shifts in output structure are not as pronounced as the shifts in the structure of employment, yet they are a factor in the changing distribution of employment along with the relative growth in productivity.

Productivity changes by sector. Over the 15-year period beginning in 1955, the average annual rate of productivity change for the total private economy was 3.0 percent. This rate of increase declines to 2.9 percent a year in 1968–80 and 2.8 percent a year in 1980–85.¹⁸ Table 7 shows the relative changes in productivity by sector historically and in the projected period.

Productivity growth in a sector relative to its past growth is important for its effect on employment shifts. The projections of productivity in mining reflect a considerably slower rate of increase than prevailed in earlier periods. Manufacturing productivity will grow during 1968–80 slightly faster than its historical rate but in line with its slightly faster growth in output. Also, productivity in trade, in services, and in construction over the projected period reflects an increase over their historical rates of gain. Relative growth in productivity among the sectors is also an important element in employment shifts. Therefore, the projection of lower-than-average productivity in the other services sector and in finance, insurance, and real estate, along with the

Table 7. Productivity change by sector, average rate during selected periods 1948–72 and projected to 1980 and 1985

Sector	Average annual growth rate ¹						
	Actual			Projected			
	1948–68 ²	1955–68	1968–72	1968–85	1968–80	1972–80	1980–85
Total private.....	3.2	3.0	2.3	2.8	2.9	3.2	2.8
Agriculture.....	5.8	5.5	4.5	5.5	5.5	6.1	5.5
Nonagriculture.....	2.7	2.6	2.2	2.7	2.7	3.0	2.7
Mining.....	4.0	3.6	1.0	.9	.9	.9	.8
Contract construction.....	(3)	(3)	(3)	.8	.8	1.5	.7
Manufacturing.....	2.9	2.7	3.8	2.9	3.1	2.7	2.6
Durable.....	(3)	2.4	3.3	2.9	3.2	3.1	2.4
Nondurable.....	(3)	3.2	4.7	2.9	2.9	2.0	2.8
Transportation, communication, and public utilities.....	(3)	4.5	3.9	4.3	4.4	4.6	4.0
Transportation.....	3.2	3.5	2.4	3.4	3.6	4.1	3.1
Communication.....	5.6	5.9	5.0	5.3	5.4	5.6	4.9
Public utilities.....	5.8	5.1	3.5	4.3	4.3	4.7	4.3
Trade.....	2.8	2.9	1.9	2.7	2.7	3.1	2.5
Wholesale.....	(3)	3.5	1.8	2.5	2.7	3.2	2.1
Retail.....	(3)	2.5	1.9	2.6	2.6	3.0	2.6
Finance, insurance, and real estate.....	(3)	(3)	(3)	1.6	1.4	2.8	1.9
Other services.....	(3)	(3)	(3)	2.5	2.5	3.6	2.4
Government enterprises.....	(3)	(3)	(3)	2.8	2.7	2.6	2.9

¹ Compound interest between terminal years.

² Least squares growth rates.

³ Not available.

NOTE: Productivity data are GNP per man-hour with the GNP stated in constant 1972 prices.

relative shifts in output to these sectors, contribute to their rapid growth in employment.

Changes in hours by sector. Average annual hours in the nonfarm economy are projected to decline somewhat less rapidly than the 0.4 percent of a year of the 1955-72 period (on an hours-paid-for basis). This rapid decline has brought about a drop in average weekly hours from 41.0 in 1955 to 37.5 by 1972. The projected decline in hours in the nonfarm economy of 0.3 percent a year anticipates a further drop in average hours to slightly over 36 per week by 1985. Most of the past decline has occurred in retail trade and services (table 8). The 1980-85 projection continues to show a more pronounced decline in hours in retail trade and other services than in the other major sectors. Historically, the sharper decline in hours in these sectors is related, at least in part, to an increase in part-time employment in retail trade and services. The projections in retail trade and other services continue the rather sharp decline in hours—albeit at diminishing rates—reflecting the decline projected in the rate of increase in part-time employees.

Composition of employment by sector. Employment is a primary focus of these projections. Between 1972 and 1980, projected growth in employment (on a job count basis) is expected to be 16 million or an average of 2.3 million jobs a year (2.2 per-

cent a year).¹⁹ From 1980 to 1985, the projections show an expected increase of 6 million more jobs or only 1.2 million a year, (1.2 percent a year), reaching over 107 million jobs by 1985 or 22 million more jobs than in 1972 (table 9). However, an important point of these projections is the dramatic difference in growth in jobs 1972-80 (2.3 million per year) compared to the 1980-85 (1.3 million a year). This compares with an employment growth of 1.2 million jobs a year 1955-72 (1.6 percent a year).

Generally, projections of employment, particularly in the major sectors, reflect continuation of employment shifts taking place for most of the postwar period (chart 2). Any changes tend to be in degree rather than direction. However, transportation and mining, which until recently experienced declines, are expected to show increases in the future. The employment turnaround in mining reflects both the resurgence of coal and a general dampening in mining productivity. The transportation turnaround results from increased importance of transportation modes other than rails, which are declining. Another employment category which had been increasing until about 1965 is private household help. Since then, the number of jobs in paid household employment declined, and this decline is projected to continue as this type of employment appeals to fewer and fewer.

Despite expected moderation, government

Table 8. Average annual hours by sector: average annual rate of change for selected periods 1948-72 and projected to 1980 and 1985

Sector	Actual			Projected			
	1948-68	1955-68	1968-72	1968-85	1968-80	1972-80	1980-85
Total private.....	-0.4	-0.5	-0.5	-0.3	-0.3	-0.3	-0.3
Agriculture.....	-.6	-.5	-.5	-.5	-.5	-.5	-.5
Nonagriculture.....	-.3	-.4	-.4	-.3	-.3	-.3	-.3
Mining.....	.6	.3	-.1	.1	.1	.1	.2
Contract construction.....	-.3	-.1	-.3	-.1	.1	.2	.1
Manufacturing.....	(1)	-.1	-.1	(1)	(1)	(1)	(1)
Durable.....	(2)	-.1	(1)	(1)	(1)	(1)	(1)
Nondurable.....	(2)	-.1	(1)	(1)	(1)	(1)	(1)
Transportation, communication, and public utilities.....	(2)	-.1	-.1	-.1	-.1	(1)	-.1
Transportation.....	-.2	-.2	-.1	-.1	-.1	-.1	(1)
Communication.....	-.1	(1)	-.3	(1)	(1)	.1	(1)
Public utilities.....	-.1	(1)	(1)	(1)	(1)	(1)	(1)
Trade.....	-.5	-.7	-.7	-.6	-.6	-.5	-.6
Wholesale.....	(2)	-.2	-.2	-.1	-.1	-.1	-.1
Retail.....	(2)	-1.0	-.9	-.8	-.8	-.7	-.8
Finance, insurance, and real estate.....	-.2	-.3	(1)	-.1	-.1	-.1	-.1
Other services (includes private household workers).....	-.6	-.7	-.4	-.4	-.4	-.4	-.4

¹ Less than .05 per year change.

² Not applicable.

NOTE: Growth rates are compound interest rate between terminal years except for 1948-68 data which are least squares growth rate.

Table 9. Total employment, by major sector, selected years 1955-72 and projected to 1980 and 1985

[Thousands of jobs]

Sector	Actual				Projected	
	1955	1960	1968	1972	1980	1985
Total.....	65,745	68,732	80,926	85,597	101,576	107,609
Government ¹	6,914	8,353	11,845	13,290	16,610	18,800
Total private.....	58,831	60,379	69,081	72,307	84,966	88,809
Agriculture.....	6,434	5,389	3,816	3,450	2,300	1,900
Nonagriculture.....	52,397	54,990	65,265	68,857	82,666	86,909
Mining.....	832	748	640	645	655	632
Construction.....	3,577	3,654	4,038	4,352	4,908	5,184
Manufacturing.....	17,309	17,197	20,138	19,281	22,923	23,499
Durable.....	9,782	9,681	11,828	11,091	13,629	14,154
Nondurable.....	7,527	7,516	8,310	8,190	9,294	9,345
Transportation, communication, and public utilities.....	4,353	4,214	5,519	4,726	5,321	5,368
Transportation.....	2,918	2,824	2,868	2,842	3,250	3,266
Communication.....	832	844	986	1,150	1,300	1,312
Public utilities.....	603	528	665	724	771	790
Trade.....	13,201	14,177	16,655	18,432	21,695	22,381
Wholesale trade.....	3,063	3,295	3,894	4,235	4,946	5,123
Retail trade.....	10,138	10,882	12,761	14,197	16,749	17,258
Finance, insurance and real estate.....	2,652	7,985	3,720	4,303	5,349	5,932
Other services ²	10,468	12,015	15,555	17,815	21,815	23,913
Percent distribution ³						
Total.....	100.0	100.0	100.0	100.0	100.0	100.0
Government ¹	10.5	12.2	14.6	15.5	16.4	17.5
Total private.....	89.5	87.8	85.4	84.5	83.6	82.5
Agriculture.....	9.8	7.8	4.7	4.0	2.3	1.8
Nonagriculture.....	79.7	80.0	80.6	80.4	81.4	80.8
Mining.....	1.3	1.1	.8	.8	.6	.6
Construction.....	5.4	5.3	5.0	5.1	4.8	4.8
Manufacturing.....	26.3	25.0	24.9	22.5	22.6	21.8
Durable.....	14.9	14.1	14.6	13.0	13.4	13.2
Nondurable.....	11.5	10.9	10.3	9.6	9.2	8.7
Transportation, communication, and public utilities.....	6.6	6.1	5.6	5.5	5.2	5.0
Transportation.....	4.4	4.1	3.5	3.3	3.2	2.0
Communication.....	1.3	1.2	1.2	1.3	1.3	1.2
Public utilities.....	.9	.8	.8	.9	.8	.7
Trade.....	20.1	20.6	21.6	21.5	21.4	20.8
Wholesale trade.....	4.7	4.8	4.8	4.9	4.9	4.8
Retail trade.....	15.4	15.8	15.8	16.6	16.5	16.0
Finance, insurance, and real estate.....	4.0	4.3	4.6	5.0	5.3	5.5
Other services.....	15.9	17.5	19.2	20.0	21.5	22.2
Average annual rate of change ⁴						
	1955-68	1968-72	1968-85	1968-80	1972-80	1980-85
Total.....	1.6	1.4	1.7	1.9	2.2	1.2
Government ¹	4.2	2.9	2.8	2.9	2.8	2.5
Total private.....	1.2	1.2	1.5	1.7	2.0	.9
Agriculture.....	-3.9	-2.5	-4.0	-4.1	-4.9	-3.7
Nonagriculture.....	1.7	1.4	1.7	2.0	2.3	1.0
Mining.....	-2.0	.2	-.1	-.2	-.4	-.7
Construction.....	.9	1.9	1.5	1.6	1.5	1.1
Manufacturing.....	1.2	-1.1	.9	1.1	2.2	.5
Durable.....	1.5	-1.6	1.1	1.2	2.6	.8
Nondurable.....	.8	-.4	.7	.9	1.6	.1
Transportation, communication, and public utilities.....	.3	1.1	1.0	1.4	1.5	.2
Transportation.....	-.1	-.2	.8	1.0	1.7	.1
Communication.....	1.3	3.9	1.7	2.3	1.5	.2
Public utilities.....	.8	2.1	1.0	1.2	.8	.5
Trade.....	1.8	2.6	1.8	2.2	2.1	.6
Wholesale trade.....	1.9	2.1	1.6	2.0	2.0	.7
Retail trade.....	1.8	2.7	1.8	2.3	2.1	.6
Finance, insurance, and real estate.....	2.6	3.7	2.8	3.1	2.8	2.1
Other services.....	3.1	2.4	2.6	2.9	3.1	1.9

¹ Government employment used in this table is based on the BLS concept to be consistent with other employment data. It is different from the government employment shown in table 1 because of inclusion of government enterprise employees as well as other statistical and coverage differences.

² Includes paid household employment.

³ Components may not add to totals because of rounding.

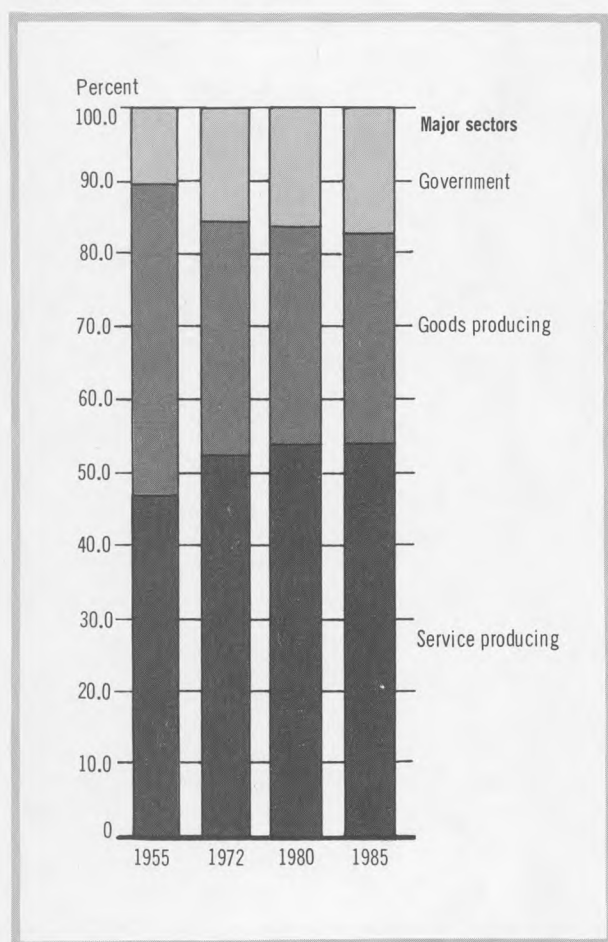
⁴ Compound interest rate between terminal years.

NOTE: Employment is on a jobs concept and includes wage and salary workers, the self-employed and unpaid family workers. Persons holding more than one job are counted in each job held.

employment is projected to increase by over 5 million jobs by 1985. By contrast, growth in private sector employment is expected to rise from slightly over 1.0 percent a year during 1955–72 to about 2.0 percent a year during 1972–80, returning in 1980–85 close to the 1.0-percent pace.

Even though the rate of growth in manufacturing employment is less than 1.0 percent a year, because of the size of the sector nearly 3 million more jobs are protected from the peak level reached in 1969 and over 4 million from the 1972 level. Despite this increase, manufacturing's share of employment is projected to decline further. Retail trade is also projected to add nearly 4 million jobs between

Chart 2. Percentage distribution of total employment (counting jobs rather than workers) for selected years and projected 1980 and 1985



NOTE: Government includes all Federal and State and local civilian employees. Goods producing includes agriculture, mining, construction, and manufacturing. Service producing includes transportation, communications, public utilities, trade, finance, insurance, and real estate, and other services.

1972–85. However, the big expansion in employment is projected to continue to be in other services—7 million—increasing its share to over 22 percent of total employment.

Some implications

Potential GNP growth. Two aspects of the projections concerning the overall GNP growth rate should be emphasized. First, the 1968–80 projections assume that all of the shortfall in productivity, which occurred during 1968–72, and the less than full utilization of the labor force in 1972 will be made up by 1980. Therefore, one concern raised by these projections is the ability to reach and to maintain the full employment growth rate, particularly over the 1972–80 period.

A second implication is the effect of the projected dramatic slowing of the GNP growth rate during the 1980–85 period. Over most of the 1960's and 1970's the potential growth in the economy has been or is expected to be 4 percent or more a year. However, beginning in the late 1970's and continuing through 1985 and beyond, the potential growth rate in the economy will be about $3\frac{1}{3}$ percent a year or less. This slowdown will affect the expected rate of growth in business sales, capital expansion, and other items closely related to the rate of economic growth in the economy. Thus, it will be difficult for business to first expand facilities to meet the increasing rate of expansion anticipated during the mid-1970's but not to overexpand in the late 1970's and early 1980's so that excess capacity will be an added cost factor.

The projected slowdown in growth in gross national product may not just produce problems but could presage some benefits; such as diminution of pollution which, even without treatment advances, should not increase as rapidly in a slower paced economy. Also, use of resources such as fuels, minerals, or timber will slow as the economy slows and thus lessen the rate of depletion.

A particularly important facet of the projections is the growth in real per capita income. The 1968–80 projected growth calls for an appreciably faster rate of increase over this period compared to the 1955–72 rate. This general indicator of the standard of living gives an unusually favorable outlook for the rest of the 1970's, with the early 1980's returning to a rate of increase more like the late 1950's and the 1960's.

Growth in both exports and imports will continue to make the United States more dependent on changes in foreign countries. While the U.S. foreign sector is still small compared with those of most other countries, recent experience has made the United States mindful of the ramifications of changes in trading position among the industrial countries. The necessity of meeting part of our energy needs by imports from abroad may make the United States even more concerned with trading relationships around the world. Such imports will put constant pressure on our balance of payments, especially between 1972 and 1980.

Employment and related implications. These projections follow or reinforce many earlier projections developed by BLS and other research groups developing employment projections. For example, the continued decline projected for agriculture employment implies an associated movement of people from rural to urban areas. In some instances, this will put further pressure on overutilized public facilities in urban areas, while at the same time making maintenance of essential public services such as education and health care in sparsely settled rural areas increasingly difficult because of the lack of a supportive tax base.

The continuing growth of State and local government employment presents another type of challenge. For instance, labor-management relations in this sector are in an early stage of development. The problems of maintaining essential public services during strikes or "sick outs" present difficult challenges to local governments. As the sector grows in size, the potential for labor relations problems

will expand until stable bargaining procedures have been established.²⁰

As an increasing proportion of the work force moves into the service sector, there will be a two-fold impact. First, since service employment is generally more stable than employment in durable goods manufacturing, employment will be less sensitive to abrupt swings up or down in economic activity. At the same time, an economy with a high portion of its work force in services may have a higher built-in rate of inflation because of the difficulty of raising productivity in services. Thus, as wages advance in services, the lower productivity there will put increasing pressure on labor costs and prices.²¹ This was a major element considered in assuming a higher rate of price increase in these projections than had prevailed in the economy over time.

The 1980-85 slowdown in employment growth does not present any greater difficulty for persons in the labor force, because the slowdown results from fewer entrants into the labor force. Perhaps, one could even envision a more orderly adjustment as the economy moves toward absorbing only 1.2 million new job entrants in the 1980's compared with 2.3 million in the 1970's. However, the slowdown does cause some structural changes in employment which could cause problems. Primary among these is the slower growth projected in retail trade. This sector has been a job source for many, particularly women, seeking only part-time employment. As this sector slows somewhat more than the economy, job entrants may have to seek full-time work in other sectors or not enter the labor force at all if they are only interested in part-time work. □

—FOOTNOTES—

¹ In these projections, 1968 is chosen as a reasonable base year with full employment of resources and with productivity advances at or near their long-run potential. The projections in this article replace or update those previously prepared by the Bureau of Labor Statistics. Further publications are planned for the spring and summer of 1974 to provide more detail for the 1980 and 1985 projections as well as a detailed description of the methodology used in developing them.

² The 1968-80 growth in real GNP is slightly higher if stated in 1963 or 1958 dollars—4.08 and 4.10 percent, respectively.

³ These projections are of the potential output of an economy with fully employed resources, but the growth rates shown cannot be considered potential since the base

year (1968) has not been adjusted to reflect deviation from potential. In any estimate of potential growth, the increase also should consider the probable expansion in the labor force which may result from a lowering of the unemployment rate. For a discussion of this, see Arthur M. Okun, "Upward Mobility, in a High-Pressure Economy," *Brookings Papers on Economy Activity*, 1973, pp. 207-61.

⁴ Because labor force growth is expected to be slower at least through 1990, the 1985-90 rate of economic growth will be at least as low as that projected for 1980-85, if not lower. See Denis F. Johnston, "The U.S. labor force: projections to 1990," *Monthly Labor Review*, July 1973, pp. 3-13.

⁵ The employment used in these projections begins with the labor force, a count of persons which is subsequently

converted to a count of jobs because of the availability of greater industry detail needed in subsequent parts of the projection.

⁶ The hours concept used is a measure of hours paid for rather than hours worked. Therefore, the decline projected might be more pronounced on an hours worked basis, particularly if the trend toward more time paid for but not worked continues into the future. A separate projection of hours is not made for government, because in general there has been no decline in government hours and the concept of productivity used in government is on a per-person basis.

⁷ The projections of government GNP, in real terms, reflect only the change in employment. This is consistent with the concept used in the national accounts of no change in government productivity.

⁸ The macroeconomic model used in these projections was developed originally by Lester C. Thurow and is described in "A Fiscal Model of the United States," *Survey of Current Business*, June 1969, pp. 45-64.

⁹ Another category, not discussed in this article, is the foreign transactions account. Also, in the usual GNP tabulation, government demand includes only the purchases of goods and services. Other government components are incorporated in other categories of demand. For example, Federal grants to State and local governments are shown as part of State and local purchases.

¹⁰ The projection of 1968-80 State and local government expenditures may seem to imply an acceleration in their rate of increase, but the difference lies in price change since real State and local government purchases are projected to slow down.

¹¹ The overall GNP deflator is set by assumption but the deflators for major demand components are developed based on the work of Richard Barth. See "The Development of Wage and Price Relationships for a Long-Term Econometric Model," *Survey of Current Business*, August 1972, pp. 15-20.

¹² Projections of overall consumption expenditures are derived by using the macro model but the components are not. They are sums of detailed projections developed for 80 categories.

¹³ See the Housing and Urban Development Act of 1968 and the Second Annual Housing Report, updated by subsequent reports.

¹⁴ *United States Energy through the Year 2000* (U.S. Department of the Interior, December 1972).

¹⁵ In the demand system of GNP accounts, government demand covers only its purchases of goods and services. The difference between Federal purchases of goods and services and expenditures is quite sizeable.

¹⁶ Even though the Interstate Highway Program is largely federally financed, in the GNP demand accounts shown here—which counts such expenditures at the point of final purchase—State and local government are shown as the purchasers of the Interstate Highway System.

¹⁷ These projections are based on the input-output table for 1963 prepared by the Bureau of Economic Analysis, U.S. Department of Commerce. See the *Survey of Current Business*, November 1969. Summing output levels generated by the input-output model is not considered meaningful because of double counting of output. For this reason, gross product originating is used, an alternative way of viewing GNP. It is the value added (in real terms as used here) in each industry.

¹⁸ Projections of productivity are made for private farm and nonfarm and for government in the initial stages of the projections. Later, industry output rates are calculated. Employment by industry is derived by projecting output per man hour and changes in annual hours by industry. The projected rates of change in productivity for each industry are aggregated to major sectors. Also, the output data are converted to the gross-product-originating basis to be consistent with the data discussed in the section on distribution of output by sector.

¹⁹ In the job count concept of employment, anyone having more than one job is counted as many times as he or she holds jobs. To this count are added the self-employed, and unpaid family workers, adding up to total employment using a jobs concept. This differs from an "employment of persons" concept, principally because of dual jobholders. (See the article in this issue by Neal Rosenthal, pp. 18-26). There are other statistical and sample differences. For a discussion of these, see Gloria P. Green, "Comparing employment estimates from the household and payroll series," *Monthly Labor Review*, December 1969, pp. 9-20.

²⁰ For a discussion of some facets of this issue, see "Exploring alternatives to the strike," *Monthly Labor Review*, September 1973, pp. 43-51.

²¹ This could be offset to some extent by the lower level of wages in services since the shift in employment to these sectors will, all else being equal, lower average wages in the economy.

The new Experimental Negotiating Agreement in steel, a similar plan in aluminum, and new union leadership in coal mining will highlight major collective bargaining negotiations in 1974

LENA W. BOLTON

THE OUTCOME of a relative handful of the collective bargaining negotiations scheduled next year will probably have significant effects throughout the Nation's economy. During 1974, union and management representatives will come to the bargaining table to work out the terms of 123 major agreements, each covering 5,000 workers or more and many in vital sectors of the economy. Of the expiring contracts, 65 are in manufacturing, 1 is in mining, 6 are in transportation, 30 are in communications, 3 are in utilities, and 18 are in service industries. Together they represent 45 percent of the 273 agreements of this size in the United States, and cover 1.8 million of the 4.5 million workers under major contracts.¹ Workers represented next year at major bargaining tables constitute about 2 percent of the total work force.

Naturally, the climate for these 1974 negotiations in part will be set by the state of the economy—at present somewhat unsettled. Although business activity and employment are at or near record levels, some economists predict a downturn and possible recession in 1974. At the same time, inflation continues to be a major problem, despite the various measures that have been taken to obtain price stability. Another important element in the bargaining climate will be the size of deferred wage increases scheduled for the upcoming year. These will be discussed in a forthcoming article.²

In most major 1973 negotiations to date, labor unions—perhaps because strikes have become increasingly costly, perhaps because cost-of-living clauses cushion the effects of inflation for many members, or perhaps because of stabilization policies—have exercised relative restraint in their wage demands.³ Major negotiations in the trucking, West

Bargaining ahead: major contracts expiring in 1974

Coast longshoring, and electrical machinery industries have been concluded peacefully.⁴

Since the major negotiations scheduled for 1974 will involve a different grouping of industries and unions, and may take place in a different economic context, it is impossible to predict whether the 1973 pattern of relatively modest union wage demands and peacefully concluded agreements will continue into 1974. The bargaining will involve a number of key industries, including basic steel, aluminum and can, East and Gulf Coast longshoring, telephone, aerospace, and coal mining. In the past, the negotiators in these industries have often failed to reach agreement, with consequent strikes and occasional invocation of the Taft-Hartley Act. The history and bargaining patterns in these industries are briefly outlined in following sections.

Steel industry

One of the most important 1974 negotiations involves the major steel producers and the United Steelworkers of America. Contracts for 10 companies,⁵ covering an estimated 350,000 workers, will expire August 1, 1974. The companies bargain together as the Coordinating Committee Steel Companies.

Despite a history of peaceful steel settlements since 1960,⁶ steel users, mindful of earlier labor strife (including a 116-day strike in 1959 ended by a Taft-Hartley injunction) have continued to stockpile steel in anticipation of a possible stoppage. Customer stockpiling has tended to disrupt steel production in two ways: By requiring overtime to meet the demand during negotiations; and by causing layoffs following negotiations until customer inventories reach levels low enough to prompt new orders. In addition, steel users have imported quantities of steel they might normally have ordered from domestic producers.

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To avoid these disruptions, company and union negotiators agreed early in 1973 to a different bargaining approach which they have termed the "Experimental Negotiating Agreement." For the 1974 negotiations only, workers are guaranteed minimum wage increases of 3 percent in 1974, 1975, and 1976, although greater increases can be negotiated. The cost-of-living clause negotiated in 1971 will continue, and national issues still unresolved as of contract expiration will be settled by an impartial arbitration panel. In addition, each worker employed as of August 1, 1974, will receive a one-time bonus of \$150 from the gains expected from avoiding stockpiling. A right to strike or lockout over local plant issues is retained, but such limited actions, should they occur, are not likely to significantly disrupt steel production. The negotiators have expressed hope that the Experimental Negotiating Agreement will alleviate the layoff problem, which in the past extended for several months for some workers, and the growing import problem.⁷

Aluminum and can industries

Historically, the negotiations and final terms of basic steel agreements have been influenced by earlier Steelworker settlements in the aluminum, can, and copper industries. What effect steel's new Experimental Negotiating Agreement may have on this pattern is not known. The 1974 bargaining will involve two major can agreements and three aluminum agreements, each covering 5,000 workers or more. Steelworker agreements expiring in February with the American and Continental Can Cos. cover about 30,000 workers, and Steelworker and Aluminum Workers of America agreements expiring in May with the Aluminum Co. of America, Reynolds Metals Co., and Kaiser Aluminum and Chemical Corp. cover about 40,000.

Labor and management in the aluminum industry have recently announced that they intend to move up contract talks by more than 3 months to December 1973, in hope of completion early in 1974. If there is no settlement by February 1, 1974, the parties will call upon the president of the Steelworkers and the chief executive officers of the companies to resolve differences. Like steel's Experimental Negotiating Agreement, aluminum's plan is designed to avoid stockpiling and layoff disruptions.

In the 1971 round of negotiations, the wage increases, improved pensions, new cost-of-living

clause, and other gains negotiated for the canworkers set the pattern for the other industries in this group. Both the can and copper settlements were reached only after serious strikes involving over 30,000 workers in each industry.⁸ The aluminum settlement, achieved without disruption, generally followed the can industry's terms, but added a job classification study estimated to result in an average upgrading cost of 5 cents per worker.

Longshore industry

Although the longshore industry employs a smaller number of workers than other major industries, bargaining disputes may have far-ranging effects on domestic and foreign trade. About 43,000 workers on the East and Gulf Coast will be affected by collective bargaining agreements expiring in September and October 1974. Four major agreements negotiated by the International Longshoremen's Association, each covering at least 5,000 workers in New York, New Orleans, Baltimore, and the West Gulf ports, account for approximately three-fourths of all longshoremen, including those on the West Coast.

Strikes in this industry have led Presidents to invoke emergency procedures of the Taft-Hartley Act eight times—more than in any other industry. All disputes have been over contracts, but one in 1953 also involved a rivalry between the International Longshoremen's Association (then Ind.) and the International Brotherhood of Longshoremen (AFL), which was organized after the ILA was expelled from the AFL on corruption charges. Virtually all the Nation's ports were shut down briefly in October 1971, when East and Gulf Coast longshoremen joined West Coast longshoremen, who had been on strike since July. President Nixon then invoked the Taft-Hartley injunction for the first time since assuming office. In the 1971 negotiations a primary issue was the union's demand that all ports receive a guaranteed annual income similar to that in the New York port. At the end of negotiations, the South Atlantic and Gulf Coast ports received no guarantee. Following settlement, the Pay Board reduced first-year pay scales by 15 cents an hour.

The ILA has repeatedly and unsuccessfully asked for a national contract with no local variations. Formerly, each port conducted separate negotiations, but in 1957 the New York Shipping Association was empowered to bargain for ports from Maine to

Virginia on wages, hours, pension and welfare contributions, and the duration of the contract; each port continued to negotiate all other issues. In 1971, the Council of North Atlantic Shipping Association was formed, representing all North Atlantic Coast ports,⁹ and now bargains with the ILA for a master contract covering containerization, as well as terms previously negotiated by the New York Shipping Association.

Telephone industry

During the summer of 1974, virtually all of the 32 telephone industry agreements covering 5,000 workers or more are scheduled to expire—2 in June, 25 in July, and 3 in August. The Communications Workers of America, the International Brotherhood of Electrical Workers (both AFL-CIO) and five independent telephone unions¹⁰ will be negotiating contracts for approximately 600,000 workers.

The Bell System accounts for nearly 90 percent of the workers in the industry. In previous bargaining there has been a recognizable pattern of settlement within the System: one major subsidiary settles and the others follow with little change in terms. Three nationwide strikes—in 1947, 1968, and 1971—and numerous smaller strikes have occurred in this industry. Opposition to settlement terms of the last agreement resulted in a lengthy strike in New York, but final terms were similar to those of other agreements in the Bell System. The emergency provisions of the Taft-Hartley Act were invoked only once—in 1948—to prevent a threatened strike of long-lines telephone workers. Recent strikes have had little effect on service owing to the high degree of automation in the telephone industry.

Aerospace industry

Three-fourths of the collective bargaining agreements covering 5,000 workers or more in the aerospace industry expire in 1974. The International Union of United Automobile, Aerospace and Agricultural Implement Workers of America (Auto Workers) and the International Association of Machinists and Aerospace Workers (Machinists) will meet with six major aerospace companies¹¹ to negotiate new contracts covering 107,000 workers. Employment in this industry has dropped considerably as Government outlays have declined since 1969.

In 1959, the Auto Workers and Machinists established a joint bargaining committee prior to contract negotiations with the Boeing, Lockheed, McDonnell Douglas, and Rockwell International companies. Since then, these unions have usually adopted a series of common objectives; however, each union negotiates separately with each company. A settlement pattern has been evident in the industry for the past two decades: one company settles first and the other companies negotiate similar agreements with their respective unions.

This industry has been characterized by a long and stormy history of strikes. In the past 20 years, most of the 18 major stoppages (those involving 10,000 workers or more) primarily were over non-economic factors—principally union security and job security. Only in the strikes of 1968 and 1969 were economic factors the primary issues. The Taft-Hartley injunction was invoked twice in 1962 and once in 1963, 1966, and 1967.

After the last aerospace contracts were negotiated in 1971, the Pay Board rejected the terms of the first-year wage increase. The contract called for an increase of 51 cents an hour, but only 34 cents was approved, with a stipulation that the 17 cents be deferred until the second year of the contract. The rollback cost the average union member about \$350. The Federal District Court and a Special Federal Court of Appeals found the Pay Board had erred. The case is now before the Cost of Living Council.¹²

Coal industry

In 1974, for the first time, the major agreement in the coal industry will be negotiated under the reform leadership of Arnold R. Miller, recently elected president of the United Mine Workers of America. The agreement, between the Mine Workers and the Bituminous Coal Operators' Association,¹³ covers about 80,000 workers and is scheduled for renegotiation in November 1974. The association claims to represent almost all soft coal producers in the industry, and the Mine Workers claim over 90 percent of all coalminers.

The Nation's supply of coal comes largely from the Appalachian area,¹⁴ which produces about 70 percent of all soft coal. After a long period of decline, the coal industry is again beginning to grow—since 1961 annual production has increased

steadily while the supplies of competitive fuels, especially gas and oil, are diminishing and their cost is skyrocketing. Coal is the only plentiful domestic resource available to bridge the gap between the demand for energy and the supply of gas and oil.

Here again is an industry with a continuous history of strikes. In the 1950's the industry averaged 314 work stoppages per year, involving a total of 136,000 workers; in the 1960's the average dropped to 184, involving 82,000 workers. In the middle 1960's and in 1970 the downward trend was reversed and reached the early 1950's levels. The

last strike, in 1971, was the longest since 1949, when President Truman asked Congress for special legislation to allow the Government to seize and operate the mines. The Taft-Hartley Act has been invoked twice, but not since 1948.

The table which follows lists key provisions of selected collective bargaining agreements, each affecting 5,000 workers or more, in a wide range of industries, excluding construction. These agreements were chosen as representative of contract expirations or reopenings, deferred wage increases, or cost-of-living reviews in 1974. □

FOOTNOTES

¹ Based on agreements on file with the Bureau of Labor Statistics, exclusive of those with railroads, airlines, and government.

² Deferred wage increases and other aspects of collective bargaining in 1974 will be discussed by John L. Gurney of the Bureau of Labor Statistics in the January issue.

³ An examination by the Bureau of Labor Statistics of 643 settlements covering 1,000 workers or more in private nonagricultural industry indicated first-year wage increases averaging 6.0 percent for the first 9 months of 1973, down from a 1972 average of 7.3 percent. The administration has set 5.5 percent as a guideline for wage settlements (or 6.2 percent including nonwage benefits).

⁴ This period of labor peace was interrupted Sept. 15, 1973, by a strike of 117,000 Chrysler workers. The company and the United Automobile Workers reached tentative agreement 2 days later, but the workers remained idle until after the agreement was ratified Sept. 23. The settlement included a pension after 30 years of service, regardless of the worker's age, and concessions on compulsory overtime.

⁵ 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., Wheeling-Pittsburgh Steel Corp., and Youngstown Sheet and Tube Co.

⁶ On at least one occasion, settlement was reached well in advance of contract termination. The 1962 agreement

was ratified Mar. 31, 1962, to become effective July 1, 1962, following expiration of the previous contract.

⁷ For additional information, see I. W. Abel, "Basic steel's experimental negotiating agreement," *Monthly Labor Review*, September 1973, pp. 39-42.

⁸ Strike data for these industries are not available, as the Bureau records strike statistics to the 3-digit Standard Industrial Classification only.

⁹ The six principal ports are New York, Baltimore, Philadelphia, Boston, Providence, and Hampton Roads (Va.).

¹⁰ Telephone Traffic Union (New York); Union of Telephone Workers (New York); Federation of Telephone Workers of Pennsylvania; Federation of Women Telephone Workers of Southern California; and Connecticut Union of Telephone Workers.

¹¹ The companies are Bendix Corp., Boeing Co., Lockheed Aircraft Corp., McDonnell Douglas Corp., Rockwell International; and United Aircraft Corp. Seattle Professional Engineering Employees Association also bargains with Boeing.

¹² At the time of preparation of this article. In September, the Council appointed a special panel, which was expected to make recommendations on the case by the middle of December 1973.

¹³ Other associations and individual producers also endorsed this agreement.

¹⁴ West Virginia, Pennsylvania, Kentucky (eastern), Ohio, Virginia, Tennessee, Maryland, and Alabama.

Table 1. Expiration, reopening, and wage-adjustment provisions of selected collective bargaining agreements, 1974

[Provisions presented are as negotiated by the parties and may be subject to Cost of Living Council approval.]

Company or association ¹	Union ²	Em- ployees covered	Contract term and reopening provisions ³	1974 provisions for automatic cost-of- living review ⁴	1974 provisions for deferred wage increase ⁵
1. ORDNANCE AND ACCESSORIES					
Ling-Temco-Vought, Inc., Vought Aeronautic Co., and Vought Missiles and Space Co. (Texas)	Auto Workers (Ind.)	6,050	Oct. 16, 1971, to Oct. 15, 1974	Jan. 15, thereafter quarterly (Apr., July, and Oct.)	
Lockheed Aircraft Corp. (California, Florida, and Hawaii)	Machinists	7,000	Dec. 13, 1971, to Oct. 1, 1974	Feb. 1, thereafter quarterly (May and Aug.)	
2. FOOD					
Armour & Co. ⁶	Meat Cutters	7,500	Sept. 3, 1973, to Aug. 31, 1976	Jan. 1 and July 1	Sept. 2: 20 cents
California Processors, Inc. (Northern California) ⁶	Teamsters (Ind.)	56,550	July 1, 1973, to June 30, 1976	July 1	July 1: 20 to 35 cents
Swift & Co. ⁶	Meat Cutters	8,300	Sept. 3, 1973, to Aug. 31, 1976	Jan. 1 and July 1	Sept. 2: 20 cents
Wilson & Co., Inc. ⁶	Meat Cutters	9,350	Sept. 3, 1973, to Aug. 31, 1976	Jan. 1 and July 1	Sept. 2: 20 cents
Pineapple Cos., plantation and factory agreement (Hawaii)	Longshoremen and Warehousemen (Ind.)	7,000	Feb. 1, 1972, to Jan. 31, 1974		
Sugar Companies' Negotiating Committee (Hawaii)	Longshoremen and Warehousemen (Ind.)	9,000	Feb. 1, 1972, to Jan. 31, 1974		
3. TEXTILES					
Textile Dye and Screen Print Cos.	Textile Workers Union	6,000	Oct. 2, 1972, to Oct. 5, 1974		
4. APPAREL					
Associated Corset and Brassiere Manufacturers, Inc. (New York, N.Y.)	Ladies' Garment Workers	35,000	Jan. 1, 1972, to Dec. 31, 1974	At anytime, when there is a 2.5-percent rise in the CPI over its level at the date of the Jan. 1 increase	Jan. 1: 5 percent
Clothing Manufacturers Association of United States of America	Clothing Workers	125,000	June 1, 1971, to May 31, 1974		
Popular Priced Dress Manufacturing Group, Inc.; Popular Priced Dress Contractors Association, Inc.; United Better Dress Manufacturers Association, Inc.; National Dress Manufacturers Association, Inc.; and Affiliated Dress Manufacturers, Inc. ⁶	Ladies' Garment Workers	60,000	Jan. 30, 1973, to Jan. 31, 1976		Feb. 1: 6 percent
5. PAPER					
West Coast Paper and Paper Converting Industry	Printing Pressmen	6,000	June 16, 1972, to June 16, 1976 REOPENING: June 16		
6. CHEMICALS					
Dow Chemical Co. (Midland and Bay City, Mich.)	Steelworkers	5,100	Mar. 8, 1971, to Mar. 11, 1974		
7. RUBBER					
B. F. Goodrich Co.	Rubber Workers	10,500	May 31, 1973, to Apr. 20, 1976		July 1: 28 cents
Firestone Tire & Rubber Co. ⁶	Rubber Workers	19,000	June 22, 1973, to Apr. 20, 1976		July 1: 28 cents
Goodyear Tire & Rubber Co.	Rubber Workers	23,750	Apr. 26, 1973, to Apr. 20, 1976		July 1: 28 cents
Uniroyal, Inc.	Rubber Workers	16,000	June 11, 1973, to Apr. 19, 1976		July 1: 13 to 28 cents (excluding Naugatuck Footwear plant)

Table 1. Continued—Expiration, reopening, and wage-adjustment provisions of selected agreements, 1974

[Provisions presented are as negotiated by the parties and may be subject to Cost of Living Council approval.]

Company or association ¹	Union ²	Em- ployees covered	Contract term and reopening provisions ³	1974 provisions for automatic cost-of- living review ⁴	1974 provisions for deferred wage increase ⁵
8. LEATHER					
Brown Shoe Co.	Boot and Shoe Workers; United Shoe Workers	13,800	July 15, 1972, to July 15, 1974	.....	June 1: 6 cents
9. STONE, CLAY, AND GLASS					
Libbey-Owens-Ford Co.	Glass and Ceramic Workers	8,400	Oct. 25, 1971, to Oct. 25, 1974	Feb. 1, thereafter quarterly (May and Aug.)	.....
PPG Industries, Inc.	Glass and Ceramic Workers	5,500	Feb. 16, 1972, to Feb. 16, 1975	Feb. 16, June 1, and quar- terly (Sept. and Dec.)	Feb. 16: 15 cents
10. STEEL AND ALUMINUM					
Aluminum Co. of America	Aluminum Workers	11,000	June 1, 1971, to May 31, 1974	Mar. 1 .....	.....
Aluminum Co. of America	Steelworkers	10,000	June 1, 1971, to May 31, 1974	Mar. 1 .....	.....
Armco Steel Corp.	Armco Employees Independent Fed- eration, Inc. (Ind.)	6,000	July 31, 1971, to July 31, 1974	Feb. 1 and May 1 .....	.....
Kaiser Aluminum and Chemical Corp.	Steelworkers	7,400	June 1, 1971, to May 31, 1974	Mar. 1 .....	.....
Kaiser Steel Corp. (Fontana, Calif.)	Steelworkers	6,500	Aug. 1, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
Reynolds Metals Co.	Steelworkers	8,500	June 1, 1971, to May 31, 1974	Feb. 1 and May 1 .....	.....
United States Steel Corp. (salaried employees) ..	Steelworkers	7,100	Aug. 1, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
Crucible, Inc.	Steelworkers	7,100	Aug. 1, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
C F & I Steel Corp.	Steelworkers	5,000	Aug. 1, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
National Steel Corp., Weirton Steel Div. (Ohio and West Virginia)	Independent Steelworkers Union (Ind.)	10,000	Aug. 18, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
10 major basic steel companies: Allegheny Ludlum Industries, Inc. Armco Steel Corp. Bethlehem Steel Corp. Inland Steel Co. Jones and Laughlin Steel Corp. National Steel Corp., Great Lakes Steel Div. (Michigan) Republic Steel Corp. United States Steel Corp. Youngstown Sheet and Tube Co. Wheeling-Pittsburgh Steel Co.	Steelworkers	6 350,000	Aug. 1, 1971, to Aug. 1, 1974	Feb. 1 and May 1 .....	.....
Western Electric Co., Inc. (Baltimore, Md.)	Communication Equipment Workers, Inc. (Ind.)	5,400	Aug. 28, 1971, to Aug. 27, 1974	.....	.....
11. FABRICATED METAL PRODUCTS					
American Can Co.	Steelworkers	15,000	Feb. 15, 1971, to Feb. 14, 1974	.....	.....
Continental Can Co.	Steelworkers	16,500	Feb. 15, 1971, to Feb. 14, 1974	.....	.....
12. MACHINERY, EXCEPT ELECTRICAL					
Briggs and Stratton (Milwaukee, Wis.)	Allied Industrial Workers	6,300	Aug. 1, 1971, to July 31, 1974	.....	.....
J. I. Case Co.	Auto Workers (Ind.)	5,050	July 31, 1971, to June 30, 1974	Mar. and June .....	.....
National Cash Register Co. (Dayton, Ohio)	Auto Workers (Ind.)	8,080	Jan. 31, 1972, to Mar. 31, 1975	Jan., thereafter quarterly (Apr., July, and Oct.)	Feb. 4: 10 to 21 cents
Timken Co. (Columbus and Wooster, Ohio)	Steelworkers	8,150	Nov. 13, 1971, to Aug. 25, 1974	Mar. 3 and June 6 .....	.....
13. ELECTRICAL MACHINERY					
General Electric Co. ⁶	Electrical Workers (IUE)	90,000	May 28, 1973, to June 27, 1976	Nov. 25	May 27: 16 cents
General Electric Co. ⁶	Electrical Workers (UE) (Ind.)	17,000	May 28, 1973, to June 27, 1976	Nov. 25	May 27: 16 cents
RCA Corp., master agreement	Electrical Workers (IUE)	12,200	Aug. 10, 1970, to May 31, 1974	.....	.....
Western Electric Co., Inc. (Massachusetts and North Carolina)	Communications Workers	11,800	July 18, 1971, to July 17, 1974	.....	.....

See footnotes at end of table.

Table 1. Continued—Expiration, reopening, and wage-adjustment provisions of selected agreements, 1974

[Provisions presented are as negotiated by the parties and may be subject to Cost of Living Council approval.]

Company or association ¹	Union ²	Em- ployees covered	Contract term and reopening provisions ³	1974 provisions for automatic cost-of- living review ⁴	1974 provisions for deferred wage increase ⁵
13. ELECTRICAL MACHINERY—Continued					
Western Electric Co., Inc. (Oklahoma).....	Electrical Workers (IBEW).....	5,350	Aug. 3, 1971, to Aug. 2, 1974	-----	-----
Western Electric Co., Inc. (New Jersey, Ohio, Indiana, Illinois, and Nebraska)	Electrical Workers (IBEW).....	45,850	July 18, 1971, to July 17, 1974	-----	-----
Westinghouse Electric Corp. ⁶	Electrical Workers (IUE).....	36,000	June 11, 1973, to July 12, 1976	Dec. 9.....	June 10: 16 cents
Westinghouse Electric Corp. ⁶	Electrical Workers (UE) (Ind.).....	8,300	June 11, 1973, to July 12, 1976	Dec. 9.....	June 10: 16 cents
Westinghouse Electric Corp. ⁶	Federation of Westinghouse Salaried Unions (Ind.).....	15,000	June 11, 1973, to July 12, 1976	Dec. 9.....	June 10: 16 cents
14. MOTOR VEHICLES					
American Motors (Kenosha and Milwaukee, Wis.)	Auto Workers (Ind.).....	9,600	Oct. 16, 1970, to Sept. 15, 1974	Mar. 1 and June 1.....	-----
Chrysler Corp. ⁶	Auto Workers (Ind.).....	110,200	Sept. 17, 1973, to Sept. 14, 1976	Mar., thereafter quarterly (June, Sept., and Dec.)	Sept.: 3 percent
Ford Motor Co. ^{6,7}	Auto Workers (Ind.).....	185,000	Oct. 31, 1973, to Sept. 14, 1976	Quarterly.....	Sept. 23: 11.5 to 24 cents
15. AIRCRAFT					
Bendix Corp.....	Auto Workers (Ind.).....	10,200	Apr. 17, 1971, to Apr. 15, 1974	-----	-----
Boeing Co., Vertol Div. (Pennsylvania).....	Auto Workers (Ind.).....	7,000	Dec. 20, 1971, to Sept. 30, 1974	-----	-----
Boeing Co. (Washington, Kansas, and Florida).....	Machinists.....	20,500	Dec. 13, 1971, to Oct. 1, 1974	-----	-----
Lockheed Aircraft Corp.....	Machinists.....	24,550	Dec. 13, 1971, to Oct. 1, 1974	Feb. 1, thereafter quarterly (May and Aug.)	-----
McDonnell Douglas Corp. (Long Beach, Calif.).....	Auto Workers (Ind.).....	14,800	Dec. 6, 1971, to Sept. 15, 1974	Jan. 21, thereafter quarterly (Apr. and July)	-----
Rockwell International.....	Auto Workers (Ind.).....	10,600	Dec. 5, 1971, to Oct. 1, 1974	Jan. 20, thereafter quarterly (Apr. and July)	-----
United Aircraft Corp., Pratt Whitney Aircraft Div. (Connecticut)	Machinists.....	11,500	Dec. 1, 1971, to Nov. 30, 1974	-----	-----
16. SHIPBUILDING					
General Dynamics Corp. (Quincy, Mass.).....	Marine and Shipbuilding Workers.....	5,200	Mar. 16, 1969, to Mar. 16, 1974	-----	-----
Litton Systems, Inc. (Pascagoula, Miss.).....	Metal Trades Council; Teamsters (Ind.).....	5,000	Nov. 1, 1971, to Nov. 17, 1974	-----	-----
Newport News Shipbuilding and Dry Dock Co. (Newport News, Va.)	Peninsula Shipbuilders' Association (Ind.).....	19,000	July 1, 1972, to June 30, 1975	-----	July 6: 5.5 percent
Pacific Coast Shipbuilding and Ship Repair Firms (Pacific Coast)	Metal Trades Council; Teamsters (Ind.).....	15,000	July 1, 1971, to June 29, 1974	-----	-----
17. RAILWAY CARS AND EQUIPMENT					
Pullman Inc., Pullman-Standard Div.....	Steelworkers.....	5,150	Oct. 1, 1971, to Oct. 1, 1974	Jan. 1, thereafter quarterly (Apr. and July)	-----
18. MINING					
Bituminous Coal Operators Association.....	Mine Workers (Ind.).....	80,000	Nov. 12, 1971, to Nov. 12, 1974	-----	-----
19. RAILROADS ⁸					
Class I railroads:					
Operating unions.....	Locomotive Engineers (Ind.).....	35,000	July 1, 1973, to Dec. 31, 1974	-----	Jan. 1: 4 percent
	United Transportation Union.....	135,000			
Nonoperating unions:					
Shop craft.....	Carmen.....	45,000			
	Firemen and Oilers.....	14,600			
Nonshop craft.....	Electrical Workers (IBEW).....	12,000			
	Maintenance of Way.....	60,000			
	Railway Clerks.....	125,000			
	Railway Signalmen.....	10,000			
	Yardmasters.....	5,500			
20. LOCAL TRANSIT					
Greyhound Lines, Inc., Central, Northern, and Southern States	Amalgamated Transit Union.....	12,000	Nov. 1, 1971, to Oct. 31, 1974	Feb. 1, thereafter quarterly (May and Aug.)	-----

See footnotes at end of table.

Table 1. Continued—Expiration, reopening, and wage-adjustment provisions of selected agreements, 1974

[Provisions presented are as negotiated by the parties and may be subject to Cost of Living Council approval.]

Company or association ¹	Union ²	Em- ployees covered	Contract term and reopening provisions ³	1974 provisions for automatic cost-of- living review ⁴	1974 provisions for deferred wage increase ⁵
21. TRUCKING AND WAREHOUSING ⁶					
National master freight agreement and supplements:					
Local cartage.....	Teamsters (Ind.).....	300,000	} July 1, 1973, to Mar. 31, 1976	July 1.....	July 1: 30 cents
Over-the-road.....	Teamsters (Ind.).....	100,000			
22. MARITIME					
Dry cargo and tanlers agreements (Atlantic and Gulf Coasts)	Maritime.....	13,000	June 16, 1972, to June 15, 1975		June 16: \$22.58 to \$46.65 a month
Dry cargo and tankers agreements (Atlantic and Gulf Coasts)	Marine Engineers.....	16,000	June 16, 1972, to June 15, 1975 REOPENING: June 16, in lieu of deferred wage increase. Union shall have the right on 60 days' written notice.		June 16: \$7.44 a day
New Orleans Steamship Association (New Orleans, La.)	Longshoremen's Association.....	5,000	Mar. 13, 1972, to Sept. 30, 1974		
New York Shipping Association (New York).....	Longshoremen's Association.....	21,200	Nov. 14, 1971, to Sept. 30, 1974		
Standard tanker and freightship agreements (Atlantic, Gulf, Lakes, and Inland Waters Districts)	Seafarers.....	21,000	June 16, 1972, to June 15, 1975		June 16: \$22.63 to \$45.09 a month
Steamship Trade Association of Baltimore, Inc. (Baltimore, Md.)	Longshoremen's Association.....	5,000	Nov. 14, 1971, to Sept. 30, 1974		
West Gulf Maritime Association, Inc. (Louisiana and Texas)	Longshoremen's Association.....	12,000	Oct. 1, 1971, to Sept. 30, 1974		
23. AIRLINES ⁶					
Pan American World Airways, Inc. (supply clerks).....	Teamsters (Ind.).....	8,000	July 1, 1972, to Sept. 30, 1974		July: 2 percent
United Airlines, Inc. (pilots).....	Airline Pilots.....	6,000	May 31, 1972, to June 1, 1974		
United Airlines, Inc. (stewardesses).....	Airline Pilots.....	5,500	July 1, 1972, to Sept. 31, 1974		
24. COMMUNICATIONS					
American Telephone and Telegraph Co., Long Lines Dept.	Communications Workers.....	26,000	July 18, 1971, to July 17, 1974		
Bell Telephone Co. of Pennsylvania (Pennsylvania)	Federation of Telephone Workers of Pennsylvania (Ind.)	12,000	July 28, 1971, to July 28, 1974		
Chesapeake and Potomac Telephone Co. (Washington, D. C., Maryland, Virginia, and West Virginia)	Communications Workers.....	31,150	July 18, 1971, to July 17, 1974		
Illinois Bell Telephone Co. (Illinois and Indiana).....	Electrical Workers (IBEW).....	15,000	Aug. 1, 1971, to July 31, 1974		
Mountain States Telephone and Telegraph Co.....	Communications Workers.....	18,950	July 18, 1971, to July 17, 1974		
New England Telephone and Telegraph Co. (New England Region)	Electrical Workers (IBEW).....	16,000	Sept. 26, 1971, to July 29, 1974		
New England Telephone Co. (New England Region)	Electrical Workers (IBEW).....	12,500	Sept. 26, 1971, to July 29, 1974		
New Jersey Bell Telephone Co., Plant and Engineering Depts. (New Jersey)	Electrical Workers (IBEW).....	10,650	May 29, 1971, to July 20, 1974		
New York Telephone Co., Traffic Department (New York and Connecticut)	Telephone Traffic Union (Ind.).....	19,750	Oct. 15, 1971, to Aug. 15, 1974		
New York Telephone Co. and Empire City Subway Co. (Limited) (New York)	Communications Workers.....	38,600	July 18, 1971, to July 17, 1974		
Northwestern Bell Telephone Co.....	Communications Workers.....	20,740	July 18, 1971, to July 17, 1974		
Ohio Bell Telephone Co. (Ohio).....	Communications Workers.....	20,450	July 18, 1971, to July 17, 1974		
Pacific Northwest Bell Telephone Co.....	Communications Workers.....	12,500	July 18, 1971, to July 17, 1974		
Pacific Telephone and Telegraph Co. and Bell of Nevada	Communications Workers.....	47,700	July 18, 1971, to July 17, 1974		
South Central Bell Telephone Co.....	Communications Workers.....	38,400	July 18, 1971, to July 17, 1974		
Southern Bell Telephone and Telegraph Co.....	Communications Workers.....	47,900	July 18, 1971, to July 17, 1974		
Southern New England Telephone Co. (Connecticut)	Connecticut Union of Telephone Workers, Inc. (Ind.)	10,750	July 18, 1971, to July 17, 1974		

Table 1. Continued—Expiration, reopening, and wage-adjustment provisions of selected agreements, 1974

[Provisions presented are as negotiated by the parties and may be subject to Cost of Living Council approval.]

Company or association ¹	Union ²	Em- ployees covered	Contract term and reopening provisions ³	1974 provisions for automatic cost-of- living review ⁴	1974 provisions for deferred wage increase ⁵
24. COMMUNICATIONS—Continued					
Southwestern Bell Telephone Co.....	Communications Workers.....	57,400	July 18, 1971, to July 17, 1974	-----	-----
Western Electric Co., Inc., (distribution).....	Communications Workers.....	14,500	Aug. 5, 1971, to Aug. 14, 1974	-----	-----
Western Electric Co., Inc., (installation).....	Communications Workers.....	30,400	July 18, 1971, to July 17, 1974	-----	-----
25. ELECTRIC AND GAS UTILITIES					
Consumer Power Co. (Michigan).....	Utility Workers.....	5,400	Sept. 1, 1971, to Aug. 31, 1974	Feb. 4 and June 3.....	-----
Pacific Lighting Service Co., and Southern Cali- fornia Gas Co. (California).....	Utility Workers; Chemical Workers..	7,500	Apr. 1, 1971, to Mar. 31, 1974	-----	-----
Southern California Edison Co. (California).....	Electrical Workers (IBEW).....	6,200	Jan. 1, 1973, to Dec. 31, 1975 REOPENING: In event guide- lines are elim- inated or raised 1 percent or more prior to Nov. 1.	-----	Jan. 1: 6 percent
26. FINANCE, INSURANCE, AND REAL ESTATE					
Realty Advisory Board on Labor Relations, Inc. (New York).....	Service Employees.....	13,000	Jan. 1, 1972, to Dec. 31, 1974	Jan. 1: in event increase in cost of living exceeds wage increase of prior year	Jan. 1: 25 cents
27. AMUSEMENT AND RECREATION					
Association of Motion Pictures: Theatrical agreement.....	Actors.....	23,000	July 1, 1971, to June 30, 1974	-----	-----
Television agreement.....	Actors.....	23,000	July 1, 1971, to June 30, 1974	-----	-----
Producers basic agreement.....	Stage Employees.....	18,200	Feb. 1, 1969, to Jan. 31, 1974	-----	-----
Television videotape agreement.....	Musicians.....	8,000	Aug. 1, 1972, to Apr. 30, 1974	-----	-----
28. MEDICAL AND OTHER HEALTH SERVICES					
League of Voluntary Hospitals and Homes of New York (New York, N.Y.).....	Retail, Wholesale and Department Store	36,000	July 1, 1972, to June 30, 1974	-----	-----

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 the 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 agreement desiring to terminate

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

⁴ Date shown indicates 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.⁷ The Ford Agreement was subject to ratification and the General Motors agreement had not been concluded by Nov. 14, 1973.

SOURCE: Contracts on file with the Bureau of Labor Statistics, Oct. 1, 1973. Where no contracts are on file, table entries are based on newspaper accounts.

Communications



MEDIATION-ARBITRATION FROM THE EMPLOYER'S STANDPOINT

LAURENCE P. CORBETT

A SPECIAL SECTION of the September *Monthly Labor Review* presented various points of view on the technique called med-arb (mediation-arbitration), but my remarks arrived too late for publication. I offer these comments from the point of view of management, which I represent.

Mediation-arbitration (med-arb) is in my experience accepted with greater reluctance by employers than by unions. The mediator-arbitrator has the ultimate say, the authority given to him by the parties to make a final and binding decision. In all but the most desperate circumstances, the employer can expect the process will increase his costs and add to the complexity of administering the contract. Employers prefer by far to make their own determinations if they can, because they fear the tendency of the third party to compromise, to split the difference, and to go beyond what the employers believe is good business judgment.

While there are many employers who state categorically that they will not submit an interest case to arbitration under any circumstances, mediation-arbitration in a situation which could otherwise lead to destruction may find more acceptance. This is because the parties can experience a sense of direct participation in the result. It is different from arbitration, with its sworn testimony, transcript of hearing, formal exhibits, advocacy by counsel, and exchange of briefs. In med-arb the mediator-arbitrator engages in informal mediation between the two parties, reserving for last resort the authority to make a final and binding decision as a third party. In the course of mediation, the mediator-

arbitrator meets privately on occasions with each party and learns at first hand facts that for sound reasons might not be presented and recorded in formal arbitration. Such information permits the mediator-arbitrator to say that if the parties cannot find a solution themselves or if they will not accept an informal off-the-record suggestion, he may be forced to make a formal award which will be pleasing to neither side.

To some employers who can survive a strike, the peaceful alternative of med-arb is not worth the gamble that some significant management prerogative or principle will be lost in the process. For example, in the 1970-71 med-arb involving the California Nurses Association and the Hospital Associations, the nurses were interested in negotiating more than the traditional subjects of wages, hours, and working conditions. As a professional association, CNA sought to bargain on patient-care matters, such as staffing patterns, the ratio of Registered Nurses to patients, and the ratio of Registered Nurses to other paramedical personnel. Hospital employers stubbornly resisted what they considered a flagrant invasion of management prerogative and expressed extreme concern that such an issue should be in the hands of a third party.

If med-arb is wide open with no limitations on the subject matter, of course it can be time-consuming and costly, for the mediator-arbitrator feels bound to treat each issue, several of which would normally be ignored or dropped in direct negotiations. In the med-arb involving the nurses, there were 68 unresolved issues, which took 45 days to settle. Admittedly, this involved the resolution of differences between two independent hospital associations and the Kaiser Foundation hospitals, and for that reason negotiations would have been prolonged no matter what form they took. Under other circumstances, the parties can themselves agree to limit by stipulation those matters that are subject to med-arb.

Without prior agreement of the parties, there is

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no criteria for arriving at a determination other than the contentions of the participants. Yet as a continuation of collective bargaining, this alternative procedure ideally should bring the parties to the decision they reasonably would have reached on their own, utilizing data, comparisons, and precedents which have served them in the past. As the process receives greater use and gains further sophistication, stipulation of the criteria for decision can be reached in many instances.

Med-arb is not a panacea. It doesn't fit each impasse situation. To establish mandatory med-arb for the resolution of all impasses in collective bargaining would, in my opinion, be a grave mistake. With a fixed format for resolving negotiating differences, there is the temptation to devise ways of beating the game. In preparing to beat the game under mandatory med-arb, the parties adopt strategic positions which prolong and complicate the procedure.

Each form or combination of forms has a place in the right situation, but no one of them has general application. Med-arb is a constructive alternative to a strike under certain circumstances, but its use should be limited to the impasses for which it is suited. □

MANUFACTURING QUIT RATES REVISITED: A CYCLICAL VIEW OF WOMEN'S QUILTS

WILLIAM F. BARNES AND ETHEL B. JONES

IN THE November 1972 *Monthly Labor Review*, Paul A. Armknecht and John F. Early presented the surprising finding that during the 1960's female quit behavior altered; women employees no longer increased the level of total quits but rather reduced it.¹ The explanation Armknecht and Early offer for their finding is secular. In this paper we offer an alternative explanation which is cyclical.

The basis for Armknecht and Early's conclusion is a series of least squares equations for the years 1959-71. In the cross-section equation for each year, quit rates of 94 manufacturing industries were fitted against five explanatory variables. The impact of one variable, the percent of female employees in

the industry, is positive from 1959 to 1963 (significant 1960-62) and negative from 1964 to 1971 (significant 1965-71). Since the presence of women, which earlier increased quitting, more recently has reduced it, Armknecht and Early infer that female quits have declined secularly. Their explanation of the decline in female quits rests upon "social, cultural, and technological changes" which have caused women to have a more permanent labor market attachment and upon "sex discrimination in hiring."

By implication, the Armknecht and Early findings also indicate that a larger proportion of men increases industry quit rates, an interpretation that follows because the proportion of female employees in an industry is a proxy for the proportion of male employees; that is, percent male equals 100 percent minus percent female. Whether a decline in female quitting or an increase in male quitting caused the changed sign is the unanswered question. To provide an answer, we compare the level of male and female quit rates separately when the regression sign is negative and when it is positive. Our analysis suggests the cyclical explanation of increased male quitting rather than Armknecht and Early's primarily secular explanation of a fall in female quitting.

Two types of quitting

A useful approach for analyzing quit behavior is to separate total quits into two types: (1) movements *within* the labor force (from employment to employment or from employment to unemployment) and (2) movements *out* of the labor force. Quitting to move within the labor force is directed at acquiring a different job in order to increase earnings. These movements are induced by the gain in earnings from the alternative job, net the cost of acquiring the job. The incentive to move is stronger the larger the gain in earnings or the lower the cost of finding new employment. Quitting to leave the labor force is induced by marriage, pregnancy, child care, schooling, illness, disability, changes in family financial needs, and similar factors.

Differences between the sexes in the net income gain from quitting are expected to produce more frequent quitting to move within the labor force by men. The gain from quitting to take another job is larger the longer the expected period of employment at the greater earnings on the new job. Since men are less likely to have their labor force attachment

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interrupted, their expected period of employment and, hence, their gain from quitting is greater. An additional factor, the higher female unemployment rate, implies that there is larger cost associated with labor market movement by women.

Quitting to leave the labor force will be done more by women because their family role provides reasons in addition to those that affect men for leaving the labor force. Events such as marriage, pregnancy, and child care raise women's productivity outside the labor force.

Secular explanation examined

According to Armknecht and Early, sex discrimination, increased worklife, and increased participation of women have reduced the level of female quitting and explain the sign change. According to our model, discrimination either has had no effect upon the level of quits or has increased female quitting. Further, our model implies that increased worklife and increased participation of women reduced their quitting to exit but increased their quitting to move within the labor force.

But all forms of discrimination do not reduce women's propensity to move within the labor force. If discrimination reduces the wage of women in all jobs, the return to moving between jobs will not be affected. The forms of discrimination which reduce women's incentive to move are obstacles to entry into higher paying jobs and greater wage discrimination in those jobs. Armknecht and Early do not distinguish between discrimination which reduces the net income gain to women from seeking higher wage employment, and more general discrimination against women in all jobs. For discrimination to explain the implied decline in female quits in the 1964-71 period, the amount of high wage discrimination must have increased. In the more likely case that it declined, and that wage discrimination in the higher paying jobs has been reduced, women's returns from quitting and, hence, their level of quitting to move within the labor force should increase.²

Longer worklife tends to decrease quits to leave the labor force. The rise in female labor force participation rates over the 1959-71 period suggests social and cultural changes that would reduce the rate of withdrawal by women. For example, the sharp rise in labor force participation at younger ages may reflect greater cultural acceptance of con-

tinuing to work with young children in the home and increased employer willingness to hire mothers with young children. By contrast, quitting to move within the labor force by women should rise with their more permanent attachment to work. The associated addition to the expected employment length increases the expected net income gain from an alternative job and, thus, the amount of quitting to move.

Cyclical alternative

Differences in the degree to which cyclical expansion affects the level of women's and men's quit rates provide an alternative explanation for Armknecht and Early's findings. The rate of quits to move within the labor force will be sensitive to changing economic conditions because the expected income gains will rise. In contrast, quitting to exit is primarily explained by factors specific to the individual—his family role and age. Therefore, quits to exit will be relatively less sensitive to changing employment opportunities. With an improvement in economic conditions, job opportunities increase for both men and women. Since the men experience fewer interruptions in worklife, the income stream added from an alternative job is longer for men. This increases the men's return from quitting. Male quits to move within the labor force will rise more than female quits of this type. In contrast, when employment opportunities contract, the quit rate of men will fall more than the quit rate of women. Employment opportunities were better in 1964-71 when Armknecht and Early find a negative relationship between quit levels and the proportion of women. Alternative employment opportunities were fewer in 1959-63 when they find the relationship positive.³

We have suggested above that the rate of female quitting may have risen during the decade due to reductions in the amount of discrimination and the lengthening of the time women spend in the labor market. Even so, the rise in the male quit rate from the employment expansion may have been sufficient to cause the level of male quits to exceed the level of female quits in the late 1960's.

Empirical evidence

For 1959-68, male and female quit rates are available separately in two-digit manufacturing industries for January, April, July, and October. These monthly observations were summed and mul-

multiplied by three to approximate annual quit rates.⁴ The annual rates were averaged for 1959–63 when the Armknecht-Early work shows a positive relationship and 1964–68 when the relationship is negative. We postulate that for the cyclical explanation to be supported, both male and female rates should increase during the years of economic expansion (1964–68) but male rates should rise more. This larger increase for men would make the ratio of male to female quit rates larger in 1964–68 than in 1959–63. Table 1 shows that female quit levels did rise in 18 of 21 industries and male quit levels rose in all industries. The average ratios of the annual male to female quit rates for both time periods show male quit rates increased relative to the female rates in 1964–68 for every industry. The absolute and relative quit increases show the operation of the cyclical quit process—larger increases in male than female quitting during the period of improved employment opportunities.

Quit rate data by sex also can be compared during economic expansion and decline in an earlier period. The years 1951–53 and 1955–57 had low average unemployment (3.0 and 4.3 percent, respectively), while 1954 was a year of high unemployment (5.5 percent). The cyclical explanation is strongly supported, because table 2 shows that the

Table 2. Ratio of men's to women's quit rates, 1951–53, 1954 and 1955–57

Industry	1951–53	1954	1955–57
Ordinance.....	1.160	.586	.681
Food.....	.853	.541	.587
Tobacco.....	.796	.678	.586
Textiles.....	.906	.810	.965
Apparel.....	.713	.637	.694
Lumber.....	1.412	1.350	1.560
Furniture.....	1.214	.817	.986
Paper.....	.681	.515	.536
Printing.....			
Chemicals.....	.485	.333	.348
Petroleum.....	.357	.131	.253
Rubber.....	.720	.400	.610
Leather.....	.751	.615	.777
Stone, clay, glass.....	.966	.553	.621
Primary metals.....	1.047	.442	.656
Fabricated metals.....	1.067	.581	.825
Machinery, excluding electrical.....	.853	.443	.610
Electrical machinery.....	.536	.463	.547
Transportation equipment.....	1.124	.587	.729
Instruments.....	.560	.521	.562
Miscellaneous manufacturing.....	.873	.618	.680

NOTE: Dashes indicate data are not available for this industry prior to 1958.

ratios of male to female quit rates are higher at the dates of low unemployment for 19 of the 20 two-digit industry categories.⁵

The cyclical explanation that the ratio of male to female quitting increases in response to improved employment opportunities can be further examined by fitting a time-series least squares equation between the ratio of male to female quit levels for total manufacturing (Q_m/Q_f) and the national unemployment rate (URAT) for all years for which the quit rate data by sex are available (1950–68).⁶

$$Q_m/Q_f = .957 - .061(URAT) \\ (.012)$$

$$R^2 = .639 \quad D-W = 1.81$$

The relationship supports the cyclical hypothesis, because male quits rise relative to female quits when unemployment falls. The standard error is reported in parentheses and the coefficient is significantly different from zero at the .01 level. The larger change in men quitting to move within the labor force suggests greater variation in male than female quit rates as employment opportunities change.

This implication of the cyclical hypothesis is supported by evidence relating to variation. For 1959–68, the coefficient of variation shows less variation in the annual female quit rate in all manufacturing (19.43 percent) than for the male quit rate (36.22 percent). The cyclical explanation similarly indicates greater variation in the quit rates of those industries with proportionately more male employees as employment opportunities change. For the cross-

Table 1. Absolute and relative quit levels by sex, 1959–63 and 1964–68

Industry	Average annual quit rates by sex				Ratio of men's to women's quit rates	
	Women		Men		1959–63	1964–68
	1959–63	1964–68	1959–63	1964–68		
Ordinance.....	21.18	19.44	10.92	15.54	.514	.772
Food.....	26.34	35.58	17.46	28.20	.697	.786
Tobacco.....	14.22	20.04	8.22	19.44	.574	.942
Textiles.....	21.18	31.14	20.58	38.70	.964	1.233
Apparel.....	28.44	33.54	21.12	33.72	.741	.993
Lumber.....	19.44	28.32	27.24	44.58	1.385	1.600
Furniture.....	20.46	33.30	22.50	42.90	1.084	1.294
Paper.....	18.54	25.92	10.56	20.76	.568	.779
Printing.....	22.80	26.40	14.40	19.80	.632	.750
Chemicals.....	16.20	18.66	6.18	11.10	.380	.571
Petroleum.....	17.82	17.64	4.86	8.04	.266	.434
Rubber.....	22.26	35.88	12.00	25.62	.533	.699
Leather.....	27.00	36.72	25.68	44.16	.947	1.186
Stone, clay, glass.....	15.96	21.60	12.60	23.10	.786	1.037
Primary metals.....	13.68	16.50	6.30	14.34	.543	.835
Fabricated metals.....	16.62	13.32	13.14	26.10	.791	1.031
Machinery, excluding electrical.....	16.80	20.76	10.20	16.98	.601	.801
Electrical machinery.....	20.16	25.20	11.34	17.70	.568	.682
Transportation equipment.....	14.10	16.02	10.44	17.46	.740	1.073
Instruments.....	18.72	23.82	10.44	16.44	.554	.682
Miscellaneous manufacturing.....	26.52	35.76	18.84	32.58	.710	.908

section of two-digit manufacturing industries, the coefficient of variation in the quit rate (CVQI) for 1959–71 was regressed upon the average proportion of female employees (FEM) during the period. Since earnings also affect quits and women are concentrated in low-wage industries, an earnings control variable is included. The earnings variable (WAGE) is the mean level of hourly earnings in each industry from 1959 through 1971.⁷

$$\text{CVQI} = 53.231 - 5.201(\text{WAGE}) - .310(\text{FEM})$$

$$(3.887) \quad (.106)$$

$$R^2 = .377$$

A larger proportion of female employees reduces variation in industry quit rates, and a larger proportion of male employees increases the variation in industry quit rates. The variable FEM is significant at the .01 level.

Armknecht and Early recognize that the total manufacturing quit rate rises during cyclical expansion. They also recognize that quit rate levels differ according to the sex and earnings of workers. Our analysis indicates that the level of quits of men and women respond differently to changes in job opportunities associated with the cycle. Since Armknecht and Early's work on the determinants of quit rate levels across industries includes years of poor employment opportunities and of good opportunities, we urge that unless the cyclical impact of a group's role in determining the level of quit rates across industries is recognized, changes in the behavior of workers that are cyclical in nature may be attributed to secular causes. □

—FOOTNOTES—

¹ Paul A. Armknecht and John F. Early, "Quits in manufacturing: A study of their causes," *Monthly Labor Review*, November 1972, pp. 31–37, and John F. Early and Paul A. Armknecht, *The Manufacturing Quit Rate: Trends, Cycles, and Interindustry Variations*, Staff Paper 7 (Bureau of Labor Statistics, 1973).

² We would describe decline as more likely in recent years because of the attention brought to women at work through the women's liberation movement and the enforcement of civil rights legislation.

³ As an indication of the differences in employment opportunities, the unemployment rate averaged 5.8 percent during the years 1959–63 and 4.4 percent during the years 1964–71. All unemployment rates used are from *Employment and Earnings*, August 1972, p. 19.

⁴ All quit rate data, except that by sex prior to 1958, are from *Employment and Earnings, United States, 1909–71*,

Bulletin 1312–8 (Bureau of Labor Statistics, 1972). Quit rate data by sex for the years prior to 1958 are from mimeographed sheets of the U.S. Department of Labor. Quit rate data by sex are not published after 1968.

⁵ The levels of male and female quit rates are highest for the period 1951–53 and lowest for 1954 in every two-digit industry.

Further support for the relationship between unemployment and the ratio of male to female quitting is offered from the data of table 2. In 15 of the 20 two-digit industries, the ratio of male to female quits is higher when the unemployment level averages 3.0 percent (1951–53) than when it averages 4.3 percent (1955–57).

⁶ In the initial equation of the ratio Q_m/Q_f regressed on the unemployment rate ($Q_m/Q_f = 1.051 - .078 \text{ URAT}$), the unemployment rate was significant by the t-test but the Durbin-Watson statistic indicated autocorrelation. A first-order autoregressive scheme was assumed and the coefficient of autocorrelation which was estimated was used to transform the variables. The transformed variables were used to calculate the regression equation which is reported above in terms of the original variables.

⁷ The data for WAGE and FEM are from *Employment and Earnings, United States 1909–71*.

The use of the data in tables 1 and 2 to test the cyclical explanation directly controls for earnings differences among industries because the data, reported by each industry category, show the expected behavior in both low-wage and high-wage industries.

MANUFACTURING QUIT RATES REVISITED: SECULAR CHANGES AND WOMEN'S QUILTS

PAUL A. ARMKNECHT AND JOHN F. EARLY

PROFESSORS ETHEL B. JONES and William F. Barnes suggest that the change we have observed in the quit behavior of women was largely the result of cyclical rather than trend influences. In our earlier work we have shown that the business cycle had powerful effects on overall quit behavior and noted those effects on some of our crosssectional results. But we believed then and continue to believe that in addition to these cyclical shifts there have been substantial secular changes in the sources of worker's motivation to quit, although the overall propensity to quit has remained unaltered.¹

One can divide female quits into two types: those

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to leave the labor force and those to move within the labor force. We offered as a reasonable explanation of our results that since 1959 there has been a decline in women's quitting to leave the labor force, a point in which Barnes and Jones concur. They argue, however, that this increasing worklife expectancy of women will increase their likelihood of quitting to move within the labor force because of the increased expected total earnings from a new job. They also argue that declining discrimination against women may have increased their mobility. (They also urge that if discrimination against women is general rather than in terms of earnings or jobs, then it will have little effect on women's propensity to quit to look for another job.)

Their assertions on these points may well be true, although the data cannot substantiate them as certain. However, we all also agree that there are greater opportunity costs to women quitting work to find a new job, as can be seen in their higher unemployment rate. This higher opportunity cost probably arises from some form of structural hiring discrimination. It is not important in interpreting our results to know whether there has been any change in the amount of discrimination or whether there is wage discrimination.

Professors Barnes and Jones and we seem to agree that (1) women have probably shown a greater propensity than men to quit to leave the labor force, and (2) women probably exhibit lower propensities to quit in search of a new job. Given this dichotomy, we interpreted our results to mean that the reduction in female quits to leave the labor force has been so large since 1959 that their propensity to quit to search for a new job has become the controlling influence in differences in quit behavior between men and women. Since women seem to have a lower propensity to quit in search of a new job, we concluded their presence in an industry had a downward influence on the quit rate rather than their former upward one. Because this would be a structural change we claimed that there had been a secular shift in the quit pattern of women.

Barnes and Jones believe that the shifts we measured were *only* the result of cyclical changes in which men's quits to search for a new job increased more than women's quits, thereby accounting for the reversal in the effect of the presence of women in an industry on quit rates.

Trend and cycle

In our earlier work we have noted that there is a cyclical element in the composition of the quit decision, and we have no quarrel with their further exploration of it. However, we remain convinced that the changes which have taken place in the effect of women on quits are secular in nature and are of a larger magnitude than the cyclical deviations along the way.

Table 1 contains the beta coefficients (standardized regression coefficients) which were derived for each of the variables in our original cross sectional regression study of 94 industries: average hourly earnings (E), proportion of production workers (P), seasonal variation (S), net new hires (H_n) and the proportion of women (W). To the original table we have added results for the 1972 experience and the manufacturing unemployment rate (U_m). (The manufacturing rate is used because it better reflects the cyclical experience of manufacturing workers whose quit rate is being studied. The rate for all civilian workers gives similar results.)

Barnes and Jones point out that the pre-1964 cyclical experience (as measured by average unemployment for the two periods) was substantially different from later years. But their use of averages conceals more than it reveals. On a year-by-year basis we can see that 1959, 1960, and 1962 have unemployment rates similar to 1970, 1971, and

Table 1. Beta coefficients for variables in cross-sectional analysis of quit rate compared to unemployment

Year	Coefficients for variables					Unemployment rate, manufacturing (U_m)
	Earnings (E)	Ratio of production workers (P)	Seasonal factor (S)	Net new hires (H_n)	Ratio of women (W)	
1959.....	-.579	(.048)	.143	.371	(.114)	6.1
1960.....	-.559	(.030)	(.026)	.394	.249	6.2
1961.....	-.452	(.026)	(.040)	.422	.272	7.8
1962.....	-.602	(-.011)	(.000)	.408	.172	5.8
1963.....	-.695	(-.016)	(.054)	.364	(.056)	5.7
1964.....	-.788	(-.005)	(.041)	.386	(-.075)	5.0
1965.....	-.856	(.100)	(.074)	.301	-.219	4.0
1966.....	-.874	.209	.116	.298	-.287	3.2
1967.....	-.844	.192	(.046)	.300	-.197	3.7
1968.....	-.911	.180	.127	.184	-.234	3.3
1969.....	-.943	.149	.121	.253	-.229	3.3
1970.....	-.914	.164	(.165)	.224	-.188	5.6
1971.....	-.904	.164	(.110)	(.126)	-.289	6.8
1972.....	-.999	.180	.134	(.026)	-.364	5.6

() = Coefficient not significant.

1972; yet the beta coefficients are quite different. We can, however, treat these data to a more systematic analysis. We regressed the beta coefficients of the variables for women from our cross sectional equations (B(W)) against a simple time trend (T) and the manufacturing unemployment rate (U_m). The results are as follows (standard errors are in parentheses):

$$B(W) = - .054 - .040T + .052U_m$$

(.102) (.005) (.015)

$$R^2_c = .879 \quad \text{Durbin-Watson} = 1.170$$

The Durbin-Watson statistic falls into the ambiguous range so there may be some autocorrelation in the residuals and the error terms may be under-

stated. In order to gauge the relative impact of the time trend and cyclical variable in the equation, we calculated the beta coefficients. The results are contained in table 2. From the above equation and table 2 we conclude:

There is a clear trend in the effect of women on the quit rate even after correction for cyclical variation. Over the last 14 years their upward pressure on quits has been reversed and now they exhibit lower than average propensities to quit.

There is a tendency to reinforce this trend in times of cyclical upswing and to retard it during slowdowns. This cyclical effect is smaller than the trend in relative importance and of only short-term duration. $\square$

Table 2. Beta coefficients of trend and cyclical components of the effect of women on quits

Dependent variable (coefficient of)	Trend T	Cycle U_m
Women.....	-.772	.346

—FOOTNOTE—

¹ Paul A. Armknecht and John F. Early, "Quits in manufacturing: a study of their causes," *Monthly Labor Review*, November 1972, pp. 31-37. Also *The Manufacturing Quit Rate: Trends, Cycles and Interindustry Variations*, Staff Paper 7 (Bureau of Labor Statistics, 1973).

Labor market segmentation by sex

Like racial discrimination, sexual discrimination did not begin as a purely economic phenomenon. As women have reentered the labor force in large numbers, however, economic forces have helped separate men's and women's jobs. Women's jobs usually pay lower than men's jobs requiring comparable skills. Female jobs often require and encourage a "serving mentality"—an orientation toward providing services to other people and particularly to men. Women are often imbued with those characteristics through the differential sexual effects of family and schooling institutions.

In many ways, the problem of sexual discrimination seems even more complicated than racial discrimination. The role of the family as a social institution adds to the complexity of the labor market process. . . . economic factors explained the introduction of women into clerical jobs but a complicated interaction of economic and social factors stimulated the rapid "feminization" of

those jobs—tipping them into all-female occupations. As with blacks, women have consistently faced the importance of control in the workplace and the usefulness of sexual discrimination as a legitimization of hierarchy. While women were never used as strikebreakers to the extent that blacks were used, they are and were channeled in production into those jobs where their presence would serve to reinforce and legitimize lines of authority in the firm. Although employment opportunities for women have been loosening somewhat in recent years, our analysis suggests that they will continue to be plagued by these issues of control for some time to come.

—RICHARD C. EDWARDS, DAVID M. GORDON,
MICHAEL REICH,

*Labor Market Segmentation: A Research Report to the
U.S. Department of Labor* (Cambridge, Mass.,
Harvard University, Center for Educational
Policy Research, 1973).

Conventions



NATIONAL POLITICS DOMINATES AFL-CIO CONVENTION

WINSTON L. TILLERY

IN MARKED CONTRAST to earlier AFL-CIO conventions, national politics held center stage at the 10th biennial convention of the American Federation of Labor-Congress of Industrial Organizations. The 900 delegates, meeting October 18-23 at Bal Harbour, Fla., supported President George Meany and other Executive Council officers in their criticism of the Nixon Administration and demands for election reforms. The representatives of 13.5 million union members also adopted a number of significant resolutions, including endorsement of the Equal Rights Amendment establishing the principle of equality of the sexes. Mr. Meany and other officers were reelected without opposition.

On October 22, the delegates, acting upon recommendations of the 33-member Executive Council, called upon President Nixon to resign, or, in the event he did not, asked the House of Representatives to initiate impeachment proceedings.¹ The delegates voted without audible dissent for the recommendations, which stated, in part, that Mr. Nixon should step down "in the interest of preserving our democratic system of government, which requires a relationship of trust and candor between the people and their political leaders . . . in the interest of restoring a fully functioning government, which the Administration is too deeply in disarray to provide [and] in the interest of national security."

Meany assails Administration

The call for Mr. Nixon's resignation climaxed the Federation's growing dissatisfaction with the Nixon Administration. In his keynote speech on October

18, AFL-CIO President George Meany excoriated the Administration, charging it is corrupt and is failing to meet either the domestic needs or foreign interests of the American people. Mr. Meany pointed to the resignation of Vice President Spiro Agnew, who "stands before the nation as a convicted felon," to two ex-Cabinet members—John Mitchell and Maurice Stans—now under criminal indictment, and to a number of other high government officials who were fired or resigned in connection with the Watergate affair. "The verdict [of the people] is that this Administration has cast a dark shadow of shame over the spirit of America," Mr. Meany said. "Never in history has a great nation been governed so corruptly. I don't say any of this with any degree of satisfaction. I say it with sadness. There are no partisan gratifications to be drawn from this seedy display of the worst of American political life. There are no political fortunes to be built on the nation's misfortune."

Mr. Meany criticized economic policy as "a series of phases and freezes that only succeeded in making matters worse," and repeated his oft-made accusation that the controls were applied inequitably to control wages, leaving profits and other income sources free to soar. He asserted that corporations, bankers and "fat-cats" benefited, while the workers shouldered the burden of increased unemployment and declining real wages. In particular, Mr. Meany was critical of the President's veto of the minimum wage bill.

Significantly, for the first time in AFL-CIO history, neither the President nor the Secretary of Labor was invited to the convention. The only Administration official to address the delegates was Secretary of Defense James R. Schlesinger. He was well-received, in keeping with the AFL-CIO's long support for a strong defense policy.

In another action related to national politics, the delegates approved a statement of the AFL-CIO Executive Council demanding curtailment of "the power of money in politics," through legislation to reform campaign spending. Citing the Watergate

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affair as a narrowly foiled effort at large-scale subversion through the availability of "an unprecedented amount of money," the statement indicated that the key need for reform is public financing of political campaigns.

Internal affairs

In a roll call vote, delegates approved an Executive Council report revoking the affiliation of the United Brewery, Flour, Cereal, Soft Drink and Distillery Workers. According to the report, the leadership of the Brewery Workers—which merged with the International Brotherhood of Teamsters shortly after the convention—had agreed to turn over its locals to the Teamsters in violation of the AFL-CIO constitution. Many locals did not wish to be absorbed by the Teamsters, said the report, and the action would enable those locals to retain AFL-CIO affiliation without legal complications.

An appeal by suspended officers of the Colorado Labor Council of the AFL-CIO was denied. Mr. Meany suspended the State Council and its officers in September 1972, after they had publicly endorsed George McGovern for President. The AFL-CIO, for the first time, had remained neutral during a presidential election.

As is usually the case, the election of officers of the AFL-CIO was without contest or dissent. George Meany and Lane Kirkland were reelected as president and secretary-treasurer. Three new vice presidents replaced Joseph Curran and William Pollock, recently retired presidents of the National Maritime Union and the Textile Workers, and Karl F. Feller, president of the ousted United Brewery Workers. The new officers were Joseph Tonelli, president of the United Paperworkers International Union; Sol Stetin, president of the Textile Workers Union; and Albert Shanker, vice president of the American Federation of Teachers and president of its largest local—the United Federation of Teachers in New York City. The 30 other members of the Executive Council—all incumbents—were reelected without opposition.

Resolutions

Among significant resolutions adopted were endorsement of the Equal Rights Amendment to the U.S. Constitution, establishing the principle of equality of the sexes under the law, and an instruction to State federations to urge legislatures not having yet ratified the amendment to do so. In line

with this action, the convention unanimously amended the AFL-CIO constitution by adding "sex" to Article II, Sec. 4, so as to provide: "To encourage all workers without regard to race, creed, color, sex, national origin or ancestry to share equally in the full benefits of union organization."

Another successful resolution called for the Federation to develop "an experimental program of expedited arbitration in appropriate industrial centers" patterned after that established by the Steelworkers union and the basic steel companies.

The delegates also supported legislation to strengthen the remedial powers of the National Labor Relations Board and action to "restore balanced objectivity in the enforcement of the National Labor Relations Act," particularly as to the duty of employers to bargain in good faith.

The delegates instructed the Executive Council to consider establishing a Department of Public Employees within the AFL-CIO, on the level of the Industrial Union Department and Building and Construction Trades Department, to improve organizing, and to unite the efforts of all public employee unions in promoting favorable legislation.

The convention endorsed a council program designed to strengthen the AFL-CIO's organizing arm under the new Department of Organization and Field Services, to be headed by William J. Usery, Jr., director of the Federal Mediation and Conciliation Service. The program is designed to broaden the functions of AFL-CIO organizers and field staff and to integrate their functions with the Federation's political, legislative, and other activities. In addition, the council urged passage of the Foreign Trade and Investment Act of 1973 (Burke-Hartke bill) for regulating imports and the export of U.S. capital and technology.

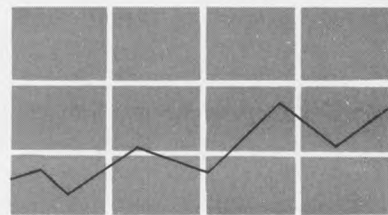
On the last day, the convention enthusiastically adopted a resolution of support for Israel in its recent conflict with the Arab states, urging the U.S. Government to conduct a large-scale airlift of military supplies and equipment.² □

FOOTNOTES

¹ It was reported that one member of the Executive Council—Paul Hall of the Seafarers International Union—opposed the recommendations as asking the President to resign without benefit of "due process."

² A few days earlier, the AFL-CIO maritime unions threatened to boycott ships engaged in trade with the Soviet Union if the Russians continued to aid the Arab nations.

The Anatomy of Price Change



FOOD PRICES ACCOUNT FOR MUCH OF RISE IN THIRD QUARTER 1973

TOSHIKO NAKAYAMA

IN THE third quarter of 1973, the Consumer Price Index and Wholesale Price Index showed contrasting trends in their rates of increase. The consumer index went up more rapidly than in the first half of the year, while the wholesale index rose less rapidly—although still showing a substantial rise.

In the July-September period, the Consumer Price Index increased at a seasonally adjusted annual rate of 10.3 percent, compared with 7.4 percent in the second quarter and 8.6 percent in the first. The increase in the Wholesale Price Index, at a seasonally adjusted annual rate, was 13.2 percent, down from 23.4 percent in the second quarter and 21.1 percent in the first. (See table 1.) For both indexes, the first two quarters' increase was at the fastest pace since 1951.

As in the preceding quarters, the rise in the consumer index reflected price increases in the agricultural sector of the economy. The advance in the food index, at an annual rate of 28.5 percent (seasonally adjusted), accounted for about 60 percent of the rise. This 28.5-percent rate was faster than in the second quarter, primarily because of the sharp food price increase in August, and about the same as in the first quarter. For nonfood commodities, the index increased at a 2.6 percent rate, half as fast as in the second quarter. One factor was gasoline prices, which declined in the third quarter, following a large increase in the second quarter. The rate of advance in the services index accelerated to an annual rate of 7.4 percent, from 4.5 percent in the second quarter and 3.6 percent in the first quarter.

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Increases in mortgage interest rates contributed to this acceleration.

Sharp advances in food prices also influenced the wholesale index. Wholesale prices for consumer foods advanced at an annual rate of 36.2 percent in the third quarter, compared with 14.2 percent in the second quarter and 44.2 percent in the first quarter. All of the third-quarter increase occurred in August. For other wholesale products, price increases slowed at all stages of processing, only slightly for industrial materials at the crude stage but noticeably for materials and products at the intermediate and final stages of processing.

The freeze and Phase 4

The behavior of the Consumer and Wholesale Price Indexes in the third quarter was affected by the transition from Phase 3 to Phase 4 in the Economic Stabilization Program. Phase 3, in effect during the first two quarters of this year, ended on June 13 with an announcement of a freeze on prices at levels prevailing in the first 8 days of June. On meat prices, ceilings which were imposed in late March remained in effect. Only a few items were exempted from the price freeze—notably raw agricultural products at the farm level, rents, interest, and imported products.

For most sectors of the economy, the freeze continued until August 12, when phase 4 regulations went into effect. However, the freeze on all food prices except beef was terminated on July 18. After that date, food processors, wholesalers, and retailers were permitted to raise prices to reflect only increased costs for raw agricultural products that had occurred since June 8. The freeze on beef prices continued until September 10. Thereafter, the food industry was covered by the same Phase 4 regulations as those applying to the nonfood sector.

Phase 4 regulations require companies with annual sales of more than \$100 million to give the Cost of Living Council 30 days prenotification of

Table 1. Changes in Consumer and Wholesale Price Indexes, selected periods 1971-73

[In percent. Seasonally adjusted, except services, compound annual rate]

Item	1971 prior to Phase 1, Dec. 1970 to Aug. 1971	3 months, Phase 1, Aug. 1971 to Nov. 1971	14 months, Phase 2, Nov. 1971 to Jan. 1973	5 months, Phase 3, Jan. 1973 to June 1973	3 months ending		
					March 1973	June 1973	Sept. 1973
CONSUMER PRICE INDEX							
All items.....	3.8	2.0	3.6	8.3	8.6	7.4	10.3
Food.....	4.8	1.7	6.5	20.3	28.6	14.7	28.8
Commodities less food.....	3.9	.3	2.4	5.2	4.0	5.4	2.6
Services.....	4.5	3.1	3.5	4.3	3.6	4.5	7.4
WHOLESALE PRICE INDEX							
All commodities.....	5.0	.3	6.9	24.4	21.1	23.4	13.2
Farm products and processed foods and feeds.....	6.5	1.1	16.1	49.8	51.9	43.2	35.9
Industrial commodities.....	4.5	-.1	3.5	14.4	10.2	14.9	4.5
Selected Stage of Processing Indexes:							
Crude materials except food.....	2.4	2.6	10.5	25.9	11.8	36.0	25.1
Intermediate materials except food...	6.4	.3	4.0	15.5	12.4	14.2	4.7
Producers' finished goods.....	3.4	-1.7	2.3	6.7	4.7	6.7	3.1
Consumers goods except food.....	2.2	0	2.3	14.6	7.2	17.5	.7
Consumer foods.....	6.7	2.1	10.6	25.4	44.2	14.2	36.2

price increases; establish a new base period for price increases and cost justification procedures; permit costs to be passed through only on a dollar-for-dollar basis; and continue the profit margin limitations established in Phase 3.

Under Phase 4, the petroleum industry is covered by mandatory regulations, with price ceilings based on the highest posted pump prices for the base period from June 1 to 8. Beginning September 8, retail price ceilings were based on the cost of gasoline (dealer tank-wagon prices) on August 1 plus the mark-up (dealer profit margin) in effect on January 10, 1973. On September 28, the regulations were changed so that the price ceiling for a retailer was based on the actual selling price on May 15, 1973, plus any increased wholesale costs between May 15 and September 28. The regulations were modified again in mid-October. From October 15 to November 1, retail gasoline prices were frozen. Starting November 1, retailers could pass on increases in dealer tank-wagon prices.

Phase 4 regulations require large writers of insurance (those with \$150 million of covered earned premiums in all lines in a year) to prenotify both the Cost of Living Council and the relevant State insurance regulatory agency of price changes. The State regulatory agency decides whether the rates are in compliance with Phase 4 guidelines: if so, they are sent to the Cost of Living Council for final review; if not, the increase is denied.

Mandatory controls similar to those in effect during Phase 3 were reimposed on the health services and construction industries. Lumber prices are exempt from Phase 4 controls, however, as are public utility rates. Almost all public utility rates are already controlled by Federal, State, or local regulatory bodies. Rents, raw agricultural products, and small businesses remain exempt, as they were in previous phases of the Economic Stabilization Program.

The implicit price deflator

Another measure of price change—the Implicit Price Deflator (IPD) for private gross national product—rose at a 7.3 percent rate in the third quarter, about the same as in the second quarter. All components of the deflator increased at a slower pace, except residential construction which rose at the same rate as in the second quarter. (See table 2.)

In the third quarter, unit nonlabor payments rose at a 7.4-percent rate, the same as in the second quarter. Unit labor costs increased at a 7.2-percent rate, compared with 7.6 percent in the second quarter. The increase of 8.6 percent in compensation per man-hour in the third quarter was partially offset by a rise of 1.4 percent in output per man-hour. In the second quarter, the increase in compensation per man-hour was smaller—6.9 percent—but output per man-hour declined 0.7 percent, leading to a large

Table 2. The anatomy of price change

[Percent change from previous quarter]

ITEM	1972				1973		
	I	II	III	IV	I	II	III
PRODUCT DEFLATORS							
Deflator: Private GNP.....	4.9	1.5	2.8	3.5	5.7	7.5	7.3
Personal consumption expenditures.....	3.1	2.3	2.5	2.9	5.1	8.1	6.8
Private construction:							
Residential.....	6.9	5.4	6.9	11.2	11.2	7.5	7.3
Nonresidential.....	6.5	3.2	2.1	.6	4.0	6.8	4.2
Producers' durable equipment.....	5.1	3.0	2.8	-1.6	1.7	8.3	3.1
Government purchases of goods and services ¹	8.6	1.0	7.0	6.3	8.6	11.5	5.5
UNIT COSTS							
Total private, all persons							
Deflator: Private GNP.....	4.9	1.5	2.8	3.5	5.7	7.5	7.3
Unit labor costs.....	7.6	— .5	1.7	2.0	5.2	7.6	7.2
Compensation per man-hour.....	9.9	5.9	4.9	7.4	9.5	6.9	8.6
Output per man-hour.....	2.1	6.5	3.1	5.2	4.1	— .7	1.4
Unit nonlabor costs.....	.5	5.4	4.6	6.0	6.6	7.4	7.5

¹ Excluding services of government employees.

increase in unit labor costs. Output per man-hour rose in the third quarter because of a faster rate of growth in output—3.6 percent compared with 2.6 percent in the second quarter—and a smaller rise in man-hour—2.2 percent compared with 3.2 percent.

Because the increase in unit labor costs was about the same as the increase in the deflator, the labor share of private GNP remained at the second quarter level. Among nonlabor costs, the share of private GNP accounted for by capital consumption allowances and indirect business taxes declined, but the share accounted for by interest increased. The preliminary data for the third quarter show that the profit share increased. In the second quarter, the profit share moved up slightly, while the labor share held steady.

Wholesale prices for industrial commodities

The largest increases in wholesale prices for industrial commodities in the third quarter occurred in prices of crude nonfood materials. A continuing imbalance between demand and supply in both domestic and world markets accounted for much of the rise in the prices of such crude materials as iron and steel scrap, copper scrap, raw cotton, wastepaper, and all crude fuels—petroleum, coal and gas

fuels. The demand for coal has strengthened because of tight supplies of heating fuels. The increase in natural gas was due to higher wellhead prices for interstate gas supplies. Prices for hides and skins turned up as supplies were reduced by the slowdown in cattle marketing which occurred during the price freeze.

Higher prices for raw materials and increases in other costs were reflected in price increases for some materials and products used in the intermediate and final stages of production, such as textile, leather, paper, and nonferrous metal products. For many of these products, however, price increases after the freeze were moderated by Phase 4 regulations, especially by the prenotification requirement. Prices for steel mill products and refined petroleum products remained almost level. For softwood lumber and nonmetallic mineral products, prices declined, reflecting the slowdown in housing construction.

Consumer goods and services

Food. In the third quarter, prices rose substantially for all categories of food except fruits and vegetables, as shown in table 3.

Although prices of most foods rose sharply after the freeze ended, increases were particularly steep for poultry, pork, and eggs. By the end of the quarter, however, prices for these items were moving down from their high August levels, primarily because of consumer resistance to high prices coupled with increased supplies. Prices for fresh fruits

Table 3. Changes in retail food prices

[In percent. Seasonally adjusted, compound annual rate]

Item	December 1972–March 1973	March 1973–June 1973	June 1973–September 1973
Food.....	28.6	14.7	28.8
Food at home.....	35.4	15.4	31.6
Cereal and bakery products.....	10.4	14.9	34.7
Meats, poultry, and fish.....	71.4	9.8	71.0
Meats.....	64.6	9.2	44.0
Poultry.....	198.1	— .3	123.8
Fish.....	11.8	32.1	10.4
Dairy products (not seasonally adjusted).....	11.3	8.8	21.5
Fruits and vegetables.....	20.8	31.2	— 18.3
Fresh fruits and vegetables.....	25.5	43.2	— 30.7
Processed fruits and vegetables.....	8.1	9.6	11.1
Other foods at home.....	14.2	26.4	17.7
Food away from home.....	7.1	12.0	15.4

and vegetables also declined late in the quarter as a result of increased supplies from the delayed summer crops and the introduction of fall crops. On the other hand, price rises for cereal and bakery products and dairy products continued to accelerate as the quarter ended, reflecting increases at the wholesale level.

The rise in wholesale prices for cereal and bakery products is attributable primarily to sharp advances in prices for wheat, flour, rice, and corn caused by continued heavy export demand coupled with sustained domestic demand. The rise in the prices of dairy products stems from the decline in milk production, as producers cut back on feed rations in response to increased feed costs. In addition, because of favorable slaughter prices, a large number of milk cows were killed.

Over the past year, sharp advances in feed prices have been a major factor in the price rises for meats, poultry, and eggs, as well as for dairy products. In the third quarter, wholesale prices of manufactured animal feeds fell because of export restric-

tions, buyer resistance, and prospects for record crops in the fall.

Nonfood commodities. The rate of increase in the index for nonfood commodities slowed markedly at retail and wholesale in the third quarter. (See table 3.) This was due mostly to gasoline prices which declined at retail and increased moderately at wholesale. They had advanced substantially in the second quarter. The decline at retail apparently resulted primarily from retailer compliance with the Cost of Living Council's petroleum regulations. Fuel oil prices, on the other hand, rose in the third quarter, reflecting the higher prices for imported oils used in the build-up of inventories for the winter season.

The rise in retail prices moderated for furniture and apparel other than footwear, but accelerated slightly for footwear and new cars. Concessions on new car prices were smaller than usual for the third quarter, due to the high level of consumer demand for smaller cars.

Table 4. Changes in wholesale and retail prices for consumer goods and services

(Seasonally adjusted, except total services, rent and other services, compound annual rate)

Item	Relative importance December 1972		Index	Percent change for 3 months ending							
	CPI	WPI		1972				1973			
				Mar.	June	Sept.	Dec.	Mar.	June	Sept.	Oct.
Consumer Price Index				3.4	2.5	4.4	2.3	8.6	7.4	10.3	13.0
Consumer goods	100.0		CPI	3.1	2.4	5.1	2.6	11.5	9.5	12.0	13.3
Food	36.0	100.0	WPI	2.5	3.2	6.7	5.2	21.3	15.9	15.3	20.6
			CPI	6.5	.3	7.7	4.9	28.6	14.7	28.5	29.0
Commodities less food	64.0	40.5	WPI	3.4	4.1	11.8	13.2	44.2	14.2	36.2	42.3
			CPI	3.1	2.0	3.7	1.3	4.0	5.4	2.6	4.3
Nondurables less food ¹	37.4	59.5	WPI	2.5	2.5	3.6	.4	7.2	17.5	.7	8.9
			CPI	2.7	1.4	3.0	2.7	4.7	7.0	1.3	4.9
Apparel, less footwear	11.8	36.7	WPI	2.5	3.2	3.6	2.8	9.7	24.7	.3	13.5
			CPI	2.7	.7	2.3	4.0	3.6	5.6	3.5	6.2
Footwear	2.5	10.4	WPI	1.8	1.8	2.1	3.2	4.2	7.4	— .4	8.0
			CPI	2.3	3.3	3.6	4.2	5.8	3.5	4.4	4.0
Gasoline	4.3	2.2	WPI	9.1	19.0	3.9	7.8	5.7	— 6.1	3.8	4.7
			CPI	— 3.6	— .4	13.7	1.1	7.4	25.5	— 5.9	6.2
Durables ¹	26.6	5.5	WPI	2.4	— .8	20.7	5.7	30.8	123.9	2.9	22.3
			CPI	2.8	2.8	5.5	— .7	2.4	3.4	4.3	3.3
New cars	3.3	22.8	WPI	2.5	1.8	5.4	— 5.5	3.6	6.4	3.1	— 1.4
			CPI	7.2	2.9	7.4	14.9	3.0	5.2	6.6	— 3.5
Furniture	2.2	11.9	WPI	3.5	2.1	7.5	12.6	3.6	3.5	2.4	— 5.7
			CPI	1.3	1.3	1.7	2.0	2.0	8.4	6.2	5.2
Appliances, including radio and TV	2.6	2.7	WPI	2.8	1.7	2.8	3.4	3.1	11.8	4.6	8.4
			CPI	.4	— .4	— .4	.4	— 1.1	— .4	.4	.8
		3.3	WPI	— .8	— .4	4.0	— 5.9	.4	— 2.3	3.6	3.2
Services	100.0		CPI	4.4	3.1	3.0	3.9	3.6	4.5	7.4	11.4
Rent	13.5		CPI	3.8	3.4	3.1	3.7	r 6.1	r 4.0	4.6	4.9
Household less rent	41.4		CPI	4.8	4.7	3.2	4.6	3.7	6.0	11.5	18.5
Medical care	14.9		CPI	2.7	3.9	2.0	6.8	2.9	4.6	3.7	13.4
Transportation	14.6		CPI	.3	3.6	3.3	— .3	— 3.7	3.9	3.0	3.3
Other services	15.6		CPI	1.9	2.9	3.5	3.2	4.8	6.7	6.2	7.2

¹ Includes items not listed.

r = revised.

Services. The services index rose at an annual rate of 7.4 percent. Almost 30 percent of the rise resulted from an increase in mortgage interest rates at the fastest pace since early 1970. After declining in 1971 and the first half of 1972, mortgage interest rates moved up moderately in the second half of last year and early this year. This spring, however, interest rates on conventional mortgage loans started to rise at a faster pace, and in the third quarter interest rates were raised on both FHA and VA mortgage loans.

Excluding mortgage interest costs,¹ the increase in the services index was 4.8 percent in the third quarter, about the same as in the second quarter. Charges for household services such as gas and electricity, domestic services, baby sitters, day care services, and rent increased at a somewhat faster pace than in the second quarter. Charges for dry cleaning, shoe repairs, men's haircuts, and beauty shop services continued to move up rapidly. The increases in charges for medical care services and transportation services were moderate, and slightly smaller than in the second quarter. □

¹ The mortgage interest cost component of the CPI reflects not only changes in mortgage interest rates but also changes in the size of mortgages, resulting from changes in house prices.

PRICE INDEXES BY SIZE OF CITY SHOW INCREASES FROM 8.8 TO 10.4 PERCENT

RICHARD C. BAHR

DURING the third quarter of 1973, the rise in the Consumer Price Index for all items accelerated in the three largest urban population groups for which indexes are published by the Bureau of Labor Statistics, as shown in the following tabulation of percent changes at an annual rate for quarters ending in:

Population classification	March	June	September
3.5 million inhabitants or more (A-1) -----	8.9	7.8	9.5
1.4-3.5 million (A-2) -----	7.7	6.6	10.4
250,000-1.4 million (B) -----	8.1	8.0	9.8
50,000-250,000 (C) -----	8.2	10.0	8.8
2,500-50,000 (D) -----	7.6	9.8	9.9

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Percent changes in this article are computed at an annual rate and are *not seasonally adjusted*.

Food prices continued to advance sharply in all population groups as they have in each previous quarter of this year. In all groups, the increase in the food index was larger in the third quarter than in the second quarter and about the same as in the first quarter. Increases ranged between 25.1 percent (in the 250,000-1.4 million population group) and 27.9 percent (in the 50,000-250,000 group).

The index for housing rose at a significantly faster rate in the third quarter than in the two previous quarters of 1973 in all groups except the 50,000-250,000 one, where the third-quarter pace of 6.5 percent was somewhat below the 7.9-percent rate of the second quarter. The greatest increase, 10.6 percent, was in the next higher group, 250,000-1.4 million, and was more than twice as much as the second quarter advance for this size-class. The smallest rate of increase was 6.0 percent in the largest population group, 3.5 million or more.

In contrast to the acceleration in the rate of advance in food and housing prices, price increases slowed for apparel and upkeep in most groups and health and recreation in all groups during the third quarter. Transportation prices actually declined in all groups, largely because of decreases in new and used car prices.

There was a wide variation among the five population groups in price increases for apparel and upkeep:

	Percent increase
3.5 million inhabitants or more (A-1) -----	8.6
1.4-3.5 million (A-2) -----	5.4
250,000-1.4 million (B) -----	4.4
50,000-250,000 (C) -----	.3
2,500-50,000 (D) -----	1.0

At least part of the difference in rates of increase between the largest group and the others may be attributed to the different effect of the seasonal reintroduction of fall and winter apparel items into the index. In Class A-1, these items were reintroduced in each of its areas, while in the other population groups the items were reintroduced in approximately a third of their areas—those priced during September. These seasonal items often are closed out at sale prices in late winter and early spring and reintroduced at their regular prices in the fall. Therefore, the class A-1 rate reflects the effect of these returns to regular prices only in the third quarter,

Table 1. Consumer Price Indexes, by population-size groups, December 1971 through September 1973

[1967 = 100]

Population-size group ¹ (Number of urban inhabitants)		Annual average		3 months ending							
				1971	1972				1973		
		1971	1972	Dec.	Mar.	June	Sept.	Dec.	Mar.	June	Sept.
All items											
3.5 million or more	(A-1)	122.9	127.5	124.8	126.3	127.1	128.9	129.6	132.4	² 134.9	138.0
1.4 to 3.5 million	(A-2)	121.7	125.5	123.5	124.2	125.1	126.4	127.6	130.0	132.1	135.4
250,000-1.4 million	(B)	120.8	124.7	122.7	123.4	124.5	125.5	126.7	129.2	131.7	134.8
50,000-250,000	(C)	120.1	123.9	121.8	122.6	123.8	124.6	125.7	128.2	131.3	134.1
2,500-50,000	(D)	119.5	122.9	121.0	121.9	122.8	123.5	124.7	127.0	130.0	133.1
Food											
3.5 million or more	(A-1)	120.2	125.6	122.0	124.4	125.1	126.9	128.0	136.3	141.5	150.1
1.4 to 3.5 million	(A-2)	118.5	123.2	120.2	121.9	122.4	124.7	125.8	134.3	139.5	148.0
250,000-1.4 million	(B)	117.5	122.7	119.5	121.6	122.1	123.9	125.3	133.8	139.0	147.0
50,000-250,000	(C)	117.1	122.3	119.0	121.4	121.4	123.6	124.6	133.5	138.9	147.7
2,500-50,000	(D)	117.3	122.0	119.0	120.8	121.7	122.9	124.5	132.8	138.5	147.2
Housing											
3.5 million or more	(A-1)	125.6	131.4	128.3	129.9	131.2	132.8	133.8	² 135.1	² 136.9	138.9
1.4 to 3.5 million	(A-2)	124.1	128.9	126.8	127.5	128.7	129.8	131.2	132.2	132.6	135.7
250,000-1.4 million	(B)	124.5	128.9	127.2	127.9	128.5	129.7	130.8	131.9	133.2	136.6
50,000-250,000	(C)	122.9	127.7	125.2	126.1	127.9	128.6	129.6	130.8	133.3	135.4
2,500-50,000	(D)	122.4	126.5	124.2	125.5	126.3	127.2	128.2	129.2	130.9	133.6
Apparel and upkeep											
3.5 million or more	(A-1)	119.0	121.3	120.9	121.6	120.4	123.8	123.8	124.8	125.2	127.8
1.4 to 3.5 million	(A-2)	120.9	123.3	123.3	122.2	122.7	123.5	125.4	125.0	127.4	129.1
250,000-1.4 million	(B)	120.0	123.0	122.0	121.1	123.0	122.8	126.4	126.2	128.2	129.6
50,000-250,000	(C)	120.3	123.0	122.1	120.6	123.6	123.1	126.2	124.5	128.2	128.3
2,500-50,000	(D)	119.6	121.8	121.7	120.6	122.2	121.3	123.8	122.4	126.3	126.6
Transportation											
3.5 million or more	(A-1)	123.3	125.5	123.3	124.1	124.9	126.7	127.3	127.3	130.2	129.5
1.4 to 3.5 million	(A-2)	119.8	121.1	120.3	119.6	120.8	122.2	122.5	122.5	124.9	124.4
250,000-1.4 million	(B)	116.0	117.4	116.3	115.5	117.6	118.6	118.8	119.0	122.4	121.6
50,000-250,000	(C)	116.0	116.4	115.6	115.3	116.5	117.0	117.2	117.4	120.8	119.9
2,500-50,000	(D)	115.2	116.1	115.0	114.7	116.0	117.0	117.3	117.5	120.9	120.5
Health and recreation											
3.5 million or more	(A-1)	123.8	128.2	125.4	126.8	128.2	129.1	129.7	131.0	132.3	133.5
1.4 to 3.5 million	(A-2)	122.8	126.4	124.3	125.3	126.3	127.2	128.1	129.0	130.2	131.2
250,000-1.4 million	(B)	121.9	125.9	123.8	124.9	125.9	126.5	127.3	128.4	130.0	130.8
50,000-250,000	(C)	121.6	125.2	123.7	124.2	125.1	125.7	126.6	127.2	128.5	129.9
2,500-50,000	(D)	120.1	123.3	121.7	122.7	123.3	123.8	124.4	125.4	126.8	128.1

¹ Based on 1960 Census of Population.² Revised due to retroactive rent increase in New York City.

while in the other population groups the impact is distributed over the third and fourth quarters.

The health and recreation index for the United States as a whole decelerated to a 3.4-percent rate of increase, after accelerating to a 4.4-percent rate in the second quarter. Prices rose fastest in the

two smallest population groups, those areas with urban populations under 250,000; the smallest increase was recorded in the middle group, 250,000-1.4 million.

The transportation index for the United States as a whole declined at a 2.2-percent rate after jump-

ing to a 10.6-percent rate of advance in the second quarter. Among the five groups, the greatest decline occurred in the 50,000-250,000 population class and the smallest in the 2,500-50,000 group.

Consumer Price Indexes for these five population-size groups are now included in the detailed report on the CPI for the months of March, June, September, and December of each year. The population classifications are based on the 1960 census of 56 urban areas. Methods of calculation and the areas included were presented in the August 1972 *Monthly Labor Review*, along with historical tables from March 1967 through June 1972.¹ Recent

trends in these indexes were reported in the March, June, and September 1973 issues.² □

—FOOTNOTES—

¹ Richard C. Bahr, Mark R. Meiners, Toshiko Nakayama, "New consumer price indexes by size of city," *Monthly Labor Review*, August 1972, pp. 3-8.

² Toshiko Nakayama and Richard C. Bahr, "New CPI by size of city shows larger increases in big areas," *Monthly Labor Review*, March 1973, pp. 55-57; Richard C. Bahr, "Price indexes by size of city show increases ranging from 7.6 to 8.9 percent," June 1973, pp. 54-55; and Richard C. Bahr, "Second quarter prices rise faster in smaller urban areas," September 1973, pp. 73-74.

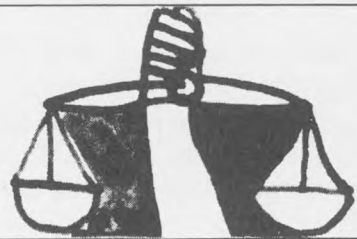
Measuring income

*Non intelligunt homines quam magnum vectigal
sit parsimonia.*

Cannot people realize how large an income is
thrift?

—MARCUS TULLIUS CICERO,
Paradoxa Stoicorum, 49
(Tr. H. Rackham).

Significant Decisions in Labor Cases



Antitrust shield for workers' rights

TRADITIONALLY, labor unions have shunned antitrust legislation because of persistent attempts to narrow the area of their exemption from its prohibitions. But here is a case where the application of antitrust statutes—the Sherman and Clayton Acts¹—favored the unions and served the purpose of safeguarding employee rights. (*Asbestos Workers v. United Contractors*.²)

The United Contractors Association of Pittsburgh established and financially aided an independent labor organization, the Associated Trades and Crafts Union, with which it maintained collective bargaining agreements and which its members' employees were required to join. Membership in the employer association automatically entitled the contractors—small businessmen—to membership in the union, with the result that the two organizations had “mutual officers, directors, and members and mutual control of activities of both [organizations]” (appeals court's language).

The International Association of Asbestos Workers and 27 other construction unions in western Pennsylvania, the area in question, filed suit in a Federal district court, charging the employer association and the rival union with conspiracy and combination designed, as the appellate court said, “to destroy competition and restrain trade in the construction industry.” The action was based on provisions of the antitrust laws.

As related by the court, the plaintiffs also charged “that an object of the illegal combination and conspiracy is to prevent the unions from representing for collective bargaining purposes employees of the members of the association and thus to obtain [for the members] a competitive advantage over employer parties to collective bargaining agreements with the [plaintiff] unions . . . ; that the association and the Trades and Crafts Union have executed sham col-

lective bargaining agreements, the purpose of which is to permit the employer members of the association to conduct their business activities free from interference from the 28 [plaintiff] unions, to use the agreements to bar organizational efforts . . . by the unions, and to prevent their employees from becoming members of the unions.” Further, “through the . . . conspiracy, members of the unions have been unlawfully denied the rights to work and earn wages in . . . jobs obtained by the members of the association by reason of the unlawful competitive advantage.”

The plaintiffs believed the conspiracy would continue if it were not stopped by the court. They asked for injunction against the defendants, an award of damages, and a reasonable attorney fee and other costs of litigation.

The defendant union and employer association asked the district court to dismiss the complaint, holding that the plaintiffs had failed to state a legal claim on which relief could be granted—that is, failed to prove a violation of the laws. Broadly, their defense argument ran as follows:

Neither dual membership of the union nor the collective bargaining agreement between the two parties was illegal. Employer membership in unions is not uncommon, and the Clayton Act (15 U.S.C. sec. 17—original sec. 6), specifically exempts labor organizations from antitrust prohibitions.³ The question of antitrust combination was of no concern to the plaintiff unions or the employees they represent. If they perceived violation of employee rights under the arrangement, they should have brought into play the law that protects those rights—the National Labor Relations Act, not the antitrust laws. The National Labor Relations Board has primary jurisdiction over such complaints. In short, the plaintiffs had no standing of legal action in the matter under the Sherman and Clayton Acts and, consequently, the court had no jurisdiction.

The defendants' reasoning coincided with the position of the district court. In dismissing the com-

¹“Significant Decisions in Labor Cases” is written by Eugene Skotzko, Office of Publications, Bureau of Labor Statistics.

plaint, the court said: “. . . [T]he plaintiffs . . . allege no facts which would even remotely taint the immunity provided the defendant Associated Trades from the antitrust laws. As to the collective bargaining agreement, the competition which it is alleged to foreclose is not that in a market in which the nonlabor [employer] group competes, but rather . . . the competition between labor organizations for the right to represent certain employees. This competition is clearly not the concern of the antitrust laws. . . .”

The court of appeals disagreed. A rather laborious review of judicial decisions and principles established over the years of antitrust litigation led it to conclude that, in this situation, the unions *did* have legal standing to invoke the antitrust statutes to protect their interests and those of the workers they represented. Here are the salient points of its reasoning:

- The employers’ membership in the defendant union did “taint the [union’s] immunity” from antitrust laws, because those employers did not meet the accepted standards of such membership: they neither competed with union members for work, nor was their participation in the union designed to “eliminate their unfair competition with union members, and the consequent lowering of the wages and working conditions of union members”—two points of the test of propriety of employer membership in unions.⁴ Nor were those contractors under employer control, and each of them acted as an independent entrepreneur. Clearly, the relationship between the defendant organizations was in restraint of trade and of competition in the industry.

- The union-association conspiracy had a restraining and damaging effect on the unions and the employees they represented. For this reason, it was erroneous for the lower court to hold that the competition with which the plaintiff unions could justifiably be concerned—the “competition between labor organizations for the right to represent certain employees”—was “clearly not the concern of the antitrust laws.”

The appellate court cited two statutory antitrust provisions: 15 U.S.C. section 15, which reads, “Any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue therefore . . .”; and 15 U.S.C. section 26, which states, “Any person, firm, corporation, or association shall be entitled to sue for and have

injunctive relief against threatened loss or damage by a violation of antitrust laws. . . .” These provisions protected the plaintiff parties in the present case. The workers employed by contractors under bona fide contracts to their unions stand to suffer adverse effects of the unlawful competitive advantage of the association’s contractor members. Every worker’s “business denotes the employment or occupation in which [he] is engaged to procure a living,” another appellate court once said.⁵

Of course, the harm suffered by employees in the present case is only indirect because the conspiracy’s adverse effect was directed at their employers, the nonassociation contractors. But the courts have developed a doctrine that a violator of antitrust laws is liable for damages to anyone who is within the “target area” of the conspiracy’s impact.⁶ The employees of the unaffiliated contractors were within that area, and they were entitled to invoke the antitrust laws for the protection of their interests.

- The plaintiff unions were rightfully concerned with the conspiracy also because the unlawful combination excluded them from competition in their field of activity. Admittedly, “competition among labor unions is not ordinarily the concern of the antitrust laws,” but the unions are entitled to statutory protection of their “business and property”: “. . . [T]he unions complain of the loss of their right to be the bargaining agents of members of the Trades and Crafts Union. Since their income is derived from the dues of their members, it would be contrary to common sense to say that a right to acquire members is not a property right of a labor union.” Furthermore, it was appropriate for the plaintiff unions to raise the public issue where coercion of employees was involved.

- The labor issues raised in the plaintiff’s complaint must be submitted to the National Labor Relations Board for a resolution because the Board has primary jurisdiction in labor matters. The district court has—and must retain—jurisdiction of the suit, but it cannot decide it until the NLRB submits its resolution of the labor issues.

Application of the doctrine of primary jurisdiction is essential where, as here, it is necessary to reconcile conflicting congressional policies embodied in different laws. “. . . [W]here the doctrine is invoked,” said the court of appeals, “the court is not ousted of its subject matter jurisdiction. Rather, where a particular issue is important to the overall determination of the suit, and where resolution of

that problem in the first instance has been vested in a particular agency, the court must certify the question of law to the relevant agency (the Board, here). In the interim, the court merely stays the proceedings before it while the matter referred to the agency is resolved. The agency then returns its findings of fact and conclusions of law on the question(s) certified. Thereafter, the court in deciding the case should give appropriate weight to the [agency's—here, Board's] determination.”⁷

The policy conflict, the appeals court said, between the antitrust and the labor laws had been stated succinctly in *Allen Bradley Co. v. Union*⁸: “. . . [W]e have two declared congressional policies which it is our responsibility to try to reconcile. The one seeks to preserve a competitive business economy; the other to preserve the rights of labor to organize to better its conditions through the agency of collective bargaining. We must determine here how far Congress intended activities under one of these policies to neutralize the results envisioned by the other.”

The district court's order of dismissal was vacated, and the case was returned to the lower court with instructions to certify all the labor issues to the NLRB and to stay all further proceedings until the Board's determinations arrive. This procedure will “preserve the integrity of the Federal labor regulatory scheme without denying the unions a judicial determination of their antitrust cause of action,” the appeals court concluded.

Union dues as political contributions

A Federal court of appeals recently told a group of plaintiffs, employees of a firm under a union shop agreement, that the only way they could prevent their union dues from being used for political financing was to demand restitution of that portion of their payments that was spent for this purpose or to enjoin such expenditures. These are the remedies so far established by court rulings on the issue.⁹ To the plaintiffs' complaint that these remedies are “wholly illusory,” the court could only say that they define employees' rights in the matter and it is up to them “to pursue a remedy against the unions.” (*Marker v. Shultz*).¹⁰

The plaintiffs charged that the use of their union dues for political purposes compelled them to support political candidates and causes they disapproved

of, thus constituting a violation of their rights under the First and Fifth Amendments to the Constitution (on appeal, also the Ninth Amendment was cited); and that, since union fees and contributions are exempted from Federal taxation, the Government, in effect, engaged in supporting political causes, “in violation of the limits imposed upon the taxing and spending powers of Congress by Article I, section 8” of the Constitution¹¹ (appeals court's language).

The district court for the District of Columbia dismissed the complaint. The judge ruled that the constitutional issue involved was not “substantial” enough to warrant institution of a three-judge court statutorily required to hear and decide cases challenging congressional enactments on constitutional grounds.¹² And his major reason for this holding was the absence of connection between the unions' tax exemption and the political benefit they derive from such an exemption: “. . . The labor organization can use the benefits from its tax exempt status for many purposes such as collective bargaining and assistance to its members during strikes. The fact that a certain benefit inures to political activities of a labor organization does not create a nexus between the tax exempt status of the organization and [its] political activity.” (337 F.Supp. at 1304.)

On appeal, the plaintiff employees asked the court “to enjoin Treasury officials from continuing to grant or recognize tax exemption status under section 501(c)(5) of the Internal Revenue Code in the case of any labor organization that expends tax-free membership dues for partisan political campaigns. . . .” (Court's language.) But the appellate court upheld the lower court's dismissal, agreeing with its reasoning and indicating that the employees went too far in both their arguments and their request for this kind of remedy.

Undoubtedly, the court reasoned, the dissenting workers' rights must be protected by the courts; but precedent decisions have also established that unions, though under statutory restraints as to what they can do with dues money, have the constitutional right to engage in political activities, “to some extent, at least.”

As for the effect of exemption of union dues and contributions, the court reasoned, such exemption cannot be equated with the Government's support of political movements any more than the exemption of churches can be considered an assistance to religious movements. Both are prohibited by the Establishment Clause of the First Amendment.¹³

Nor can tax authorities be enjoined to work out a scheme whereby tax exemption would be inapplicable to political activities of tax-exempt organizations: "... [P]laintiffs [may not] soundly claim that the Constitution requires the Treasury [Department] to become involved in the operating activities of the organizations receiving such exemptions, and in deciding which of their activities are objectionable ... and which are within the First Amendment right of unions to promote their interests. ..."

Attempts were made in Congress, in 1969 and 1971, to terminate the exemption of union dues from taxation, but they were rejected. "... What was involved," said the appeals court, "was the determination by Congress to keep the tax exemption of dues and contributions in a neutral stance, rather than to embroil the tax laws and the agencies administering them into involvement with and surveillance of the political activities of the unions. ..." And it concluded, "It is not for this court to appraise the policy considerations brought out in these [congressional] debates." □

—FOOTNOTES—

¹ The Act of July 2, 1890, popularly known as Sherman Antitrust Act (15 U.S.C. secs. 1-7); and the Act of Oct. 15, 1914, popularly known as Clayton Antitrust Act (15 U.S.C. secs. 12, 13, 14-21, and 22-27), supplementing the Sherman Antitrust Act.

² *International Association of Asbestos Workers v. United Contractors Association, Inc., of Pittsburgh, and Associated Trades and Crafts Union* (C.A. 3, No. 70-1475, July 17, 1973).

³ However, while declaring that "labor, agricultural, or horticultural organizations, instituted for the purposes of mutual help," and their members are not "illegal combinations or conspiracies in restraint of trade," 15 U.S.C. sec. 17 is silent on their acting in combination with employers.

⁴ Citation from *United States v. Los Angeles Meat & Provision Drivers Union* (196 F.Supp. 12, 15, D.C.-So. Calif., 1961), where this test was adopted. It was eventually affirmed by the Supreme Court (371 U.S. 94, 1962). Other decisions on this issue cited here were *Bakery and Pastry Drivers v. Wohl*, 315 U.S. 769 (1941); *Milk Wagon Drivers' Union v. Lake Valley Farm Products*, 311 U.S. 91 (1940); and *United States v. Fish Smokers Trade Council*, 183 F.Supp. 227 (D.C.-So. N.Y., 1960).

⁵ *Roseland v. Phister Manufacturing Co.*, 125 F.2d 417 (C.A. 7, 1942).

⁶ The doctrine of "target area" was first enunciated in

Conference of Studio Unions v. Loew's, Inc. (193 F.2d 51, 55—C.A. 9, 1951), where the court held that a claimant in an antitrust suit must show he is "within that area of economy which is endangered by a breakdown of competitive conditions in a particular industry. Otherwise he is not injured 'by reason' of anything forbidden in the antitrust laws." Cited here was also *Karseal Corp. v. Richfield Oil Corp.*, 221 F.2d 358 (C.A. 9, 1955).

⁷ Cited here was Supreme Court Justice White's dissertation in *Meat Cutters v. Jewel Tea*, 381 U.S., 676 684-685 (1965).

⁸ 325 U.S. 797, 806 (1944).

⁹ Cited: *Machinists v. Street*, 367 U.S. 740 (1961); and *Railway Clerks v. Allen*, 373 U.S. 113 (1963).

¹⁰ *Marker v. Shultz* (C.A.-D.C., No. 72-1499, August 8, 1973). The district court's decision (sub nom. *Marker v. Connally*, D.C.-D.C., Civ. A. No. 2486-71, 1972) is at 337 F.Supp. 1301.

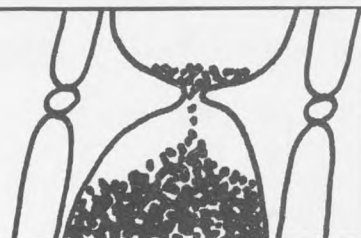
¹¹ In fact, sec. 8 of Article I of the Constitution lays down no limits on Congress' power to impose taxes, although certain limits have been read into it by courts. Clause 1 of the section reads: "The Congress shall have power to lay and collect taxes, duties, imposts and excises, to pay the debts and provide for the common defense and general welfare of the United States; but all duties, imposts and excises shall be uniform throughout the United States."

¹² 28 U.S.C. sec. 2282 provides: "An interlocutory or permanent injunction restraining the enforcement, operation or execution of any Act of Congress for repugnance to the Constitution of the United States shall not be granted by any district court or judge thereof unless the application therefore is heard and determined by a district court of three judges. ..."

The Supreme Court has imposed a limitation on the grant of a three-judge hearing. In *Idlewild Bon Voyage Liquor Corp. v. Epstein* (370 U.S. 713, 715, 1962), the High Court stated, per curiam, "When an application for a statutory three-judge court is addressed to a district court, the court's inquiry is appropriately limited to determining [among other things] whether the constitutional question raised is substantial. ..." And in a much earlier per curiam statement (*Ex parte Poresky*, 290 U.S. 30, 1933), the High Court said, "... The [constitutional] question may be plainly unsubstantial, either because it is 'obviously without merit' or because 'its unsoundness so clearly results from the previous decisions of this court to foreclose the subject and leave no room for the inference that the question sought to be raised can be subject of controversy.'" (At 32. The cited language originally appeared in *Hannis Distilling Co. v. Baltimore*, 216 U.S. 285, 288, 1910.)

¹³ Precedent cases cited: *Walz v. Tax Commission*, 397 U.S. 664 (1970); *Green v. Connally*, 330 F.Supp. 1150 (D.C.-D.C., 1971)—affirmed sub nom. *Coit v. Green*, 404 U.S. 997 (1971); and *McGlotten v. Connally*, 338 F.Supp. 448 (D.C.-D.C., 1972).

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. This list includes agreements covering 1,000 workers or more.

Employer and location	Industry	Union ¹	Number of workers
American Cyanamid Co., Lederle Laboratories Division (Pearl River, N.Y.)	Chemicals	Chemical Workers	1,400
American Home Foods, Inc. (Milton, Pa.)	Food products	Meat Cutters	1,450
American Motors Corp., Jeep Unit (Toledo, Ohio)	Transportation equipment	Auto Workers (Ind.)	3,000
American Tobacco Co. (Interstate)	Tobacco manufacturers	Tobacco Workers	4,200
Associated Guard and Patrol Agencies (Chicago, Ill.)	Services	Service Employees	4,000
Associated Produce Dealers and Brokers of Los Angeles, Inc. (Los Angeles, Calif.)	Wholesale trade	Teamsters (Ind.)	1,500
Bakery Agreement, Retail and Wholesale Products (New York, N.Y.) ²	Food product	Bakery Workers	4,000
Beech-Nut, Inc. (Canajoharie, N.Y.)	Food products	Bakery Workers	1,050
Bulova Watch Co., Inc. (New York)	Instruments	Production Employees Group of the Bulova Watch Company (Ind.)	2,050
Bunker-Ramo Corp., 3 divisions (Illinois)	Electrical products	Electrical Workers (IBEW)	1,900
Caterpillar Tractor Co. (Joliet, Ill.)	Machinery	Machinists	4,500
Central Foundry Co. (Holt, Ala.)	Primary metals	Molders	1,050
Champion Spark Plug Co. (Interstate)	Electrical products	Auto Workers (Ind.)	3,850
Dana Corp., Spicer Axle Division (Ft. Wayne, Ind.)	Transportation equipment	Allied Industrial Workers	1,800
Delta Airlines, Inc., Pilots (Interstate) ³	Air transportation	Air Line Pilots	1,500
E. I. du Pont de Nemours & Co., Textile Fibers Department (Old Hickory, Tenn.)	Chemicals	Old Hickory Employees' Council (Ind.)	2,200
First National Stores, Inc. (Boston, Mass.)	Retail trade	Meat Cutters	2,400
Frolic Footwear, Inc. (Jonesboro, Ark.)	Leather	Boot and Shoe Workers	1,050
Independent Retail Meat Market, Service and Self-Service (Missouri and Illinois) ²	Retail trade	Meat Cutters	2,400
Jewel Cos., Inc., Jewel Food Stores Division (Chicago, Ill.)	Retail trade	United Retail Workers Union (Ind.)	8,000
Johns-Manville Products Corp. (Manville, N.J.)	Stone, clay, and glass products	Paperworkers	2,000
Kelsey Hayes Co.: Detroit and Romulus, Mich.	Transportation equipment	Auto Workers (Ind.)	2,700
Jackson, Mich.	Transportation equipment	Allied Industrial Workers	1,400
Motor Wheel Corp. (Lansing, Mich.)	Transportation equipment	Allied Industrial Workers	2,150
Newport News Shipbuilding and Dry Dock Co. (Newport News, Va.)	Transportation equipment	Designers' Association of Newport News (Ind.)	2,500
Northern Illinois Gas Co. (Illinois)	Utilities	Electrical Workers (IBEW)	1,550
Phillip Morris USA (Louisville, Ky., and Richmond, Va.)	Tobacco manufacturers	Tobacco Workers	5,600
Pineapple Companies, Factory and Plantations (Hawaii) ²	Food products	Longshoremen and Warehousemen (Ind.)	7,000
PPG Industries, Chemical Industrial Division (Barberton, Ohio)	Chemicals	Allied Chemical and Alkali Workers of America (Ind.)	1,400
R. H. Macy & Co., Inc., Bamberger's Division (New Jersey)	Retail trade	Retail Clerks	2,000
Retail and Wholesale Bakery Agreement (New York, N.Y.) ²	Food products	Bakery Workers	1,500
Revlon, Inc. (New Jersey)	Chemicals	Distributive Workers of America (Ind.)	1,500
Sterling Drug, Inc., Winthrop Laboratories Division (Rensselaer, N.Y.)	Chemicals	Chemical Workers	1,300
Sugar Companies' Negotiating Committee (Hawaii)	Food products	Longshoremen and Warehousemen (Ind.)	9,000
	Government activity	Employee organization ¹	
District of Columbia: Fire Department	Fire protection	Fire Fighters	1,350
Ohio: Cincinnati Board of Education	Education	National Education Association (Ind.)	3,500

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

³ Information is from newspaper.

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

Developments in Industrial Relations



AFL-CIO scores the President

The 10th biennial convention of the AFL-CIO, held October 18-23 in Bal Harbour, Fla., was dominated by the crisis over the "Watergate tapes" and the war in the Middle East. (A full report on the convention appears on pp. 59-60.) In an unprecedented action, the delegates called for President Nixon's resignation, and for the House of Representatives to impeach him "forthwith" if he did not resign. The resolution, passed prior to the President's decision to release the tapes, asserted that "the constitutional crisis" had "been brought to a head" by the firing of Special Prosecutor Archibald Cox and the resignations of Attorney General Elliot L. Richardson and Deputy Attorney General William D. Ruckelshaus.

Other resolutions adopted called on the Executive Council to consider establishment of a new department for public employees; proposed an economic program for the Nation, centering on termination of wage and price controls; and backed Federal legislation to protect workers' pensions and to set uniform unemployment and workmen's compensation standards.

The delegates also unanimously approved a resolution condemning what was termed Arab aggression against Israel and backing a "massive airlift" of military equipment to Israel.

Another successful resolution, reversing a Federation stand, endorsed the passage of the Equal Rights Amendment barring sex discrimination on the job and elsewhere. In other actions, Presidents Joseph Tonelli of the United Paperworkers and Sol Stetin of the Textile Workers and Vice President Albert Shanker of the American Federation of Teachers were elected to the AFL-CIO Executive

Council. They replaced William Pollock of the Textile Workers and Joseph Curran of the Maritime Union, who had retired, and Karl F. Feller of the United Brewery Workers.

(On October 23, Mr. Feller signed an agreement with Teamsters President Frank E. Fitzsimmons for a merger of their unions. The signing followed the AFL-CIO's revocation of the Brewery Workers' charter because of the merger discussions.)

During the convention, AFL-CIO President George Meany expressed hope of soon bringing to "final consummation" a tentative agreement between the Teamsters and Farm Workers Unions to end their jurisdictional dispute. The accord, announced on September 28 by Mr. Meany and Teamsters President Fitzsimmons (*Monthly Labor Review*, November 1973, p. 73), reportedly stipulated that Teamster representation of fieldhands would end, while jurisdiction over workers in canneries and warehouses would continue. Mr. Meany said complications had developed and that "at the moment, the matter is in a state of flux." He expressed hope the matter could be resolved at a Teamsters' executive board meeting. (The board reportedly rejected the accord.) The growers, meanwhile, were insisting that the pacts they signed with the Teamsters (after expiration of agreements with the Farm Workers) were binding.

Construction unions convene

The Federation's Building and Construction Trades Department also convened in Bal Harbour. The delegates approved an increase in monthly per capita payments to 8 cents, from 4. The additional money was slated for organizing, to strengthen local councils, and to improve information programs. These efforts were designed to meet the challenge posed by "the growth of the nonunion contractor paying substandard wages and abusing acceptable and fair working conditions."

In an effort to counter what Department President Frank Bonadio called "an all-out concerted

"Developments in Industrial Relations" is prepared by Leon Bornstein 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.

effort" by "unfair" contractors' associations and other "anti-labor" forces "to destroy the trade union movement," the convention also approved the creation of a panel of union presidents to hold hearings and make suggestions to improve the unity and effectiveness of local building and construction trades councils. The panel would also initiate a public relations program to respond to what Mr. Bonadio called "the weary old slogans" used against Building Trades unions.

The Department also reached a new work rules agreement with the National Constructors Association to improve productivity and job continuity in industrial plant construction. The pact replaced one signed in 1971, which expired late in 1972. Like the prior agreement, the new one prohibits illegal strikes, work stoppages, and lockouts, as well as slowdowns, standby crews, featherbedding, and non-working stewards. The agreement provides for binding arbitration of disputes, an element missing in prior agreements. Fred R. Stevens, president of the Association, hailed the accord as an important step against incursions by open-shop contractors. The association consists of 39 major engineering and construction firms.

The first result of the increased cooperation between the 17 unions and the Association was a reported agreement on a plan to make union contractors in the Houston area more competitive with open-shop firms by waiver of restrictive work rules, thus enabling firms to use any type of materials or equipment. Wages and fringe benefits would continue at the level set by the separate labor contracts for the various trades.

Time off for good attendance

Deere & Co. and the Auto Workers settled September 30 on a 3-year contract that was similar to the Chrysler accord (*Monthly Labor Review*, November 1973, pp. 69-71) but with several new features. The settlement, covering 23,000 workers at plants in Iowa and Illinois, was followed by brief walkouts at some locations, reportedly in protest of ratification procedures.

As at Chrysler, the Deere accords provided for optional retirement after 30 years of service, regardless of age. Deere employees were given another option—to continue working after 30 years of service, in return for 1 to 4 weeks of annual leave each year, paid at \$110 to \$185 a week. This leave, in

addition to the regular annual vacation of up to 4 weeks a year, is to be financed from the existing optional leave fund, into which Deere pays up to 7 cents an hour.

To combat absenteeism, Deere agreed that beginning October 1, 1974, employees will accrue a half hour of paid leave for each week a worker is present for all regular hours. Absence is permitted for reasons such as short workweeks, jury duty, or funerals.

The new policy on overtime provides that an employee will not be required to work daily overtime unless he receives 24 hour's notice. However, an employee can be required to fill in for another employee the following shift. Saturday overtime will not be permitted unless the employee receives notice on the preceding Wednesday, and work on the fourth consecutive Saturday will be strictly voluntary. Employees cannot be required to work Sundays or holidays unless these days are part of their regular workweek.

Other terms included wage increases of 3 percent plus 12 cents an hour immediately, 3 percent in both the second and third years, and adoption of a dental plan effective October 1, 1974.

Negotiations were continuing with the International Harvester Co. and Caterpillar Tractor Co., where Auto Workers' agreements had also expired

Hourly Earnings Index

The Hourly Earnings Index (1967=100) rose 0.8 in October to 149.5. The index measures earnings of production or nonsupervisory workers in the private nonfarm economy. It is seasonally adjusted and excludes the effects of overtime premium pay in manufacturing and interindustry employment shifts.

	1970	1971	1972	1973
January	117.4	126.0	134.5	142.3
February	118.0	126.7	134.8	142.5
March	118.9	127.2	135.6	143.3
April	119.2	128.0	136.6	144.4
May	119.9	128.9	136.7	144.7
June	120.6	129.5	137.2	146.0
July	121.4	130.1	138.0	146.9
August	122.5	130.9	138.5	147.6
September	123.1	131.4	139.3	^p 148.7
October	123.5	131.7	140.4	^p 149.5
November	124.2	131.8	140.7	
December	124.8	133.5	141.9	

p = preliminary.

September 30, but had been extended pending the outcome at Deere.

Mine Workers' Fund strike ends

Employees of the United Mine Workers Welfare and Retirement Fund tentatively agreed on an initial contract with the fund after a 7-week strike. A fund spokesman said the 2-year contract with the Independent Employees Union provided for a 5.5-percent wage increase retroactive to April 1 and for adoption of a pension plan. The walkout had involved 350 of the fund's 400 employees in Washington, D.C., and 10 regional offices. The union had received National Labor Relations Board certification earlier in the year.

Job bias damages awarded

United States District Judge Damon J. Keith ordered the Detroit Edison Co. to pay \$4 million in punitive damages to blacks he found to have been victims of "deliberate" and "invidious" racial discrimination. The award was reportedly the largest for punitive damages since the Civil Rights Act of 1964 gave individuals the right to sue companies in Federal courts because of discrimination in employment. In addition, Local 223 of the Utility Workers Union of America was assessed \$250,000 in punitive damages for what the judge said was the union's part in helping to maintain Detroit Edison's allegedly discriminatory practices in hiring and promotion. The court also found Local 17 of the Electric Workers (IBEW) guilty of discrimination, but the local was not ordered to pay damages because "it hasn't acted with the requisite malice."

Judge Keith also ordered the utility, the largest in Michigan, to pay retroactive wages to those found victims of bias, and to undertake a program to end discrimination. The civil class action suit against the company and the two union locals was originally filed in May 1971 by three Detroit Edison employees for themselves and other blacks who either worked for the company or had tried to obtain employment. The Department of Justice in 1971 had also filed suit against the utility, but the suit (which did not seek damages) was later combined with the private suit.

The utility had denied the original charge, but it had no immediate comment on the judge's ruling. The union also had no immediate comment.

State sued on job test use

The Justice Department accused the State of North Carolina of discrimination against blacks, American Indians, and Orientals in its use of an examination for certifying teachers. In a suit filed in U.S. District Court in Raleigh, the Department said a new State law was discriminatory because it barred the certification of teachers who did not achieve a minimum score on the National Teachers Examination. The test, designed by the Educational Testing Service of Princeton, N.J., and used by a number of States for certifying teachers, has been criticized by civil rights groups as being culturally biased. They have asserted that using the test as an absolute requirement for jobs is a major factor in barring minorities from employment.

The suit asked the court to enjoin the North Carolina Board of Education from making hiring decisions based on the minimum score requirements of the examination. It also asked for compensation for blacks, Indians, and Orientals who were refused certification because of their scores. The suit did not challenge the test as such, but the way North Carolina applied the results in the past year.

Utility to push minority hiring

The Pacific Gas & Electric Co. reached an agreement with the Equal Employment Opportunity Commission in which the utility pledged to make a special effort to recruit women and minorities in all its managerial, craft, and technical jobs. The agreement was described as the most comprehensive voluntary accord the Commission has signed with a private employer, and provides for a company review of potential advancement opportunities for its 5,000 minority-race and 3,000 women employees. The San Francisco-based utility, serving northern and central California, employs 26,000 people. The agreement calls for wage increases for many women who successfully transfer from clerical to craft jobs, a special emphasis on the hiring of persons of Asian ancestry for craft jobs, and management training for women and minority-race members.

Brewer to aid minorities

The Miller Brewing Co. signed an agreement with PUSH (People United to Save Humanity) to increase opportunities for its minority employees

and for minority enterprises. The company pledged to raise its minority-race employment level to 12 percent, and eventually to 15 percent. (As of December 31, 1972, Miller employed 164 members of minority races, out of a total of 2,456 employees.) The brewer, based in Milwaukee, also agreed to boost its banking activities with minority-owned banks to \$37.5 million, to reinsure 15 percent of its group life program with minority-owned insurance companies, and to place at least 12 percent of its construction, renovation and demolition business with minority-owned companies. A similar agreement had been signed in July 1972 with the Jos. Schlitz Brewing Co. (*Monthly Labor Review*, October 1972, p. 76).

Safety standards called 'vague'

In an October speech, Robert D. Moran, chairman of the Occupational Safety and Health Review Commission,¹ complained that standards under the Occupational Safety and Health Act of 1970 were "vague" and "ambiguous." Mr. Moran asked how employers could comply with standards they did not understand, and he cited some criteria he claimed fitted Winston Churchill's phrase, "riddles wrapped in mysteries inside enigmas." Mr. Moran claimed that there would be more compliance and fewer safety violations if safety and health standards would both identify the hazard and specify what must be done to prevent its occurrence. Mr. Moran cited as too broad the regulation that "no contractor or subcontractor . . . shall require any laborer or mechanic . . . to work in surroundings or under any

working conditions which are unsanitary, hazardous, or dangerous to his health or safety."

In September, the Occupational Safety and Health Administration (which administers the act) had announced a reorganization to meet several program objectives. These objectives included "focusing management responsibility into three major areas, rather than a multitude of smaller ones; providing for a more responsive coordination of OSHA field programs; placing greater emphasis on the development of safety and health standards, and establishing a more coordinated administrative support program." Assistant Secretary of Labor John H. Stender, who heads OSHA, praised "the high level of competence and dedication displayed by OSHA employees," but said he had developed a growing awareness that the changes were necessary to achieve peak efficiency.

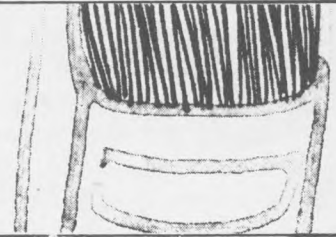
Transit union chief defeated

John Elliott, president of the Amalgamated Transit Union, lost his bid for an eighth term at the union's September convention in Miami Beach. Mr. Elliott, who had been in office for 14 years, was defeated by Daniel V. Maroney. Mr. Maroney had headed the union's Division 1493, based in Charleston, W. Va. The union has about 130,000 members. □

—FOOTNOTE—

¹ The Commission hears employer appeals of alleged safety violations and has other adjudicatory functions under the act.

Book Reviews and Notes



Mass migration

The Black Man Comes to the City: A Documentary Account from the Great Migration to the Great Depression, 1915 to 1930. By Robert B. Grant. Chicago, Nelson-Hall Co., Publishers, 1972. 269 pp., bibliography. \$12.

The Black Migration: The Journey to Urban America. By George Groh. New York, Weybright and Talley, 1972. 301 pp., bibliography. \$8.95.

These two volumes address themselves to the most striking and far-reaching development in black life in the 20th century—the mass migration from the rural South. Beginning in 1910 and continuing through the 1960's, large numbers of blacks were bent on relocating, the great majority of them leaving the South and moving cityward, so that by 1970 blacks were the most urbanized of any of the racial groups in America. Primarily unlanded agricultural workers, some of the earlier arrivals but one step removed from peonage, these blacks who came to the urban centers of the North and West brought little with them in goods, money, or industrial skills. But however ill-prepared they were for the city, the city was even less prepared for them, emergency responses yielding but slowly to any sort of planning. The uneasy and often strife-ridden ways in which the black newcomers and the older inhabitants adjusted to each other is the theme of these two studies.

The work by Grant, basically the reproduction of a variety of source materials, covers a relatively short period, 1915 to 1930. The author gives no reason for the selection of this particular timespan other than is conveyed in the book's subtitle. Grant organizes well, dealing successively with the dynamics of migration, the living conditions and employment patterns of the newcomers, the attitude of whites to black immigration, and the varied responses of the black community. In treating Marcus Garvey, the black nationalist, he might have included a selec-

tion from Garvey's weekly, *The Negro World*. But aside from this, the documents themselves, enhanced by Grant's incisive chapter introduction and content commentaries, are unusually rich in texture, suggesting leads for researchers in black studies.

Indeed, one of the distinguishing features of the documents Grant presents is their emphasis on actions and reactions by blacks themselves. In his treatment of the migrants, for example, Grant gives a sampling of their interviews taken by black interviewers and of their letters to family members and friends who remained in the South. In his all-too-brief treatment of black businesses, Grant has H. H. Pace of New York describe his efforts to launch the Black Swan Record Co. Grant brings his readings to a close with an imaginative touch, presenting a section, "Voices," which mirrors the black literary mood of the decade, even though the selec-

Books reviewed in this issue

- Leslie Allan and others, *Paper Profits: Pollution in the Pulp and Paper Industry*. Reviewed by Vernon S. McDougall.
- Walter E. Baer, *Practice and Precedent in Labor Relations*. Reviewed by Edward B. Krinsky.
- Frederick E. Case, *Black Capitalism: Problems and Development—A Case Study of Los Angeles*. Reviewed by Edgar R. Czarnecki.
- Victor R. Fuchs, ed., *Essays in the Economics of Health and Medical Care*. Reviewed by Barbara H. Kehler.
- Fred R. Glahe, ed., *Collected Papers of Kenneth E. Boulding*. Reviewed by Everett J. Burt, Jr.
- Robert B. Grant, *The Black Man Comes to the City: A Documentary Account from the Great Migration to the Great Depression, 1915 to 1930*. Reviewed by Benjamin Quarles.
- George Groh, *The Black Migration: The Journey to Urban America*. Reviewed by Benjamin Quarles.
- John A. Guthrie, *An Economic Analysis of the Pulp and Paper Industry*. Reviewed by Vernon S. McDougall.
- Ida R. Hoos, *Systems Analysis in Public Policy—A Critique*. Reviewed by Donald R. Kalder.

tions themselves are more likely to be recognized by the reader, particularly the closing one, Claude McKay's stirring sonnet, "If We Must Die." The index is disappointing, little more than a skeleton.

George Groh's book is extensive as to timespan, stretching back to Reconstruction, although devoting most of its attention to the 20th century, particularly the more recent decades. In documentation and content Groh is also wide-ranging. In treating the cooperative associations of black farmers in Alabama, he draws heavily from his own on-the-spot interviews during the summer of 1968. Other primary sources include such hard data as statistical reports from the Census Bureau. This type of evidence contrasts somewhat incongruously with Groh's use of folk tales, such as the story of the black graduate of Harvard who, seeking to vote in Mississippi, found that he could not satisfy the registrar as to his literacy even though he was proficient in five languages. Indeed Groh's opening chapter, "One More Bale," resurrects the familiar story of the black sharecropper who slyly held out one bale of cotton from "Mr. Charlie," only to find out that when he brought it to light, "Mr. Charlie" simply adjusted his calculations, leaving the sharecropper no better off.

To the more scholarly reader Groh's volume may appear to be somewhat loosely organized, anecdotal, impressionistic, and given to sweeping statements. Groh, moreover, totally ignores the black migrations to the West Coast, not honoring Watts with a footnote although giving an extensive and revealing depiction of the troubles in Newark. Groh, however, is worthy of serious attention. He succeeds in capturing the changing mood of blacks, those trapped in a Southern backroads region or in the blighted streets of the ghetto. His analysis of the role of the Federal Government in urban relief is graphic and sobering. *The Black Migration* is moving in its social compassion. Yet the author does not permit his sympathies to becloud his judgment. He emphasizes the point that "not all blacks are poor, nor are all poor black." His concluding chapter offers a number of proposals for attacking poverty, including the suggestion that tens of thousands of young people of low-income families be trained for public service at public expense. Groh's book, like that of Grant, was probably in press at the time of the appearance of the richly detailed study by Guichard Parris and Lester Brooks, *Blacks in the City: A*

History of the National Urban League, thus precluding their use of it.

—BENJAMIN QUARLES
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Broad, rich, and unsettled

Collected Papers of Kenneth E. Boulding. Edited by Fred R. Glahe. Boulder, Colorado Associated University Press, 1971. Vol. I, 492 pp. \$10; Vol. II, 510 pp. \$10.

In these two volumes Kenneth E. Boulding has gathered together 63 of his articles and papers, arranged chronologically from his first on "displacement cost," written while a student at Oxford and published in the *Economic Journal* in 1934, to "Is Economics Culture-Bound?" his presidential address before the American Economic Association in 1970. Not all of the papers from this period of nearly four decades are included. Among those missing are most of his essays on society and ethics, already reprinted in *Beyond Economics* (1968), as well as his more recent papers on social conflict and the "grants economy," which will appear in volumes three and four.

The collection is impressive. Boulding has an original, inquiring mind, and his papers serve to remind us how broad, rich, and unsettled the field of economics really can be. Boulding, almost from the beginning of his career as an economist, felt uncomfortable with the dicta of accepted theory. He was willing to explore and develop new approaches, even though he himself had produced a standard text in economic analysis and still sees himself close to the "main line" of economic thought from Adam Smith to Marshall to Keynes and not as a "radical" (see "Introduction," I, viii).

Boulding's first reservations with respect to orthodox theory concerned the neglect of the element of time in the theory of the firm. In his 1942 article, "The Theory of the Firm in the Last Ten Years," Boulding argued for a more realistic analysis of the firm that would take into consideration its balance sheet, liquidity problems, and future uncertainties. In 1944, he extended this analysis with his "A Liquidity Preference Theory of Market Prices," an article which Boulding himself considers his most important contribution to economic theory, although,

he adds, no one has paid much attention to it. In it Boulding emphasized the importance of viewing market transactions as asset-transfers, claiming that the usual marginal productivity analysis is "very far from the truth" because it is too general, ignoring the individual's preferences with respect to the composition of his balance sheet (I, 143).

In his "Introduction" to Volume I, Boulding calls his early emphasis on assets his "principal heresy." It was an outgrowth of his initial interests in population theory, and he still believes that the economists' neglect of "stocks" to the exclusive attention given to "flows" is unfortunate. Boulding has applied the stock approach to a macro theory of distribution, to economic welfare, and to ecological problems. Today's belated recognition of the disastrous impact of economic growth upon the environment, Boulding claims, should bring about a reassessment by critics of the asset approach, because the "obvious" truth is that "a high consumption economy is going to deplete and pollute the earth" (I, ix).

In later developments of his own thinking, Boulding describes his interests turning more to questions of the scope, method, and justification of economics and to "beyond economics," or concerns with social systems in general. It is perhaps in these areas that Boulding's criticisms of economic orthodoxy is most pronounced. He attacks the acceptance by economists of restrictive jurisdictional boundaries as myopic and dangerous. The reason is, he says, that economic theory is a "parametric" system, good so long as the parameters do not shift. Only when economists extend their analysis to other parts of the "sociosphere" and recognize the need for analysis of the parameters themselves will they be able to avoid the charge that their long-run propositions are "very hard to test, and that indeed most of them are untested" ("The Legitimacy of Economics," II, 423).

Because of his discontent with the more limited views of his professional contemporaries, primarily on matters of integration with other social sciences, Boulding finds kinship with the early American institutionalists. They were dissenters who complained about the failure of orthodox economics to deal with empirical feedbacks, social forces, and dynamic changes. In "A New Look at Institutionalism" (1957)—a paper which Boulding labels the most important in the entire collection—he reveals what must be his own aspirations. What the institutionalists had accomplished, he says, is a side stream of dissent that gouged a channel "which the main

stream will one day follow—and in part is following" (II, 91).

Boulding has not strayed far from classical and neoclassical economics, however. Unlike Thorstein Veblen, he is no critic of equilibrium analysis; unlike Wesley C. Mitchell, his use of statistics is a rarity; and unlike John R. Commons, he has little interest in the legal framework of capitalism. Adam Smith, whom he quotes favorably in article after article, is very much his hero. In two articles, "A Theory of Philanthropy" (1962) and "The Grants Economy" (1969), his analysis is reminiscent of Alfred Marshall's attitude towards "chivalry" as an important motivation in society.

Whether or not Boulding will gouge a major or minor side channel in the history of economic thought, it is certain that his essays are invariably well-written and almost always instructive. One of his strong points is his knack of finding the apt phrase that can suddenly illuminate a subject others take pages to obfuscate. It was in his 1966 article, for example, that he dramatized the environmental crisis, then only dimly perceived, by contrasting the "economics of coming spaceship earth" with the past "cowboy economy" of seemingly limitless resources. Both economists and noneconomists will find enjoyable reading in these volumes.

—EVERETT J. BURTT, JR.

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A needed antidote

Systems Analysis in Public Policy—A Critique. By Ida R. Hoos. Berkeley, University of California Press, 1972. 259 pp. \$10.

During the past decade, there has been a rapid increase in the application of systems analysis to the management problems of the public sector. Although much has been written about the technical aspects and the results of particular applications, there have been few studies analyzing this experience and assessing the benefits and costs. Ida Hoos' book is an effort in this direction. Based on research sponsored by the National Aeronautics and Space Administration, her study examines the origins and applications of systems analysis, its uses and abuses, and its present impact and future implications.

The book begins with an introduction to the theory and practice of systems analysis. Attention

is turned next to applications in the Department of Defense where it was first adopted. In appraising the experience at the Pentagon, Dr. Hoos concludes that the approach is highly overrated as a military management tool and that events associated with strategy in Vietnam and with procurement at home indicate it still has to prove itself. The experience with the approach in civilian agencies is examined with much the same result: "PPBS seems to have failed to achieve any improvements in the executive budgetary process or to respond to the needs of Congress."

Systems analysis is then viewed as a case of technological transfer. Considerations influencing the adoption of the approach in civilian agencies are analyzed. This is followed by a discussion of the procedures employed in initiating, developing, and evaluating systems studies. Here Dr. Hoos argues that nonfeasibility and nonimplementation are important factors in the proliferation of systems studies.

Two chapters are devoted to a more detailed look at the application of the approach in waste management, supersonic transportation, education, and health. The author is highly critical of the way systems analysts bypass the problem of conflicting goals and values, introduce their own value judgments, and omit objectives that cannot be quantified.

In the last chapter, Dr. Hoos points her criticism at the futurists—those who use systems analysis to forecast or design the future. She makes the interesting point that the models employed by the futurists illustrate the basic philosophical conflict between free will and determinism. Convinced that systems analysis is not now an appropriate approach in dealing with human and social problems, she offers an alternative: "Competent research and experimentation, with conceptualization first, technique last, and professional judgment always."

Undoubtedly most practitioners of systems analysis will disagree with Dr. Hoos' overall evaluation. In this reviewer's opinion, the "state of the art" is not as bad as the author makes out, nor is it as good as many systems experts would have one believe. Since the book is described as a critique, it might be expected that emphasis would be placed on the weaknesses, limitations, and costs of the approach. Yet it is surprising that Dr. Hoos' research did not uncover some evidence suggesting at least a few noteworthy benefits—realized or potential. Her argument is weakened considerably by the failure to clearly identify the criteria for evaluation. More-

over, some of her empirical statements seem to be more in the nature of assertions than propositions supported by evidence. As a result, she leaves herself open to some of the same criticism that is levied against the system analyst.

Nevertheless, this book offers a number of valuable insights into the application of systems analysis in public policy. It provides a needed antidote to some of the more extreme claims of what the systems approach can accomplish. Public administrators, practitioners, and students of systems analysis should find it worth reading.

—DONALD R. KALDER

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Cumulative process of research

Essays in the Economics of Health and Medical Care. Edited by Victor R. Fuchs. New York, National Bureau of Economic Research, 1972. 239 pp. \$8, Columbia University Press, New York.

This collection of related papers, according to the editor, constitutes an "interim report" on research in progress at the National Bureau of Economic Research. Arranged in roughly chronological order, the essays together reflect a continuing effort to resolve certain basic problems of health economics. Fuchs' introduction, which provides valuable orientation to the reader, cites two major interests of the NBER program: (1) determinants of health levels in the United States and, particularly, the relative importance of medical care vis-à-vis socioeconomic factors; and (2) determinants of medical care cost and its two components—utilization and unit price. Yet another primary goal of the volume is to communicate the concerns and contributions of health economists to others in the health field.

The first four essays, by Fuchs, are nontechnical and straightforward, serving to introduce the non-economist to concepts which are developed in the five technical papers. These introductory essays stress the basic economic notion that, given limited resources (which include individuals' time), it is necessary to choose among competing alternative uses; since individuals place less than an infinite value on health, choices must be made between providing health services versus other goods and services, as well as between different types of health

services. Economists, Fuchs argues, can help to rationalize this decisionmaking process.

The complex relationship between medical services and health is a central issue in the volume. At the same time, environmental factors, such as income and education, may also significantly affect health. Moreover, although higher per capita income traditionally is cited as promoting higher health levels, Fuchs and others argue that the way of life associated with higher individual incomes or the effects of earning such incomes may now entail unfavorable consequences for an individual's health.

In explaining the rapid increases in health expenditures, Fuchs emphasizes the importance of the physician's influence in determining demand for health services and the effect on supply of the "technological imperative." Fuchs's concern with his medical tradition of "giving the best care that is technically possible," without regard to cost or to competing demands for scarce resources, leads to his call for physicians to "consider the economic as well as the medical consequences of their decisions."

Each of the five papers describing empirical research reflects a careful and thorough approach to its material, with considerable emphasis being given to the explanatory power of income. The effect of income on use of health services is explored by Morris Silver, who estimates positive income elasticities of demand for medical services. Two papers consider the impact of income on health. Auster, Leveson, and Sarachek find environmental factors relatively more important than medical services in the production of health, with income having a negative impact. Silver, in his second paper, however, finds higher incomes have a positive effect on health. It should be noted that, although some effort is made to develop a better measure of health, most of the discussions involving health status fall back on mortality indexes. The other papers included in the volume are by K. K. Ro and Fuchs, Rand, and Garrett.

As a final note, this reader had two relatively minor reservations about the book. First, to the extent that it represents an in-house compendium of NBER efforts, the volume is a relatively parochial view of current research on the relevant issues. A second quibble involves reprinting the article by Auster and others, with its many allusions to appendixes available upon request to the authors. It would have been useful to include at least some of these appendixes in the present volume, especially

since it was possible to include 20 pages of appendixes for the second paper by Silver, which appears for the first time here.

Such shortcomings do not, however, detract seriously from the book's strongest contribution to the literature: that of bringing together a series of nine papers which together describe the evolution of a substantial research program. Thus, the reader who is unfamiliar with the eight previously published papers will not only gain the information contained therein by reading the new volume, but also may acquire insight into the cumulative process by which research takes place.

—BARBARA H. KEHRER

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Language versus practice

Practice and Precedent in Labor Relations. By Walter E. Baer. Lexington, Mass. D.C. Heath and Co., 1972. 112 pp. \$10.

Labor arbitrators frequently must decide cases which result from apparent conflicts between the written language of the labor agreement and the day-to-day, on-the-job practices of labor and management. In *Practice and Precedent in Labor Relations*, Walter Baer focuses on how arbitrators evaluate these cases of language versus practice.

Of the book's five chapters, three contain summaries of arbitration awards dealing with specific aspects of the employment relationship: "Exclusive Agreement Clauses" (past practice and zipper clauses), "Benefits vs. Gratuity," and "Past Practices vs. Management Rights." The remaining chapters are "Clear Language vs. Conflicting Practices" and "Standards Determining a Fixed and Established Past Practice."

In his introduction, Baer states:

Much too often, from management's point of view and sometimes also from the union's point of view, arbitrators deem it permissible, when confronted with a conflict between clear and unambiguous contract clauses and an established past practice, to consider that practice as sufficient to have produced an amendment to the contract. . . . Providing clarity in this arena of organized confusion is certainly a formidable if not impossible task, but an attempt will be made here to at least reveal the arbitral rationale which produced these divergent conclusions. Also an attempt will be made to delineate the factors and

standards observed by arbitrators in determining whether in fact a fixed and established past practice exists between the parties.

The author has brought together a large number of arbitration cases, but his efforts suffer from several weaknesses. There is very little analysis or criticism of the arbitration awards. The reader intuitively feels that Baer likes or does not like a particular arbitration award, but in most cases Baer's reasons are not presented. It is only in his brief criticism and attack on the NLRB that his views are clearly articulated.

Arbitrators, as Baer readily acknowledges, commonly state in their awards that their decisions are based on the specific contract language and facts before them. Baer's approach, however, is to summarize the contract language, the facts of the case, or the arbitrator's findings—often without quoting enough of the language, facts, or findings to make the reader confident of his own or Baer's judgments about the wisdom of the arbitrator's conclusions. Baer thus "reveals the arbitral rationale," but does not furnish enough information about the case to provide the reader with a context for that rationale.

The book may be of some value to readers seeking illustrations of what arbitrators do in language-versus-practice disputes. Baer does "delineate the factors and standards" used by arbitrators. However, his observations are spread throughout the text and are not summarized in a way which would make the book convenient for reference purposes. Perhaps, also, practitioners may gain insights from the book which will help them avoid becoming involved in language-versus-practice disputes. On balance, however, the book is of limited usefulness and does not contribute significantly to the literature of the arbitration process.

—EDWARD B. KRINSKY

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Minority enterprises

Black Capitalism: Problems in Development—A Case Study of Los Angeles. By Frederick E. Case. New York, Praeger Publishers, Inc., 1972. 86 pp. \$11.

In the growing literature of black capitalism, this book covers a little bit of a number of areas germane to minority enterprises. In six short chapters

the author gives a brief employment picture of inner city Los Angeles from 1960 to 1969, describes various agencies involved in minority enterprises, covers some interviews with black businessmen about their problems establishing profitable operations, and finally details a series of case studies of small "mom and pop" businesses. The report concludes with a half dozen recommendations, ranging from giving loan officers "cultural acquaintance with inner city life" to "getting into businesses with regional and national markets." It concludes, "Minority employment efforts appear to offer more potential for success at less cost than do minority capitalism efforts." The book gives little substantiation for its positions, and these same "solutions" have been enunciated many times before in the literature (often with much more insight, analysis, and thoroughness).

One area of importance covered by the book (and generally omitted from previous discussions of the topic) is the black community's general misgivings about the operation of the Small Business Administration (SBA). From my experience with black capitalism endeavors in Iowa, I have run into the same criticisms of the SBA: undue paperwork, lack of understanding of minority problems, restrictive regulations, and lack of managerial assistance. The one bright spot in this mire of administration-community distrust is SBA's 8A program, which is generally greeted with enthusiasm.

The book's excerpts from interviews conducted in the Los Angeles area focus on the lack of managerial skills and limited capital available to blacks. It does, I believe, correctly point out that ad hoc university experts are of little help in providing managerial know-how to prospective black entrepreneurs. The technical assistance course of the Small Business Administration and its Service Corps of Retired Executives (SCORE) were also of little help. The problem really is that there is little knowledge of the reasons why people succeed or fail in business. (This is explored to some extent in an article by Bernard H. Booms and James E. Ward, Jr., "The Cons of Black Capitalism: Will This Policy Cure Urban Ills?" in *Business Horizons*, October 1969.)

While the book gives a number of examples of undercapitalization of black businesses and recommends blacks should "not be encouraged to undertake marginal business operations" (good advice to any businessman), it does not reach the heart of the problem—the tendency of blacks (and other minor-

ities) to "think of small-scale operations." Several writers have elaborated on this problem, but essentially it's difficult for any individual unfamiliar with capital projects, often working at a modest salary, to realize the large sums of money necessary not only to start a business but also to cover the initial rough development stage.

Overall, the book is generally pessimistic about the potential for black capitalism and concurs with the criticism (often cited in the book) put forth by Andrew F. Brimmer, a black member of the Federal Reserve Board. While there are other supporters of this skepticism (often for completely different reasons, for example, Carl Ofari, *The Myth of Black Capitalism*), there is—again speaking from my experience in Iowa—a small but influential and vocal group of blacks who want to "get their share of the action" through ownership of business.

This is not to say that potential businessmen should not be forewarned of possible failures and pitfalls of small business enterprises, but it cautions against imposing the rationale of the white world for the desires of blacks and other minorities.

As to language and style, the chapters of the book do not integrate well, and there are a few irritations such as references not fully cited and language that is hard to follow, particularly in the opening chapter.

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Paper pollution

An Economic Analysis of the Pulp and Paper Industry. By John A. Guthrie, Pullman, Washington State University Press, 1972. 236 pp. \$12.

Paper Profits: Pollution in the Pulp and Paper Industry. By Leslie Allan and others. New York, The Council on Economic Priorities, 1972. 503 pp. \$10, The MIT Press, Cambridge, Mass.

An Economic Analysis Of The Pulp And Paper Industry is something of a misnomer for Professor Guthrie's book. This is not so much an economic as a general discussion of the industry; and it is much more a description than an analysis. It is for the most part an uncritical recitation of facts and

figures. It questions nothing. It draws no significant conclusions. The author seems to hold no opinions.

This might have been more appropriately billed as a primer on the pulp and paper industry. As such it is not without value. It offers a light, simply put overview of the industry. It defines terms, provides some historical background, but goes no further.

The few allusions to economic theory are on a very elementary level, bordering on common sense. Probably the most rigorous "economic" exercise in the entire book is the fitting of trend lines to some historical data and the extrapolation of these into the future.

A typical passage is the following:

The pulp and paper industry is acutely conscious of the problems of air pollution from kraft mills, and substantial and continuing efforts are made to eliminate such pollution. With existing methods of control, total sulphurous emissions can be reduced some 90-95 percent. Furthermore the industry claims that, ordinarily, there are not enough harmful gases in the ambient air to produce physiological damage to human beings.

From here the author goes on to discuss the unpleasant odors of these emissions. Granting the industry's consciousness of pollution problems, what is its attitude toward abatement? How effective, indeed how widespread, are the "substantial" efforts to eliminate pollution? How credible are these claims that the emissions are not harmful? Mr. Guthrie offers no analysis whatsoever.

By contrast, *Paper Profits* provides just enough background information for the reader to understand the authors' point—which, invariably, is that the pulp and paper industry is a major, largely irresponsible polluter. Part I of what might be termed a low-key expose of pollution in the basic pulp and paper industry consists of a brief explanation of the nature of the pollution, the processes which generate this pollution, and the available technology for abatement.

Part II is a company-by-company, plant-by-plant documentation of who pollutes, how, and where. This covers virgin pulp operations of the 24 largest firms in the industry. Documented for each mill are present pollution control efforts, an evaluation of the adequacy of these efforts, the company's apparent motivation for performing as it does, and future plans.

Corporate attitudes toward pollution abatement are analyzed, and fingers are pointed where deemed

appropriate. But credit is also given where credit is considered due.

Part I of *Paper Profits* is an interesting, informative introduction to the problem of pollution in the pulp and paper industry. Part II may prove a useful reference.

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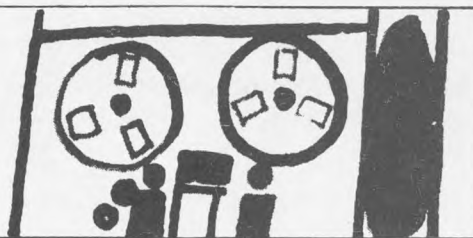
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Current Labor Statistics



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1. Employment status of the noninstitutional population, 16 years and over, 1947-72

[Numbers in thousands]

Year	Total non-institutional population	Total labor force		Civilian labor force						Not in labor force
		Number	Percent of population	Total	Employed			Unemployed		
					Total	Agriculture	Nonagri-cultural industries	Number	Percent of labor force	
1947	103,418	60,941	58.9	59,350	57,039	7,891	49,148	2,311	3.9	42,477
1948	104,527	62,080	59.4	60,621	58,344	7,629	50,713	2,276	3.8	42,447
1949	105,611	62,903	59.6	61,286	57,649	7,656	49,990	3,637	5.9	42,708
1950	106,645	63,858	59.9	62,208	58,920	7,160	51,760	3,288	5.3	42,787
1951	107,721	65,117	60.4	62,017	59,962	6,726	53,239	2,055	3.3	42,604
1952	108,823	65,730	60.4	62,138	60,254	6,501	53,753	1,883	3.0	43,093
1953	110,601	66,560	60.2	63,015	61,181	6,261	54,922	1,834	2.9	44,041
1954	111,671	66,993	60.0	63,643	60,110	6,206	53,903	3,532	5.5	44,678
1955	112,732	68,072	60.4	65,023	62,171	6,449	55,724	2,852	4.4	44,660
1956	113,811	69,409	61.0	66,552	63,802	6,283	57,517	2,750	4.1	44,402
1957	115,065	69,729	60.6	66,929	64,071	5,947	58,123	2,859	4.3	45,336
1958	116,363	70,275	60.4	67,639	63,036	5,586	57,450	4,602	6.8	46,088
1959	117,881	70,921	60.2	68,369	64,630	5,565	59,065	3,740	5.5	46,960
1960	119,759	72,142	60.2	69,628	65,778	5,458	60,318	3,852	5.5	47,617
1961	121,343	73,031	60.2	70,459	65,746	5,200	60,546	4,714	6.7	48,312
1962	122,981	73,442	59.7	70,614	66,702	4,944	61,759	3,911	5.5	49,539
1963	125,154	74,571	59.6	71,833	67,762	4,687	63,076	4,070	5.7	50,583
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

NOTE: Figures for period prior to January 1972 in the tables are not strictly comparable with subsequent data because of the introduction of 1970 Census data into the estimation procedures. For example, the civilian labor force and employment totals were raised by more than 300,000 as a result of the census adjustment. An explanation of changes and an indication of the differences appear in "Revisions in the Current Population Survey" in the February 1972 issue of *Employment and Earnings*. A

subsequent census adjustment, primarily affecting whites and Negro and other races groups, was introduced into the survey in March 1973. As a result, the white labor force and employment levels were lowered by about 150,000, while Negro levels were raised by 210,000. Consequently, the overall labor force and employment showed a net increase of about 60,000. Comparisons with data prior to these two dates should take these adjustments into account.

2. Employment status, by color, sex, and age, seasonally adjusted, quarterly averages

[Numbers in thousands]

Characteristic	Annual average		1970		1971				1972 ¹				1973		
	1971	1972 ¹	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
WHITE															
Civilian labor force.....	74,790	76,958	73,650	74,175	74,217	74,435	74,903	75,604	76,304	76,784	77,274	77,514	77,830	78,582	78,857
Men, 20 years and over....	43,088	43,961	42,495	42,740	42,710	43,012	43,235	43,385	43,626	43,850	44,116	44,245	44,275	44,356	44,551
Women, 20 years and over....	25,030	25,822	24,686	24,858	24,904	24,856	24,984	25,363	25,552	25,786	26,052	25,908	26,121	26,663	26,905
Both sexes, 16-19 years....	6,672	7,175	6,469	6,577	6,604	6,566	6,684	6,856	7,125	7,147	7,105	7,360	7,433	7,563	7,401
Employed.....	70,716	73,074	70,138	70,168	70,144	70,377	70,830	71,498	72,301	72,789	73,396	73,855	74,309	75,122	75,558
Men, 20 years and over....	41,347	42,362	41,007	41,025	40,981	41,270	41,476	41,653	41,961	42,184	42,567	42,750	42,893	43,011	43,319
Women, 20 years and over....	23,707	24,554	23,550	23,584	23,566	23,535	23,679	24,033	24,314	24,460	24,735	24,719	24,942	25,521	25,740
Both sexes, 16-19 years....	5,662	6,158	5,581	5,559	5,597	5,572	5,675	5,811	6,026	6,144	6,093	6,386	6,474	6,590	6,500
Unemployed.....	4,074	3,884	3,512	4,006	4,073	4,058	4,073	4,106	4,002	3,995	3,878	3,659	3,520	3,461	3,299
Men, 20 years and over....	1,741	1,599	1,488	1,715	1,729	1,742	1,760	1,732	1,665	1,666	1,550	1,495	1,382	1,346	1,232
Women, 20 years and over....	1,324	1,268	1,135	1,274	1,337	1,321	1,305	1,329	1,238	1,326	1,317	1,190	1,179	1,142	1,166
Both sexes, 16-19 years....	1,010	1,017	888	1,018	1,007	994	1,009	1,045	1,099	1,003	1,012	974	958	973	901
Unemployment rate.....	5.4	5.0	4.8	5.4	5.5	5.5	5.4	5.4	5.2	5.2	5.0	4.7	4.5	4.4	4.2
Men, 20 years and over....	4.0	3.6	3.5	4.0	4.0	4.0	4.1	4.0	3.8	3.8	3.5	3.4	3.1	3.0	2.8
Women, 20 years and over....	5.3	4.9	4.6	5.1	5.4	5.3	5.2	5.2	4.8	5.1	5.1	4.6	4.5	4.3	4.3
Both sexes, 16-19 years....	15.1	14.2	13.7	15.5	15.2	15.1	15.1	15.2	15.4	14.0	14.2	13.2	12.9	12.9	12.2
NEGRO AND OTHER															
Civilian labor force.....	9,322	9,585	9,221	9,202	9,255	9,244	9,396	9,384	9,488	9,547	9,597	9,686	9,822	9,957	10,122
Men, 20 years and over....	4,773	4,847	4,764	4,745	4,753	4,756	4,789	4,790	4,779	4,847	4,874	4,885	4,915	5,043	5,085
Women, 20 years and over....	3,769	3,889	3,667	3,664	3,728	3,730	3,808	3,810	3,883	3,859	3,860	3,955	4,032	3,985	4,103
Both sexes, 16-19 years....	781	849	790	793	775	758	799	784	831	840	863	845	874	929	933
Employed.....	8,403	8,629	8,443	8,351	8,365	8,350	8,454	8,435	8,480	8,631	8,648	8,726	8,941	9,062	9,197
Men, 20 years and over....	4,428	4,518	4,481	4,435	4,421	4,430	4,433	4,422	4,431	4,508	4,534	4,596	4,643	4,733	4,789
Women, 20 years and over....	3,442	3,546	3,412	3,379	3,412	3,403	3,474	3,478	3,528	3,544	3,522	3,588	3,687	3,682	3,771
Both sexes, 16-19 years....	533	565	550	537	531	516	547	535	521	578	592	542	611	646	637
Unemployed.....	919	956	778	851	890	895	942	949	1,008	916	949	960	881	895	925
Men, 20 years and over....	345	329	283	310	331	326	356	369	343	339	340	290	272	310	296
Women, 20 years and over....	326	343	255	285	316	327	334	332	355	315	338	367	345	302	333
Both sexes, 16-19 years....	248	284	240	256	244	242	252	249	310	262	271	303	263	282	296
Unemployment rate.....	9.9	10.0	8.4	9.2	9.6	9.7	10.0	10.1	10.6	9.6	9.9	9.9	9.0	9.0	9.1
Men, 20 years and over....	7.2	6.8	5.9	6.5	7.0	6.9	7.4	7.7	7.2	7.0	7.0	5.9	5.5	6.1	5.8
Women, 20 years and over....	8.7	8.8	7.0	7.8	8.5	8.8	8.8	8.7	9.1	8.2	8.8	9.9	8.6	7.6	8.1
Both sexes, 16-19 years....	31.7	33.5	30.4	32.3	31.5	31.9	31.5	31.8	37.3	31.2	31.4	35.3	30.1	30.4	31.7

¹ See note, table 1, regarding the introduction of 1970 census population controls.

NOTE: These data have been adjusted to reflect seasonal experience through

December 1972. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*.3. Full-time and part-time status¹ of the civilian labor force, seasonally adjusted²

[Numbers in thousands]

Employment status	1972			1973									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FULL TIME													
Total, 16 years and over:													
Civilian labor force.....	74,688	74,402	74,715	74,935	75,244	75,557	75,604	75,816	76,181	75,963	75,821	76,056	76,649
Employed.....	70,947	70,969	71,224	71,491	71,755	72,136	72,213	72,487	72,984	72,847	72,637	72,837	73,576
Unemployed.....	3,741	3,433	3,491	3,444	3,489	3,421	3,391	3,329	3,197	3,116	3,184	3,219	3,073
Unemployment rate.....	5.0	4.6	4.7	4.6	4.6	4.5	4.5	4.4	4.2	4.1	4.2	4.2	4.0
PART TIME													
Total, 16 years and over:													
Civilian labor force.....	12,559	12,679	12,705	12,220	12,589	12,708	12,873	12,787	12,456	12,598	12,824	13,519	13,214
Employed.....	11,495	11,616	11,640	11,249	11,600	11,754	11,792	11,690	11,386	11,439	11,755	12,447	12,259
Unemployed.....	1,064	1,063	1,065	971	989	954	1,081	1,097	1,070	1,048	1,069	1,072	960
Unemployment rate.....	8.5	8.4	8.4	7.9	7.9	7.5	8.4	8.6	8.6	8.4	8.3	7.9	7.3

¹ Persons on part-time schedules for economic reasons are included in the full-time employed category; unemployed persons are allocated by whether seeking full-time or part-time work.² These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*.

4. Employment and unemployment, by age and sex, seasonally adjusted

(In thousands)

Employment status	Annual average		1972 ¹			1973									
	1971	1972 ¹	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
TOTAL															
Total labor force.....	86,929	88,991	89,651	89,454	89,707	89,235	89,961	90,629	90,700	90,739	91,247	91,121	90,958	91,694	92,053
Civilian labor force.....	84,113	86,542	87,236	87,023	87,267	86,921	87,569	88,268	88,350	88,405	88,932	88,810	88,651	89,403	89,764
Employed.....	79,120	81,702	82,397	82,525	82,780	82,555	83,127	83,889	83,917	84,024	84,674	84,614	84,434	85,127	85,695
Agriculture.....	3,387	3,472	3,658	3,556	3,650	3,501	3,424	3,480	3,311	3,275	3,403	3,516	3,443	3,370	3,471
Nonagriculture.....	75,732	78,230	78,739	78,969	79,130	79,054	79,703	80,409	80,606	80,749	81,271	81,098	80,991	81,757	82,224
Unemployed.....	4,993	4,840	4,839	4,498	4,487	4,366	4,442	4,379	4,433	4,381	4,258	4,196	4,217	4,276	4,069
MEN, 20 YEARS AND OVER															
Total labor force.....	50,308	50,881	51,184	51,079	51,150	50,970	51,054	51,323	51,228	51,259	51,409	51,533	51,411	51,539	51,788
Civilian labor force.....	47,861	48,808	49,162	49,044	49,152	49,001	49,095	49,389	49,303	49,347	49,519	49,646	49,528	49,667	49,918
Employed.....	45,775	46,880	47,227	47,308	47,475	47,361	47,448	47,711	47,622	47,668	47,913	48,140	47,979	48,132	48,446
Agriculture.....	2,446	2,501	2,630	2,599	2,664	2,557	2,475	2,516	2,442	2,422	2,488	2,476	2,491	2,462	2,488
Nonagriculture.....	43,329	44,379	44,597	44,709	44,811	44,804	44,973	45,195	45,180	45,242	45,425	45,664	45,488	45,670	45,958
Unemployed.....	2,086	1,928	1,935	1,736	1,677	1,640	1,647	1,678	1,681	1,679	1,606	1,506	1,549	1,535	1,472
WOMEN, 20 YEARS AND OVER															
Civilian labor force.....	28,799	29,710	29,931	29,779	29,869	29,870	30,141	30,339	30,513	30,569	30,895	31,017	30,992	31,023	31,033
Employed.....	27,149	28,100	28,281	28,293	28,357	28,296	28,662	28,849	29,073	29,177	29,377	29,499	29,486	29,538	29,660
Agriculture.....	537	560	585	547	566	526	559	585	543	504	535	620	556	505	530
Nonagriculture.....	26,612	27,540	27,696	27,746	27,791	27,770	28,103	28,264	28,530	28,673	28,842	28,879	28,930	29,033	29,130
Unemployed.....	1,650	1,610	1,650	1,486	1,512	1,574	1,479	1,490	1,440	1,392	1,518	1,518	1,506	1,485	1,373
BOTH SEXES, 16-19 YEARS															
Civilian labor force.....	7,453	8,024	8,143	8,200	8,246	8,050	8,333	8,540	8,534	8,489	8,518	8,147	8,131	8,713	8,813
Employed.....	6,195	6,722	6,889	6,924	6,948	6,898	7,017	7,329	7,222	7,179	7,384	6,975	6,969	7,457	7,589
Agriculture.....	404	411	443	410	420	418	390	379	326	349	380	420	396	403	453
Nonagriculture.....	5,791	6,311	6,446	6,514	6,528	6,480	6,627	6,950	6,896	6,830	7,004	6,555	6,573	7,054	7,136
Unemployed.....	1,257	1,302	1,254	1,276	1,298	1,152	1,316	1,211	1,312	1,310	1,134	1,172	1,162	1,256	1,224

¹ See note, table 1, regarding the introduction of 1970 census population controls.NOTE: These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*.5. Employment totals and unemployment rates, seasonally adjusted,¹ quarterly averages

(Numbers in thousands)

Characteristic	Annual average		1970		1971				1972				1973		
	1971	1972	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
EMPLOYMENT	79,120	81,702	78,571	78,513	78,512	78,765	79,277	79,922	80,797	81,474	82,033	82,567	83,190	84,205	84,725
White-collar workers.....	38,252	39,092	37,961	38,051	37,933	38,046	38,429	38,577	38,704	38,840	39,319	39,515	40,035	40,012	40,491
Professional and technical. Managers and administrators, except farm.....	11,070	11,459	11,201	11,123	10,923	11,077	11,105	11,171	11,293	11,385	11,577	11,585	11,723	11,549	11,844
Sales workers.....	8,675	8,032	8,238	8,346	8,673	8,678	8,769	8,570	8,017	7,897	8,018	8,195	8,458	8,535	8,632
Clerical workers.....	5,066	5,354	4,883	4,943	5,056	5,011	5,049	5,145	5,277	5,353	5,385	5,403	5,471	5,477	5,385
Blue-collar workers.....	13,440	14,247	13,639	13,639	13,281	13,280	13,506	13,691	14,117	14,205	14,338	14,333	14,382	14,451	14,630
Craftsmen and kindred workers.....	27,184	28,576	27,676	27,548	27,059	27,044	27,132	27,505	28,270	28,585	28,593	28,835	29,309	30,032	30,046
Operatives.....	10,178	10,810	10,159	10,141	10,058	10,132	10,156	10,361	10,856	10,845	10,808	10,736	11,034	11,451	11,388
Nonfarm laborers.....	12,983	13,549	13,777	13,676	12,951	12,956	12,930	13,096	13,385	13,555	13,489	13,763	14,069	14,300	14,307
Service workers.....	4,022	4,217	3,740	3,731	4,050	3,955	4,046	4,048	4,029	4,185	4,296	4,336	4,206	4,281	4,351
Farm workers.....	10,676	10,966	9,829	9,862	10,582	10,582	10,725	10,813	10,804	11,054	11,012	10,993	10,816	11,198	11,213
Unemployment rate.....	5.9	5.6	5.2	5.8	6.0	5.9	6.0	5.9	5.8	5.7	5.6	5.3	5.0	4.9	4.8
White-collar workers.....	3.5	3.4	2.9	3.4	3.6	3.5	3.5	3.4	3.5	3.3	3.4	3.3	3.0	2.9	2.9
Professional and technical. Managers and administrators, except farm.....	2.9	2.4	2.1	2.4	3.1	2.9	2.9	2.9	2.6	2.2	2.4	2.5	2.2	2.0	2.2
Sales workers.....	1.6	1.8	1.4	1.6	1.6	1.6	1.5	1.7	1.8	1.6	1.8	1.9	1.5	1.5	1.3
Clerical workers.....	4.3	4.3	3.9	4.7	4.2	4.5	4.3	4.0	4.1	4.0	4.5	4.4	3.6	3.6	3.7
Blue-collar workers.....	4.8	4.7	4.0	4.8	4.9	4.8	4.8	4.7	4.8	4.9	4.7	4.4	4.3	4.2	4.2
Craftsmen and kindred workers.....	7.4	6.5	6.8	7.4	7.5	7.4	7.4	7.3	7.0	6.6	6.3	5.8	5.6	5.3	5.2
Operatives.....	4.7	4.3	4.4	4.6	4.9	4.2	5.2	4.8	4.4	4.4	4.2	4.1	3.8	3.6	3.9
Nonfarm laborers.....	8.3	6.9	7.5	8.5	8.5	8.6	8.2	7.9	7.7	7.2	6.7	6.0	6.1	5.6	5.3
Service workers.....	10.8	10.3	10.3	10.9	10.5	11.0	10.3	11.5	11.6	10.4	9.9	9.1	8.5	8.7	8.2
Farm workers.....	6.3	6.3	5.4	6.0	6.2	6.3	6.4	6.4	6.2	6.1	6.6	6.3	5.9	5.6	5.6
Unemployment rate.....	2.6	2.6	2.8	2.8	2.9	2.1	2.7	2.6	2.4	2.6	2.5	2.9	2.4	3.1	2.3

¹ These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*.

NOTE: In addition to the 1970 census population control adjustment in total employment (see note, table 1), reclassification of census occupations introduced in

January 1971 affected comparisons of 1971 occupational employment data and those of prior years. Moreover, 1972 data are not completely comparable with 1971 because of the addition of a question to the Current Population Survey in December 1971 relating to major activities and duties.

6. Unemployed persons by reason for unemployment, seasonally adjusted

[Numbers in thousands]

Reason for unemployment	1972			1973									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
NUMBER OF UNEMPLOYED													
Lost last job.....	1,988	1,882	1,846	1,758	1,724	1,677	1,652	1,597	1,713	1,584	1,609	1,659	1,467
Left last job.....	685	646	672	550	671	745	653	605	659	663	631	666	671
Reentered labor force.....	1,450	1,375	1,322	1,409	1,377	1,296	1,484	1,509	1,203	1,301	1,381	1,308	1,236
Never worked before.....	638	621	629	679	684	714	704	765	620	629	597	637	604
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
Lost last job.....	41.8	41.6	41.3	40.0	38.7	37.8	36.8	35.7	40.8	37.9	38.1	38.9	36.9
Left last job.....	14.4	14.3	15.0	12.5	15.1	16.8	14.5	13.5	15.7	15.9	15.0	15.6	16.9
Reentered labor force.....	30.5	30.4	29.6	32.1	30.9	29.2	33.0	33.7	28.7	31.1	32.7	30.6	31.1
Never worked before.....	13.4	13.7	14.1	15.4	15.4	16.1	15.7	17.1	14.8	15.1	14.2	14.9	15.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE													
Lost last job.....	2.3	2.2	2.1	2.0	2.0	1.9	1.9	1.8	1.9	1.8	1.8	1.9	1.6
Left last job.....	.8	.7	.8	.6	.8	.8	.7	.7	.7	.7	.7	.7	.7
Reentered labor force.....	1.7	1.6	1.5	1.6	1.6	1.5	1.7	1.7	1.4	1.5	1.6	1.5	1.4
Never worked before.....	.7	.7	.7	.8	.8	.8	.8	.9	.7	.7	.7	.7	.7

NOTE: These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical

seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*

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

Age and sex	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total, 16 years and over.....	5.9	5.6	5.5	5.2	5.1	5.0	5.1	5.0	5.0	5.0	4.8	4.7	4.8	4.8	4.5
16 to 19 years.....	16.9	16.2	15.4	15.6	15.7	14.3	15.8	14.2	15.4	15.4	13.3	14.4	14.3	14.4	13.9
16 and 17 years.....	18.7	18.5	17.6	18.3	17.5	17.3	18.8	17.2	19.4	18.7	17.2	16.3	16.5	16.9	16.3
18 and 19 years.....	15.5	14.6	13.7	13.7	14.4	12.2	13.5	12.2	12.6	13.4	10.0	12.7	12.7	12.8	12.0
20 to 24 years.....	9.9	9.3	9.2	8.4	8.7	8.2	7.9	7.9	8.1	8.1	7.7	8.0	7.9	7.9	6.6
25 years and over.....	4.0	3.6	3.6	3.3	3.2	3.3	3.3	3.2	3.1	3.1	3.2	3.0	3.0	2.9	2.9
25 to 54 years.....	4.2	3.7	3.6	3.4	3.4	3.4	3.4	3.4	3.3	3.2	3.3	3.0	3.1	3.0	2.9
55 years and over.....	3.4	3.3	3.4	2.8	3.0	2.9	2.7	2.6	2.5	2.5	2.6	2.8	2.8	2.6	2.7
Male, 16 years and over.....	5.3	4.9	4.8	4.6	4.4	4.2	4.3	4.3	4.4	4.4	4.1	3.9	4.0	3.9	2.9
16 to 19 years.....	16.6	15.9	14.5	15.7	15.4	13.4	14.4	13.4	14.7	14.7	12.8	14.0	14.1	13.7	13.2
16 and 17 years.....	18.6	18.2	17.1	18.4	17.4	17.1	18.0	17.1	20.0	18.0	16.7	16.5	16.2	15.2	15.8
18 and 19 years.....	15.0	14.0	12.5	13.7	13.7	11.0	11.3	10.6	10.7	12.3	9.6	11.4	12.4	12.8	11.0
20 to 24 years.....	10.3	9.2	8.8	8.5	8.2	7.7	7.5	7.5	7.9	7.8	7.4	6.9	7.4	7.0	6.1
25 years and over.....	3.5	3.1	3.1	2.8	2.7	2.6	2.7	2.7	2.7	2.7	2.5	2.4	2.4	2.4	2.4
25 to 54 years.....	3.5	3.1	2.9	2.8	2.6	2.7	2.8	2.8	2.8	2.7	2.5	2.3	2.4	2.3	2.2
55 years and over.....	3.4	3.3	3.5	2.7	3.0	2.5	2.3	2.2	2.4	2.6	2.8	2.9	2.6	2.8	2.8
Female, 16 years and over.....	6.9	6.6	6.7	6.1	6.3	6.4	6.3	6.1	6.0	5.9	5.9	5.9	5.9	6.0	5.6
16 to 19 years.....	17.2	16.7	16.6	15.4	16.2	15.4	17.5	15.2	16.2	16.3	13.9	14.9	14.5	15.3	14.7
16 and 17 years.....	18.7	18.8	18.4	18.1	17.6	17.7	20.0	17.4	18.7	19.6	17.7	15.9	16.7	19.0	17.1
18 and 19 years.....	16.2	15.2	15.2	13.8	15.4	13.7	16.1	14.0	14.8	14.7	10.4	14.2	13.1	12.8	13.1
20 to 24 years.....	9.6	9.3	9.7	8.2	9.2	8.9	8.3	8.4	8.3	8.4	8.0	9.4	8.6	8.9	7.3
25 years and over.....	4.9	4.6	4.5	4.3	4.2	4.4	4.3	4.1	3.9	3.7	4.2	3.9	4.0	3.8	3.7
25 to 54 years.....	5.3	4.9	4.8	4.6	4.6	4.7	4.5	4.3	4.3	4.1	4.7	4.3	4.3	4.1	4.0
55 years and over.....	3.4	3.4	3.2	3.0	3.0	3.7	3.5	3.4	2.6	2.3	2.4	2.6	3.2	2.4	2.4

NOTE: These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical

seasonally adjusted series, see the February 1973 issue of *Employment and Earnings*.

8. Unemployment rates, seasonally adjusted

Selected categories	Average annual		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Total (all civilian workers).....	5.9	5.6	5.5	5.2	5.1	5.0	5.1	5.0	5.0	5.0	4.8	4.7	4.8	4.8	4.5
Men, 20 years and over.....	4.4	4.0	3.9	3.5	3.4	3.3	3.4	3.4	3.4	3.4	3.2	3.0	3.1	3.1	2.9
Women, 20 years and over.....	5.7	5.4	5.5	5.0	5.1	5.3	4.9	4.9	4.7	4.6	4.9	4.9	4.9	4.8	4.4
Both sexes, 16-19 years.....	16.9	16.2	15.4	15.6	15.7	14.3	15.8	14.2	15.4	15.4	13.3	14.4	14.3	14.4	13.9
White.....	5.4	5.0	5.0	4.6	4.6	4.6	4.6	4.4	4.5	4.4	4.3	4.1	4.2	4.2	4.1
Negro and other.....	9.9	10.0	10.0	10.1	9.6	8.9	9.0	9.0	9.1	9.4	8.5	9.3	8.7	9.4	8.3
Household heads.....	3.7	3.3	3.4	2.9	2.9	2.9	3.0	3.0	3.0	2.9	2.9	2.7	2.8	2.7	2.7
Married men.....	3.2	2.8	2.8	2.5	2.4	2.4	2.4	2.5	2.4	2.3	2.3	2.1	2.1	2.1	2.1
Full-time workers.....	5.5	5.1	5.0	4.6	4.7	4.6	4.6	4.5	4.5	4.4	4.2	4.1	4.2	4.2	4.0
Unemployed 15 weeks and over ¹	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	.9	.9	.9	.8	.9	.9	.9
State insured ²	4.0	3.5	3.2	3.1	3.1	2.9	2.8	2.9	2.7	2.7	2.8	2.7	2.7	2.7	2.7
Labor force time lost ³	6.4	6.0	5.8	5.4	5.3	5.3	5.4	5.2	5.3	5.3	5.1	5.2	5.2	5.1	5.0
Vietnam Era veterans, men: ⁴															
20 to 29 years.....	8.8	7.3	6.6	6.2	5.8	5.9	5.7	5.9	6.2	5.9	6.0	5.6	6.1	5.4	4.7
20 to 24 years.....	12.3	10.6	9.7	10.0	8.9	8.6	10.4	9.2	9.1	8.7	10.5	8.4	10.1	7.6	8.0
25 to 29 years.....	5.8	4.9	4.5	3.7	3.8	4.2	2.9	3.9	4.5	4.3	3.5	4.2	4.1	4.2	3.2
30 to 34 years.....	3.6	3.0	2.8	3.9	4.1	2.3	3.2	4.0	2.8	2.0	2.3	1.5	1.9	4.2	2.6
Nonveterans, men:															
20 to 29 years.....	7.3	6.8	6.5	6.2	6.3	6.0	5.7	6.2	6.1	6.4	5.6	5.6	6.0	5.6	4.9
20 to 24 years.....	9.5	8.8	8.5	8.0	8.1	7.4	6.6	7.0	7.7	7.6	6.6	6.4	7.0	6.5	5.7
25 to 29 years.....	4.7	4.2	3.8	3.8	3.9	4.0	4.3	5.1	3.8	4.7	4.1	4.5	4.6	4.2	3.8
30 to 34 years.....	3.7	3.0	2.8	2.3	2.7	2.5	3.4	3.0	2.7	2.9	2.1	2.0	2.4	2.2	2.0
OCCUPATION															
White-collar workers.....	3.5	3.4	3.5	3.1	3.3	3.2	3.0	2.9	3.1	2.8	2.8	2.9	3.0	2.9	2.7
Professional and managerial.....	2.4	2.1	2.3	2.1	2.2	2.1	1.9	1.8	1.9	1.8	1.7	1.8	1.8	1.9	1.9
Sales workers.....	4.3	4.3	4.4	4.3	4.3	3.9	3.5	3.5	3.9	3.6	3.4	3.6	3.9	3.6	3.1
Clerical workers.....	4.8	4.7	4.8	3.9	4.4	4.5	4.3	4.2	4.4	4.0	4.1	4.1	4.2	4.2	3.6
Blue-collar workers.....	7.4	6.5	6.0	5.8	5.6	5.6	5.7	5.4	5.4	5.4	5.3	5.3	5.2	5.1	5.1
Craftsmen and kindred workers.....	4.7	4.3	4.1	4.2	3.9	3.7	3.8	3.8	3.7	3.6	3.5	4.1	3.8	3.7	3.6
Operatives.....	8.3	6.9	6.3	5.9	5.8	6.3	6.2	5.8	5.6	5.7	5.7	5.3	5.5	5.2	5.3
Nonfarm laborers.....	10.8	10.3	9.3	9.1	8.8	8.4	8.9	8.2	8.7	8.9	8.7	8.2	8.2	8.1	8.0
Service workers.....	6.3	6.3	6.4	6.3	6.2	5.5	6.1	6.2	6.0	5.7	5.0	5.6	5.5	5.8	5.1
INDUSTRY															
Nonagricultural private wage and salary workers ⁵	6.2	5.7	5.6	5.3	5.2	5.1	5.1	4.9	4.9	4.9	4.7	4.7	4.7	4.8	4.5
Construction.....	10.4	10.3	10.3	10.5	9.8	9.0	8.7	8.5	9.4	9.0	7.9	9.6	8.2	9.9	9.1
Manufacturing.....	6.8	5.6	5.1	4.6	4.4	5.0	4.5	4.6	4.3	4.5	4.4	3.8	4.1	4.2	3.7
Durable goods.....	7.0	5.4	4.5	4.2	3.9	4.6	4.3	4.5	3.8	4.1	3.7	3.3	3.6	4.1	3.6
Nondurable goods.....	6.5	5.7	5.8	5.2	5.2	5.5	4.9	4.9	5.1	5.1	5.3	4.5	4.8	4.4	3.9
Transportation and public utilities.....	3.8	3.5	3.3	2.8	2.7	2.9	3.2	3.0	2.5	2.8	3.6	2.7	3.1	2.9	2.9
Wholesale and retail trade.....	6.4	6.4	6.5	6.3	6.1	5.6	5.9	5.3	5.7	5.6	5.2	6.0	6.0	5.6	5.2
Finance and service industries.....	5.1	4.8	5.0	4.5	4.9	4.4	4.7	4.7	4.5	4.1	4.0	4.0	4.1	3.9	4.1
Government wage and salary workers.....	2.9	2.9	3.0	2.9	3.0	2.3	2.6	2.6	3.3	2.7	2.6	3.0	2.7	3.0	2.7
Agricultural wage and salary workers.....	7.9	7.7	10.0	8.7	6.4	6.4	7.3	6.5	8.1	9.7	6.8	5.0	7.6	5.8	6.8

¹ Unemployment rate calculated as a percent of civilian labor force.² Insured unemployment under State programs as a percent of average covered employment.³ Man-hours lost by the unemployed and persons on part time for economic reasons (that is, those persons who worked less than 35 hours during the survey week because of slack work, job changing during the week, material shortages, inability to find full-time work, and so on) as a percent of potentially available labor force man-hours.⁴ Vietnam Era veterans are those who served after August 4, 1964. Over 90 percent of Vietnam Era veterans of all ages are 20 to 34 years old.⁵ Includes mining, not shown separately.NOTE: These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1973 issue of **Employment and Earnings**.

9. Duration of unemployment, seasonally adjusted

[Numbers in thousands]

Period	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
Less than 5 weeks.....	2,234	2,223	2,239	2,151	2,026	2,060	2,324	2,138	2,184	2,257	2,233	2,213	2,240	2,167	1,960
5 to 14 weeks.....	1,578	1,458	1,455	1,348	1,444	1,375	1,265	1,330	1,485	1,290	1,202	1,268	1,205	1,351	1,303
15 weeks and over.....	1,181	1,158	1,117	1,068	1,001	919	895	859	763	802	775	750	796	778	776
15 to 26 weeks.....	665	597	589	579	530	515	530	479	460	450	453	482	457	489	439
27 weeks and over.....	517	562	528	489	471	404	365	380	303	352	322	268	339	289	337
15 weeks and over as a percent of civilian labor force.....	1.4	1.3	1.3	1.2	1.1	1.1	1.0	1.0	.9	.9	.9	.8	.9	.9	.9
Average (mean duration, in weeks).....	11.4	12.1	11.9	11.6	11.4	10.9	10.5	10.5	9.9	10.0	9.8	9.6	10.0	9.4	10.4

NOTE: These data have been adjusted to reflect seasonal experience through December 1972. For a discussion of seasonal adjustment procedures and the historical

seasonally adjusted series, see the February 1973 issue of **Employment and Earnings**.

10. Unemployment insurance and employment service operations ¹

[All items except average benefits amounts are in thousands]

Item	1972				1973											
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
All programs: ²																
Insured unemployment.....	1,554	1,512	1,692	1,993	2,333	2,250	2,075	1,828	1,610	1,523	1,640	1,572	1,440			
State unemployment insurance program: ³																
Initial claims ^{4 5}	795	955	1,119	1,347	1,539	1,000	916	920	887	865	1,231	-----	-----			
Insured unemployment ⁶ (average weekly volume).....	1,388	1,357	1,507	1,801	2,124	2,062	1,898	1,669	1,465	1,384	1,505	1,436	1,299			
Rate of insured unemployment ⁷	2.6	2.5	2.7	3.3	3.8	3.7	3.4	2.8	2.5	2.4	2.5	2.4	2.1			
Weeks of unemployment compensated.....	4,686	4,969	5,292	5,699	8,123	7,210	7,707	6,315	5,975	5,083	5,290	-----	-----			
Average weekly benefit amount for total unemployment.....	\$60.16	\$56.95	\$57.59	\$58.10	\$58.69	\$59.08	\$59.09	\$59.41	\$58.44	\$58.12	\$57.42	-----	-----			
Total benefits paid.....	\$280,078	\$280,257	\$307,165	\$342,197	\$465,288	\$414,957	\$440,880	\$363,825	\$339,220	\$286,639	\$296,334	-----	-----			
Unemployment compensation for ex-service-men:																
Initial claims ^{3 4}	33	31	30	35	39	35	33	26	27	28	32	-----	-----			
Insured unemployment (average weekly volume).....	78	69	67	70	76	76	72	64	58	56	59	59	53			
Weeks of unemployment compensated.....	335	291	288	268	340	292	326	274	267	225	240	-----	-----			
Total benefits paid.....	\$20,929	\$18,248	\$18,000	\$16,722	\$21,212	\$17,974	\$20,101	\$17,014	\$16,681	\$14,258	\$15,325	-----	-----			
Unemployment compensation for Federal civilian employees: ^{8 10}																
Initial claims ⁴	12	14	14	12	18	11	11	11	12	15	31	-----	-----			
Insured unemployment ⁶ (average weekly volume).....	38	38	39	39	39	37	34	31	28	28	39	42	42			
Weeks of unemployment compensated.....	151	153	164	154	177	149	155	129	127	114	127	-----	-----			
Total benefits paid.....	\$9,124	\$9,271	\$9,982	\$9,406	\$10,590	\$8,802	\$9,202	\$7,696	\$7,672	\$6,782	\$7,752	-----	-----			
Railroad unemployment insurance:																
Applications ¹¹	8	6	12	1	7	3	26	9	3	7	13	7	6			
Insured unemployment (average weekly volume).....	19	16	20	16	20	17	15	13	10	9	9	9	10			
Number of payments ¹²	37	38	39	38	60	41	58	38	28	21	18	21	20			
Average amount of benefit payment ¹³	\$95.87	\$95.92	\$96.99	\$102.29	\$103.81	\$95.35	\$66.66	\$74.74	\$91.34	\$93.50	\$96.64	\$96.22	\$92.52			
Total benefits paid ¹⁴	\$3,354	\$3,591	\$3,546	\$3,757	\$5,918	\$3,850	\$3,651	\$2,885	\$2,291	\$1,700	\$1,524	\$1,760	\$1,612			
Employment service: ¹⁵																
New applicants.....	-----	897	768	689	1,026	794	858	769	991	1,108	-----	-----	-----			
Nonfarm placements.....	-----	416	362	287	330	315	384	383	443	526	-----	-----	-----			

¹ Includes data for Puerto Rico² Represents an unduplicated count of insured unemployment under the State, Ex-servicemen, and UCFE programs and the Railroad Unemployment Insurance Act. Includes claims filed under Extended Duration (ED) provisions of regular State laws.³ Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.⁴ Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transition claims under State programs.⁵ Includes interstate claims for the Virgin Islands.⁶ Number of workers reporting the completion of at least 1 week of unemployment.⁷ The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.⁸ Excludes data on claims and payments made jointly with other programs⁹ Includes the Virgin Islands.¹⁰ Excludes data on claims and payments made jointly with State programs.¹¹ 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.¹² Payments are for unemployment in 14-day registration periods.¹³ The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.¹⁴ Adjusted for recovery of overpayments and settlement of underpayments.¹⁵ = preliminary.

NOTE: Dashes indicate data not available.

SOURCE: U.S. Department of Labor, Office of Financial and Management Information Systems for all items except railroad unemployment insurance which is prepared by the U.S. Railroad Retirement Board.

11. Employees on nonagricultural payrolls, by industry division, 1947-72

[In thousands]

Year	Total	Mining	Contract construction	Manufacturing	Transportation and public utilities	Wholesale and retail trade			Finance, insurance, and real estate	Services	Government		
						Total	Wholesale trade	Retail trade			Total	Federal	State and local
1947	43,881	955	1,982	15,545	4,166	8,955	2,361	6,595	1,754	5,050	5,474	1,892	3,582
1948	44,891	994	2,169	15,582	4,189	9,272	2,489	6,783	1,829	5,206	5,650	1,863	3,787
1949	43,778	930	2,165	14,441	4,001	9,264	2,487	6,778	1,857	5,264	5,856	1,908	3,948
1950	45,222	901	2,333	15,241	4,034	9,386	2,518	6,868	1,919	5,382	6,026	1,928	4,098
1951	47,849	929	2,603	16,393	4,226	9,742	2,606	7,136	1,991	5,576	6,389	2,302	4,087
1952	48,825	898	2,634	16,632	4,248	10,004	2,687	7,317	2,069	5,730	6,609	2,420	4,188
1953	50,232	866	2,623	17,549	4,290	10,247	2,727	7,520	2,146	5,867	6,645	2,305	4,340
1954	49,022	791	2,612	16,314	4,084	10,235	2,739	7,496	2,234	6,002	6,751	2,188	4,563
1955	50,675	792	2,802	16,882	4,141	10,535	2,796	7,740	2,335	6,274	6,914	2,187	4,727
1956	52,408	822	2,999	17,243	4,244	10,858	2,884	7,974	2,429	6,536	7,277	2,209	5,069
1957	52,894	828	2,923	17,174	4,241	10,886	2,893	7,992	2,477	6,749	7,616	2,217	5,399
1958	51,363	751	2,778	15,945	3,976	10,750	2,848	7,902	2,519	6,806	7,839	2,191	5,648
1959 ¹	53,313	732	2,960	16,675	4,011	11,127	2,946	8,182	2,594	7,130	8,083	2,233	5,850
1960	54,234	712	2,885	16,796	4,004	11,391	3,004	8,388	2,669	7,423	8,353	2,270	6,083
1961	54,042	672	2,816	16,326	3,903	11,337	2,993	8,344	2,731	7,664	8,594	2,279	6,315
1962	55,596	650	2,902	16,853	3,906	11,566	3,056	8,511	2,800	8,028	8,890	2,340	6,550
1963	56,702	635	2,963	16,995	3,903	11,778	3,104	8,675	2,877	8,325	9,225	2,358	6,868
1964	58,331	634	3,050	17,274	3,951	12,160	3,189	8,971	2,957	8,709	9,596	2,348	7,248
1965	60,815	632	3,186	18,062	4,036	12,716	3,312	9,404	3,023	9,087	10,074	2,378	7,696
1966	63,955	627	3,275	19,214	4,151	13,245	3,437	9,808	3,100	9,551	10,792	2,564	8,227
1967	65,857	613	3,208	19,447	4,261	13,606	3,525	10,081	3,225	10,099	11,398	2,719	8,679
1968	67,915	606	3,285	19,781	4,310	14,084	3,611	10,473	3,382	10,623	11,845	2,737	9,109
1969	70,284	619	3,435	20,167	4,429	14,639	3,733	10,906	3,564	11,229	12,202	2,758	9,444
1970	70,593	623	3,381	19,349	4,493	14,914	3,812	11,102	3,688	11,612	12,535	2,705	9,830
1971	70,645	602	3,411	18,529	4,442	15,142	3,809	11,333	3,796	11,869	12,856	2,664	10,191
1972	72,764	607	3,521	18,933	4,495	15,683	3,918	11,765	3,927	12,309	13,290	2,650	10,640

¹ Data include Alaska and Hawaii beginning 1959. This inclusion has resulted in an increase of 212,000 (0.4 percent) in the nonagricultural total for the March 1959 benchmark month.

NOTE: The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9). These series are based

upon establishment reports which cover all full-time and part-time employees in nonagricultural establishments who worked during, or received pay for any part of, the pay period which includes the 12th of the month. Therefore, persons who worked in more than one establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

12. Employees on nonagricultural payrolls, by State

[In thousands]

State	Sept. 1972	Aug. 1973	Sept. 1973 ¹	State	Sept. 1972	Aug. 1973	Sept. 1973 ¹
Alabama	1,077.6	1,108.7	1,108.3	Montana	215.7	224.7	222.8
Alaska	112.2	119.3	116.5	Nebraska	522.6	527.8	535.6
Arizona	655.3	697.1	704.4	Nevada	230.9	252.1	251.4
Arkansas	597.5	629.9	623.0	New Hampshire	283.1	306.0	298.3
California	7,334.1	7,547.0	7,590.4	New Jersey	2,688.9	2,752.9	2,745.1
Colorado	816.4	839.0	841.8	New Mexico	334.5	354.1	355.0
Connecticut	1,196.3	1,222.3	1,236.5	New York	7,036.5	7,113.8	7,055.0
Delaware	233.4	235.3	236.1	North Carolina	1,924.7	1,953.9	1,976.9
District of Columbia	676.3	697.3	677.9	North Dakota	182.7	184.1	187.8
Florida	2,391.0	2,534.3	2,558.3	Ohio	3,985.0	4,058.6	4,104.5
Georgia	1,681.0	1,719.8	1,722.3	Oklahoma	812.1	830.5	835.1
Hawaii	305.6	322.3	312.6	Oregon	804.9	830.0	843.4
Idaho ¹	242.3	250.6	254.0	Pennsylvania	4,406.1	4,476.4	4,461.2
Illinois	4,293.0	4,399.9	4,383.3	Rhode Island	361.9	364.9	358.8
Indiana	1,947.2	1,989.1	2,007.3	South Carolina	934.0	979.8	981.5
Iowa	952.7	964.4	976.8	South Dakota	192.6	202.0	200.7
Kansas ¹	730.7	752.6	763.9	Tennessee	1,479.4	1,517.5	1,520.2
Kentucky	1,009.9	1,043.3	1,049.7	Texas	3,936.7	4,074.9	4,106.6
Louisiana	1,130.3	1,146.0	1,150.0	Utah	406.6	419.8	426.9
Maine	343.9	349.7	345.2	Vermont	155.8	164.7	163.3
Maryland	1,362.6	1,403.2	1,407.9	Virginia	1,593.0	1,637.0	1,646.0
Massachusetts	2,303.9	2,336.1	2,352.6	Washington	1,124.5	1,146.5	1,165.2
Michigan ¹	3,164.8	3,191.4	3,248.3	West Virginia	546.0	543.4	543.9
Minnesota	1,383.2	1,434.4	1,448.5	Wisconsin	1,619.0	1,645.0	1,661.2
Mississippi	639.6	653.2	663.0	Wyoming	124.3	133.8	130.0
Missouri ¹	1,725.6	1,756.8	1,774.9				

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

² = preliminary.

NOTE: Current State employment data by major industry division are published in *Employment and Earnings*, table B-7. For historical data in available industry detail, see the annual compendium, *Employment and Earnings, States and Areas, 1939-71* (BLS Bulletin 1370-9).

SOURCE: State agencies in cooperation with U.S. Department of Labor, Bureau of Labor Statistics. More detailed industry data are available from the State agencies. For addresses see inside back cover of *Employment and Earnings*.

13. Employees on nonagricultural payrolls, by industry division and major manufacturing group¹

[In thousands]

Industry division and group	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
TOTAL	70,645	72,764	74,118	74,449	74,778	73,343	73,724	74,255	74,861	75,404	76,308	75,368	75,686	76,251	76,830
MINING	602	607	609	607	603	598	598	598	603	608	642	644	648	641	639
CONTRACT CONSTRUCTION	3,411	3,521	3,782	3,630	3,373	3,155	3,184	3,294	3,442	3,616	3,837	3,934	3,981	3,938	3,918
MANUFACTURING	18,529	18,933	19,359	19,414	19,423	19,279	19,420	19,521	19,586	19,667	20,002	19,729	20,018	20,127	20,135
Production workers ²	13,434	13,838	14,225	14,281	14,282	14,130	14,258	14,345	14,394	14,457	14,739	14,458	14,727	14,844	14,850
Durable goods	10,565	10,884	11,165	11,241	11,289	11,253	11,359	11,431	11,498	11,575	11,755	11,608	11,676	11,803	11,847
Production workers ²	7,598	7,919	8,173	8,248	8,290	8,243	8,334	8,397	8,452	8,514	8,665	8,507	8,560	8,686	8,727
Ordnance and accessories.....	192.1	188.2	190.5	198.0	197.9	197.3	197.0	195.7	193.0	191.2	191.7	192.4	192.3	190.5	190.1
Lumber and wood products.....	580.8	612.0	623.1	620.8	614.5	606.3	611.9	616.9	617.6	624.9	648.5	644.0	650.6	643.9	642.3
Furniture and fixtures.....	458.5	492.7	508.6	511.7	512.1	511.3	511.4	513.7	514.5	516.8	527.6	512.3	530.3	527.2	532.0
Stone, clay, and glass products.....	633.7	660.0	679.4	676.1	666.1	653.4	661.9	672.1	681.6	692.3	708.3	709.3	711.5	707.1	708.3
Primary metal industries.....	1,227.4	1,234.8	1,255.0	1,261.1	1,271.6	1,274.5	1,283.6	1,287.4	1,297.9	1,310.3	1,331.8	1,322.4	1,326.1	1,330.7	1,327.8
Fabricated metal products.....	1,328.2	1,371.1	1,403.0	1,412.2	1,418.3	1,411.6	1,423.1	1,430.2	1,439.5	1,448.3	1,468.5	1,441.2	1,457.2	1,468.8	1,478.0
Machinery, except electrical.....	1,805.3	1,864.2	1,899.4	1,920.1	1,950.1	1,961.0	1,985.0	2,002.1	2,016.3	2,022.7	2,054.1	2,036.2	2,048.5	2,070.0	2,081.3
Electrical equipment.....	1,768.5	1,833.0	1,889.4	1,905.2	1,919.7	1,920.7	1,939.2	1,947.0	1,958.2	1,970.0	2,007.5	1,992.9	2,005.8	2,026.7	2,042.6
Transportation equipment.....	1,723.9	1,746.8	1,801.6	1,817.7	1,833.5	1,827.7	1,844.8	1,855.7	1,869.2	1,876.7	1,882.3	1,834.3	1,803.8	1,883.6	1,880.1
Instruments and related products.....	437.0	455.9	466.4	471.4	473.8	475.2	478.8	482.3	479.3	488.4	494.8	494.0	502.3	502.8	505.5
Miscellaneous manufacturing	409.6	425.2	448.9	447.1	431.7	414.2	422.6	427.8	430.7	433.0	439.4	428.5	447.1	451.2	459.0
Nondurable goods	7,964	8,049	8,194	8,173	8,134	8,026	8,061	8,090	8,088	8,092	8,247	8,121	834.2	832.4	828.8
Production workers ²	5,836	5,919	6,052	6,033	5,992	5,887	5,924	5,948	5,942	5,943	6,074	5,951	6,167	6,158	6,123
Food and kindred products.....	1,758.3	1,751.1	1,815.3	1,761.7	1,727.0	1,684.0	1,673.5	1,670.9	1,665.4	1,673.4	1,725.4	1,759.4	1,834.2	1,836.0	1,798.3
Tobacco manufactures.....	76.3	72.0	76.6	74.9	75.7	71.3	70.5	69.9	68.4	67.6	68.5	67.8	79.6	81.8	81.1
Textile mill products.....	957.0	991.0	1,003.2	1,012.9	1,020.3	1,011.3	1,019.6	1,022.0	1,020.5	1,020.2	1,035.8	1,006.8	1,029.5	1,025.7	1,029.3
Apparel and other textile products.....	1,335.7	1,335.3	1,356.8	1,362.0	1,343.4	1,316.9	1,350.0	1,359.0	1,354.4	1,350.7	1,364.7	1,270.4	1,346.4	1,348.5	1,349.6
Paper and allied products.....	683.6	697.0	705.6	709.9	711.5	703.5	704.8	709.5	708.9	711.3	727.2	716.3	727.1	722.4	721.2
Printing and publishing.....	1,071.2	1,079.6	1,088.4	1,092.8	1,097.3	1,091.0	1,090.6	1,093.8	1,095.4	1,091.9	1,100.2	1,097.2	1,097.8	1,096.6	1,102.6
Chemicals and allied products.....	1,008.2	1,002.2	1,007.8	1,009.5	1,011.1	1,007.8	1,007.4	1,016.2	1,021.1	1,022.8	1,038.1	1,041.0	1,040.6	1,037.3	1,035.4
Petroleum and coal products.....	190.6	189.6	189.7	189.0	187.3	184.7	180.6	182.5	180.8	181.7	189.8	191.5	193.3	192.0	191.9
Rubber and plastics products, nec.....	580.9	627.0	647.4	656.9	660.5	660.2	668.2	671.7	677.0	673.9	691.6	682.0	691.6	689.0	685.0
Leather and leather products.....	302.4	304.4	302.8	303.0	300.1	294.8	295.3	294.5	295.7	298.2	305.5	288.4	302.3	294.5	293.2
TRANSPORTATION AND PUBLIC UTILITIES	4,442	4,495	4,549	4,554	4,558	4,510	4,507	4,539	4,559	4,593	4,661	4,653	4,659	4,674	4,675
WHOLESALE AND RETAIL TRADE	15,142	15,683	15,887	16,162	16,669	15,865	15,776	15,880	16,088	16,200	16,335	16,262	16,279	16,373	16,518
Wholesale trade.....	3,809	3,918	3,982	3,987	3,998	3,973	3,974	3,989	4,000	4,014	4,096	4,112	4,136	4,142	4,176
Retail trade.....	11,333	11,765	11,905	12,175	12,671	11,892	11,802	11,891	12,088	12,186	12,239	12,150	12,143	12,231	12,342
FINANCE, INSURANCE, AND REAL ESTATE	3,796	3,927	3,957	3,965	3,971	3,959	3,978	4,000	4,019	4,040	4,089	4,113	4,121	4,081	4,074
SERVICES	11,869	12,309	12,463	12,472	12,474	12,406	12,530	12,627	12,771	12,865	12,999	12,982	13,009	12,983	13,066
Hotels and other lodging places.....	793.1	849.0	833.0	812.5	814.0	801.8	820.4	825.4	844.0	868.0	934.3	999.0	1,015.7	923.7	-----
Personal services.....	935.1	913.0	914.5	914.5	909.8	897.1	892.2	898.3	899.5	901.8	904.1	897.6	889.6	892.4	-----
Medical and other health services.....	3,256.8	3,441.5	3,495.1	3,512.7	3,524.8	3,545.1	3,572.8	3,593.9	3,611.1	3,630.8	3,684.9	3,704.1	3,722.3	3,729.2	-----
Educational services.....	1,138.4	1,166.8	1,228.8	1,250.1	1,242.8	1,209.8	1,252.9	1,262.2	1,257.2	1,245.0	1,154.1	1,040.7	1,019.3	1,165.0	-----
GOVERNMENT	12,856	13,290	13,512	13,645	13,707	13,571	13,731	13,796	13,793	13,815	13,743	13,051	12,971	13,434	13,805
Federal.....	2,664	2,650	2,627	2,631	2,671	2,619	2,619	2,623	2,631	2,638	2,631	2,616	2,617	2,604	2,595
State and local.....	10,191	10,640	10,885	11,014	11,036	10,952	11,112	11,173	11,162	11,177	11,112	10,435	10,354	10,830	11,210

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

² Production workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance,

repair, janitorial, and watchman services, product development, auxiliary production for plant's own use (e.g., powerplant), and recordkeeping and other services closely associated with the above production operations.

P=preliminary.

r= revised.

NOTE: For additional detail, see **Employment and Earnings**, table B-2.

14. Employees on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted ¹
 [In thousands]

Industry division and group	1972			1973									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ²	Oct. ²
TOTAL	73,584	73,835	74,002	74,252	74,715	74,914	75,105	75,321	75,526	75,478	75,747	75,972	76,277
MINING	608	608	607	610	612	610	608	608	629	631	634	633	638
CONTRACT CONSTRUCTION	3,561	3,524	3,459	3,498	3,594	3,604	3,571	3,620	3,654	3,680	3,676	3,694	3,689
MANUFACTURING	19,210	19,312	19,402	19,463	19,586	19,643	19,727	19,782	19,856	19,804	19,861	19,876	19,981
Production workers ²	14,082	14,175	14,256	14,295	14,402	14,451	14,521	14,551	14,614	14,566	14,611	14,607	14,705
Durable goods	11,112	11,194	11,270	11,326	11,421	11,463	11,534	11,602	11,654	11,646	11,692	11,707	11,793
Production workers ²	8,124	8,200	8,266	8,307	8,386	8,425	8,483	8,528	8,573	8,562	8,597	8,600	8,678
Ordnance and accessories.....	191	196	196	197	198	197	195	193	192	193	192	189	191
Lumber and wood products.....	616	621	623	624	628	630	631	629	628	628	631	633	635
Furniture and fixtures.....	503	505	508	511	514	517	520	523	527	522	527	524	526
Stone, clay, and glass products.....	671	673	673	674	682	687	687	692	693	697	694	694	700
Primary metal industries.....	1,274	1,278	1,286	1,284	1,286	1,280	1,288	1,299	1,308	1,308	1,323	1,339	1,348
Fabricated metal products.....	1,393	1,400	1,407	1,419	1,432	1,436	1,448	1,456	1,457	1,459	1,459	1,457	1,468
Machinery, except electrical.....	1,909	1,932	1,950	1,965	1,973	1,990	2,006	2,021	2,040	2,040	2,065	2,076	2,092
Electrical equipment.....	1,878	1,888	1,908	1,925	1,945	1,957	1,970	1,984	2,008	2,009	2,006	2,009	2,030
Transportation equipment.....	1,782	1,800	1,814	1,817	1,845	1,846	1,869	1,877	1,871	1,858	1,859	1,849	1,860
Instruments and related products.....	466	470	472	477	481	484	481	490	494	494	500	502	505
Miscellaneous manufacturing.....	429	431	433	433	437	439	439	438	436	438	436	435	438
Nondurable goods	8,098	8,118	8,132	8,137	8,165	8,180	8,193	8,180	8,202	8,158	8,169	8,169	8,188
Production workers ²	5,958	5,975	5,990	5,988	6,016	6,026	6,038	6,023	6,041	6,004	6,014	6,007	6,027
Food and kindred products.....	1,746	1,743	1,744	1,749	1,751	1,748	1,746	1,736	1,729	1,720	1,706	1,714	1,729
Tobacco manufactures.....	68	70	72	72	73	76	76	76	76	76	72	70	71
Textile mill products.....	1,003	1,008	1,015	1,014	1,023	1,023	1,023	1,022	1,024	1,021	1,026	1,025	1,029
Apparel and other textile products.....	1,343	1,347	1,345	1,337	1,349	1,350	1,357	1,351	1,351	1,319	1,337	1,336	1,336
Paper and allied products.....	706	706	707	708	711	715	712	719	719	716	721	720	721
Printing and publishing.....	1,085	1,088	1,090	1,093	1,092	1,094	1,096	1,095	1,100	1,101	1,100	1,099	1,099
Chemicals and allied products.....	1,010	1,013	1,014	1,016	1,014	1,018	1,021	1,025	1,030	1,034	1,031	1,036	1,037
Petroleum and coal products.....	189	189	189	189	185	186	183	182	186	186	189	190	191
Rubber and plastics products, nec.....	644	652	657	664	672	674	680	676	687	690	691	684	681
Leather and leather products.....	304	302	299	295	295	296	299	298	300	295	296	295	294
TRANSPORTATION AND PUBLIC UTILITIES	4,540	4,549	4,558	4,574	4,580	4,580	4,591	4,593	4,597	4,598	4,617	4,632	4,666
WHOLESALE AND RETAIL TRADE	15,839	15,911	15,946	16,013	16,114	16,163	16,217	16,256	16,262	16,294	16,352	16,393	16,468
Wholesale trade.....	3,958	3,963	3,970	4,001	4,022	4,029	4,044	4,046	4,072	4,071	4,099	4,125	4,151
Retail trade.....	11,881	11,948	11,976	12,012	12,092	12,134	12,173	12,210	12,190	12,223	12,253	12,268	12,317
FINANCE, INSURANCE, AND REAL ESTATE	3,969	3,981	3,991	3,995	4,014	4,024	4,031	4,044	4,049	4,048	4,064	4,077	4,086
SERVICES	12,451	12,497	12,537	12,621	12,682	12,716	12,746	12,776	12,820	12,828	12,906	12,996	13,053
Hotels and other lodging places.....	860	868	867	861	872	867	865	871	888	877	890	899	899
Personal services.....	909	908	907	905	903	904	901	896	891	898	894	895	895
Medical and other health services.....	3,495	3,513	3,532	3,556	3,580	3,601	3,622	3,642	3,663	3,678	3,711	3,733	3,733
Educational services.....	1,184	1,187	1,188	1,179	1,191	1,193	1,196	1,194	1,206	1,196	1,196	1,224	1,224
GOVERNMENT	13,406	13,453	13,502	13,478	13,533	13,574	13,614	13,642	13,659	13,595	13,637	13,671	13,696
Federal.....	2,639	2,644	2,650	2,634	2,628	2,631	2,628	2,641	2,613	2,588	2,599	2,609	2,608
State and local.....	10,767	10,809	10,852	10,844	10,905	10,943	10,986	11,001	11,046	11,007	11,038	11,062	11,088

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment). Data shown in this table are not comparable with those published in issues prior to July 1973. Comparable data from January 1968 forward appear in the June 1973 issue of *Employment and Earnings*. For comparable data prior to January 1968 see *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

² Production workers include working foremen and all nonsupervisory workers including leadmen and trainees engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance,

repair, janitorial, and watchman services, product development, auxiliary production for plant's own use (e.g., powerplant), and recordkeeping and other services closely associated with the above production operations.

p = preliminary.

r = revised.

NOTE: These data have been seasonally adjusted to reflect experience through March 1973. For additional detail, see June 1973 issue of *Employment and Earnings*.

15. Labor turnover rates in manufacturing, 1964 to date

[Per 100 employees]

Year	Annual average	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total accessions													
1964	4.0	3.6	3.4	3.7	3.8	3.9	5.1	4.4	5.1	4.8	4.0	3.2	2.6
1965	4.3	3.8	3.5	4.0	3.8	4.1	5.6	4.5	5.4	5.5	4.5	3.9	3.1
1966	5.0	4.6	4.2	4.9	4.6	5.1	6.7	5.1	6.4	6.1	5.1	3.9	2.9
1967	4.4	4.3	3.6	3.9	3.9	4.6	5.9	4.7	5.5	5.3	4.7	3.7	2.8
1968	4.6	4.2	3.8	4.0	4.3	4.7	5.9	5.0	5.8	5.7	5.1	3.9	3.1
1969	4.7	4.6	3.9	4.4	4.5	4.8	6.6	5.1	5.6	5.9	4.9	3.6	2.9
1970	4.0	4.0	3.6	3.7	3.7	4.2	5.4	4.4	5.1	4.7	3.8	3.0	2.4
1971	3.9	3.5	3.1	3.5	3.6	4.0	4.9	4.0	5.3	4.8	3.9	3.3	2.5
1972	4.4	4.1	3.7	4.0	4.0	4.8	5.2	4.6	6.0	5.3	4.8	3.6	2.7
1973		4.6	4.0	4.4	4.5	5.3	5.9	5.1	6.2	5.7			
New hires													
1964	2.6	2.0	2.0	2.2	2.4	2.5	3.6	2.9	3.4	3.5	2.8	2.2	1.6
1965	3.1	2.4	2.4	2.8	2.6	3.0	4.3	3.2	3.9	4.0	3.5	2.9	2.2
1966	3.8	3.2	3.1	3.7	3.6	4.1	5.6	3.9	4.8	4.7	4.2	3.1	2.1
1967	3.3	3.0	2.7	2.8	2.8	3.3	4.6	3.3	4.0	4.1	3.7	2.8	2.0
1968	3.5	3.0	2.7	2.9	3.2	3.6	4.7	3.7	4.3	4.6	4.0	2.9	2.2
1969	3.7	3.3	3.0	3.4	3.5	3.8	5.4	3.9	4.3	4.8	4.0	2.8	2.1
1970	2.8	2.9	2.5	2.6	2.6	2.8	3.9	3.0	3.5	3.4	2.7	1.9	1.4
1971	2.5	2.0	1.9	2.2	2.3	2.6	3.5	2.7	3.4	3.4	2.7	2.2	1.6
1972	3.3	2.6	2.4	2.7	2.9	3.6	4.1	3.4	4.4	4.2	3.8	2.9	2.0
1973		3.5	3.1	3.5	3.6	4.4	5.0	4.1	5.0	4.8			
Total separations													
1964	3.9	4.0	3.3	3.5	3.5	3.6	3.5	4.4	4.3	5.1	4.2	3.6	3.7
1965	4.1	3.7	3.1	3.4	3.7	3.6	3.6	4.3	5.1	5.6	4.5	3.9	4.1
1966	4.6	4.0	3.6	4.1	4.3	4.3	4.4	5.3	5.8	6.6	4.8	4.3	4.2
1967	4.6	4.5	4.0	4.6	4.3	4.2	4.3	4.8	5.3	6.2	4.7	4.0	3.9
1968	4.6	4.4	3.9	4.1	4.1	4.3	4.1	5.0	6.0	6.3	5.0	4.1	3.8
1969	4.9	4.5	4.0	4.4	4.5	4.6	4.6	5.3	6.2	6.6	5.4	4.3	4.2
1970	4.8	4.8	4.3	4.4	4.8	4.6	4.4	5.3	5.6	6.0	5.3	4.3	4.1
1971	4.2	4.2	3.5	3.7	3.9	3.7	3.8	4.8	5.5	5.3	4.3	3.7	3.8
1972	4.2	4.0	3.5	3.8	3.7	3.9	4.2	4.8	5.4	5.3	4.3	3.7	3.6
1973		4.2	3.7	4.2	4.1	4.3	4.4	5.1	6.5	5.7			
Quits													
1964	1.5	1.2	1.1	1.2	1.3	1.5	1.4	1.5	2.1	2.7	1.7	1.2	1.0
1965	1.9	1.4	1.3	1.5	1.7	1.7	1.7	1.8	2.6	3.5	2.2	1.7	1.4
1966	2.6	1.9	1.8	2.3	2.5	2.5	2.5	2.5	3.6	4.5	2.8	2.1	1.7
1967	2.3	2.1	1.9	2.1	2.2	2.2	2.3	2.1	3.2	4.0	2.5	1.9	1.5
1968	2.5	2.0	1.9	2.1	2.2	2.4	2.3	2.4	3.8	4.2	2.8	2.1	1.6
1969	2.7	2.3	2.1	2.4	2.6	2.7	2.6	2.7	4.0	4.4	3.0	2.1	1.6
1970	2.1	2.1	1.9	2.0	2.1	2.1	2.1	2.1	3.0	3.3	2.1	1.4	1.2
1971	1.8	1.5	1.3	1.5	1.6	1.7	1.8	1.8	2.8	2.9	1.9	1.5	1.2
1972	2.2	1.7	1.6	1.9	2.0	2.2	2.2	2.2	3.6	3.4	2.5	1.9	1.6
1973		2.2	2.1	2.5	2.4	2.7	2.8	2.8	4.5	3.9			
Layoffs													
1964	1.7	2.0	1.6	1.6	1.4	1.4	1.3	2.1	1.4	1.5	1.8	1.7	2.1
1965	1.4	1.6	1.2	1.2	1.3	1.1	1.1	1.8	1.6	1.3	1.4	1.5	1.9
1966	1.2	1.3	1.0	1.0	1.0	.9	1.0	2.0	1.1	1.0	1.1	1.3	1.7
1967	1.4	1.5	1.3	1.5	1.3	1.1	1.1	1.9	1.2	1.2	1.3	1.3	1.6
1968	1.2	1.5	1.2	1.1	1.0	1.0	.9	1.8	1.3	1.1	1.2	1.2	1.4
1969	1.2	1.2	1.0	1.0	.9	.9	.9	1.6	1.1	1.1	1.3	1.3	1.8
1970	1.8	1.7	1.5	1.6	1.7	1.5	1.5	2.3	1.7	1.7	2.2	2.1	2.2
1971	1.6	1.9	1.4	1.4	1.4	1.2	1.2	2.1	1.8	1.5	1.5	1.5	1.8
1972	1.1	1.4	1.1	1.1	1.0	.8	1.1	1.7	.9	.9	.9	1.0	1.3
1973		1.0	.8	.8	.7	.6	.6	1.4	.8	.7			

p=preliminary.

NOTE: The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series because (1) the labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth, and (2) the turnover series excludes personnel changes caused by strikes, but the employment series reflects the influence of such stoppages.

16. Labor turnover rates in manufacturing, by major industry group ¹

(Per 100 employees)

Major industry group	Accession rates						Separation rates								
	Total			New hires			Total			Quits			Layoffs		
	Sept. 1972	Aug. 1973	Sept. 1973 ^p	Sept. 1972	Aug. 1973	Sept. 1973 ^p	Sept. 1972	Aug. 1973	Sept. 1973 ^p	Sept. 1972	Aug. 1973	Sept. 1973 ^p	Sept. 1972	Aug. 1973	Sept. 1973 ^p
MANUFACTURING	5.3	6.2	5.7	4.2	5.0	4.8	5.3	6.5	5.7	3.4	4.5	3.9	0.9	0.8	0.7
Seasonally adjusted ²	4.4	4.7	4.7	3.3	3.8	3.7	4.1	5.1	4.4	2.1	3.0	2.4	1.0	.9	.7
Durable goods	4.8	5.5	5.2	3.9	4.5	4.4	4.6	5.9	5.1	2.9	4.0	3.4	.7	.6	.6
Ordnance and accessories.....	3.0	2.4	-----	1.9	1.6	-----	2.4	3.1	-----	1.4	1.6	-----	.4	.8	-----
Lumber and wood products.....	7.0	7.6	6.7	6.4	6.9	6.1	8.1	9.1	7.9	6.2	7.2	5.8	.7	.7	.9
Furniture and fixtures.....	8.2	9.6	8.6	7.4	8.8	7.9	7.5	10.1	8.1	5.7	7.9	6.2	.4	.6	.4
Stone, clay, and glass products.....	4.6	5.7	5.4	3.9	5.1	4.7	5.2	6.9	6.0	3.5	4.9	4.3	.7	.7	.6
Primary metal industries.....	3.5	3.8	3.7	2.5	3.3	3.2	3.7	4.6	3.9	1.9	3.1	2.5	.7	.3	.3
Fabricated metal products.....	5.3	6.4	-----	4.4	5.6	-----	5.4	7.4	-----	3.3	5.0	-----	1.0	.8	-----
Machinery, except electrical.....	3.8	4.1	4.2	3.0	3.5	3.7	3.5	4.5	3.6	2.0	3.0	2.5	.5	.4	.3
Electrical equipment.....	4.6	5.1	-----	3.6	4.1	-----	4.1	5.0	-----	2.6	3.6	-----	.5	.3	-----
Transportation equipment.....	4.6	6.0	-----	3.2	3.8	-----	4.0	5.4	-----	2.2	3.0	-----	.9	1.4	-----
Instruments and related products.....	3.8	4.1	4.0	3.2	3.6	3.5	3.7	4.5	4.0	2.4	3.2	2.9	.4	.3	.2
Miscellaneous manufacturing.....	8.2	8.1	8.7	7.3	7.1	7.6	7.3	8.2	7.2	5.0	5.8	5.3	.8	1.0	.7
Nondurable goods	6.0	7.1	6.5	4.7	5.6	5.3	6.3	7.3	6.7	4.2	5.2	4.7	1.1	1.0	1.0
Food and kindred products.....	8.8	10.8	9.7	6.5	8.4	7.3	9.2	9.6	10.0	5.5	6.5	6.6	2.6	2.1	2.4
Tobacco manufactures.....	7.3	9.8	6.4	5.5	7.2	5.1	5.0	5.7	4.1	3.1	3.5	2.9	1.1	1.1	.4
Textile mill products.....	7.2	8.5	7.6	6.0	7.0	6.4	7.3	9.3	7.6	5.7	7.4	6.0	.4	.5	.3
Apparel and other textile products.....	6.6	8.7	7.0	5.0	6.1	5.6	6.6	8.2	7.2	4.7	6.1	5.2	1.1	1.0	1.1
Paper and allied products.....	3.8	4.1	3.8	3.3	3.7	3.5	4.8	5.5	4.6	3.3	3.9	3.2	.6	.5	.5
Printing and publishing.....	3.9	4.0	4.0	3.4	3.4	3.6	4.0	4.6	4.3	2.7	3.3	3.0	.7	.6	.6
Chemicals and allied products.....	2.6	2.6	2.8	2.1	2.1	2.4	2.9	3.6	3.0	1.9	2.3	1.8	.4	.5	.4
Petroleum and coal products.....	1.8	2.4	2.3	1.6	2.2	2.1	2.8	3.6	2.7	1.5	2.1	1.5	.5	.7	.4
Rubber and plastics products, nec.....	6.6	7.1	7.4	5.8	6.3	6.8	6.3	7.7	7.2	4.5	5.8	5.2	.6	.5	.5
Leather and leather products.....	6.8	9.3	8.6	5.5	7.2	7.1	8.6	10.6	9.4	5.6	7.9	6.9	1.8	1.3	1.2

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series because (1) the labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth, and (2) the turnover series excludes personnel

changes caused by strikes, but the employment series reflects the influence of such stoppages.

² These data have been seasonally adjusted to reflect experience through March 1973, and are not comparable with those published in issues prior to July 1973. Comparable data from January 1968 forward appear in the June 1973 issue of *Employment and Earnings*. For comparable data prior to January 1968 see *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

^p = preliminary.

NOTE: For additional detail, see *Employment and Earnings*, table D-2.

17. Job vacancies in manufacturing ¹

Industry	Annual average		1972				1973								
	1971	1972	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p
Job vacancies in manufacturing (number in thousands).....	88	127	155	142	133	132	155	163	176	190	194	190	201	231	219
Seasonally adjusted ²	-----	-----	138	146	156	161	170	175	178	178	179	192	192	190	195
JOB VACANCY RATES ³															
Manufacturing.....	0.5	0.7	0.8	0.7	0.7	0.7	0.8	0.8	0.9	1.0	1.0	0.9	1.0	1.1	1.1
Seasonally adjusted ²	-----	-----	.7	.8	.8	.8	.9	.9	.9	.9	.9	1.0	1.0	.9	1.0
Durable goods industries.....	.4	.6	.8	.7	.7	.7	.8	.9	.9	1.0	1.0	1.0	1.0	1.2	1.1
Nondurable goods industries.....	.6	.7	.8	.7	.7	.7	.8	.9	.9	1.0	1.0	.9	1.0	1.1	1.0
Selected durable goods industries:															
Primary metal industries.....	.2	.3	.4	.4	.3	.3	.4	.5	.5	.6	.6	.6	.6	.8	.6
Machinery, except electrical.....	.4	.7	.9	.9	.8	.8	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.4	1.4
Electrical equipment and supplies.....	.5	.8	1.0	.9	.9	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.5	1.4
Transportation equipment.....	.4	.6	.7	.7	.6	.5	.8	.8	.8	.8	.9	.9	1.0	1.0	.9
Instruments and related products.....	.7	1.1	1.3	1.0	1.0	1.1	1.2	1.2	1.4	1.5	1.5	1.3	1.6	1.7	1.7
Selected nondurable goods industries:															
Textile mill products.....	.8	1.2	1.5	1.4	1.2	1.2	1.3	1.4	1.6	1.8	1.7	1.6	1.8	1.9	1.8
Apparel and other textile products.....	1.2	1.4	1.5	1.4	1.4	1.4	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9
Printing and publishing.....	.4	.4	.5	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5	.6	.6
Chemicals and allied products.....	.4	.5	.6	.5	.5	.5	.6	.7	.7	.8	.7	.8	.8	.8	.7

¹ Data have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

² These data have been seasonally adjusted to reflect experience through March 1973, and are not comparable with those published in issues prior to July 1973. Comparable data from January 1969 forward appear in the June 1973 issue of *Employment*

and *Earnings*.

³ Computed by dividing the total number of job vacancies by the sum of employment plus the total number of job vacancies and multiplying the quotient of 100.

^p = preliminary.

NOTE: For additional detail on this series, see *Employment and Earnings*, tables E-1, E-2, E-3, and E-4.

18. Gross average hours and earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division, 1947-72

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			Contract 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	67.16	40.7	1.65
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	75.70	40.7	1.86
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	98.65	40.1	2.46	100.27	37.0	2.71	81.59	39.8	2.05
1958	75.08	38.5	1.95	96.08	38.9	2.47	103.78	36.8	2.82	82.71	39.2	2.11
1959 ²	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	105.44	40.4	2.61	113.04	36.7	3.08	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	110.43	40.9	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	99.63	40.5	2.46
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	95.06	38.8	2.45	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	112.34	41.3	2.72
1967	101.84	38.0	2.68	135.89	42.6	3.19	154.95	37.7	4.11	114.90	40.6	2.83
1968	107.73	37.8	2.85	142.71	42.6	3.35	164.93	37.4	4.41	122.51	40.7	3.01
1969	114.61	37.7	3.04	155.23	43.0	3.61	181.54	37.9	4.79	129.51	40.6	3.19
1970	119.46	37.1	3.22	164.40	42.7	3.85	195.98	37.4	5.24	133.73	39.8	3.36
1971	126.91	37.0	3.43	171.74	42.3	4.06	212.24	37.3	5.69	142.04	39.9	3.56
1972	135.78	37.2	3.65	186.15	42.5	4.38	224.22	37.0	6.06	154.69	40.6	3.81
	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 ²				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	\$118.37	41.1	\$2.88	74.28	37.9	1.96	85.79	37.3	2.30	\$69.84	36.0	\$1.94
1965	125.14	41.3	3.03	76.53	37.7	2.03	88.91	37.2	2.39	73.60	35.9	2.05
1966	128.13	41.2	3.11	79.02	37.1	2.13	92.13	37.3	2.47	77.04	35.5	2.17
1967	131.22	40.5	3.24	81.76	36.5	2.24	95.46	37.0	2.58	80.38	35.1	2.29
1968	138.85	40.6	3.42	86.40	36.0	2.40	101.75	37.0	2.75	84.32	34.7	2.43
1969	148.15	40.7	3.64	91.14	35.6	2.56	108.70	37.1	2.93	90.57	34.7	2.61
1970	155.93	40.5	3.85	95.66	35.3	2.71	113.34	36.8	3.08	96.66	34.4	2.81
1971	168.84	40.2	4.20	100.74	35.1	2.87	121.36	37.0	3.28	102.94	34.2	3.01
1972	187.46	40.4	4.64	106.00	35.1	3.02	128.34	37.2	3.45	108.44	34.1	3.18

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

² Data include Alaska and Hawaii beginning 1959.

NOTE: For additional detail, see *Employment and Earnings*, table C-1.

19. Gross average weekly hours of production or nonsupervisory workers ¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p	Oct. ^p
TOTAL PRIVATE	37.0	37.2	37.3	37.1	37.2	36.6	36.8	36.9	36.9	37.0	37.4	37.6	37.5	37.3	37.0
MINING	42.3	42.5	42.9	42.5	42.0	41.3	41.4	41.4	41.7	42.4	42.9	42.6	42.8	42.8	42.5
CONTRACT CONSTRUCTION	37.3	37.0	38.2	36.0	35.2	34.8	34.9	36.6	36.8	37.5	38.1	38.4	38.3	38.0	37.9
MANUFACTURING	39.9	40.6	40.8	41.0	41.2	40.0	40.6	40.8	40.7	40.7	40.9	40.5	40.5	41.0	40.7
Overtime hours.....	2.9	3.5	3.8	3.8	3.9	3.6	3.7	3.7	3.8	3.8	3.9	3.7	3.8	4.1	3.9
Durable goods	40.4	41.3	41.5	41.8	42.1	41.0	41.6	41.6	41.6	41.6	41.7	41.1	40.9	41.7	41.5
Overtime hours.....	2.8	3.6	4.0	4.0	4.2	3.9	4.1	4.0	4.1	4.1	4.2	3.9	3.9	4.4	4.1
Ordnance and accessories.....	41.7	42.2	42.4	42.4	42.9	42.4	42.7	42.6	42.0	41.9	42.1	42.2	41.5	42.6	42.6
Lumber and wood products.....	40.3	41.0	41.4	40.9	39.8	39.0	40.1	40.9	41.1	41.0	41.5	40.4	40.9	41.0	40.5
Furniture and fixtures.....	39.8	40.5	40.8	40.7	40.8	38.4	39.8	40.3	39.8	39.8	40.4	39.4	40.2	40.2	40.1
Stone, clay, and glass products.....	41.6	41.9	42.5	41.9	41.5	40.2	41.4	42.1	42.2	42.4	42.6	42.3	42.5	42.6	42.6
Primary metal industries.....	40.4	41.6	41.7	42.3	42.4	42.4	42.4	42.3	42.5	42.1	42.3	42.1	41.7	42.8	42.7
Fabricated metal products.....	40.4	41.2	41.5	41.7	42.1	41.0	41.4	41.5	41.5	41.7	42.0	41.4	41.4	41.9	41.4
Machinery, except electrical.....	40.6	42.0	42.3	42.7	43.4	42.4	42.8	42.9	42.4	42.6	42.6	41.7	42.0	43.1	42.8
Electrical equipment.....	39.9	40.5	40.8	41.1	41.1	40.3	40.6	40.6	40.3	40.5	40.3	39.7	40.1	40.7	40.3
Transportation equipment.....	40.7	41.8	42.0	42.5	43.8	41.9	42.7	42.0	42.5	42.3	42.5	42.0	40.0	41.7	41.9
Instruments and related products.....	39.8	40.5	40.7	40.9	41.0	40.2	40.5	40.7	40.7	40.6	40.6	40.2	40.2	41.1	40.9
Miscellaneous manufacturing	38.9	39.3	39.5	39.7	39.4	38.4	39.1	39.3	39.0	39.0	39.0	38.4	38.9	39.1	38.8
Non durable goods	39.3	39.7	39.8	40.0	39.9	38.7	39.3	39.6	39.5	39.5	39.8	39.7	39.8	40.0	39.6
Overtime hours.....	3.0	3.3	3.6	3.6	3.5	3.2	3.2	3.3	3.3	3.3	3.4	3.4	3.5	3.8	3.5
Food and kindred products.....	40.3	40.4	40.4	40.4	40.7	39.8	39.6	39.7	39.5	40.2	40.3	40.6	41.0	41.3	40.6
Tobacco manufactures.....	37.8	37.4	39.4	38.2	38.8	36.1	37.3	37.4	38.0	37.6	38.4	35.9	39.1	39.0	38.8
Textile mill products.....	40.6	41.3	41.4	41.7	41.7	39.1	40.9	41.2	41.3	40.7	41.2	40.5	40.9	41.1	40.5
Apparel and other textile products.....	35.6	36.0	36.2	36.4	35.7	34.1	35.8	36.3	36.0	35.9	36.1	36.0	36.0	35.9	35.7
Paper and allied products.....	42.1	42.8	43.1	43.3	43.3	42.3	42.6	42.8	42.6	42.6	42.8	42.7	42.6	43.0	42.5
Printing and publishing.....	37.5	37.9	38.0	38.3	38.2	37.3	37.6	38.0	37.8	37.9	37.9	37.8	37.9	38.3	37.9
Chemicals and allied products.....	41.6	41.8	42.0	42.0	42.2	41.5	41.8	42.0	42.1	42.0	42.1	41.9	41.8	42.0	41.7
Petroleum and coal products.....	42.4	42.2	42.7	42.5	41.9	41.2	41.2	41.4	42.0	42.3	42.0	43.0	42.3	43.1	42.9
Rubber and plastics products, nec.....	40.3	41.2	41.4	41.7	41.6	40.9	41.2	41.3	41.3	40.8	40.9	40.5	40.6	41.2	40.7
Leather and leather products.....	37.7	38.3	37.5	37.9	37.2	37.2	37.7	37.6	37.5	38.1	38.7	38.3	38.1	37.8	37.8
TRANSPORTATION AND PUBLIC UTILITIES	40.2	40.4	40.6	40.5	40.7	40.2	40.3	40.2	40.2	40.7	40.9	41.1	41.1	41.1	40.8
WHOLESALE AND RETAIL TRADE	35.1	35.1	34.9	34.7	35.3	34.5	34.5	34.5	34.4	34.5	35.2	35.6	35.4	34.7	34.3
Wholesale trade.....	39.8	39.8	39.8	39.8	40.1	39.5	39.5	39.6	39.3	39.5	39.6	39.7	39.6	39.5	39.4
Retail trade.....	33.7	33.6	33.3	33.2	33.9	32.9	32.9	32.9	33.0	33.0	33.8	34.3	34.1	33.2	32.8
FINANCE, INSURANCE, AND REAL ESTATE	37.0	37.2	37.3	37.0	37.1	37.0	37.1	37.0	37.2	36.9	37.1	37.3	37.1	37.1	36.9
SERVICES	34.2	34.1	34.1	34.0	34.0	33.9	33.9	33.9	34.0	33.9	34.4	34.8	34.7	34.1	33.9

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p = preliminary.

NOTE: For additional detail, see **Employment and Earnings**, table C-2.

20. Gross average weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

Industry division and group	1972			1973									
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^P	Oct. ^P
TOTAL PRIVATE.....	37.3	37.2	37.0	36.9	37.2	37.1	37.2	37.2	37.1	37.2	37.0	37.2	37.0
MINING.....	42.5	42.4	41.8	41.5	42.0	41.9	41.7	42.5	42.5	42.4	42.6	42.7	42.1
CONTRACT CONSTRUCTION.....	37.4	36.9	35.8	36.1	36.2	37.0	37.0	37.5	37.4	37.5	37.1	36.8	37.1
MANUFACTURING.....	40.7	40.8	40.7	40.3	41.0	40.9	40.9	40.7	40.6	40.7	40.5	40.8	40.6
Overtime hours.....	3.6	3.7	3.8	3.7	3.9	3.9	4.1	3.9	3.8	3.8	3.7	3.8	3.7
Durable goods.....	41.4	41.7	41.5	41.3	42.0	41.6	41.8	41.6	41.4	41.4	41.1	41.4	41.4
Overtime hours.....	3.8	3.9	4.0	4.1	4.4	4.1	4.4	4.2	4.0	4.1	3.9	4.0	3.9
Ordnance and accessories.....	42.5	42.3	42.5	42.5	42.7	42.4	42.0	41.9	41.9	42.7	41.5	42.6	42.7
Lumber and wood products.....	41.0	41.0	39.8	39.9	40.7	41.0	41.1	40.7	40.9	40.5	40.7	40.8	40.1
Furniture and fixtures.....	40.3	40.3	40.0	39.0	40.6	40.6	40.4	40.1	40.1	39.8	39.7	39.7	39.6
Stone, clay, and glass products.....	42.1	41.8	41.6	41.1	42.2	42.3	42.3	42.3	42.2	42.1	42.0	42.2	42.2
Primary metal industries.....	42.2	42.7	42.4	42.4	42.4	42.1	42.2	41.9	41.9	42.2	41.8	42.7	43.2
Fabricated metal products.....	41.4	41.6	41.6	41.4	41.9	41.7	41.8	41.6	41.5	41.6	41.3	41.6	41.3
Machinery, except electrical.....	42.4	42.6	42.6	42.4	42.9	42.6	42.5	42.6	42.5	42.2	42.4	43.1	42.9
Electrical equipment.....	40.6	40.8	40.5	40.4	41.1	40.6	40.6	40.6	40.1	40.2	40.1	40.5	40.1
Transportation equipment.....	41.7	42.2	42.4	42.3	43.2	42.0	43.5	42.1	41.9	42.3	41.0	41.2	41.7
Instruments and related products.....	40.6	40.5	40.6	40.4	40.8	40.7	40.8	40.7	40.5	40.6	40.4	40.9	40.8
Miscellaneous manufacturing.....	39.3	39.3	39.1	38.7	39.4	39.3	39.0	39.1	38.9	38.9	38.7	39.1	38.6
Non durable goods.....	39.8	39.8	39.6	39.1	39.7	39.8	39.8	39.6	39.6	39.6	39.5	39.8	39.6
Overtime hours.....	3.4	3.5	3.4	3.4	3.4	3.5	3.6	3.4	3.3	3.4	3.3	3.4	3.3
Food and kindred products.....	40.4	40.3	40.4	40.1	40.2	40.2	40.1	40.4	40.1	40.2	40.4	40.6	40.6
Tobacco manufactures.....	38.0	38.0	37.9	36.6	38.4	38.8	39.2	37.9	37.8	36.0	38.5	37.9	37.4
Textile mill products.....	41.3	41.3	41.2	39.5	41.2	41.3	41.6	40.9	40.8	40.8	40.8	41.0	40.4
Apparel and other textile products.....	36.2	36.1	35.7	34.5	36.0	36.2	36.1	36.0	36.0	35.9	35.7	35.9	35.7
Paper and allied products.....	42.9	43.1	42.9	42.5	43.0	43.1	42.8	42.8	42.7	42.7	42.4	42.7	42.3
Printing and publishing.....	38.0	38.2	37.7	37.8	38.0	38.0	38.0	38.0	37.8	37.7	37.7	38.0	37.9
Chemicals and allied products.....	42.0	41.9	41.9	41.6	42.0	42.0	41.9	42.0	42.0	42.1	42.1	42.0	41.7
Petroleum and coal products.....	42.3	42.4	42.2	41.9	41.9	42.0	41.9	42.1	41.7	42.4	42.1	42.6	42.5
Rubber and plastics products, nec.....	41.3	41.6	41.3	41.0	41.5	41.5	41.5	40.8	40.7	40.8	40.5	40.9	40.6
Leather and leather products.....	37.9	37.8	36.5	37.2	37.8	37.9	38.2	37.9	38.1	37.8	38.1	38.4	38.2
TRANSPORTATION AND PUBLIC UTILITIES.....	40.5	40.4	40.5	40.6	40.4	40.4	40.7	41.0	40.7	40.7	40.9	40.9	40.7
WHOLESALE AND RETAIL TRADE.....	35.1	35.0	35.1	34.9	35.0	34.8	34.8	34.8	34.9	34.7	34.5	34.6	34.5
Wholesale trade.....	39.8	39.8	39.7	39.7	39.7	39.7	39.5	39.7	39.5	39.5	39.4	39.5	39.4
Retail trade.....	33.5	33.5	33.6	33.4	33.5	33.4	33.4	33.4	33.5	33.2	33.0	33.2	33.0
FINANCE, INSURANCE, AND REAL ESTATE.....	37.2	37.0	37.1	37.0	37.1	37.0	37.2	37.0	37.1	37.2	37.0	37.2	36.8
SERVICES.....	34.2	34.1	34.0	34.1	34.1	34.0	34.1	34.2	34.4	34.2	34.2	34.1	34.0

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment). Data shown in this table are not comparable with those published in issues prior to July 1973. Comparable data from January 1968 forward appear in the June 1973 issue of *Employment and Earnings*. For comparable data prior to January 1968 see *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

P=preliminary.

NOTE: These data have been seasonally adjusted to reflect experience through March 1973. For additional details, see June 1973 issue of *Employment and Earnings*.

21. Gross average hourly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p	Oct. ^p
TOTAL PRIVATE	\$3.43	\$3.65	\$3.74	\$3.74	\$3.74	\$3.77	\$3.78	\$3.80	\$3.83	\$3.85	\$3.87	\$3.90	\$3.91	\$3.98	\$3.99
MINING	4.06	4.38	4.41	4.47	4.55	4.60	4.55	4.55	4.60	4.61	4.67	4.70	4.69	4.77	4.79
CONTRACT CONSTRUCTION	5.69	6.06	6.22	6.23	6.32	6.42	6.31	6.28	6.31	6.34	6.35	6.40	6.46	6.63	6.66
MANUFACTURING	3.56	3.81	3.86	3.89	3.95	3.98	3.97	3.98	4.01	4.02	4.04	4.06	4.06	4.13	4.13
Durable goods.....	3.79	4.05	4.11	4.14	4.21	4.23	4.23	4.23	4.26	4.28	4.30	4.31	4.31	4.39	4.38
Ordnance and accessories.....	3.84	4.09	4.13	4.13	4.18	4.16	4.15	4.17	4.18	4.23	4.22	4.28	4.29	4.37	4.34
Lumber and wood products.....	3.15	3.31	3.37	3.40	3.38	3.45	3.47	3.47	3.51	3.54	3.61	3.59	3.62	3.67	3.65
Furniture and fixtures.....	2.90	3.06	3.12	3.13	3.15	3.15	3.17	3.19	3.21	3.24	3.25	3.25	3.28	3.33	3.32
Stone, clay, and glass products.....	3.66	3.91	4.02	4.00	4.02	4.03	4.04	4.07	4.11	4.14	4.17	4.20	4.21	4.26	4.25
Primary metal industries.....	4.23	4.66	4.74	4.80	4.81	4.87	4.86	4.88	4.92	4.95	4.96	5.00	5.10	5.15	5.12
Fabricated metal products.....	3.74	3.99	4.05	4.07	4.13	4.13	4.15	4.15	4.19	4.21	4.24	4.24	4.24	4.30	4.30
Machinery, except electrical.....	3.99	4.27	4.35	4.38	4.44	4.44	4.45	4.46	4.49	4.50	4.50	4.51	4.53	4.61	4.61
Electrical equipment.....	3.48	3.67	3.71	3.74	3.79	3.80	3.78	3.79	3.81	3.81	3.83	3.86	3.88	3.91	3.90
Transportation equipment.....	4.41	4.73	4.81	4.87	5.01	5.00	5.00	4.96	5.00	5.00	5.05	5.06	5.02	5.11	5.15
Instruments and related products.....	3.52	3.72	3.73	3.74	3.83	3.82	3.82	3.82	3.81	3.86	3.84	3.87	3.87	3.93	3.93
Miscellaneous manufacturing.....	2.97	3.11	3.13	3.15	3.19	3.24	3.22	3.23	3.22	3.26	3.27	3.26	3.26	3.31	3.31
Nondurable goods.....	3.26	3.47	3.52	3.53	3.58	3.61	3.59	3.61	3.63	3.64	3.66	3.70	3.70	3.75	3.76
Food and kindred products.....	3.38	3.60	3.63	3.66	3.72	3.75	3.75	3.77	3.78	3.82	3.82	3.82	3.83	3.85	3.89
Tobacco manufactures.....	3.15	3.43	3.38	3.49	3.49	3.56	3.65	3.70	3.81	3.84	3.91	3.97	3.73	3.68	3.72
Textile mill products.....	2.57	2.73	2.76	2.78	2.83	2.87	2.88	2.88	2.90	2.90	2.90	2.89	2.92	3.02	3.03
Apparel and other textile products.....	2.49	2.61	2.67	2.68	2.69	2.72	2.72	2.73	2.74	2.74	2.75	2.74	2.79	2.84	2.86
Paper and allied products.....	3.67	3.94	4.02	4.03	4.06	4.06	4.07	4.08	4.11	4.12	4.16	4.23	4.24	4.28	4.28
Printing and publishing.....	4.20	4.48	4.55	4.56	4.59	4.56	4.58	4.60	4.63	4.67	4.68	4.70	4.70	4.75	4.76
Chemicals and allied products.....	3.94	4.20	4.28	4.29	4.33	4.36	4.35	4.36	4.40	4.42	4.46	4.49	4.50	4.53	4.52
Petroleum and coal products.....	4.57	4.95	5.01	5.02	5.03	5.09	5.09	5.15	5.22	5.22	5.24	5.26	5.24	5.30	5.27
Rubber and plastics products, nec.....	3.40	3.60	3.69	3.68	3.72	3.74	3.73	3.73	3.76	3.71	3.75	3.82	3.81	3.86	3.83
Leather and leather products.....	2.60	2.71	2.72	2.72	2.74	2.77	2.78	2.80	2.79	2.80	2.80	2.79	2.80	2.85	2.86
TRANSPORTATION AND PUBLIC UTILITIES	4.20	4.64	4.80	4.82	4.86	4.87	4.90	4.89	4.96	4.96	4.99	5.04	5.12	5.17	5.18
WHOLESALE AND RETAIL TRADE	2.87	3.02	3.06	3.07	3.07	3.11	3.13	3.14	3.16	3.17	3.19	3.20	3.21	3.25	3.26
Wholesale trade.....	3.67	3.88	3.93	3.94	3.99	3.99	4.02	4.03	4.07	4.09	4.10	4.12	4.13	4.18	4.18
Retail trade.....	2.57	2.70	2.74	2.75	2.75	2.78	2.80	2.81	2.83	2.84	2.86	2.86	2.87	2.91	2.92
FINANCE, INSURANCE, AND REAL ESTATE	3.28	3.45	3.48	3.49	3.52	3.54	3.56	3.55	3.59	3.57	3.58	3.61	3.60	3.64	3.64
SERVICES	3.01	3.18	3.24	3.25	3.27	3.27	3.28	3.30	3.32	3.32	3.34	3.36	3.34	3.43	3.45

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p=preliminary.

NOTE: For additional detail, see *Employment and Earnings*, table C-2.

22. Gross average weekly earnings of production or nonsupervisory workers ¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	Annual average		1972			1973									
	1971	1972	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept. ^p	Oct. ^p
TOTAL PRIVATE	\$126.91	\$135.78	\$139.50	\$138.75	\$139.13	\$137.98	\$139.10	\$140.22	\$141.33	\$142.45	\$144.74	\$146.64	\$146.63	\$148.45	\$147.63
MINING	171.74	186.15	189.19	189.98	191.10	189.98	188.37	188.37	191.82	195.46	200.34	200.22	200.73	204.16	203.58
CONTRACT CONSTRUCTION	212.24	224.22	237.60	224.28	222.46	223.42	220.22	229.85	232.21	237.75	241.94	245.76	247.42	251.94	252.41
MANUFACTURING	142.04	154.69	157.49	159.49	162.74	159.20	161.18	162.38	163.21	163.61	165.24	164.43	164.43	169.33	168.09
Durable goods	153.12	167.27	170.57	173.05	177.24	173.43	175.97	175.97	177.22	178.05	179.31	177.14	176.28	183.06	181.77
Ordnance and accessories.....	160.13	172.60	175.11	175.11	179.32	176.38	177.21	177.64	175.56	177.24	177.66	180.62	178.04	186.16	184.88
Lumber and wood products.....	126.95	135.71	139.52	139.06	134.52	134.55	139.15	141.92	144.26	145.14	149.82	145.04	148.06	150.47	147.83
Furniture and fixtures.....	115.42	123.93	127.30	127.39	128.52	120.96	126.17	128.56	127.76	128.95	131.30	128.05	131.86	133.87	133.13
Stone, clay, and glass products.....	152.26	163.83	170.85	167.60	166.83	162.01	167.26	171.35	173.44	175.54	177.64	177.66	178.93	181.48	181.05
Primary metal industries.....	170.89	193.86	197.66	203.04	203.94	206.49	206.06	206.42	209.10	208.40	209.81	210.50	212.67	220.42	218.62
Fabricated metal products.....	151.10	164.39	168.08	169.72	173.87	169.33	171.81	172.23	173.89	175.56	178.08	175.54	175.54	180.17	178.02
Machinery, except electrical.....	161.99	179.34	184.01	187.03	192.70	188.26	190.46	191.33	190.38	191.70	191.70	188.07	190.26	198.69	197.31
Electrical equipment.....	138.85	148.64	151.37	153.71	155.77	153.14	153.47	153.87	153.54	154.31	154.35	153.24	155.59	159.14	157.17
Transportation equipment.....	179.49	197.71	202.02	206.98	219.44	209.50	213.50	208.32	212.50	211.50	214.63	212.52	200.80	213.09	215.79
Instruments and related products.....	140.10	150.66	151.81	152.97	157.03	153.56	154.71	155.47	155.07	156.72	155.90	155.57	155.57	161.52	160.74
Miscellaneous manufacturing.....	115.53	122.22	123.64	125.06	125.69	124.42	125.90	126.94	125.58	127.14	127.53	125.18	126.81	129.42	128.43
Nondurable goods	128.12	137.76	140.10	141.20	142.84	139.71	141.09	142.96	143.39	143.78	145.67	146.89	147.26	150.00	148.90
Food and kindred products.....	136.21	145.44	146.65	147.86	151.40	149.25	148.50	149.67	149.31	153.56	153.95	155.09	157.03	159.01	157.93
Tobacco manufactures.....	119.07	128.28	133.17	133.32	135.41	128.52	136.15	138.38	144.78	144.38	150.14	142.52	145.84	143.52	144.34
Textile mill products.....	104.34	112.75	114.26	115.93	181.01	112.22	117.79	181.66	119.77	118.03	119.48	117.05	119.43	124.12	122.72
Apparel and other textile products.....	88.64	93.96	96.65	97.55	96.03	92.75	97.38	99.10	98.64	98.37	99.28	98.64	100.44	101.96	102.10
Paper and allied products.....	154.51	168.63	173.26	174.50	175.80	171.74	173.38	174.62	175.09	175.51	178.05	180.62	180.62	184.04	181.90
Printing and publishing.....	157.50	169.79	172.90	174.65	175.34	170.09	172.21	174.80	175.01	176.99	177.37	177.66	178.13	181.93	180.40
Chemicals and allied products.....	163.90	175.56	179.76	180.18	182.73	180.94	181.83	183.12	185.24	185.64	187.77	188.13	188.10	190.26	188.48
Petroleum and coal products.....	193.77	208.89	213.93	213.35	210.76	209.71	209.71	213.21	219.24	220.81	220.08	226.18	221.65	228.43	226.08
Rubber and plastics products, nec.....	137.02	148.32	152.77	153.46	154.75	152.97	153.68	154.05	155.29	151.37	153.38	154.71	154.69	159.03	155.88
Leather and leather products.....	98.02	103.79	102.00	103.09	101.93	103.04	104.81	105.28	104.63	106.68	108.36	106.86	106.68	107.73	108.11
TRANSPORTATION AND PUBLIC UTILITIES	168.84	187.46	194.88	195.21	197.80	195.77	197.47	196.58	199.39	201.87	204.09	207.14	210.43	212.49	211.34
WHOLESALE AND RETAIL TRADE	100.74	106.00	106.79	106.53	108.37	107.30	107.99	108.33	108.70	109.37	112.29	113.92	113.63	112.78	111.82
Wholesale trade.....	146.07	154.42	156.41	156.81	160.00	157.61	158.79	159.59	159.95	161.56	162.36	163.56	163.55	165.11	164.69
Retail trade.....	86.61	90.72	91.24	91.30	93.23	91.46	92.12	92.45	93.39	93.72	96.67	98.10	97.87	96.61	95.78
FINANCE, INSURANCE, AND REAL ESTATE	121.36	128.34	129.80	129.13	130.59	130.98	132.08	131.35	133.55	131.73	132.82	134.65	133.56	135.04	134.32
SERVICES	102.94	108.44	110.48	110.50	111.18	110.85	111.19	111.87	112.88	112.55	114.90	116.93	115.90	116.96	116.96

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in **Employment and Earnings, United States, 1909-72** (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and

public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

^p = preliminary.

NOTE: For additional detail, see **Employment and Earnings**, table C-2.

23. Gross and spendable average weekly earnings of production or nonsupervisory workers ¹ on private nonagricultural payrolls, in current and 1967 dollars, 1960 to date

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		Worker with 3 dependents				Worker with no dependents		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	99.63	108.65	79.82	87.04	87.58	95.51
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-----	95.06	100.59	78.99	83.59	86.30	91.32	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	112.34	115.58	91.57	94.21	99.45	102.31
1967-----	101.84	101.84	83.38	83.38	90.86	90.86	114.90	114.90	93.28	93.28	101.26	101.26
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-----	119.46	102.72	95.94	82.49	104.61	89.95	133.73	114.99	106.62	91.68	115.90	99.66
1971-----	126.91	104.62	103.51	85.33	112.12	92.43	142.04	117.10	114.68	94.54	123.93	102.17
1972-----	135.78	108.36	111.37	88.88	120.79	96.40	154.69	123.46	125.32	100.02	135.56	108.19
1972:												
October-----	139.50	110.19	114.11	90.13	123.73	97.73	157.49	124.40	127.30	100.55	137.74	108.80
November-----	138.75	109.34	113.56	89.49	123.14	97.04	159.49	125.68	128.72	101.43	139.29	109.76
December-----	139.13	109.29	113.84	89.43	123.43	96.96	162.74	127.84	131.02	102.92	141.77	111.37
1973:												
January-----	137.98	108.05	112.09	87.78	121.63	95.25	159.20	124.67	127.48	99.83	138.03	108.09
February-----	139.10	108.16	112.91	87.80	122.51	95.26	161.18	125.33	128.87	100.21	139.54	108.51
March-----	140.22	108.03	113.73	87.62	123.38	95.05	162.38	125.10	129.71	99.93	140.44	108.20
April-----	141.33	108.13	114.54	87.64	124.25	95.07	163.21	124.87	130.29	99.69	141.06	107.93
May-----	142.45	108.33	115.36	87.73	125.11	95.14	163.61	124.42	130.57	99.29	141.36	107.50
June-----	144.74	109.32	117.04	88.40	126.88	95.83	165.24	124.80	131.72	99.49	142.59	107.70
July-----	146.64	110.50	118.43	89.25	128.34	96.71	164.43	123.91	131.15	98.83	141.98	106.99
August-----	146.63	108.53	118.42	87.65	128.34	95.00	164.43	121.71	131.15	97.08	141.98	105.09
September-----	148.45	109.56	119.75	88.38	129.74	95.75	169.33	124.97	134.68	99.39	145.74	107.56
October-----	147.63	108.07	119.15	87.23	129.11	94.52	168.09	123.05	133.77	97.93	144.77	105.98

¹ The industry series have been adjusted to March 1971 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to November 1972. Comparable back data are published in *Employment and Earnings, United States, 1909-72* (BLS Bulletin 1312-9).

Data relate to production workers in mining and manufacturing; to construction workers in contract construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employment on private nonagricultural payrolls.

Spendable average weekly earnings are based on gross average weekly earnings as published in table 22 less the estimated amount of the work-

er's Federal social security and income tax liability. Since the amount of tax liability depends on the number of dependents supported by the worker as well as on the level of his gross income, spendable earnings have been computed for 2 types of income receivers: (1) a worker with no dependents and (2) a married worker with 3 dependents.

The earnings expressed in 1967 dollars have been adjusted for changes in purchasing power as measured by the Bureau's Consumer Price Index.

These series are described in "The Spendable Earnings Series: A Technical Note on its Calculation," in *Employment and Earnings and Monthly Report on the Labor Force*, February 1969, pp. 6-13.

^p = preliminary.

NOTE: For additional detail, see *Employment and Earnings*, table C-5.

24. Consumer and Wholesale Price Indexes, annual averages and changes, 1951-72

[1967 = 100]

Year	Consumer prices						Wholesale prices					
	All items		Commodities		Services		All commodities		Farm products, processed foods and feeds		Industrial commodities	
	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change	Index	Percent change
1951	77.8	7.9	85.9	9.0	61.8	5.3	91.9	11.4	106.9	13.8	86.1	10.4
1952	79.5	2.2	87.0	1.3	64.5	4.4	88.6	-2.7	102.7	-3.9	84.1	-2.3
1953	80.1	.8	86.7	-.3	67.3	4.3	87.4	-1.4	96.0	-6.5	84.8	.8
1954	80.5	.5	85.9	-.9	69.5	3.3	87.6	.2	-95.7	-.3	85.0	.2
1955	80.2	-.4	85.1	-.9	70.9	2.0	87.8	.2	91.2	-4.7	86.9	2.2
1956	81.4	1.5	85.9	.9	72.7	2.5	90.7	3.3	90.6	-.7	90.8	4.5
1957	84.3	3.6	88.6	3.1	75.6	4.0	93.3	2.9	93.7	3.4	93.3	2.8
1958	86.6	2.7	90.6	2.3	78.5	3.8	94.6	1.4	98.1	4.7	93.6	.3
1959	87.3	.8	90.7	.1	80.8	2.9	94.8	.2	93.5	-4.7	95.3	1.8
1960	88.7	1.6	91.5	.9	83.5	3.3	94.9	.1	93.7	.2	95.3	.0
1961	89.6	1.0	92.0	.5	85.2	2.0	94.5	-.4	93.7	.0	94.8	-.5
1962	90.6	1.1	92.8	.9	86.8	1.9	94.8	.3	94.7	1.1	94.8	.0
1963	91.7	1.2	93.6	.9	88.5	2.0	94.5	-.3	93.8	-1.0	94.7	-.1
1964	92.9	1.3	94.6	1.1	90.2	1.9	94.7	.2	93.2	-.6	95.2	.5
1965	94.5	1.7	95.7	1.2	92.2	2.2	96.6	2.0	97.1	4.2	96.4	1.3
1966	97.2	2.9	98.2	2.6	95.8	3.9	99.8	3.3	103.5	6.6	98.5	2.2
1967	100.0	2.9	100.0	1.8	100.0	4.4	100.0	.2	100.0	-3.4	100.0	1.5
1968	104.2	4.2	103.7	3.7	105.2	5.2	102.5	2.5	102.4	2.4	102.5	2.5
1969	109.8	5.4	108.4	4.5	112.5	6.9	106.5	3.9	108.0	5.5	106.0	3.4
1970	116.3	5.9	113.5	4.7	121.6	8.1	110.4	3.7	111.6	3.3	110.0	3.8
1971	121.3	4.3	117.4	3.4	128.4	5.6	113.9	3.2	113.8	2.0	114.0	3.6
1972	125.3	3.3	120.9	3.0	133.3	3.8	119.1	4.6	122.4	7.6	117.9	3.4

NOTE: Historical price changes are shown in greater detail and for earlier years in the Bureau's Handbook of Labor Statistics, 1972 (BLS Bulletin 1735).

25. Consumer Price Index—U.S. average—general summary and groups, subgroups, and selected items

[1967 = 100 unless otherwise specified]

General summary	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All items	125.3	126.6	126.9	127.3	127.7	128.6	129.8	130.7	131.5	132.4	132.7	135.1	135.5	136.6
All items (1957-59=100)	145.7	147.2	147.6	148.0	148.5	149.5	150.9	152.0	153.0	154.0	154.4	157.1	157.6	158.8
Food	123.5	124.9	125.4	126.0	128.6	131.1	134.5	136.5	137.9	139.8	140.9	149.4	148.3	148.4
Food at home	121.6	122.8	123.4	124.1	127.2	130.1	134.2	136.4	137.6	139.9	140.9	151.3	149.2	148.7
Food away from home	131.1	132.8	133.3	133.7	134.2	134.7	135.7	137.0	138.9	139.8	140.9	142.4	145.1	147.7
Housing	129.2	130.4	130.8	131.2	131.5	132.0	132.4	132.8	133.3	133.9	134.2	135.2	136.6	138.1
Rent	119.2	120.3	120.5	121.0	121.8	122.1	122.8	123.2	123.7	124.0	124.4	125.0	125.4	125.9
Homeownership	140.1	141.8	142.0	142.6	142.6	142.9	143.2	143.6	144.2	145.0	145.2	147.0	149.2	151.5
Apparel and upkeep	122.3	124.3	125.0	125.0	123.0	123.6	124.8	125.8	126.7	126.8	125.8	126.5	128.3	129.6
Transportation	119.9	121.2	121.4	121.3	121.0	121.1	121.5	122.6	123.5	124.6	124.8	124.5	123.9	125.0
Health and recreation	126.1	127.2	127.4	127.5	127.8	128.1	128.6	129.2	129.6	130.0	130.3	130.5	131.1	132.1
Medical care	132.5	133.9	134.1	134.4	134.9	135.3	135.8	136.2	136.6	137.0	137.3	137.6	138.3	140.6
Special groups														
All items less shelter	122.9	124.2	124.6	124.8	125.3	126.4	127.8	128.9	129.7	130.6	131.0	133.5	133.6	134.5
All items less food	125.8	127.1	127.4	127.6	127.5	127.9	128.4	129.1	129.7	130.3	130.4	130.9	131.8	133.1
All items less medical care	124.9	126.2	126.6	126.9	127.3	128.2	129.5	130.5	131.3	132.2	132.5	135.0	135.4	136.4
Appliances (including radio and TV)	105.8	105.9	105.9	105.8	105.7	105.5	105.4	105.4	105.4	105.4	105.4	105.3	105.5	106.7
Commodities	120.9	122.3	122.7	122.9	123.4	124.5	126.1	127.4	128.3	129.4	129.7	132.8	132.8	133.5
Nondurables	121.7	123.1	123.5	123.8	124.7	126.2	128.3	129.7	130.7	132.0	132.4	136.6	136.5	137.4
Durables	118.9	120.1	120.3	120.3	119.9	119.9	120.2	121.0	121.8	122.3	122.4	122.6	122.6	123.2
Services	133.3	134.6	134.9	135.4	135.7	136.2	136.6	137.1	137.6	138.1	138.4	139.3	140.6	142.2
Commodities less food	119.4	120.8	121.0	121.1	120.5	120.9	121.5	122.3	123.0	123.7	123.5	123.8	124.3	125.4
Nondurables less food	119.8	121.3	121.7	121.7	120.9	121.6	122.4	123.3	124.0	124.7	124.4	124.7	125.5	127.0
Apparel commodities	122.7	124.9	125.6	125.5	123.1	123.8	125.2	126.2	127.2	127.2	126.0	126.6	128.7	130.0
Apparel commodities less footwear	122.3	124.6	125.3	125.2	122.5	123.1	124.5	125.5	126.5	126.7	125.2	125.9	128.1	129.6
Nondurables less food and apparel	118.2	119.3	119.4	119.5	119.7	120.4	120.8	121.7	122.2	123.3	123.5	123.6	123.8	125.3
Household durables	115.0	115.8	116.0	116.2	116.1	116.3	116.9	117.7	118.5	119.2	119.4	119.6	120.1	120.4
Household furnishings	116.2	116.9	117.1	117.3	116.9	117.2	117.6	118.0	118.5	119.1	119.1	119.2	119.8	120.3
Services less rent	135.9	137.2	137.6	138.0	138.3	138.7	139.2	139.6	140.1	140.7	141.0	141.9	143.4	145.2
Household services less rent	139.2	140.7	141.3	141.9	142.3	142.8	143.2	143.6	144.2	144.9	145.3	146.8	149.3	151.7
Transportation services	136.0	136.2	136.3	136.4	136.0	136.1	136.3	136.5	136.6	137.0	137.0	137.1	137.2	137.4
Medical care services	138.2	139.9	140.1	140.5	141.0	141.5	142.2	142.7	143.1	143.6	143.9	144.3	145.1	147.8
Other services	125.8	127.0	127.4	127.7	128.1	128.6	129.2	129.9	130.6	131.3	131.7	132.1	133.3	134.0

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FOOD	123.5	124.9	125.4	126.0	128.6	131.1	134.5	136.5	137.9	139.8	140.9	149.4	148.3	148.4
Food away from home.....	131.1	132.8	133.3	133.7	134.2	134.7	135.7	137.0	138.9	139.8	140.9	142.4	145.1	147.7
Restaurant meals.....	131.1	133.0	133.5	133.9	134.3	134.9	135.9	137.4	139.5	140.5	141.7	143.2	146.2	148.8
Snacks.....	131.2	132.2	132.4	132.7	133.6	133.9	134.3	135.3	136.1	136.6	137.4	138.2	139.7	142.6
Food at home.....	121.6	122.8	123.4	124.1	127.2	130.1	134.2	136.4	137.6	139.9	140.9	151.3	149.2	148.7
Cereals and bakery products.....	114.7	114.6	115.0	115.8	116.3	117.8	119.0	120.2	122.1	123.0	123.5	124.7	132.4	139.0
Flour.....	100.4	100.0	101.5	103.1	105.4	108.1	111.8	113.9	116.3	117.1	117.7	119.1	134.2	156.2
Cracker meal.....	135.3	135.6	135.5	136.1	136.5	138.2	139.1	138.8	140.7	142.6	142.9	143.8	146.6	151.8
Corn flakes.....	100.6	99.8	99.7	99.1	99.3	99.4	99.5	101.1	103.4	105.0	105.4	105.8	106.4	107.2
Rice.....	109.9	109.4	109.8	111.3	113.4	116.5	118.7	121.6	124.2	126.8	127.5	128.2	137.1	158.0
Bread, white.....	113.0	112.4	113.2	114.3	114.3	115.2	117.0	118.5	120.6	121.3	121.6	124.8	135.5	140.4
Bread, whole wheat.....	120.1	120.6	120.9	121.4	122.1	124.5	125.4	126.1	126.9	127.6	128.2	130.0	138.9	142.9
Cookies.....	110.2	110.2	110.1	110.9	111.4	113.3	112.6	112.6	113.4	111.7	113.5	113.0	117.4	120.2
Layer cake.....	120.0	120.2	120.1	120.1	120.5	121.5	123.7	124.9	126.5	126.5	127.1	126.9	134.4	137.4
Cinnamon rolls.....	120.7	121.5	122.1	123.1	122.9	123.5	123.2	124.2	127.0	129.0	129.0	128.4	135.2	139.0
Meats, poultry, and fish.....	128.0	131.3	131.5	131.2	136.1	142.8	152.7	155.4	155.6	156.5	157.8	184.0	180.2	170.7
Meats.....	129.2	132.7	132.9	132.5	137.7	145.2	153.0	156.1	155.9	156.7	157.8	180.0	180.8	172.7
Beef and veal.....	136.6	137.3	137.7	136.8	142.9	152.3	160.2	162.9	162.7	163.5	164.3	175.4	177.0	170.6
Steak, round.....	134.2	132.6	134.3	133.3	141.9	152.7	158.9	159.1	158.2	158.2	160.4	170.8	171.5	160.0
Steak, sirloin.....	132.1	130.6	132.2	130.2	136.5	144.2	149.4	151.6	150.3	151.4	151.8	160.0	159.5	153.2
Steak, porterhouse.....	134.7	134.1	135.4	133.7	139.6	146.6	149.8	152.1	151.8	153.5	154.4	161.2	160.9	154.5
Rump roast.....	133.0	132.5	132.9	132.4	139.6	149.5	154.1	154.4	154.2	154.9	156.1	165.0	165.5	156.8
Rib roast.....	138.1	137.4	136.3	136.9	146.0	151.4	158.2	161.0	162.4	163.5	164.4	170.6	172.1	167.4
Chuck roast.....	136.2	135.0	134.6	134.2	140.0	160.2	167.9	172.5	173.0	172.6	173.6	190.5	191.8	177.8
Hamburger.....	137.4	139.7	139.1	138.5	143.4	153.7	166.0	170.4	170.6	172.2	171.6	188.9	193.2	188.3
Beef liver.....	129.4	134.7	134.9	134.1	135.8	139.9	150.7	156.2	155.3	156.8	156.8	163.0	165.8	170.1
Veal cutlets.....	161.6	167.0	167.6	165.0	168.3	174.9	185.4	188.7	188.9	188.5	189.8	195.5	195.6	196.4
Pork.....	121.6	129.2	128.6	128.4	135.0	142.2	149.8	150.7	150.0	151.4	153.4	197.0	191.3	177.2
Chops.....	123.7	130.4	130.0	128.3	138.4	146.5	153.0	143.9	145.8	148.8	150.9	195.0	168.4	156.6
Loin roast.....	123.3	130.3	130.4	128.6	138.7	147.3	156.3	152.9	151.7	153.8	155.9	211.7	183.5	168.7
Pork sausage.....	128.4	137.5	137.4	136.8	138.0	145.1	157.6	166.0	166.1	167.0	169.1	209.6	223.3	211.3
Ham, whole.....	114.9	117.4	120.3	125.6	131.2	129.4	135.0	142.0	140.5	139.6	140.9	174.4	182.2	167.2
Picnics.....	123.9	129.3	127.5	126.9	132.7	141.8	154.2	161.2	159.2	158.0	159.1	198.0	203.5	188.8
Bacon.....	116.9	128.8	125.9	125.7	130.5	139.5	143.5	147.8	145.2	147.3	149.6	195.7	202.3	185.7
Other meats.....	124.0	127.8	128.9	129.3	130.4	134.0	142.1	148.9	149.4	149.2	149.9	166.3	174.4	171.0
Lamb chops.....	129.3	131.8	132.3	131.5	131.4	140.0	144.7	145.5	145.0	143.8	146.5	154.7	154.5	145.9
Frankfurters.....	124.7	129.3	129.7	129.0	130.7	134.3	147.9	156.0	156.4	156.6	156.5	180.1	191.7	184.0
Ham, canned.....	115.2	119.6	122.1	125.0	126.9	128.7	134.0	139.8	140.8	140.8	140.9	157.6	165.8	170.4
Bologna sausage.....	129.1	133.7	133.6	134.3	135.0	138.4	148.0	157.3	156.7	156.5	157.0	175.5	187.8	183.8
Salami sausage.....	126.0	130.6	132.3	131.9	132.4	133.8	142.1	148.6	150.3	149.7	149.6	165.0	172.5	171.6
Liverwurst.....	119.6	122.0	123.3	124.1	126.0	128.6	135.9	146.8	147.8	148.1	149.0	165.8	175.4	171.6
Poultry.....	110.4	112.0	110.2	110.2	116.1	120.7	150.7	150.1	150.4	150.8	154.6	225.4	185.9	157.7
Frying chicken.....	109.6	111.4	108.9	109.2	116.6	121.7	158.8	155.7	154.8	153.7	158.2	244.5	193.0	154.6
Chicken breasts.....	113.1	115.7	114.4	113.8	116.8	122.5	145.5	145.2	144.5	145.4	147.3	202.7	168.0	149.2
Turkey.....	111.8	111.4	112.6	111.7	113.3	114.2	118.0	129.0	136.0	142.8	145.4	158.7	170.8	180.8
Fish.....	141.9	145.8	148.0	148.6	149.2	151.3	152.8	156.1	160.2	163.7	163.8	165.2	167.1	170.8
Shrimp, frozen.....	134.9	138.3	141.6	140.8	140.3	141.7	145.6	149.4	154.1	156.9	158.1	159.2	162.7	167.4
Fish, fresh or frozen.....	152.3	159.1	163.7	165.2	167.9	173.8	174.5	179.2	185.1	189.6	190.1	194.2	195.2	200.2
Tuna fish, canned.....	133.0	134.6	134.8	135.7	135.7	136.2	136.8	138.9	140.9	144.7	145.8	144.9	146.0	147.8
Sardines, canned.....	147.3	151.0	151.7	152.6	152.8	153.7	154.5	157.1	161.0	163.9	161.7	163.1	164.9	168.4
Dairy products.....	117.1	117.1	117.7	118.3	119.1	121.0	121.5	121.8	123.2	124.1	124.1	126.6	130.3	137.3
Milk, fresh, grocery.....	116.3	115.8	116.3	117.0	117.9	120.5	120.5	120.4	121.9	122.8	122.9	125.9	129.0	136.7
Milk, fresh, delivered.....	120.3	120.7	121.2	121.7	122.7	124.7	125.0	125.5	126.5	127.1	127.2	129.2	132.0	139.0
Milk, fresh, skim.....	121.9	122.0	122.7	123.4	124.2	127.8	127.8	128.0	130.2	131.0	130.9	134.6	138.0	147.0
Milk, evaporated.....	120.0	119.8	121.2	121.7	122.4	123.7	125.8	129.2	131.4	133.5	134.1	135.5	136.0	141.2
Ice cream.....	106.5	106.3	106.7	106.2	107.2	107.7	109.1	109.3	110.0	110.6	110.3	111.5	115.1	119.6
Cheese, American process.....	124.7	125.3	126.4	127.6	128.3	129.7	130.5	132.3	134.7	135.9	136.3	137.5	139.1	145.7
Butter.....	105.3	105.4	105.5	105.4	105.7	105.6	105.9	103.2	103.0	102.6	102.6	107.1	120.7	128.0
Fruits and vegetables.....	125.0	124.5	126.5	127.3	130.5	133.3	136.8	141.8	144.6	151.7	153.7	152.6	137.3	138.8
Fresh fruits and vegetables.....	128.0	126.7	129.5	130.6	135.5	139.8	145.1	152.6	156.9	168.2	171.3	168.4	141.3	141.6
Fresh fruits.....	123.9	127.3	122.6	120.5	123.5	126.3	127.6	136.8	137.7	150.1	154.6	149.4	141.3	140.8
Apples.....	121.6	113.1	112.9	117.3	118.0	122.6	125.8	134.2	145.5	165.3	177.4	168.1	154.7	137.4
Bananas.....	101.6	101.2	100.0	97.3	97.5	101.3	97.2	106.9	100.6	110.1	113.2	117.6	110.7	111.1
Oranges.....	125.4	124.2	129.1	119.8	129.7	129.5	133.3	135.7	137.6	135.4	135.4	147.5	147.5	157.7
Orange juice, fresh.....	130.8	130.5	130.7	131.3	132.1	132.4	132.0	131.7	132.0	132.8	132.6	132.8	133.4	132.3
Grapefruit.....	144.8	187.8	137.0	130.5	126.4	128.9	128.9	127.2	130.6	143.5	160.1	183.8	178.6	185.7
Grapes ¹	163.0	169.9	166.5	-----	-----	-----	-----	-----	-----	-----	199.6	157.9	140.5	159.1
Strawberries ¹	112.5	-----	-----	-----	-----	-----	-----	146.7	120.6	127.7	-----	-----	-----	-----
Watermelon ¹	130.0	-----	-----	-----	-----	-----	-----	-----	166.7	164.8	129.1	-----	-----	-----
Fresh vegetables.....	131.5	126.3	135.1	138.9	145.3	150.7	159.2	165.4	172.4	182.8	184.9	183.8	141.5	142.4
Potatoes.....	126.6	128.9	135.2	136.3	142.0	152.7	163.9	171.4	184.3	226.2	248.6	252.4	177.3	169.1
Onions.....	128.8	140.5	140.9	143.5	148.1	175.4	210.6	251.7	303.6	203.0	175.4	170.9	140.9	137.3
Asparagus ¹	141.8	-----	-----	-----	-----	-----	182.1	145.5	134.4	156.7	156.5	-----	-----	-----
Cabbage.....	129.3	126.6	124.6	126.0	131.4	133.7	166.6	167.7	195.2	162.4	167.1	175.9	159.8	178.4
Carrots.....	135.5	138.5	134.6	144.5	140.8	144.4	145.2	131.1	131.4	136.8	143.2	157.0	129.8	139.3
Celery.....	143.4	134.6	133.9	136.0	148.3	147.0	145.6	132.5	146.7	144.7	159.0	193.0	141.8	136.6
Cucumbers.....	122.1	94.2	98.1	110.0	121.5	161.8	187.9	170.4	144.7	137.8	127.9	103.7	101.1	127.4
Lettuce.....	124.7	125.8	138.5	145.5	142.4	133.2	133.7	160.5	165.2	188.5	188.5	184.9	131.6	125.8
Peppers, green.....														

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
FOOD—Continued														
Spinach.....	139.6	140.4	141.2	145.0	148.7	151.1	152.6	154.4	152.8	160.2	166.2	170.5	163.7	163.2
Tomatoes.....	132.7	116.7	148.8	146.2	164.4	146.8	138.4	133.6	126.9	136.6	161.3	142.0	103.1	111.2
Processed fruits and vegetables.....	120.5	121.2	122.1	122.4	123.1	123.7	124.5	125.7	126.3	127.2	127.6	129.1	131.2	134.7
Fruit cocktail, canned.....	121.7	121.8	123.0	123.3	125.1	126.7	127.7	129.2	128.8	129.4	129.2	129.4	130.1	132.6
Pears, canned.....	118.3	120.1	120.7	120.5	121.2	121.6	122.8	123.4	123.9	125.0	125.0	125.7	125.5	127.1
Pineapple-grapefruit drink.....	115.3	115.5	116.6	116.3	117.6	118.0	118.2	119.2	119.0	119.7	119.6	119.9	120.4	121.5
Orange juice concentrate, frozen.....	136.0	134.9	136.4	136.1	136.5	136.9	137.3	139.0	137.2	135.6	136.0	135.8	136.3	136.4
Lemonade concentrate, frozen.....	117.4	117.7	119.3	119.3	119.3	119.5	119.7	120.8	120.5	119.2	119.0	119.2	119.8	121.1
Beets, canned.....	122.0	123.9	126.0	127.4	128.4	130.0	132.8	134.1	138.0	138.4	139.4	143.9	145.8	145.6
Peas, green, canned.....	107.7	107.0	107.7	107.2	107.8	108.2	109.4	110.0	109.2	110.2	110.2	110.4	111.2	112.5
Tomatoes, canned.....	116.6	117.9	118.5	119.4	119.7	121.6	121.7	123.4	124.6	124.8	125.1	125.6	126.2	127.3
Dried beans.....	137.9	141.0	140.4	141.0	141.2	141.3	141.1	142.1	144.3	149.0	151.0	157.8	172.0	194.0
Broccoli, frozen.....	118.5	118.2	118.3	118.8	119.0	117.9	119.0	120.7	120.7	122.3	122.6	123.2	123.1	124.5
Other food at home.....	116.7	118.0	118.1	120.2	123.8	123.1	123.2	124.3	125.4	127.7	128.5	135.6	135.9	137.2
Eggs.....	107.7	114.5	113.6	128.0	151.6	141.2	136.2	138.8	138.7	146.6	151.3	198.4	188.4	179.2
Fats and oils:														
Margarine.....	117.6	117.1	117.0	116.7	116.3	116.6	117.5	119.6	121.1	125.3	125.7	131.4	147.1	158.1
Salad dressing, Italian.....	110.0	109.5	109.7	109.6	110.3	109.9	110.4	110.4	111.3	110.5	109.5	110.8	111.4	114.9
Salad or cooking oil.....	121.4	120.1	119.4	119.2	119.0	119.0	120.1	123.2	125.7	127.7	128.2	129.4	136.1	153.9
Sugar and sweets.....	120.9	120.9	121.1	121.4	121.7	122.8	124.0	125.3	126.3	127.6	127.9	128.8	129.6	131.2
Sugar.....	115.0	115.4	115.8	116.5	116.7	117.9	118.6	119.3	120.5	122.7	123.5	124.6	127.0	132.3
Grape jelly.....	124.8	126.0	125.8	126.2	126.8	129.6	131.3	132.5	132.9	134.4	134.6	135.1	135.0	135.6
Chocolate bar.....	130.7	130.6	130.8	130.9	130.9	131.1	131.3	133.0	134.8	135.9	136.6	137.6	138.6	138.5
Syrup, chocolate flavored.....	111.8	110.6	110.9	111.1	111.2	111.7	113.8	115.3	115.9	116.2	116.0	116.9	117.1	118.0
Nonalcoholic beverages.....	121.3	122.6	122.9	123.1	123.9	125.6	126.4	127.2	129.5	131.4	131.7	131.9	132.1	133.2
Coffee, can and bag.....	119.4	122.4	122.8	123.1	124.3	127.3	128.4	129.7	133.4	137.3	138.2	138.6	139.0	140.4
Coffee, instant.....	124.1	123.1	123.5	124.3	125.0	127.6	128.1	128.9	131.7	132.8	133.2	133.2	133.3	132.9
Tea.....	108.7	109.7	109.5	109.8	109.7	110.1	110.1	110.5	110.9	111.2	111.3	111.1	111.1	111.6
Carbonated drink, cola flavored.....	128.3	128.7	129.4	129.1	129.6	129.5	130.2	130.5	131.4	132.0	131.7	131.3	131.2	133.2
Carbonated drink, fruit flavored.....	128.0	127.9	128.2	128.0	128.7	129.3	129.9	130.4	131.1	131.4	131.3	131.6	132.1	132.9
Prepared and partially prepared foods.....	114.7	115.0	115.4	115.7	115.7	116.2	117.0	117.5	117.8	118.3	118.3	118.4	119.6	120.9
Bean soup, canned.....	116.1	116.3	116.5	116.6	116.7	117.0	117.0	117.4	117.7	118.2	118.3	118.2	121.0	123.1
Chicken soup, canned.....	105.3	104.2	104.7	104.8	104.2	104.7	105.2	105.3	105.3	105.6	105.9	105.8	107.8	110.1
Spaghetti, canned.....	119.6	121.5	121.9	122.2	122.3	122.5	122.8	122.4	123.0	124.0	123.6	124.0	124.4	125.0
Mashed potatoes, instant.....	112.1	112.2	112.4	112.8	112.4	113.0	115.1	117.0	117.9	118.7	118.4	118.2	118.7	119.2
Potatoes, French fried, frozen.....	110.9	111.4	111.5	111.9	112.3	111.8	112.5	113.0	113.5	114.1	114.3	114.8	116.5	118.1
Baby food, can or jar.....	110.6	110.2	109.6	109.8	109.9	110.7	111.7	112.8	113.7	114.7	114.6	114.9	115.4	116.6
Sweet pickle relish.....	125.5	127.6	128.9	129.9	130.1	130.4	132.0	132.2	131.3	131.3	131.2	131.2	131.3	132.6
Pretzels.....	115.0	114.2	115.2	115.0	114.7	116.6	117.0	117.0	117.0	117.5	117.8	117.6	119.4	120.0
HOUSING.....	129.2	130.4	130.8	131.2	131.5	132.0	132.4	132.8	133.3	133.9	134.2	135.2	136.6	138.1
Shelter.....	134.5	136.0	136.2	136.8	137.0	137.4	137.7	138.1	138.7	139.4	139.7	141.1	142.9	144.7
Rent, residential.....	119.2	120.3	120.5	121.0	121.8	122.3	122.8	123.2	123.7	124.0	124.4	125.0	125.4	125.9
Homeownership.....	140.1	141.8	142.0	142.6	142.6	142.9	143.2	143.6	144.2	145.0	145.2	147.0	149.2	151.5
Mortgage interest rates.....	117.5	117.3	117.5	117.5	117.9	118.1	117.8	117.8	118.2	118.7	119.1	121.8	127.6	132.7
Property taxes.....	145.7	149.3	149.6	150.6	150.8	151.7	151.9	152.1	152.4	152.5	152.6	152.6	152.7	152.7
Property insurance premiums.....	123.2	123.6	123.7	125.0	124.5	124.5	124.7	124.8	125.0	124.9	124.8	124.2	123.9	123.8
Maintenance and repairs.....	140.7	142.4	142.9	144.2	144.7	145.3	146.5	148.1	149.6	151.5	152.2	153.0	153.9	154.6
Commodities.....	124.1	126.2	126.7	127.3	127.9	128.6	130.3	134.2	136.5	138.1	138.7	139.8	139.9	140.0
Exterior house paint.....	117.7	116.7	117.7	118.1	119.0	118.8	119.1	119.3	119.2	118.9	119.2	120.3	120.5	120.8
Interior house paint.....	117.1	117.4	117.9	118.9	119.1	119.3	119.2	119.6	119.9	120.5	119.4	120.0	121.3	122.4
Services.....	147.9	149.5	149.8	151.5	151.9	152.5	153.5	154.1	155.2	157.2	158.0	158.7	159.9	161.0
Repainting living and dining rooms.....	159.4	162.7	162.8	163.7	164.1	165.1	166.0	167.1	168.9	170.8	171.5	172.2	173.4	174.7
Reshingling roofs.....	155.5	157.1	157.3	158.6	159.6	160.2	161.0	161.4	162.9	164.1	165.1	165.6	166.4	167.1
Residing houses.....	135.7	137.3	137.6	138.7	139.1	139.6	140.7	141.1	142.1	145.2	145.9	146.6	146.9	147.9
Replacing sinks.....	146.4	147.7	148.2	150.4	150.5	150.7	152.1	152.7	153.3	154.7	155.2	156.1	158.0	159.1
Repairing furnaces.....	153.3	153.1	153.9	157.4	157.9	158.3	158.9	159.5	160.4	161.8	163.0	163.5	166.5	167.5
Fuel and utilities.....	120.1	120.6	121.7	121.9	122.8	124.1	124.6	125.1	125.4	125.6	125.7	126.3	126.8	128.6
Fuel oil and coal.....	118.5	118.1	119.3	119.4	120.7	127.2	127.8	128.3	129.3	131.6	131.7	132.8	133.6	141.1
Fuel oil, #2.....	116.6	116.7	117.0	117.0	118.3	125.1	125.7	126.2	127.3	130.6	130.8	132.0	132.4	140.0
Gas and electricity.....	120.5	120.9	122.2	122.5	124.1	124.5	125.0	125.5	125.7	125.4	125.5	125.8	126.5	127.4
Gas.....	122.3	122.0	124.6	125.1	126.2	126.6	126.7	127.1	127.4	126.3	126.5	126.7	127.3	128.4
Electricity.....	118.9	119.9	120.0	120.2	122.1	122.6	123.4	124.0	124.0	124.6	124.6	125.0	125.8	126.5
Other utilities:														
Residential telephone.....	113.5	114.9	114.9	115.0	114.6	115.2	115.4	115.6	115.8	115.9	115.9	117.1	117.1	117.5
Residential water and sewerage.....	138.5	138.8	141.6	141.7	141.7	141.7	143.2	146.5	146.5	146.8	147.0	147.1	147.1	147.4
Household furnishings and operations.....	121.0	121.8	122.1	122.3	122.2	122.6	123.0	123.6	123.9	124.7	125.0	125.3	126.1	126.7
House furnishings.....	116.2	116.9	117.1	117.3	116.9	117.2	117.6	118.0	118.5	119.1	119.1	119.2	119.8	120.3
Textiles.....	113.6	114.7	115.1	115.4	113.1	115.2	115.1	115.8	115.7	116.4	115.1	114.8	116.3	117.6
Sheets, percale or muslin.....	115.1	116.9	11											

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
HOUSING—Continued														
Furniture and bedding.....	121.1	121.5	121.9	122.1	121.8	121.7	122.8	123.6	124.8	125.7	125.9	126.2	127.0	127.3
Bedroom furniture, chest and dresser ²	105.1	105.4	105.7	105.8	105.7	105.4	106.9	107.7	109.0	109.9	110.4	110.7	111.6	112.0
Dining room chairs ²	104.3	103.9	104.9	105.2	104.4	104.0	106.5	107.3	108.2	109.2	110.1	109.4	110.4	111.4
Sofas, upholstered.....	120.4	120.7	121.2	121.2	120.5	120.9	121.8	122.3	123.4	124.3	124.0	124.6	125.3	125.2
Sofas, convertible.....	117.1	117.7	118.0	118.2	117.7	116.5	117.4	118.0	119.0	120.1	120.4	120.4	121.7	121.8
Bedding, mattress, and box springs ³	104.7	105.1	105.2	105.2	105.3	105.2	105.7	106.0	106.2	107.0	107.8	108.9	109.4	109.6
Cribs.....	118.6	118.4	119.0	120.2	120.0	120.1	120.8	120.4	122.3	125.5	126.3	127.2	127.5	127.5
Cocktail table ⁴	100.7	101.2	101.7	101.6	101.8	102.1	102.4	102.8	103.3	104.5	104.2	105.2	105.6	106.2
Recliner, upholstered ⁴	98.5	98.5	98.3	98.7	98.5	98.8	98.6	99.7	100.1	99.9	99.9	99.6	99.6	100.1
Floor coverings.....	106.5	106.6	106.6	106.6	106.6	107.1	107.2	107.6	107.4	107.9	108.6	108.4	109.1	109.4
Broadloom carpeting, manmade fibers.....	101.5	101.4	101.4	101.4	101.2	101.6	101.6	102.2	102.0	102.6	103.4	103.1	103.9	104.2
Vinyl sheet goods.....	118.0	119.2	119.5	119.1	119.6	119.8	120.3	120.1	120.4	120.6	121.2	121.6	122.1	122.9
Vinyl asbestos tile.....	118.0	117.9	118.1	118.1	119.0	119.7	119.7	119.7	119.4	119.8	120.0	120.1	120.1	120.2
Appliances (excluding radio and TV).....	109.7	109.9	109.9	109.9	109.9	109.7	109.5	109.5	109.5	109.7	109.7	109.6	109.8	110.0
Washing machines, automatic.....	110.5	110.9	110.7	110.8	111.0	110.9	110.8	110.8	110.8	110.9	110.8	111.0	111.1	111.0
Vacuum cleaners, canister type.....	103.8	103.8	103.7	103.8	103.7	103.8	103.8	103.8	103.5	104.2	104.8	104.0	104.3	104.4
Refrigerator-freezers, electric.....	108.1	108.3	108.3	108.4	108.1	108.3	108.2	108.2	108.4	108.2	108.0	107.9	108.2	108.5
Ranges, free standing, gas or electric.....	110.9	111.6	111.0	111.0	111.1	110.9	109.8	110.0	110.0	109.7	109.5	110.3	110.3	110.8
Clothes dryers, electric.....	114.2	114.8	115.2	114.8	114.6	114.0	114.2	114.2	114.1	114.4	114.4	114.1	114.5	114.5
Air conditioners, demountable ¹	110.7	-----	-----	-----	-----	-----	110.0	109.9	109.7	110.6	110.5	109.9	-----	-----
Room heaters, electric, portable ¹	108.7	108.4	109.1	109.4	108.7	107.8	108.0	-----	-----	-----	-----	-----	-----	108.6
Garbage disposal units.....	111.0	111.4	111.1	111.0	111.8	111.4	111.1	111.0	111.5	111.7	111.9	112.0	112.4	112.5
Other house furnishings:														
Dinnerware, fine china.....	124.1	125.8	126.7	126.6	126.9	128.6	128.7	128.8	129.6	130.2	131.3	132.2	133.2	133.0
Flatware, stainless steel.....	124.8	129.4	129.4	129.8	130.7	130.8	130.9	131.1	131.4	131.7	132.1	132.4	133.3	133.5
Table lamps, with shade.....	123.8	125.6	126.3	126.4	126.8	127.1	127.8	127.7	128.5	129.1	129.3	129.6	128.4	127.9
Housekeeping supplies:														
Laundry soaps and detergents.....	111.2	111.4	111.4	111.5	111.4	111.7	112.2	112.4	112.0	112.8	112.7	113.4	113.9	115.2
Paper napkins.....	131.1	133.5	133.5	134.4	135.6	137.2	137.4	138.5	138.5	139.1	139.1	139.3	139.6	139.2
Toilet tissue.....	124.9	123.5	125.7	125.6	125.2	126.2	126.6	127.1	121.0	127.8	129.5	130.0	130.7	131.2
Housekeeping services:														
Domestic service, general housework.....	139.1	140.8	141.5	141.6	141.9	142.2	143.8	144.4	145.7	146.0	146.2	146.7	151.4	152.3
Baby sitter service.....	136.3	138.3	138.5	139.3	139.2	139.4	140.7	140.7	141.1	142.2	142.7	143.2	144.8	145.8
Postal charges.....	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6	146.6
Laundry, flatwork.....	138.7	140.2	140.4	140.9	142.1	143.8	144.6	145.9	147.5	148.6	149.0	149.7	152.0	153.1
Licensed day care service, preschool child.....	122.5	124.7	125.6	125.8	125.8	126.1	126.4	128.8	129.1	129.5	131.0	131.0	133.0	133.9
Washing machine repair.....	140.7	142.2	142.7	143.6	144.1	144.9	146.2	147.2	148.2	148.8	149.1	150.1	150.5	151.0
APPAREL AND UPKEEP.....	122.3	124.3	125.0	125.0	123.0	123.6	124.8	125.8	126.7	126.8	125.8	126.5	128.3	129.6
Men's and boys'.....	121.9	123.8	124.8	124.8	123.5	123.3	124.6	125.9	126.7	127.1	125.4	126.3	127.3	128.3
Men's:														
Topcoats, wool or all weather coats, polyester blend ¹	125.8	130.1	132.4	130.8	128.8	126.6	130.0	133.6	134.6	134.2	129.8	132.4	132.5	133.9
Suits, year-round weight.....	130.3	133.4	133.5	134.3	129.4	129.2	131.7	146.1	145.9	146.0	137.0	-----	133.9	135.8
Suits, tropical weight ¹	134.0	-----	-----	-----	-----	-----	-----	146.1	145.9	146.0	137.0	-----	-----	-----
Jackets, lightweight.....	114.2	113.9	114.0	114.3	115.3	116.0	116.8	117.5	118.0	118.4	117.7	118.4	119.8	119.9
Slacks, wool, manmade fibers or blends.....	115.7	115.8	116.1	116.4	115.7	115.7	115.1	115.7	116.0	115.8	114.6	114.4	116.9	117.8
Slacks, cotton, manmade fibers or blends.....	137.6	143.0	143.2	142.0	142.4	141.8	141.7	143.0	142.8	143.1	138.3	137.4	137.1	138.3
Trousers, work.....	114.8	114.8	115.3	115.2	115.8	116.7	117.1	118.1	119.2	119.8	120.2	121.6	122.5	123.1
Shirt, work.....	115.2	115.4	115.8	116.0	116.1	116.7	118.0	119.0	119.6	120.6	121.0	122.3	123.1	123.4
Shirts, business or dress.....	112.6	111.8	112.8	113.5	110.7	111.0	111.3	111.9	112.4	114.3	113.3	114.0	116.2	116.8
T-shirts.....	117.9	118.8	118.2	118.5	118.6	118.9	119.0	119.7	121.7	122.6	122.8	123.3	124.1	124.3
Socks.....	115.8	115.0	115.6	116.2	116.2	116.3	116.6	116.6	117.3	117.3	117.7	117.8	118.0	117.8
Handkerchiefs.....	116.4	117.2	117.1	117.0	117.7	118.4	119.4	119.2	120.1	119.9	120.0	121.1	122.1	122.7
Boys':														
Coats, all purpose, cotton or cotton blend ¹	119.9	121.5	128.0	127.1	123.1	123.3	122.0	-----	-----	-----	-----	-----	-----	126.0
Sport coats, wool or blend ¹	121.1	121.9	122.7	121.6	119.6	-----	-----	-----	-----	-----	-----	-----	-----	122.5
Dungarees, cotton or blend.....	127.5	128.5	128.9	129.7	130.6	131.1	131.6	133.0	134.0	135.9	138.2	140.0	141.2	142.3
Undershorts, cotton.....	120.4	120.2	120.5	120.7	121.1	121.2	121.2	122.1	122.5	123.2	123.4	124.4	125.0	125.8
Women's and girls'.....	123.0	125.9	126.5	126.4	122.2	123.3	125.1	126.0	127.2	127.1	125.5	126.0	129.5	131.4
Women's:														
Coats, heavyweight, wool or wool blend ¹	130.1	134.1	136.1	134.5	121.7	-----	-----	-----	-----	-----	-----	-----	138.4	142.3
Skirts, winter weight.....	139.4	141.5	146.2	147.2	140.1	127.6	-----	-----	-----	-----	-----	-----	-----	148.7
Skirts, summer weight.....	117.1	-----	-----	-----	-----	-----	-----	123.3	130.5	129.1	121.4	117.4	-----	-----
Blouses.....	123.1	125.1	125.6	124.7	124.2	125.5	124.8	124.7	125.9	125.0	124.6	126.0	127.7	129.2
Dresses, street, chiefly manmade fiber.....	130.1	131.5	132.2	133.4	130.9	132.4	133.6	134.6	135.0	134.7	132.9	136.3	138.4	139.9
Slips, nylon.....	110.9	111.1	110.6	110.5	110.6	110.9	111.0	110.9	110.9	110.9	111.3	111.3	111.6	111.4
Panties, acetate or nylon.....	117.7	118.7	118.8	118.8	118.4	118.7	118.9	119.0	119.4	119.8	119.9	120.0	120.3	121.1
Girdles, manmade blend.....	117.6	118.2	118.2	118.2	116.7	117.8	117.9	118.7	119.0	117.7	117.7	119.4	119.8	119.6
Brassieres, nylon.....	122.4	123.0	123.8	123.7	121.5	121.6	123.2	124.2	125.0	125.3	124.1	125.8	124.4	124.9
Hose or panty hose, nylon, seamless.....	96.2	94.6	95.3	95.0	94.6	94.4	95.3	94.3	94.5	94.3	94.2	93.9	94.3	93.5
Anklets or knee-length socks, various fibers.....	114.8	113.7	114.2	114.8	114.7	114.3	114.7	114.3	113.9	113.7	114.3	113.4	114.3	114.4
Gloves, fabric, nylon.....	110.6	110.7	110.8	110.8	110.5	111.6	111.0	111.5	112.0	112.6	111.4	112.0	113.1	113.3
Handbags, rayon faille or plastic.....	143.7	146.3	147.7	148.3	146.0	146.4	145.3	148.3	148.5	149.9	151.5	153.7	155.3	157.2

See footnotes at end of table.

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
APPAREL AND UPKEEP—Continued														
Girls':														
Raincoats, vinyl plastic or chiefly cotton ¹	116.3	116.9	115.2	114.6	110.1	109.8	114.3	-----	-----	-----	-----	-----	-----	122.7
Skirts, wool or wool blend ¹	113.5	121.1	119.5	119.1	104.7	-----	-----	-----	-----	-----	-----	-----	-----	127.6
Dresses, cotton manmade fibers or blends.....	119.9	124.3	124.2	125.3	120.6	123.4	124.9	122.6	123.2	123.7	122.7	122.2	121.0	127.6
Slacks, wool.....	137.5	140.0	140.1	140.9	137.1	138.7	-----	-----	-----	-----	-----	-----	-----	142.7
Slips, cotton blend.....	110.8	110.1	110.1	109.8	109.9	109.4	109.0	109.2	109.4	109.3	109.7	110.0	110.2	109.9
Handbags.....	125.7	123.8	125.2	127.0	122.8	123.5	126.2	124.9	126.1	128.6	130.2	130.2	133.4	135.7
Footwear.....	124.9	126.5	127.1	127.3	126.6	127.6	128.7	129.7	130.3	130.0	129.9	130.6	131.3	132.0
Men's:														
Shoes, street (oxford or buckle strap).....	123.6	125.7	126.8	127.5	126.7	129.1	130.4	132.1	133.0	133.6	133.5	133.8	133.5	134.4
Shoes, work, high.....	122.9	124.8	126.0	127.1	127.4	129.4	130.3	132.4	134.8	137.6	138.0	138.8	139.7	140.4
Women's:														
Shoes, street, pump.....	126.3	128.2	128.8	128.4	125.5	127.0	128.9	130.1	130.0	128.9	128.1	129.2	130.3	131.5
Shoes, evening, pump.....	122.2	123.6	123.6	123.6	123.0	123.3	123.8	123.7	123.7	123.4	124.7	124.8	125.5	125.6
Shoes, casual, pump.....	125.6	126.2	128.0	128.3	128.0	126.8	128.3	130.1	130.5	130.3	129.3	129.6	131.2	132.2
Houseslippers, scuff.....	125.2	126.1	126.7	126.9	127.2	126.7	126.9	127.5	128.6	128.7	128.6	128.7	129.8	130.0
Children's:														
Shoes, oxford.....	126.8	129.0	129.3	130.0	129.5	130.1	131.3	132.5	133.0	132.8	132.6	132.9	134.2	134.4
Sneakers, boys', oxford type.....	123.5	124.8	125.2	124.9	124.9	124.8	125.3	125.6	125.6	125.5	125.6	125.8	125.5	126.8
Dress shoes, girls', strap or pump.....	129.8	131.1	130.5	130.2	130.8	132.9	134.3	135.2	135.3	130.9	129.7	133.2	134.0	134.7
Miscellaneous apparel:														
Diapers, cotton gauze or disposable.....	115.0	117.0	116.9	116.9	116.3	117.1	117.9	118.3	118.6	119.2	119.1	119.1	119.2	119.4
Yard goods, polyester blend.....	119.2	119.3	119.3	118.7	118.7	118.7	119.8	120.8	122.4	123.2	124.9	124.7	126.5	131.9
Apparel services:														
Drycleaning, men's suits and women's dresses.....	117.7	118.1	118.4	118.8	119.0	119.3	119.5	120.2	120.8	121.4	121.6	122.2	123.4	124.2
Automatic laundry service.....	114.9	115.2	115.7	115.7	115.8	115.8	116.4	116.5	117.9	118.3	118.0	118.1	118.3	118.6
Laundry, men's shirts.....	122.0	123.7	123.9	125.0	125.3	126.5	126.9	127.1	127.6	128.3	128.7	129.7	130.3	131.7
Tailoring charges, hem adjustment.....	133.2	134.1	135.5	135.5	135.9	135.7	136.2	136.8	137.6	138.1	138.3	139.5	140.5	142.6
Shoe repairs, women's heel lift.....	116.0	118.1	118.5	118.9	119.1	119.6	120.1	120.4	120.8	121.2	121.7	122.5	123.8	124.4
TRANSPORTATION.....	119.9	121.2	121.4	121.3	121.0	121.1	121.5	122.6	123.5	124.6	124.8	124.5	123.9	125.0
Private.....	117.5	118.7	119.0	118.9	118.5	118.7	119.1	120.3	121.3	122.4	122.6	122.3	121.6	122.9
Automobiles, new.....	111.0	110.1	110.2	110.6	111.1	111.0	110.8	111.1	111.1	111.0	110.9	110.6	109.1	111.9
Automobiles, used.....	110.5	115.2	116.0	115.0	112.8	112.4	113.7	117.3	120.6	122.3	122.7	121.3	120.3	118.5
Gasoline, regular and premium.....	107.6	110.2	110.1	110.2	110.7	111.4	112.0	113.8	115.3	118.4	118.8	118.7	117.8	121.8
Motor oil, premium.....	123.6	124.6	124.5	124.7	125.1	125.3	125.8	126.5	127.2	127.7	128.1	128.4	128.7	129.2
Tires, new, tubeless.....	115.9	114.8	114.6	114.8	113.1	112.9	112.1	111.2	110.7	110.5	110.3	109.1	108.8	108.3
Auto repairs and maintenance.....	135.1	136.4	136.6	136.8	138.4	139.3	140.1	140.7	141.4	142.1	142.5	142.9	143.8	144.4
Auto insurance rates.....	140.5	139.6	139.8	139.6	138.4	138.2	138.1	138.4	138.4	138.2	138.1	138.2	138.0	137.5
Auto registration.....	127.4	127.5	127.7	127.7	123.0	123.0	123.6	123.7	123.7	123.7	123.7	123.7	123.7	123.7
Public.....	143.4	144.1	144.1	144.5	144.3	144.3	144.5	143.9	143.9	144.9	144.9	144.9	145.5	145.2
Local transit fares.....	150.1	150.8	150.8	150.8	150.6	150.5	150.7	149.8	149.9	150.3	150.3	150.3	150.6	150.2
Taxicab fares.....	133.5	133.7	133.7	135.6	135.6	135.6	135.7	135.7	135.7	138.3	138.3	138.3	138.3	138.3
Railroad fares, coach.....	124.5	122.0	122.0	122.2	122.2	122.2	122.3	122.3	122.4	122.6	122.6	122.6	122.8	122.6
Airplane fares, chiefly coach.....	130.3	131.9	131.9	132.1	132.1	132.1	132.1	132.1	132.1	134.5	134.5	134.5	137.1	137.1
Bus fares, intercity.....	140.1	142.1	142.1	144.0	144.0	144.0	144.6	144.6	144.6	145.9	145.9	145.9	145.9	145.9
HEALTH AND RECREATION.....	126.1	127.2	127.4	127.5	127.8	128.1	128.6	129.2	129.6	130.0	130.3	130.5	131.1	132.1
Medical care.....	132.5	133.9	134.1	134.4	134.9	135.3	135.8	136.2	136.6	137.0	137.3	137.6	138.3	140.6
Drugs and prescriptions.....	105.6	105.7	105.6	105.6	105.7	105.8	105.6	105.7	105.9	105.9	105.9	105.9	106.1	106.1
Over-the-counter items.....	111.3	111.7	111.7	111.7	111.7	111.8	112.1	112.2	112.5	112.5	112.4	112.4	112.6	112.8
Multiple vitamin concentrates.....	95.2	95.5	95.3	94.9	94.5	93.6	94.5	94.7	95.5	94.2	94.6	94.8	95.3	95.2
Aspirin compounds.....	116.4	117.1	117.1	117.0	117.6	118.2	118.4	117.5	117.7	117.3	117.6	117.3	117.4	117.7
Liquid tonics.....	101.2	101.0	101.1	100.9	101.2	101.2	101.1	101.2	101.7	101.7	101.8	101.6	101.8	101.8
Adhesive bandages, package.....	124.2	124.8	125.0	125.2	125.2	125.1	125.4	126.1	126.7	127.7	126.3	126.3	126.6	127.6
Cold tablets or capsules.....	113.8	114.2	114.3	114.2	114.3	114.1	114.4	114.4	114.1	114.5	114.8	115.0	114.9	114.8
Cough syrup.....	113.4	114.3	113.7	114.2	113.9	114.7	115.1	115.1	115.3	115.4	115.4	115.6	115.6	115.7
Prescriptions.....	100.9	100.6	100.5	100.5	100.6	100.8	100.2	100.3	100.4	100.4	100.4	100.5	100.7	100.5
Anti-infectives.....	75.0	72.9	72.7	72.6	72.6	72.9	71.3	71.1	71.3	70.9	71.0	70.9	70.7	70.2
Sedatives and hypnotics.....	126.6	128.3	127.8	127.9	127.8	128.1	128.2	128.4	129.0	129.2	129.0	129.5	130.3	130.6
Ataractics.....	103.1	103.3	103.5	103.5	103.8	103.7	103.7	103.6	103.8	103.8	103.8	103.8	103.9	103.9
Anti-spasmodics.....	107.9	108.0	108.0	108.0	107.8	108.0	107.6	107.4	107.6	107.7	107.9	107.9	108.0	107.9
Cough preparations.....	130.4	131.7	132.0	132.0	133.4	134.6	135.1	135.3	136.0	137.3	137.6	137.8	138.4	138.4
Cardiovasculars and antihypertensives.....	111.8	112.0	112.1	112.1	112.1	112.4	112.4	112.9	112.8	112.8	112.8	112.9	113.6	113.7
Analgesics, internal.....	109.5	109.7	109.9	110.1	110.7	110.6	110.8	111.5	111.7	111.7	111.2	111.2	111.3	110.8
Anti-obesity.....	117.4	116.9	117.2	117.0	117.6	117.7	116.3	116.4	116.6	116.9	117.1	117.4	117.9	118.1
Hormones.....	93.2	92.8	92.7	92.6	92.6	92.8	91.5	91.5	91.3	91.4	91.3	91.4	91.4	91.5
Professional services:														
Physicians' fees.....	133.8	134.6	134.8	135.4	135.7	136.1	136.7	136.9	137.5	138.0	138.2	138.6	139.6	139.9
General physician, office visits.....	134.8	135.6	135.7	136.6	137.0	137.1	137.9	138.1	138.5	139.1	139.5	139.8	141.2	141.6
General physician, house visits.....	136.7	137.8	138.0	138.8	139.3	139.5	140.7	141.0	141.3	141.4	141.5	141.9	143.4	143.6
Obstetrical cases.....	133.8	134.5	134.6	134.6	134.7	136.2	136.8	137.0	137.9	138.3	138.4	138.7	139.1	139.6
Pediatric care, office visits.....	136.2	137.0	137.8	137.8	138.0	138.7	139.2	139.6	140.0	140.0	140.4	141.5	141.8	142.0
Psychiatrist, office visits.....	129.2	129.5	130.8	131.7	131.8	132.6	132.9	132.9	133.6	133.6	133.8	133.9	134.2	134.3
Herniorrhaphy, adult.....	128.2	128.8	129.2	129.6	129.7	129.9	130.6	130.5	130.8	131.2	131.3	131.8	132.0	132.1
Tonsillectomy and adenoidectomy.....	129.9	130.5	130.4	130.5	130.6	130.9	131.1	131.1	132.7	133.1	133.3	133.3	133.5	133.9

See footnotes at end of table.

25. Continued—Consumer Price Index—U.S. average

Group, subgroup, and selected items	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
HEALTH AND RECREATION—Continued														
Dentists' fees.....	132.2	133.3	133.5	133.7	134.3	134.4	134.7	135.4	135.7	136.1	136.7	136.7	137.0	138.2
Fillings, adult, amalgam, one surface.....	133.8	135.0	135.2	135.5	136.6	136.8	137.0	137.8	137.9	138.4	139.0	139.1	139.5	140.4
Extractions, adult.....	132.2	133.1	133.3	133.3	133.2	133.3	133.7	134.3	134.7	135.3	136.0	135.9	136.1	137.4
Dentures, full uppers.....	129.3	130.1	130.2	130.2	130.7	130.8	131.1	131.9	132.1	132.3	132.7	132.8	132.9	134.3
Other professional services:														
Examination, prescription, and dispensing of eyeglasses.....	124.9	125.6	126.3	126.3	126.5	126.7	127.2	127.6	129.4	129.6	129.8	130.6	130.9	131.2
Routine laboratory tests, urinalysis.....	120.4	121.3	121.3	121.3	121.4	121.6	121.1	121.2	121.9	122.2	122.5	123.8	124.0	124.2
Hospital service charges ⁵	102.0	102.9	103.0	103.2	103.6	104.1	104.6	104.9	105.1	105.3	105.6	106.0	106.3	107.0
Semiprivate rooms.....	173.9	175.8	176.0	176.3	177.6	178.9	180.1	180.8	181.0	181.4	181.8	182.5	183.6	185.2
Operating room charges.....	168.6	171.6	172.9	173.1	173.5	175.6	177.3	178.4	178.5	179.0	179.2	179.7	180.2	181.5
X-ray, diagnostic series, upper G.I.....	129.1	129.7	130.1	130.1	130.7	130.8	130.9	131.2	131.2	131.4	131.9	132.1	132.1	133.0
Laboratory test, urinalysis ⁵	101.9	102.5	102.2	102.7	102.7	102.8	103.0	103.0	103.3	103.3	104.3	105.2	105.6	105.7
Anti-infective, tetracycline, HCL ⁵ and Mepro- bamate.....	99.9	99.1	99.1	99.4	99.7	98.3	98.2	97.7	97.8	97.5	97.6	97.4	97.1	97.0
Tranquilizer, chlordizepoxide, HCL ⁵	101.2	102.2	101.8	101.9	102.0	102.4	102.4	102.4	104.4	104.9	104.9	105.3	105.3	105.3
Electrocardiogram ⁵	102.7	103.4	103.5	104.0	104.0	104.1	104.4	104.5	104.5	104.5	104.5	104.7	104.9	105.4
Intravenous solution, saline ⁵	101.9	102.7	102.4	102.8	103.0	103.3	103.6	103.6	103.8	103.8	103.8	103.8	103.8	104.6
Physical therapy, whirlpool bath ⁵	101.7	102.4	102.7	102.8	102.9	103.6	104.0	106.3	106.4	106.5	106.7	107.9	108.0	107.2
Oxygen, inhalation therapy ⁵	101.7	102.0	101.9	102.4	101.9	102.1	103.1	103.1	103.1	103.1	103.5	103.8	103.8	105.5
Personal care.....	119.8	120.8	121.0	121.5	121.8	122.4	123.1	123.8	124.4	124.9	125.3	125.7	126.3	127.3
Toilet goods.....	116.9	117.6	117.7	117.9	118.1	118.2	118.7	119.3	119.5	119.5	119.7	120.1	120.4	121.1
Toothpaste, standard dentifrice.....	109.8	110.2	109.7	109.5	109.4	109.1	110.1	110.7	110.1	109.4	109.1	109.3	110.2	110.5
Toilet soap, hard milled.....	121.9	122.1	123.3	123.3	123.3	123.1	124.7	126.0	126.9	127.8	128.0	128.4	129.9	130.2
Hand lotions, liquid.....	125.6	127.8	127.5	127.3	127.3	127.5	127.0	126.6	125.3	125.6	125.5	127.0	126.7	126.9
Shaving cream, aerosol.....	107.3	107.0	107.4	107.6	108.3	108.2	107.8	108.5	108.9	108.8	108.8	108.7	108.8	109.3
Face powder, pressed.....	131.6	136.4	139.0	139.3	140.6	140.4	140.4	142.9	144.3	146.2	146.6	148.2	148.4	149.4
Deodorants, aerosol.....	105.0	103.5	103.8	104.6	104.4	104.2	104.4	104.7	104.8	104.7	104.9	105.2	104.7	105.1
Cleansing tissues.....	124.1	124.9	121.7	122.2	122.2	123.2	125.3	125.4	126.1	124.1	125.0	124.7	124.5	127.8
Home permanent wave sets.....	110.0	109.7	109.7	109.8	109.9	109.9	110.1	109.3	109.4	109.4	109.5	109.3	109.3	109.4
Personal care services.....	122.9	124.2	124.4	125.2	125.6	126.8	127.6	128.5	129.5	130.6	131.1	131.6	132.6	133.9
Men's haircuts.....	125.3	126.4	126.6	127.2	127.5	128.6	129.1	130.2	131.4	133.1	133.8	133.9	135.3	136.8
Beauty shop services.....	121.3	122.6	122.9	123.9	124.3	125.5	126.6	127.3	128.3	128.9	129.3	130.0	130.8	131.9
Reading and recreation.....	122.8	124.0	124.1	124.0	124.1	124.3	124.5	125.2	125.6	125.9	126.2	126.1	126.8	127.2
Recreational goods.....	107.9	108.3	108.2	107.9	107.8	108.0	108.2	108.6	109.0	109.1	109.4	109.5	109.7	110.1
TV sets, portable and console.....	99.5	99.4	99.3	99.0	98.8	98.5	98.5	98.2	98.1	97.8	97.6	97.4	97.8	97.9
TV replacement tubes.....	130.9	133.0	133.2	133.4	133.4	134.2	134.2	134.3	134.5	134.6	134.8	134.8	135.6	135.4
Radios, portable and table model.....	98.9	98.9	99.2	99.2	99.1	98.8	99.0	99.2	99.3	99.3	99.5	99.4	99.6	100.2
Tape recorders, portable.....	94.3	94.8	94.3	94.5	92.9	92.6	92.1	92.5	92.9	93.2	93.4	93.8	93.9	94.7
Phonograph records, stereophonic.....	107.3	108.0	107.4	108.0	108.1	108.2	108.4	108.2	108.8	108.8	108.0	108.3	108.5	108.7
Movie cameras, Super 8, zoom lens.....	88.4	88.6	88.6	88.2	88.3	88.2	88.5	88.7	88.5	88.7	89.9	90.2	90.5	90.6
Film, 35mm, color.....	108.2	108.2	108.1	108.1	108.1	108.2	108.2	108.1	107.8	107.3	107.6	107.5	107.8	107.6
Bicycle, boys'.....	116.2	117.6	117.6	116.7	117.5	118.2	119.0	121.1	121.8	122.4	122.8	124.2	124.1	124.7
Tricycles.....	113.9	114.6	114.9	114.4	114.0	114.1	114.4	114.3	115.1	115.4	116.2	116.1	116.5	116.9
Recreational services.....	128.3	128.8	129.4	129.3	129.7	130.1	130.4	131.5	132.1	132.7	133.2	132.9	133.2	133.4
Indoor movie admissions.....	141.5	142.0	141.9	142.1	142.7	143.4	144.7	146.7	147.7	148.5	148.5	148.8	149.3	149.2
Drive-in movie admissions, adult.....	145.9	147.5	147.9	146.6	148.2	148.1	147.9	148.5	149.2	150.9	152.9	151.3	150.5	150.3
Bowling fees, evening.....	119.3	120.0	122.1	122.0	122.2	122.7	122.9	123.1	122.9	123.0	123.2	122.4	123.3	125.4
Golf greens fees ¹	130.5	131.1						132.1	134.9	136.0	137.7	137.9	138.4	137.6
TV repairs, picture tube replacement.....	98.3	98.2	98.5	98.7	98.7	99.1	99.2	99.5	99.4	100.0	100.2	100.4	100.8	100.6
Film developing, color.....	117.0	116.1	116.1	116.1	116.2	115.8	115.9	116.3	116.3	115.6	116.2	116.1	116.2	115.6
Reading and education:														
Newspapers, street sale and delivery.....	132.3	133.1	133.2	133.4	133.6	133.6	133.6	134.8	136.2	136.4	136.4	136.4	136.4	136.6
Piano lessons, beginner.....	123.0	124.4	125.2	125.0	125.2	125.5	125.6	125.6	125.8	125.6	126.2	126.4	128.4	129.0
OTHER GOODS AND SERVICES.....														
Tobacco products.....	125.5	126.4	126.4	126.5	126.7	127.1	127.6	128.2	128.5	129.0	129.5	129.4	129.9	130.3
Cigarettes, nonfilter tip, regular size.....	133.3	134.3	134.3	134.2	134.2	134.5	135.5	136.5	137.0	137.3	137.8	137.8	138.0	138.2
Cigarettes, filter, king.....	134.8	136.0	136.0	135.9	136.0	136.3	137.3	138.2	138.8	138.9	139.3	139.5	139.7	139.9
Cigars, domestic, regular.....	135.4	136.2	136.3	136.2	136.2	136.5	137.6	138.7	139.2	139.6	140.0	140.1	140.2	140.4
	110.8	111.2	111.1	111.3	111.2	111.3	111.6	112.3	112.7	113.0	113.5	113.2	113.2	113.6
Alcoholic beverages.....	119.6	120.3	120.4	120.5	120.7	121.2	121.3	121.6	121.7	122.3	122.8	122.4	123.2	123.7
Beer.....	113.9	114.2	114.1	114.4	114.6	114.8	114.9	114.9	114.3	115.2	116.0	115.1	116.2	116.5
Whiskey, spirit blended and straight bourbon.....	108.6	108.9	108.8	109.0	109.1	109.1	109.2	109.1	108.9	108.9	109.0	109.0	109.5	109.5
Wine, dessert and table.....	127.0	128.0	128.3	128.3	128.5	129.3	130.0	131.5	135.0	136.5	136.8	136.9	137.3	138.7
Beer, away from home.....	130.9	132.4	132.7	132.6	132.8	133.8	133.8	134.3	134.6	134.8	135.2	135.1	135.6	136.5
Financial and miscellaneous personal expenses:														
Funeral services, adult.....	121.2	122.1	122.3	122.7	123.0	123.4	124.1	124.6	125.4	126.1	126.4	127.6	128.5	128.9
Bank service charges, checking accounts.....	107.5	106.8	106.9	106.5	106.5	106.5	106.5	106.5	107.4	107.4	107.0	107.0	107.0	104.7
Legal services, will.....	148.6	152.4	152.6	153.0	155.5	155.7	157.1	158.3	158.5	159.4	163.3	163.4	164.6	168.1

¹ Priced only in season.² March 1970=100.³ June 1970=100.⁴ December 1971=100.⁵ January 1972=100.

r = revised.

NOTE: For a description of the general method of computing the monthly Consumer Price Index, see BLS Handbook of Methods for Surveys and Studies (BLS Bulletin 1711, 1971), chapter 10.

26. Consumer Price Index ¹—U.S. city average, and selected areas

[1967 = 100 unless otherwise specified]

Area ²	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All items														
U.S. city average ⁴ -----	125.3	126.6	126.9	127.3	127.7	128.6	129.8	130.7	131.5	132.4	132.7	135.1	135.5	136.6
Atlanta, Ga.	125.5	(*)	(*)	127.7	(*)	(*)	130.1	(*)	(*)	132.6	(*)	(*)	137.0	(*)
Baltimore, Md.	126.3	(*)	(*)	128.0	(*)	(*)	131.9	(*)	(*)	133.6	(*)	(*)	137.5	(*)
Boston, Mass.	127.1	128.9	(*)	(*)	129.7	(*)	(*)	132.4	(*)	(*)	134.1	(*)	(*)	138.7
Buffalo, N.Y.	126.6	(*)	128.6	(*)	(*)	130.3	(*)	(*)	133.2	(*)	(*)	136.6	(*)	(*)
Chicago, Ill.-Northwestern Ind.	124.3	125.4	125.7	126.1	126.4	127.5	129.0	129.9	130.8	131.7	131.4	134.5	134.6	135.7
Cincinnati, Ohio-Kentucky	124.7	(*)	(*)	126.5	(*)	(*)	129.8	(*)	(*)	130.9	(*)	130.9	134.4	(*)
Cleveland, Ohio	126.5	(*)	127.9	(*)	(*)	129.9	(*)	(*)	132.7	(*)	(*)	135.9	(*)	(*)
Dallas, Tex.	124.9	(*)	125.7	(*)	(*)	127.7	(*)	(*)	130.6	(*)	(*)	133.7	(*)	(*)
Detroit, Mich.	126.2	127.2	127.4	128.3	128.5	129.7	131.1	132.4	133.4	133.7	133.8	136.8	137.3	137.9
Honolulu, Hawaii	122.8	(*)	(*)	124.4	(*)	(*)	126.0	(*)	(*)	127.5	(*)	(*)	129.6	(*)
Houston, Tex.	125.2	126.4	(*)	(*)	127.2	(*)	(*)	130.5	(*)	(*)	131.5	(*)	(*)	136.2
Kansas City, Mo.-Kansas	124.0	(*)	(*)	125.5	(*)	(*)	127.4	(*)	(*)	129.8	(*)	(*)	132.5	(*)
Los Angeles-Long Beach, Calif.	122.3	123.9	124.3	124.4	124.8	125.5	126.4	126.9	127.4	128.5	129.1	130.9	131.2	132.3
Milwaukee, Wis.	123.7	(*)	125.0	(*)	(*)	127.0	(*)	(*)	130.0	(*)	(*)	133.2	(*)	(*)
Minneapolis-St. Paul, Minn.	125.5	127.2	(*)	(*)	127.8	(*)	(*)	130.8	(*)	(*)	133.1	(*)	(*)	136.3
New York, N.Y.-Northeastern N.J.	131.4	133.2	133.3	133.7	133.8	135.0	136.5	137.5	138.1	139.1	139.2	141.7	142.3	143.1
Philadelphia, Pa.-N.J.	127.0	128.7	129.0	128.9	129.0	130.6	132.5	133.4	134.1	134.7	134.8	137.1	138.1	139.4
Pittsburgh, Pa.	125.3	126.5	(*)	(*)	127.2	(*)	(*)	131.2	(*)	(*)	132.6	(*)	(*)	136.6
Portland, Oreg.-Wash. ⁵	119.5	120.6	(*)	(*)	121.8	(*)	(*)	125.3	(*)	(*)	127.1	(*)	(*)	130.8
St. Louis, Mo.-Ill.	122.3	(*)	(*)	123.7	(*)	(*)	126.2	(*)	(*)	128.1	(*)	(*)	132.3	(*)
San Diego, Calif.	124.4	(*)	126.8	(*)	(*)	128.2	(*)	(*)	130.7	(*)	(*)	134.4	(*)	(*)
San Francisco-Oakland, Calif.	124.3	(*)	(*)	126.3	(*)	(*)	128.7	(*)	(*)	130.7	(*)	(*)	134.5	(*)
Scranton, Pa. ⁶	125.9	(*)	127.9	(*)	(*)	130.0	(*)	(*)	132.7	(*)	(*)	136.3	(*)	(*)
Seattle, Wash.	119.7	(*)	121.2	(*)	(*)	123.1	(*)	(*)	126.3	(*)	(*)	128.8	(*)	(*)
Washington, D.C.-Md.-Va.	126.9	(*)	129.7	(*)	(*)	130.7	(*)	(*)	133.3	(*)	(*)	136.4	(*)	(*)
Food														
U.S. city average ³ -----	123.5	124.9	125.4	126.0	128.6	131.1	134.5	136.5	137.9	139.8	140.9	149.4	148.3	148.4
Atlanta, Ga.	124.4	126.6	127.1	127.1	129.9	132.8	136.4	138.6	140.6	142.4	143.9	152.9	151.2	152.5
Baltimore, Md.	124.7	126.9	126.9	127.7	129.7	132.7	137.0	138.8	139.8	141.7	143.1	151.3	151.6	151.4
Boston, Mass.	123.7	126.0	125.9	126.1	128.0	130.5	133.6	135.6	136.4	138.5	139.4	146.4	145.4	147.9
Buffalo, N.Y.	123.5	124.1	124.8	125.4	128.1	130.6	135.0	137.1	138.2	140.2	140.3	149.1	147.1	147.3
Chicago, Ill.-Northwestern Ind.	123.9	125.3	126.0	126.6	129.0	132.4	125.2	137.3	138.8	141.4	142.0	152.8	149.9	151.1
Cincinnati, Ohio-Kentucky	124.5	125.4	126.3	127.0	128.6	131.6	136.0	138.2	140.0	142.5	143.2	152.1	150.2	149.9
Cleveland, Ohio	123.3	124.8	125.6	126.1	128.2	130.8	135.4	138.2	139.5	140.4	142.0	152.0	150.1	147.8
Dallas, Tex.	123.0	124.7	124.9	125.5	128.2	131.1	133.6	135.1	136.9	139.1	140.0	149.2	148.2	144.9
Detroit, Mich.	122.9	123.8	124.7	125.4	128.5	131.1	135.1	138.2	138.6	141.3	142.7	154.6	152.9	152.1
Honolulu, Hawaii	123.2	123.7	124.8	126.8	126.6	128.0	129.6	131.4	132.7	133.4	134.0	136.1	138.9	141.6
Houston, Tex.	125.0	127.5	127.8	128.3	130.7	133.6	136.6	137.3	139.1	140.3	141.7	151.8	151.3	151.8
Kansas City, Mo.-Kansas	123.6	124.8	125.2	125.9	127.9	130.4	133.3	136.3	138.1	139.8	141.2	149.5	148.9	149.1
Los Angeles-Long Beach, Calif.	120.4	121.8	122.3	122.8	125.7	127.7	129.8	132.4	133.6	135.5	136.1	141.9	142.5	141.9
Milwaukee, Wis.	120.6	122.1	122.6	123.0	125.7	128.7	132.3	133.4	134.5	136.1	137.5	145.8	144.8	145.6
Minneapolis-St. Paul, Minn.	124.4	126.1	126.5	127.8	130.6	132.6	135.1	136.6	138.6	139.9	141.7	149.1	148.7	149.1
New York, N.Y.-Northeastern N.J.	128.6	130.0	130.6	130.9	133.4	135.6	139.0	140.4	141.9	143.7	145.0	152.7	152.1	152.1
Philadelphia, Pa.-N.J.	124.4	125.6	126.1	126.8	129.0	132.1	136.5	138.1	139.5	140.7	141.8	150.5	149.3	149.5
Pittsburgh, Pa.	122.8	123.7	123.9	125.1	127.3	130.2	134.9	136.6	137.4	139.7	141.4	150.9	149.6	149.4
Portland, Oreg.-Wash. ⁵	118.0	118.7			123.8			131.1			133.8			139.5
St. Louis, Mo.-Ill.	122.5	123.4	124.3	125.0	127.1	129.2	132.9	134.5	136.0	138.7	140.4	149.8	148.1	147.4
San Diego, Calif.	123.3	124.6	125.4	125.6	129.8	131.5	134.0	134.7	137.2	138.2	138.9	146.2	146.4	144.1
San Francisco-Oakland, Calif.	121.4	122.8	123.1	123.9	127.8	129.5	131.6	134.2	135.2	137.5	138.3	144.4	144.9	143.0
Scranton, Pa. ⁶	123.4		124.3			131.0			136.5			149.7		
Seattle, Wash.	120.7	122.0	122.5	123.4	127.1	128.5	130.1	132.5	133.9	135.3	136.2	142.5	140.0	141.1
Washington, D.C.-Md.-Va.	125.8	128.8	129.2	128.9	132.0	134.3	138.4	140.3	141.5	143.7	145.6	152.6	151.6	153.8

¹ See table 25. Indexes measure time-to-time changes in prices. They do not indicate whether it costs more to live in one area than in another.² The areas listed include not only the central city but the entire urban portion of the Standard Metropolitan Statistical Area, as defined for the 1960 Census of Population; except that the Standard Consolidated Area is used for New York and Chicago.³ Average of 56 "cities" (metropolitan areas and nonmetropolitan urban places beginning January 1966).⁴ All items indexes are computed monthly for 5 areas and once every 3 months on a rotating cycle for other areas.⁵ Old series (old market basket components).

27. Wholesale Price Index,¹ by group and subgroup of commodities[1967 = 100 unless otherwise specified²]

Code	Commodity group	Annual average 1972	1972			1973									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	All commodities.....	119.1	120.0	120.7	122.9	124.5	126.9	129.7	130.7	133.5	136.7	134.9	142.7	140.2	139.5
	All commodities (1957-59=100).....	127.3	128.1	130.4	132.1	134.6	137.6	138.7	138.7	141.6	145.0	143.1	151.4	148.8	148.0
	Farm products and processed foods and feeds.....	122.4	123.3	125.3	132.6	137.0	142.4	149.0	147.9	154.9	163.6	156.9	184.5	173.5	166.8
	Industrial commodities.....	117.9	118.8	119.1	119.4	120.0	121.3	122.7	124.4	125.8	126.9	126.9	127.4	128.1	129.6
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS														
01	Farm products.....	125.0	125.5	128.8	137.5	144.2	150.9	160.9	160.6	170.4	182.3	173.3	213.3	200.4	188.4
01-1	Fresh and dried fruits and vegetables.....	127.6	122.8	141.8	134.6	151.2	146.9	158.5	176.0	186.0	197.5	187.8	162.2	149.0	162.1
01-2	Grains.....	102.9	109.2	113.6	137.6	135.6	128.2	126.1	130.9	149.9	178.6	157.2	266.4	231.5	229.0
01-3	Livestock.....	142.5	144.2	139.5	152.6	159.4	177.8	194.4	184.1	188.7	193.8	199.3	243.3	207.4	185.5
01-4	Live poultry.....	104.0	103.8	102.8	103.6	127.9	137.0	164.8	185.8	180.3	184.5	189.5	269.7	226.5	189.2
01-5	Plant and animal fibers.....	117.5	105.7	112.2	120.9	134.1	140.0	152.7	154.7	171.4	177.7	186.4	228.5	267.9	266.5
01-6	Fluid milk.....	122.2	123.8	123.5	123.6	126.7	128.5	130.3	130.4	132.9	133.3	133.3	143.4	158.7	168.2
01-7	Eggs.....	103.7	99.1	123.1	143.9	158.2	130.1	152.6	144.9	137.1	159.4	155.2	209.6	191.5	177.7
01-8	Hay, hayseeds, and oilseeds.....	118.1	114.9	124.6	141.6	143.9	178.1	188.1	186.9	243.0	299.9	187.4	293.6	304.5	211.1
01-9	Other farm products.....	125.0	132.3	134.0	135.3	136.5	140.5	143.3	142.1	146.0	148.1	151.9	150.4	153.2	154.7
02	Processed foods and feeds.....	120.8	121.8	123.1	129.4	132.4	137.0	141.4	139.8	145.0	151.8	146.5	166.2	156.3	153.1
02-1	Cereal and bakery products.....	114.7	116.9	118.3	120.1	121.0	120.8	121.3	123.7	124.3	125.9	125.5	136.2	147.7	150.5
02-2	Meats, poultry, and fish.....	130.0	130.4	127.9	136.3	145.2	153.1	165.1	163.2	162.5	164.9	169.7	198.3	187.3	170.2
02-3	Dairy products.....	118.6	120.0	121.8	123.0	123.8	124.0	126.8	127.2	126.5	127.5	127.1	131.3	137.2	139.6
02-4	Processed fruits and vegetables.....	119.7	121.8	123.8	124.7	125.3	125.9	126.2	126.6	127.2	127.9	127.7	129.3	130.0	135.0
02-5	Sugar and confectionery.....	121.6	123.5	121.7	122.1	121.5	124.4	125.7	126.9	129.0	131.0	131.1	135.7	136.9	139.8
02-6	Beverages and beverage materials.....	118.0	118.8	119.4	119.7	119.8	120.0	120.8	121.4	121.9	121.4	121.1	121.2	121.6	123.0
02-7	Animal fats and oils.....	127.4	129.6	134.9	122.9	120.6	134.7	174.1	176.7	195.0	221.3	227.4	428.9	264.7	308.8
02-72	Crude vegetable oils.....	107.5	94.9	93.7	99.2	96.3	123.1	139.3	145.0	153.1	168.8	169.7	284.6	195.2	223.0
02-73	Refined vegetable oils.....	114.5	108.4	104.6	108.8	110.0	120.3	132.5	135.1	147.0	164.8	164.8	164.8	164.8	180.5
02-74	Vegetable oil end products.....	121.2	123.2	121.6	119.2	119.7	122.2	127.0	125.6	131.6	137.4	137.2	161.6	160.1	167.6
02-8	Miscellaneous processed foods.....	114.8	116.9	116.1	115.8	116.6	117.3	118.7	118.7	118.9	119.9	123.4	128.5	128.1	129.3
02-9	Manufactured animal feeds.....	116.0	116.5	130.5	163.6	166.3	182.5	182.3	166.7	211.3	257.8	197.0	261.8	190.1	184.5
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel.....	113.6	114.8	115.1	115.6	116.6	117.4	119.0	120.8	122.3	123.7	124.2	125.2	126.8	128.5
03-1	Cotton products.....	121.8	124.0	124.2	124.8	126.0	128.2	130.0	133.3	137.4	141.3	144.6	147.3	153.1	155.5
03-2	Wool products.....	99.4	106.6	107.1	108.8	114.5	119.2	127.7	129.8	127.5	131.3	132.1	134.9	133.7	130.2
03-3	Manmade fiber textile products.....	108.0	108.6	109.5	110.3	111.4	111.8	115.2	118.7	121.5	122.9	123.1	123.7	126.7	127.7
03-5	Apparel.....	114.8	115.6	115.9	116.0	116.5	116.8	117.0	117.7	118.4	118.8	118.8	119.3	119.5	121.5
03-6	Textile housefurnishings.....	109.2	110.0	109.9	109.9	109.9	110.3	110.5	110.5	110.5	111.5	111.5	112.2	112.3	115.2
03-7	Miscellaneous textile products.....	126.7	121.3	118.7	119.9	120.0	120.4	120.4	121.9	127.4	126.0	124.2	124.3	121.4	127.0
04	Hides, skins, leather, and related products.....	131.3	139.8	144.0	142.2	143.9	144.9	143.5	145.0	142.2	140.9	141.4	143.0	143.8	143.8
04-1	Hides and skins.....	213.7	270.8	287.0	255.2	274.0	272.7	246.4	270.2	253.5	241.6	246.3	261.6	257.3	256.3
04-2	Leather.....	140.3	153.3	162.6	162.2	162.8	162.9	164.5	161.1	159.7	156.4	156.8	157.5	162.8	160.7
04-3	Footwear.....	124.5	127.0	128.5	128.7	129.0	130.9	131.1	131.5	129.3	129.3	129.5	129.7	130.3	131.0
04-4	Other leather and related products.....	117.8	123.6	127.1	128.4	129.3	129.4	129.4	129.9	129.1	129.0	129.2	130.6	130.4	130.5
05	Fuels and related products and power.....	118.6	120.6	121.3	121.9	122.2	126.0	126.7	131.8	135.5	142.8	142.8	142.9	144.8	150.5
05-1	Coal.....	193.8	192.4	201.2	205.5	205.2	206.9	207.4	213.8	214.2	215.1	214.0	214.4	222.6	224.1
05-2	Coke.....	155.5	157.0	157.0	159.9	162.5	164.6	164.6	166.9	167.2	167.2	167.2	167.2	167.3	167.3
05-3	Gas fuels.....	114.1	117.5	119.0	119.2	118.4	118.6	118.9	120.1	121.4	128.0	128.7	130.4	132.2	133.4
05-4	Electric power.....	121.5	123.1	123.0	122.9	123.8	125.9	126.8	127.6	128.2	128.4	129.0	129.1	130.9	132.1
05-61	Crude petroleum.....	113.8	114.7	114.7	114.7	114.7	114.7	114.9	117.1	122.0	125.3	125.8	129.8	133.3	133.3
05-7	Petroleum products, refined.....	108.9	111.5	111.5	112.0	112.3	118.7	119.4	127.9	133.9	146.6	146.1	145.9	146.1	156.6
06	Chemicals and allied products.....	104.2	104.4	104.7	104.8	105.1	105.6	106.7	107.7	109.3	110.4	110.8	111.0	111.5	112.7
06-1	Industrial chemicals.....	101.2	100.8	100.9	101.0	101.4	101.8	101.9	102.6	102.7	103.0	103.4	103.5	104.3	105.3
06-21	Prepared paint.....	118.0	118.2	118.2	118.2	119.4	119.4	119.9	120.3	120.8	121.0	121.0	121.0	121.2	126.0
06-22	Paint materials.....	104.1	105.1	105.1	106.3	106.5	107.7	107.7	108.9	110.4	113.0	114.9	115.7	116.2	116.8
06-3	Drugs and pharmaceuticals.....	103.0	103.3	103.6	103.7	103.5	103.6	103.8	103.8	104.0	104.4	104.4	104.3	104.7	104.7
06-4	Fats and oils, inedible.....	115.8	117.2	123.2	128.2	130.3	139.1	173.9	184.0	232.0	263.6	263.2	273.2	279.5	273.0
06-5	Agricultural chemicals and chemical products.....	91.7	92.1	92.4	92.5	93.0	93.1	93.6	94.5	94.7	95.0	96.7	95.9	95.9	95.9
06-6	Plastic resins and materials.....	88.7	89.2	89.6	89.3	89.7	90.0	90.5	91.3	92.4	92.7	93.1	93.3	93.1	92.4
06-7	Other chemicals and allied products.....	113.5	114.1	114.1	114.0	113.9	114.2	115.1	116.3	117.7	118.0	118.1	118.2	118.1	121.2
07	Rubber and plastic products.....	109.3	109.5	109.8	109.8	110.0	110.1	110.3	110.6	111.5	112.6	112.9	113.1	112.8	114.0
07-1	Rubber and rubber products.....	113.7	114.3	114.6	114.6	115.0	115.1	115.5	115.7	117.1	118.0	118.5	118.9	118.4	120.2
07-11	Crude rubber.....	99.2	99.6	100.8	101.2	102.7	104.8	107.2	108.5	108.9	112.8	115.8	118.1	113.4	111.4
07-12	Tires and tubes.....	109.2	109.7	109.7	109.7	109.7	109.3	109.3	109.4	110.0	110.4	110.4	110.4	110.4	115.1
07-13	Miscellaneous rubber products.....	121.1	121.7	122.0	122.0	122.3	122.3	122.5	122.5	124.7	125.2	125.4	125.4	125.8	126.4
07-21	Plastic construction products.....	93.4	93.3	93.3	93.3	94.0	94.3	93.9	93.8	94.0	93.9	93.8	94.0	94.0	94.7
07-22	Unsupported plastic film and sheeting.....	98.7	98.3	98.6	98.6	98.7	98.8	99.1	99.2	99.2	101.1	100.8	100.8	100.9	101.1
07-23	Laminated plastic sheets, high pressure.....	98.1	97.6	97.9	97.9	97.5	96.2	95.2	96.6	97.9	97.7	98.7	98.1	98.5	97.7
08	Lumber and wood products.....	144.3	149.2	149.4	149.8	151.0	161.0	173.2	182.0	186.9	183.1	177.8	178.8	181.9	180.3
08-1	Lumber.....	159.4	166.1	166.8	167.9	169.0	182.3	195.8	207.2	215.4	214.8	209.6	210.8	216.9	214.5
08-2	Millwork.....	128.4	130.7	130.9	130.7	131.4	133.4	134.8	141.2	146.5	147.7	148.3	148.3	149.0	149.4
08-3	Plywood.....	130.7	134.6	133.3	132.3	134.1	149.4	176.8	182.5	177.7	154.9	138.0	140.1	138.2	134.6
08-4	Other wood products.....	124.6	128.2	130.2	130.5	133.1	135.1	140.9	147.4	149.6	151.9	152.9	153.2	155.9	158.2

See footnotes at end of table.

27. Continued—Wholesale Price Index,¹ by group and subgroup of commodities[1967 = 100 unless otherwise specified²]

Code	Commodity group	Annual average 1972	1972			1973									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	INDUSTRIAL COMMODITIES—Continued														
09	Pulp, paper, and allied products	113.4	114.7	115.0	115.1	115.8	116.5	118.3	119.8	120.7	122.0	122.3	123.3	124.4	125.8
09-1	Pulp, paper, and products, excluding building paper and board.....	113.7	115.0	115.3	115.4	116.1	116.9	118.6	120.2	121.1	122.4	122.7	123.7	124.8	126.1
09-11	Woodpulp.....	111.5	111.5	111.5	111.5	111.5	111.5	111.5	122.2	122.4	122.4	130.8	133.3	133.3	145.7
09-12	Wastepaper.....	133.6	136.9	136.9	133.6	133.8	135.8	136.9	149.3	168.1	187.6	187.6	187.6	230.5	252.9
09-13	Paper.....	116.3	116.8	117.3	117.5	117.8	118.5	119.2	120.2	120.8	122.5	121.8	121.5	121.7	122.3
09-14	Paperboard.....	105.5	106.8	106.8	107.1	108.2	109.7	110.7	113.0	114.6	116.7	116.7	116.7	116.7	118.0
09-15	Converted paper and paperboard products.....	113.6	115.4	115.6	115.8	116.6	117.3	120.0	120.4	121.0	121.5	121.5	123.2	123.8	123.8
09-2	Building paper and board.....	106.4	107.3	107.2	107.2	107.1	108.1	108.5	109.3	110.8	111.7	112.2	112.8	115.9	117.7
10	Metals and metal products	123.5	124.1	124.1	124.4	125.6	126.9	129.2	130.5	131.7	132.5	132.8	133.7	134.4	135.9
10-1	Iron and steel.....	128.4	128.9	129.0	129.5	131.9	133.0	133.3	134.0	135.3	135.9	135.9	136.0	136.5	138.6
10-13	Steel mill products.....	130.4	130.2	130.2	130.2	132.6	132.7	133.2	133.7	134.1	134.3	134.3	134.3	134.3	135.3
10-2	Nonferrous metals.....	116.9	117.3	117.2	117.4	117.9	121.0	128.3	131.4	133.2	135.0	135.9	137.9	138.5	140.7
10-3	Metal containers.....	128.9	131.1	131.1	131.1	131.1	130.8	135.7	135.7	135.7	135.7	135.6	135.5	135.6	134.8
10-4	Hardware.....	120.2	121.1	121.4	121.4	121.7	121.9	122.1	122.8	123.3	124.0	124.5	124.5	126.8	127.7
10-5	Plumbing fixtures and brass fittings.....	119.7	120.6	120.8	120.8	120.8	121.6	123.3	124.8	125.8	126.2	126.3	126.4	127.2	127.8
10-6	Heating equipment.....	118.2	119.2	119.2	119.2	118.8	119.2	119.5	120.5	120.2	120.7	120.9	120.7	120.7	120.8
10-7	Fabricated structural metal products.....	122.4	123.0	123.1	123.3	124.4	124.7	125.0	125.7	126.7	126.9	127.1	127.8	128.7	129.6
10-8	Miscellaneous metal products.....	124.2	124.8	124.9	124.8	125.2	125.8	126.7	127.3	128.3	128.7	129.1	130.9	131.4	132.2
11	Machinery and equipment	117.9	118.4	118.5	118.6	118.9	119.4	120.0	120.8	121.5	121.9	122.0	122.3	122.6	123.1
11-1	Agricultural machinery and equipment.....	122.3	122.6	122.9	122.9	123.6	124.4	124.7	124.7	125.0	125.4	125.5	125.5	125.6	127.5
11-2	Construction machinery and equipment.....	125.7	126.1	126.3	126.3	126.6	127.4	128.6	130.4	130.9	131.3	131.3	131.4	131.4	132.5
11-3	Metalworking machinery and equipment.....	120.2	121.2	121.3	121.3	121.8	122.5	123.4	124.5	125.2	125.6	125.8	125.8	126.6	127.5
11-4	General purpose machinery and equipment.....	122.4	123.2	123.3	123.4	123.9	124.3	124.9	125.6	126.4	127.2	127.4	127.4	127.6	128.4
11-6	Special industry machinery and equipment.....	123.7	124.3	124.5	124.6	124.9	126.5	127.0	128.5	129.0	130.0	130.2	131.7	132.6	132.9
11-7	Electrical machinery and equipment.....	110.4	110.5	110.6	110.6	110.9	111.0	111.3	111.7	112.3	112.7	112.7	112.7	112.8	113.0
11-9	Miscellaneous machinery.....	120.2	120.9	120.8	121.0	121.1	121.5	122.4	123.1	124.4	124.4	124.4	124.7	125.0	125.2
12	Furniture and household durables	111.4	112.0	112.3	112.4	112.6	113.1	113.5	114.1	115.1	115.2	115.2	115.9	116.0	116.6
12-1	Household furniture.....	117.3	117.7	118.1	118.5	119.1	119.4	120.0	121.8	122.3	123.3	123.2	123.6	124.4	125.2
12-2	Commercial furniture.....	120.2	121.7	123.4	123.4	123.6	123.8	123.8	123.8	130.6	130.6	130.6	132.2	132.8	133.6
12-3	Floor coverings.....	98.6	99.0	99.1	99.2	99.7	100.9	101.1	101.7	102.5	102.7	102.7	102.7	102.6	103.3
12-4	Household appliances.....	107.6	108.0	108.0	107.9	107.8	108.2	108.4	108.3	108.0	107.4	107.7	109.0	109.0	109.1
12-5	Home electronic equipment.....	92.7	92.9	92.5	92.3	92.4	92.4	92.2	92.2	92.2	91.6	91.6	92.0	91.5	91.5
12-6	Other household durable goods.....	125.6	126.9	126.9	127.0	127.0	128.1	129.1	130.3	130.8	131.0	130.8	130.8	130.5	131.3
13	Nonmetallic mineral products	126.1	127.3	127.3	127.4	128.2	128.4	129.0	130.0	130.5	131.1	130.0	130.0	129.9	130.9
13-11	Flat glass.....	122.4	122.5	122.5	122.5	122.5	122.5	124.1	124.1	124.4	122.2	117.9	117.9	118.2	118.2
13-2	Concrete ingredients.....	126.9	128.4	128.5	128.5	129.0	129.2	129.9	131.6	131.4	131.6	131.7	131.7	131.7	131.9
13-3	Concrete products.....	125.6	127.2	127.3	127.5	128.5	128.9	129.6	130.8	131.5	132.3	132.3	132.3	132.5	133.6
13-4	Structural clay products excluding refrac- tories.....	117.3	118.4	118.8	118.9	120.3	121.5	122.2	123.0	123.6	123.8	123.8	123.9	123.9	124.6
13-5	Refractories.....	129.0	132.1	132.1	132.1	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
13-6	Asphalt roofing.....	131.2	131.2	131.2	131.2	131.2	131.2	131.2	134.1	136.6	136.6	136.6	136.3	136.3	136.8
13-7	Gypsum products.....	114.7	115.5	115.0	114.8	117.4	115.8	118.1	119.6	120.4	124.1	122.9	122.5	122.0	122.4
13-8	Glass containers.....	135.1	136.4	136.4	136.4	136.4	136.4	136.4	136.8	136.8	141.6	137.1	137.4	137.1	143.5
13-9	Other nonmetallic minerals.....	127.0	127.3	127.3	127.3	127.8	128.0	128.3	128.5	129.1	129.5	128.1	128.0	127.3	127.3
14	Transportation equipment ⁵	113.7	112.9	113.0	114.2	114.1	114.2	114.5	114.9	115.1	115.0	115.0	115.1	114.5	115.9
14-1	Motor vehicles and equipment.....	118.0	116.9	117.0	118.4	118.2	118.2	118.6	119.0	119.1	118.9	119.0	119.0	118.3	120.0
14-4	Railroad equipment.....	128.7	130.2	130.2	131.1	131.8	132.2	132.7	133.4	134.3	134.8	134.8	135.2	136.1	136.2
15	Miscellaneous products	114.6	115.0	115.0	115.1	115.8	117.1	117.9	118.6	119.5	120.2	120.9	121.0	121.1	121.0
15-1	Toys, sporting goods, small arms, ammuni- tion.....	114.4	114.9	115.0	115.1	116.2	116.5	117.1	117.2	117.3	117.5	117.6	117.8	118.3	119.2
15-2	Tobacco products.....	117.5	117.5	117.5	117.5	117.5	121.0	121.8	122.0	122.3	122.5	122.5	122.5	122.5	122.7
15-3	Notions.....	112.1	112.9	112.9	112.9	112.9	113.1	113.1	113.1	114.5	114.5	113.1	113.6	113.6	115.5
15-4	Photographic equipment and supplies.....	106.7	107.0	107.0	107.0	107.3	107.5	108.5	108.4	108.2	108.4	108.5	108.6	108.6	108.6
15-9	Other miscellaneous products.....	116.0	116.9	116.9	117.2	118.6	118.9	119.9	122.2	124.7	127.0	129.5	129.5	129.5	127.8

¹ As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes also were made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

² As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

³ December 1969 = 100.

⁴ December 1970 = 100.

⁵ December 1968 = 100.

NOTE: For a description of the general method of computing the monthly Wholesale Price Index, see BLS Handbook of Methods (BLS Bulletin 1711, 1971), chapter 11.

28. Wholesale Price Index for special commodity groupings¹[1967 = 100 unless otherwise specified²]

Commodity group	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All commodities—less farm products.....	118.4	119.3	119.8	121.2	122.2	124.1	126.1	127.2	129.2	131.4	130.5	134.5	133.2	133.8
All foods.....	121.8	122.3	124.2	127.3	132.0	133.9	140.4	141.6	142.6	146.0	146.7	160.2	156.4	154.1
Processed foods.....	121.9	123.1	122.7	126.1	129.4	132.9	138.4	138.4	138.9	141.0	142.8	158.4	155.9	152.5
Textile products, excluding hard and bast fiber products.....	111.6	113.6	114.1	114.8	116.3	117.8	120.9	123.8	126.1	128.6	129.8	131.4	134.5	135.6
Hosiery.....	96.1	96.2	96.2	95.2	96.2	96.1	96.1	96.1	96.1	96.4	96.3	96.2	96.4	96.5
Underwear and nightwear.....	109.9	110.3	110.3	110.4	111.5	111.6	111.8	112.1	113.1	113.6	113.6	113.6	114.3	115.1
Refined petroleum products.....	108.9	111.5	111.5	112.0	112.3	118.7	119.4	127.9	133.9	146.6	146.1	145.9	146.1	156.6
East Coast.....	119.8	119.9	119.9	119.9	119.9	128.9	129.4	129.4	130.0	137.7	137.7	130.0	130.1	142.0
Mid-Continent.....	102.5	103.1	103.1	103.1	103.1	108.1	111.0	111.2	115.9	125.5	125.5	125.5	125.6	134.9
Gulf Coast.....	103.6	109.2	109.0	110.3	110.6	118.7	118.7	139.8	149.5	172.0	172.0	172.0	172.1	185.3
Pacific Coast.....	113.9	114.3	115.2	115.2	115.9	122.2	122.2	123.0	123.0	124.8	124.8	126.2	126.2	136.3
Midwest.....	113.0	113.1	113.1	113.1	113.1	118.1	120.2	120.6	128.4	139.7	135.8	135.8	136.6	147.0
Chemicals and allied products, including synthetic rubber and manmade fibers and yarns ³	103.7	103.9	104.0	104.1	104.3	104.5	104.9	105.6	106.2	106.5	106.9	106.9	107.2	108.5
Pharmaceutical preparations.....	103.0	103.4	103.8	103.8	103.6	103.6	103.9	103.9	104.1	104.6	104.6	104.5	104.4	104.4
Lumber and wood products, excluding millwork and other wood products ⁴	152.1	158.1	158.3	158.8	160.1	173.9	190.9	200.9	205.8	199.6	191.4	192.8	197.0	194.3
Special metals and metal products ⁵	121.7	121.7	121.8	122.4	123.1	124.0	125.7	126.6	127.4	127.9	128.1	128.7	128.9	130.5
Fabricated metal products ⁶	123.1	123.9	124.0	124.1	124.6	125.0	126.0	126.6	127.4	127.8	128.0	128.9	129.7	130.4
Copper and copper products ⁷	117.7	117.2	117.2	117.2	118.3	121.7	133.6	137.5	138.6	140.7	141.6	145.3	145.3	147.7
Machinery and motive products.....	118.2	118.1	118.2	118.7	118.9	119.2	119.8	120.4	120.9	121.2	121.2	121.4	121.4	122.3
Machinery and equipment, except electrical.....	122.2	122.9	123.0	123.1	123.5	124.2	125.0	126.0	126.7	127.3	127.4	127.8	128.2	128.9
Agricultural machinery, including tractors.....	122.8	123.1	123.3	123.3	124.0	124.9	125.2	125.2	125.4	125.8	125.9	125.9	125.9	128.0
Metalworking machinery.....	121.7	122.7	122.8	122.8	123.5	124.3	125.7	127.2	128.0	128.4	128.6	128.6	129.9	131.1
Numerically controlled machine tools (Dec. 1971 = 100).....	101.9	102.6	102.6	102.9	107.8	107.9	108.4	108.6	109.4	109.8	109.7	109.7	110.6	111.0
Total tractors.....	125.4	125.8	125.9	125.9	126.4	127.3	127.9	128.1	128.5	128.9	128.9	128.9	128.9	130.7
Industrial valves.....	121.1	122.2	122.4	122.4	122.9	122.9	123.5	124.4	125.5	126.4	127.8	127.2	127.7	129.4
Industrial fittings.....	121.6	119.2	119.2	119.2	123.0	125.0	125.3	125.3	126.1	127.3	127.3	127.3	127.3	129.5
Abrasive grinding wheels.....	126.3	126.8	126.8	126.8	126.8	126.8	127.5	127.2	127.8	127.9	127.9	127.9	127.9	127.9
Construction materials.....	126.6	128.3	128.4	128.5	129.4	132.3	136.2	139.1	140.8	140.1	138.6	138.9	140.1	140.4

¹ As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See *Wholesale Prices and Price Indexes, January 1967 (final)* and February 1967 (final) for a description of the changes.

² As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

³ Introduced in February 1971.

⁴ Formerly titled "Lumber and wood products, excluding millwork."

⁵ Metals and metal products, agricultural machinery and equipment, and motor vehicles and equipment.

⁶ Introduced in July 1972. See *Wholesale Prices and Price Indexes, July 1972* for a description.

⁷ Formerly titled "Copper and copper base metals."

29. Wholesale Price Index,¹ by durability of product[1967 = 100²]

Commodity group	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All commodities.....	119.1	120.0	120.7	122.9	124.5	126.9	129.7	130.7	133.5	136.7	134.9	142.7	140.2	139.5
Total durable goods.....	121.1	121.7	121.8	122.1	122.7	123.9	125.6	127.0	128.0	128.2	128.0	128.5	128.9	129.7
Total nondurable goods.....	117.6	118.8	120.0	123.5	125.9	129.2	132.9	133.5	137.7	143.1	140.1	153.3	148.7	146.9
Total manufactures.....	117.9	118.8	119.2	120.7	121.6	123.6	125.7	126.7	128.7	130.9	129.8	134.0	132.5	133.0
Durable.....	121.1	121.7	121.8	122.1	122.6	123.7	125.4	126.7	127.7	127.8	127.6	128.0	128.3	129.0
Nondurable.....	114.7	115.8	116.5	119.2	120.6	123.4	125.9	126.6	129.7	134.0	132.0	140.1	136.6	136.9
Total raw or slightly processed goods.....	124.6	125.7	128.2	133.7	138.7	143.5	150.0	150.7	157.4	165.6	160.3	185.9	178.9	172.2
Durable.....	115.0	116.0	116.5	118.9	124.4	132.6	134.5	138.1	141.9	146.7	146.8	151.1	153.2	162.5
Nondurable.....	125.1	126.2	128.9	134.5	139.5	144.1	150.8	151.3	158.3	166.6	161.0	187.8	180.3	172.7

¹ As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure and may differ from data previously published. See *Wholesale Prices and Price Indexes, January 1967 (final)* and February 1967 (final) for a description of the changes.

² As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

NOTE: For a description of the series by durability of product and data beginning with 1947, see *Wholesale Prices and Price Indexes, 1957* (BLS Bulletin 1235, 1958).

30. Wholesale Price Index,¹ by stage of processing[1967 = 100²]

Commodity group	Annual average 1972	1972			1973									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
All commodities.....	119.1	120.0	120.7	122.9	124.5	126.9	129.7	130.7	133.5	136.7	134.9	142.7	140.2	139.5
RAW MATERIALS														
Crude materials for further processing.....	127.6	129.2	130.4	138.3	143.3	151.3	159.0	158.8	167.7	177.5	170.9	207.5	197.1	185.7
Foodstuffs and feedstuffs.....	127.5	129.6	129.9	140.7	146.4	156.0	166.2	164.2	173.7	185.4	177.7	226.2	200.7	189.2
Nonfood materials except fuel.....	121.9	122.3	124.7	127.2	132.1	138.1	141.4	144.6	154.2	161.8	155.9	172.7	184.7	180.8
Manufacturing.....	122.1	122.4	125.2	127.9	133.2	139.7	143.4	146.8	157.4	165.8	159.3	177.7	190.9	186.7
Construction.....	121.6	122.4	122.4	122.4	123.4	123.8	124.3	124.6	125.0	125.3	125.3	125.3	125.4	125.4
Crude fuel.....	148.7	149.9	154.4	156.3	155.5	156.3	156.9	160.4	161.6	162.6	163.0	164.4	169.2	169.9
Manufacturing industries.....	139.3	141.0	144.7	146.0	145.2	145.8	146.3	149.1	150.5	151.6	152.1	153.8	157.8	158.3
Nonmanufacturing industries.....	161.1	161.5	167.2	169.7	169.2	170.2	170.8	175.2	176.2	177.2	177.2	178.4	184.3	185.2
INTERMEDIATE MATERIALS														
Intermediate materials, supplies and components.....	118.7	119.9	120.6	122.3	123.1	125.1	127.4	128.5	131.5	134.3	131.8	136.1	133.9	134.6
Materials and components for manufacturing.....	117.0	118.0	118.2	118.8	119.7	121.1	123.5	125.1	126.6	127.8	128.1	130.6	130.8	131.7
Materials for food manufacturing.....	119.9	121.2	120.9	125.1	126.9	130.8	136.0	136.4	138.1	142.6	143.3	163.5	157.6	158.7
Materials for nondurable manufacturing.....	109.4	110.7	111.3	111.8	112.6	113.6	115.7	117.9	120.0	121.9	122.4	123.6	125.1	126.3
Materials for durable manufacturing.....	123.8	124.6	124.6	124.7	125.9	127.7	130.9	132.7	134.0	134.3	134.1	134.5	135.0	135.9
Components for manufacturing.....	117.6	118.1	118.2	118.2	118.5	118.8	119.6	120.1	121.0	121.3	121.6	122.0	122.3	122.9
Materials and components for construction.....	126.2	127.7	127.8	127.9	128.6	130.9	134.2	136.8	138.5	137.9	136.7	137.3	138.3	138.7
Processed fuels and lubricants.....	118.9	121.0	120.9	121.0	121.8	124.6	125.4	128.8	130.0	134.3	134.8	135.2	136.5	139.7
Manufacturing industries.....	122.0	123.8	123.7	123.7	124.7	126.8	127.6	128.4	129.1	131.0	131.6	131.8	133.5	135.5
Nonmanufacturing industries.....	114.0	116.7	116.6	116.7	117.3	121.2	122.0	129.5	131.4	139.5	139.9	140.4	141.3	146.4
Containers.....	121.9	124.0	124.1	124.2	124.9	125.2	128.5	128.7	128.9	129.9	129.0	130.3	130.6	131.4
Supplies.....	115.6	116.6	120.3	128.9	129.8	133.6	134.6	131.9	142.9	154.7	139.8	156.3	140.3	139.2
Manufacturing industries.....	115.1	116.3	116.5	116.6	117.3	117.8	119.3	119.8	120.4	121.2	122.1	122.7	122.7	123.1
Nonmanufacturing industries.....	115.9	116.9	122.4	135.2	136.2	141.7	142.5	138.1	154.5	172.1	149.4	174.0	149.3	147.4
Manufactured animal feeds.....	116.1	116.5	131.3	167.0	169.3	184.0	184.0	169.2	214.3	263.2	199.8	266.9	193.0	187.3
Other supplies.....	115.5	116.7	117.4	118.0	118.4	119.1	120.3	121.2	123.1	124.6	122.7	125.6	126.0	126.1
FINISHED GOODS														
Finished goods (including raw foods and fuels).....	117.2	117.6	118.3	119.5	121.0	122.5	124.6	125.6	126.8	128.7	128.8	132.9	132.2	132.8
Consumer goods.....	116.6	117.1	117.9	119.3	121.2	122.9	125.5	126.6	127.9	130.2	130.4	135.4	134.5	135.0
Foods.....	121.7	122.3	124.1	127.1	131.8	134.1	140.2	140.7	141.9	145.0	145.4	158.6	156.1	153.6
Crude.....	121.2	118.5	133.7	134.3	145.6	137.8	147.6	153.6	157.3	166.0	162.0	165.2	164.2	170.6
Processed.....	121.7	122.9	122.4	125.8	129.3	133.4	138.8	138.4	139.2	141.3	142.4	157.4	154.9	150.6
Other nondurable goods.....	113.6	114.7	115.0	115.2	115.4	117.4	117.8	119.8	121.6	124.7	124.5	124.5	124.8	128.2
Durable goods.....	113.2	112.7	112.8	113.7	113.8	114.0	114.5	115.3	115.7	115.9	116.1	116.3	115.8	116.7
Producer finished goods.....	119.5	119.7	119.9	120.3	120.6	121.2	121.7	122.3	123.1	123.4	123.5	123.9	124.2	125.1
Manufacturing industries.....	119.8	120.3	120.6	120.7	121.1	122.0	122.6	123.7	124.5	125.0	125.2	125.8	126.5	127.1
Nonmanufacturing industries.....	119.1	119.2	119.4	119.9	120.1	120.4	120.9	121.3	122.1	122.2	122.2	122.4	122.5	123.6
SPECIAL GROUPINGS														
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco.....	131.1	133.8	136.3	136.8	139.1	142.3	142.5	146.8	149.6	152.8	153.5	156.0	161.0	164.7
Intermediate materials, supplies and components, excluding intermediate materials for food manufacturing and manufactured animal feeds.....	118.9	120.1	120.3	120.5	121.2	122.6	124.8	126.6	128.0	128.9	128.7	129.5	130.3	131.2
Consumer finished goods, excluding consumer foods.....	113.5	113.9	114.1	114.6	114.8	116.0	116.5	118.0	119.3	121.3	121.2	121.3	121.3	123.7

¹ As of January 1967, the index incorporated a revised weighting structure reflecting 1963 values of shipments. Changes were also made in the classification structure, and titles and composition of some indexes were changed. Titles and indexes in this table conform with the revised classification structure, and may differ from data previously published. See Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final) for a description of the changes.

² As of January 1971 the indexes were converted from the former base of 1957-59 = 100 to the new base of 1967 = 100. Technical details and earlier data on the 1967 base furnished upon request to the Bureau.

NOTE: For a description of the series by stage of processing see Wholesale Prices and Price Indexes, January 1967 (final) and February 1967 (final).

31. Price indexes for the output of selected SIC industries¹

[1967 = 100 unless otherwise specified]

1963 SIC code	Industry	Annual average 1972	1972			1973									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
MINING															
1111	Anthracite.....	151.0	159.1	159.1	159.1	159.1	159.1	159.1	163.4	163.4	163.4	164.5	170.4	172.6	172.6
1211	Bituminous coal.....	197.4	195.2	204.8	209.4	209.4	211.0	211.5	218.0	218.5	219.5	218.1	218.1	226.8	228.4
1311	Crude petroleum and natural gas.....	115.4	116.7	117.2	117.2	117.0	117.1	117.3	119.4	123.6	126.4	127.0	127.5	133.9	133.9
1421	Crushed and broken stone.....	120.2	120.8	120.8	120.8	121.8	121.9	122.2	122.4	122.7	123.0	123.0	123.0	123.0	123.0
1442	Construction sand and gravel.....	123.3	124.2	124.2	124.2	125.2	126.0	126.7	127.3	127.8	128.2	128.2	128.2	128.3	128.3
1475	Phosphate rock.....	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8
1476	Rock salt.....	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4	124.4
1477	Sulfur.....	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8
MANUFACTURING															
2011	Meat slaughtering plants.....	130.5	131.3	127.7	138.2	145.9	156.0	165.9	161.0	163.6	168.2	171.7	201.4	185.1	169.4
2013	Meat processing plants.....	126.8	130.9	129.8	133.9	138.1	143.9	163.6	161.0	158.8	162.6	164.2	219.1	192.2	179.8
2015	Poultry dressing plants.....	113.8	114.9	114.3	114.8	134.3	140.9	166.4	180.6	174.5	179.2	182.7	246.1	213.9	184.1
2021	Creamery butter.....	116.4	120.3	121.9	125.7	122.9	123.0	127.5	127.6	120.6	121.1	121.3	132.3	151.4	152.7
2022	Natural and processed cheese (12/72=100).....				100.0	100.1	100.2	102.3	103.7	104.1	106.7	104.8	112.3	121.8	128.3
2024	Ice cream and frozen desserts (12/72=100).....				100.0	100.2	100.3	100.4	100.7	100.8	101.2	101.2	102.7	106.0	108.1
2033	Canned fruits and vegetables.....	115.6	116.9	118.1	118.9	119.9	120.7	120.4	120.7	121.3	121.5	121.5	123.5	124.1	128.8
2036	Fresh or frozen packaged fish.....	166.6	166.0	166.4	170.0	173.2	170.1	180.1	185.6	193.0	185.7	194.7	204.6	221.3	220.5
2041	Flour mills (12/71=100).....	103.8	109.3	113.4	124.8	126.6	119.1	122.3	119.0	123.9	128.8	126.0	160.9	156.6	159.4
2042	Prepared animal feeds (12/71=100).....	106.4	107.3	114.4	134.3	140.4	150.8	153.9	139.8	154.8	182.9	170.5	189.1	164.4	166.6
2044	Rice milling.....	110.9	119.8	141.9	141.9	147.9	147.9	147.9	174.0	174.0	174.0	174.0	193.6	216.5	261.3
2052	Biscuits, crackers and cookies.....	122.0	121.8	122.2	120.3	122.2	125.1	125.1	125.1	125.8	126.3	126.3	128.0	134.8	138.0
2061	Raw cane sugar.....	125.1	128.9	123.8	125.5	128.9	125.8	129.7	131.2	137.7	141.1	137.8	147.3	149.2	152.2
2062	Cane sugar refining.....	124.9	126.5	124.8	125.0	125.4	130.7	131.1	132.5	131.9	132.9	134.5	140.1	141.3	144.8
2063	Beet sugar.....	120.8	122.2	120.5	120.6	120.5	122.4	123.1	124.2	123.9	125.1	126.0	128.4	129.7	139.6
2073	Chewing gum.....	125.9	126.0	126.0	126.0	126.0	126.0	126.1	126.1	126.1	126.2	126.2	126.2	126.2	126.2
2082	Malt liquors.....	110.7	110.8	110.9	110.8	110.8	111.0	111.1	111.1	111.1	111.5	111.4	111.4	111.9	112.3
2083	Malt.....	94.2	94.2	94.2	94.2	101.8	101.8	108.3	108.3	108.3	108.3	108.3	(2)	123.7	150.9
2084	Wines and brandy.....	125.2	126.1	126.1	126.1	126.1	129.3	129.6	131.6	131.7	133.3	133.3	133.9	133.9	139.3
2091	Cottonseed oil mills.....	110.6	97.6	117.5	153.5	144.1	163.4	158.0	154.3	195.8	219.8	155.9	218.2	186.3	164.5
2092	Soybean oil mills.....	128.1	122.9	138.7	190.0	180.2	219.2	215.0	216.9	303.2	394.5	238.6	412.9	239.8	230.3
2094	Animal and marine fats and oils.....	132.5	138.7	153.3	165.7	177.7	226.8	238.3	205.9	298.5	356.2	302.3	362.2	284.4	258.4
2095	Roasted coffee (12/72=100).....				100.0	99.9	100.0	102.3	103.5	105.4	105.5	105.8	106.0	105.8	106.2
2096	Shortening and cooking oils.....	120.2	121.9	120.4	118.6	119.0	123.4	129.1	127.9	135.1	142.4	141.5	169.3	163.6	171.8
2098	Macaroni and noodle products.....	107.3	109.1	112.1	112.1	112.2	112.2	112.2	112.3	114.8	114.8	114.8	123.9	144.5	153.2
2111	Cigarettes.....	118.2	118.2	118.2	118.2	118.2	122.4	123.3	123.4	123.4	123.4	123.4	123.5	123.5	123.5
2121	Cigars.....	109.1	109.1	109.1	109.1	109.1	109.1	109.1	109.2	111.3	112.3	112.3	112.3	112.3	112.9
2131	Chewing and smoking tobacco.....	125.6	125.8	125.8	125.8	125.8	125.9	126.3	128.0	129.5	129.7	129.7	131.0	131.0	132.8
2211	Weaving mills, cotton (12/72=100).....				100.0	100.6	102.1	103.6	105.5	106.3	108.9	110.8	111.6	113.7	115.3
2254	Knit underwear mills.....	110.0	110.4	110.4	110.4	112.1	112.4	112.5	112.9	113.5	114.3	114.3	114.3	114.4	114.7
2272	Tufted carpets and rugs.....	95.5	96.1	96.3	96.3	97.0	98.8	99.0	99.8	101.0	101.2	101.2	101.2	101.1	101.6
2281	Yarn mills, except wool (12/71=100).....	104.7	105.3	104.4	105.0	105.8	107.3	109.6	110.8	116.2	119.7	121.4	128.0	141.2	143.3
2311	Men's and boys' suits and coats.....	132.6	134.8	134.8	135.0	135.2	135.8	136.0	136.2	137.6	139.5	139.5	140.1	140.8	142.9
2321	Men's dress shirts and nightwear.....	112.7	113.1	115.0	115.1	116.4	116.5	116.7	117.2	117.7	118.5	118.2	118.7	119.1	123.9
2322	Men's and boys' underwear.....	112.2	112.8	112.9	112.9	115.2	115.3	115.4	116.9	119.4	119.9	120.0	120.0	120.0	124.5
2327	Men's and boys' separate trousers.....	108.5	107.3	107.9	107.9	107.9	108.0	108.1	108.3	110.8	109.1	109.1	111.6	111.6	112.2
2328	Work clothing.....	117.1	118.6	118.7	118.7	119.6	119.7	121.8	123.3	124.0	123.9	123.9	125.2	125.4	125.8
2337	Women's suits, coats and skirts (12/71=100).....	100.3	100.5	101.0	101.0	101.0	101.0	101.0	101.0	101.3	101.3	101.3	101.4	101.4	101.5
2341	Women's and children's underwear (12/72=100).....				100.0	100.1	100.1	100.4	100.6	102.2	102.7	102.6	102.7	103.3	105.3
2381	Fabric dress and work gloves.....	120.7	125.7	126.1	127.1	128.4	128.9	131.3	133.8	134.5	134.7	134.7	134.7	135.3	139.2
2421	Sawmills and planing mills (12/71=100).....	111.1	115.7	116.1	116.7	117.4	126.7	136.8	145.0	151.0	150.2	146.0	145.9	150.4	148.7
2426	Hardwood dimension and flooring.....	126.1	128.8	129.1	130.1	132.3	143.3	151.6	162.0	164.7	166.7	166.8	182.2	185.4	186.4
2431	Millwork plants (12/71=100).....	103.5	105.1	105.2	105.1	105.9	107.3	108.7	112.3	117.7	118.9	119.5	119.6	120.2	120.7
2432	Veneer and plywood plants (12/71=100).....	112.3	115.8	114.6	113.7	115.9	131.7	159.3	164.1	160.1	136.7	120.0	121.9	120.4	116.9
2442	Wirebound boxes and crates (12/67=100).....	124.2	126.8	129.5	129.5	130.7	132.6	137.3	139.0	139.8	143.3	142.8	142.8	148.8	155.1
2511	Wood furniture, not upholstered (12/71=100).....	102.0	102.2	102.4	103.1	103.4	103.7	104.5	106.2	107.1	108.6	108.4	108.9	109.6	110.1
2512	Wood furniture upholstered (12/71=100).....	101.1	101.5	102.0	102.0	102.5	102.5	102.5	104.9	105.4	106.2	106.2	106.6	106.8	107.2
2515	Mattresses and bedsprings.....	110.7	111.4	111.5	111.5	112.4	113.8	113.9	114.1	114.3	114.3	114.2	114.3	114.5	114.9
2521	Wood office furniture.....	119.8	122.1	123.0	123.1	123.6	123.6	123.7	123.6	124.9	124.9	124.9	126.0	127.8	129.5
2647	Sanitary paper products.....	120.7	121.2	121.2	121.2	121.5	121.9	122.4	123.4	124.8	125.4	125.4	124.8	125.2	125.2
2652	Set-up paperboard boxes (12/72=100).....				100.0	103.3	104.3	104.5	105.7	106.1	106.1	106.1	107.3	109.8	110.5
2654	Sanitary food containers.....	107.1	107.2	107.2	107.2	107.7	108.1	109.0	109.1	109.8	111.1	110.5	110.6	110.9	111.5
2819	Inorganic chemicals, nec. (12/71=100).....	101.4	102.0	102.1	102.2	102.9	103.2	103.6	104.2	104.8	105.1	106.5	106.1	106.1	106.3
2822	Synthetic rubber.....	100.0	100.1	100.1	100.1	100.0	100.0	100.1	100.5	100.7	100.8	100.9	100.9	100.9	101.3
2823	Cellulosic man-made fibers.....	106.2	107.2	107.6	107.6	107.9	107.8	107.9	108.0	108.7	108.7	108.8	109.4	109.4	110.1
2824	Organic fibers, noncellulosic.....	98.0	97.9	97.9	97.9	97.9	97.4	97.9	97.9	97.9	98.0	98.0	98.0	98.0	98.9
2834	Pharmaceutical preparations (12/71=														

31. Continued—Price indexes for the output of selected SIC industries ¹

[1967 = 100 unless otherwise specified]

1963 SIC code	Industry	Annual average 1972	1972			1973									
			Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
	MANUFACTURING—Continued														
3221	Glass containers.....	135.1	136.4	136.4	136.4	136.4	136.4	136.4	136.7	136.7	141.6	137.1	137.4	137.1	143.5
3241	Cement, hydraulic.....	131.9	134.2	134.3	134.3	134.4	134.4	135.3	138.4	137.6	137.6	137.9	137.9	137.9	138.2
3251	Brick and structural clay tile.....	123.5	125.2	125.5	125.9	128.5	130.1	131.0	131.6	131.7	132.1	132.1	132.2	132.2	133.5
3255	Clay refractories.....	130.7	133.5	133.5	133.5	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6	138.6
3259	Structural clay products nec.....	110.2	110.5	110.5	110.5	110.7	111.1	111.1	111.7	112.9	112.9	112.9	112.9	113.0	113.2
3261	Vitreous plumbing fixtures.....	115.8	116.4	117.2	117.1	116.8	118.8	120.1	121.6	121.7	121.7	121.9	121.8	121.8	122.0
3262	Vitreous china food utensils.....	138.5	140.2	140.2	140.2	140.2	142.6	144.8	144.8	148.3	148.3	148.3	148.3	148.3	148.3
3263	Fine earthenware food utensils.....	139.4	140.4	140.4	140.4	141.6	141.8	141.9	143.5	143.7	143.7	143.7	143.7	143.7	143.7
3271	Concrete block and brick.....	123.8	128.2	128.4	128.4	130.4	130.8	132.0	133.6	134.4	136.0	136.0	136.0	136.1	137.9
3273	Ready mixed concrete.....	127.5	128.4	128.4	128.8	129.7	130.2	130.8	132.2	132.8	133.7	133.7	133.6	133.8	135.0
3275	Gypsum products.....	114.7	115.5	115.1	115.0	117.4	115.9	118.1	119.6	120.4	124.1	122.9	122.5	122.0	122.4
3291	Abrasive products (12/71=100).....	102.1	103.0	103.0	102.9	102.9	103.0	103.4	103.5	104.2	104.9	105.0	105.0	105.4	106.0
3312	Blast furnace and steel mills.....	130.7	130.7	130.7	130.7	132.5	132.7	132.8	133.9	134.3	134.5	134.5	134.5	134.6	135.5
3315	Steel wire drawing, etc.....	128.0	128.3	128.3	128.3	132.3	133.2	134.0	135.9	136.1	136.6	136.6	136.6	136.7	136.8
3316	Cold finishing of steel shapes.....	130.3	129.7	129.7	129.7	130.6	130.6	130.7	131.6	132.0	132.4	132.4	132.4	132.4	134.0
3317	Steel pipe and tube.....	129.2	129.4	129.4	129.4	133.1	133.2	133.4	133.9	134.9	135.1	135.1	135.1	135.1	135.1
3321	Gray iron foundries (12/68=100).....	117.9	119.5	119.5	119.5	120.4	120.8	121.9	124.3	125.3	125.9	125.9	126.0	126.2	128.3
3333	Primary zinc.....	124.0	126.1	126.2	126.2	127.7	133.8	137.5	141.7	144.0	146.4	144.7	150.5	150.4	153.2
3334	Primary aluminum.....	96.8	96.6	95.9	95.9	95.9	96.1	96.1	98.2	99.7	99.6	98.5	98.5	102.9	105.8
3339	Primary nonferrous metals, nec.....	120.9	126.7	126.4	130.2	132.4	137.3	160.3	154.6	167.8	170.9	177.8	166.6	168.6	173.4
3341	Secondary nonferrous metals (12/71=100).....	102.6	102.8	102.7	103.0	104.5	108.6	116.5	117.8	121.5	123.3	126.3	134.3	134.5	136.7
3351	Copper rolling and drawing.....	124.5	125.3	125.7	125.8	126.2	127.8	136.6	138.0	141.1	141.2	141.1	140.6	143.2	145.6
3352	Aluminum rolling and drawing (12/68=100).....	108.7	108.8	108.8	108.8	107.5	107.8	107.6	108.1	108.3	108.7	108.8	109.0	109.7	110.2
3356	Rolling, drawing, and extruding of metals, excluding copper, aluminum (12/71=100).....	102.3	104.3	104.3	104.3	104.4	105.0	107.4	107.7	110.2	111.0	110.8	111.1	111.6	112.0
3411	Metal cans.....	129.1	131.2	131.2	131.2	131.2	130.8	136.8	136.8	136.8	136.8	136.9	136.9	136.9	135.8
3423	Hand and edge tools (12/67=100).....	126.5	127.5	128.1	128.1	128.8	129.0	129.4	130.2	131.2	131.8	131.8	131.6	132.9	133.5
3425	Hand saws and saw blades (12/72=100).....				100.0	100.0	99.7	100.0	99.9	100.4	101.1	101.1	101.1	101.1	101.6
3431	Metal plumbing fixtures.....	119.0	120.5	120.8	120.7	121.1	122.2	123.9	124.2	124.6	125.9	126.0	126.1	126.2	126.3
3493	Steelsprings.....	118.8	118.9	119.0	119.0	119.0	119.5	120.0	120.2	120.8	120.8	120.8	120.9	122.9	124.2
3494	Valves and pipe fittings (12/71=100).....	100.7	100.6	100.8	100.8	101.8	102.3	102.7	103.3	104.0	104.7	105.2	105.0	105.2	106.6
3496	Collapsible tubes.....	121.8	123.4	123.2	123.2	123.2	125.7	125.9	125.9	126.1	126.2	127.1	127.1	127.3	127.6
3498	Fabricated pipe and fittings.....	136.7	136.8	136.8	136.8	138.9	139.6	139.6	140.5	140.5	142.7	142.7	146.7	146.7	146.7
3519	Internal combustion engines.....	121.2	121.6	121.2	121.4	121.4	122.5	122.5	123.1	123.5	123.5	123.5	124.2	124.2	125.6
3532	Mining machinery and equipment (12/72=100).....				100.0	100.2	100.5	100.7	101.8	102.0	102.1	102.5	103.9	104.2	104.7
3533	Oil field machinery and equipment.....	128.1	129.4	129.4	130.2	130.5	130.9	131.3	132.8	133.4	133.9	134.3	134.4	134.4	134.5
3534	Elevators and moving stairways.....	122.1	121.8	121.8	121.8	121.8	123.2	123.3	123.3	123.3	123.3	123.3	123.3	123.3	124.7
3535	Conveyors and conveying equipment (12/71=100).....	101.7	102.3	102.4	102.4	102.6	102.7	104.0	104.1	104.2	104.2	104.3	104.3	104.5	104.7
3537	Industrial trucks and tractors.....	123.7	123.9	123.9	123.9	124.2	125.6	125.6	127.7	128.0	128.4	128.5	128.9	128.9	129.4
3541	Metal-cutting machine tools (12/71=100).....	102.0	102.8	102.9	102.9	104.3	105.2	106.0	107.0	108.0	108.3	108.7	108.8	109.8	111.1
3542	Metal-forming machine tools (12/71=100).....	101.7	102.8	102.9	102.9	102.9	103.9	106.3	107.7	108.6	108.7	108.7	108.7	110.3	111.6
3552	Textile machinery (12/69=100).....	111.5	112.1	112.1	112.4	112.9	113.1	113.6	114.7	116.1	116.7	116.8	116.6	116.7	116.8
3553	Woodworking machinery (12/72=100).....				100.0	99.9	99.7	100.5	101.1	101.2	102.2	102.3	102.3	102.4	103.1
3555	Printing trades machinery and equipment (12/72=100).....				100.0	100.0	100.3	100.9	102.1	103.3	103.9	103.9	105.4	105.5	105.8
3562	Ball and roller bearings.....	117.0	117.6	117.6	117.6	117.6	117.6	118.6	119.9	121.6	121.9	121.9	121.9	121.9	121.9
3572	Typewriters.....	104.5	104.7	104.7	104.7	104.7	104.8	104.8	106.3	106.7	106.7	106.7	106.7	106.8	106.8
3576	Scales and balances.....	118.1	118.6	118.9	118.4	118.4	119.2	120.7	121.0	121.1	121.9	121.9	122.0	122.0	123.5
3611	Electric measuring instruments and test equip- ment (12/71=100).....	100.5	100.3	100.6	100.5	100.6	100.6	100.8	101.1	100.4	100.4	100.3	100.6	100.6	100.6
3612	Transformers.....	95.1	95.0	95.5	95.7	95.9	96.6	97.0	98.0	98.3	98.8	98.8	99.1	99.9	99.2
3613	Switchgear and switchboards.....	111.7	111.4	111.8	111.7	111.8	112.5	113.2	113.7	114.3	114.4	114.0	114.0	114.8	115.0
3623	Electric welding apparatus (12/72=100).....				100.0	100.0	100.1	100.8	102.4	103.2	104.4	104.2	104.2	104.3	105.7
3624	Carbon and graphite products (12/67=100).....	113.9	114.3	114.3	114.3	114.3	119.6	119.8	119.8	119.9	119.9	119.9	119.9	120.0	120.0
3634	Electric housewares and fans (12/71=100).....	99.6	99.4	99.4	99.7	99.8	99.8	99.9	100.4	100.6	100.2	100.2	100.2	100.1	100.0
3635	Household vacuum cleaners.....	101.7	102.1	102.1	102.1	102.9	102.9	103.0	103.0	103.5	98.6	98.7	98.7	98.7	98.7
3641	Electric lamps.....	117.2	118.2	118.2	118.2	118.2	118.0	118.3	118.3	119.8	121.9	120.5	120.5	120.5	120.5
3642	Lighting fixtures (12/71=100).....	101.8	102.3	102.4	102.3	102.4	102.8	102.9	103.2	103.3	103.7	103.7	104.2	104.3	104.8
3644	Noncurrent carrying devices (12/72=100).....				100.0	100.0	100.1	100.6	102.9	103.3	103.4	103.4	103.3	103.4	104.8
3652	Phonograph records.....	112.2	112.6	112.6	112.6	112.6	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4	115.4
3671	Electron tubes, receiving type.....	142.0	144.1	144.1	144.1	144.1	144.1	144.1	144.1	144.2	144.2	144.2	144.2	144.2	144.3
3672	Cathode ray picture tubes.....	83.6	84.0	84.0	84.0	84.1	84.1	84.1	84.1	84.2	84.3	84.3	84.3	84.3	84.3
3673	Electron tubes, transmitting.....	113.4	114.4	114.3	114.4	114.4	114.4	114.4	114.5	115.6	116.2	116.2	116.2	116.0	116.3
3674	Semiconductors.....	91.8	90.6	90.6	90.7	91.1	91.1	91.1	91.5	92.4	92.4	92.9	92.5	92.6	92.6
3692	Primary batteries, dry and wet.....	123.2	123.3	123.3	123.5	123.6	123.6	123.6	123.6	123.9	124.0	124.0	124.0	124.0	124.0
3693	X-ray equipment, apparatus and tubes (12/ 67=100).....	132.4	132.7	132.7	133.1	132.8	129.0	129.0	129.3	129.4	129.4	128.0	128.3	128.6	129.4
3717	Motor vehicles and parts.....	119.8	119.4	119.5	120.5	120.3	120.4	120.5	120.8	120.9	120.7	121.1	121.4	120.8	122.0
3861	Photographic equipment (12/71=100).....	100.3	100.7	100.7	100.7	101.0	101.2	102.3	102.2	102.1	102.2	102.2	102.2	102.4	102.5
3941	Games and toys.....	115.4	115.7	115.7	115.7	116.5	116.8	117.9	118.3	118.3	118.3	118.4	118.4	118.4	119.6

¹ For a description of the series, see BLS Handbook of Methods (BLS Bulletin 1711, 1971), chapter 12. See also "Industry and Sector Price Indexes," in the Monthly Labor Review, August 1965, pp. 974-82.

² Not available because the price coverage did not meet publication standards.

NOTE: Beginning in January 1967, index weights and classifications are based on the 1963 Censuses of Manufactures and Minerals. They were formerly based on the 1958 Industrial Censuses.

32. Work stoppages, 1946 to date

Month and year	Number of stoppages		Workers involved		Man-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
1946	4,985		4,600		116,000	1.04
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	3,655		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
January	416	647	235	320	2,868	.20
February	359	632	128	206	1,934	.14
March	457	725	150	260	2,489	.15
April	550	859	180	269	2,389	.15
May	612	957	727	818	4,000	.28
June	617	1,031	280	420	4,094	.26
July	499	938	748	938	7,895	.52
August	437	890	194	502	5,037	.32
September	352	668	111	330	3,230	.20
October	304	551	246	326	5,511	.36
November	315	561	235	453	5,034	.33
December	219	485	46	238	3,109	.20
1972 ^p	5,100		1,700		26,000	.14
January	310	470	80	155	2,303	.15
February	320	480	61	140	1,618	.11
March	400	530	127	165	1,544	.09
April	440	640	146	217	2,031	.14
May	510	720	126	203	2,139	.13
June	425	670	311	388	3,513	.21
July	380	640	177	426	3,185	.21
August	360	630	108	198	2,492	.15
September	440	710	129	214	2,049	.14
October	320	560	139	196	1,065	.07
November	270	510	93	136	1,065	.07
December	200	410	41	99	914	.06
1973 ^p	310	480	118	145	1,433	.09
January	380	590	141	200	1,281	.09
February	410	670	110	156	1,330	.08
March	470	710	146	167	1,890	.12
April	580	860	155	253	2,483	.15
May	520	840	238	299	2,173	.13
June	500	830	253	377	2,510	.16
July	530	890	167	341	2,698	.15
August	500	850	259	360	2,696	.18
September						

^p=preliminary.

NOTE: The data include all known strikes or lockouts involving 6 workers or more and lasting a full day or shift or longer. Figures on workers involved and man-days idle

cover all workers made idle for as long as 1 shift in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments or industries whose employees are made idle as a result of material or service shortages.

33. Indexes of output per man-hour, hourly compensation, unit costs, and prices, private economy, seasonally adjusted

[1967=100]

Item	Annual average		Quarterly indexes										
	1971	1972	1971				1972				1973		
			I	II	III	IV	I	II	III	IV	I	II	III
Total private:													
Output per man-hour.....	108.7	112.8	107.5	108.0	109.3	110.1	110.7	112.5	113.3	114.8	115.9	115.8	p 116.2
Output ⁵	110.9	118.1	109.2	110.1	111.1	113.1	114.5	117.4	119.1	121.5	124.2	125.0	p 126.2
Man-hours.....	120.0	104.7	101.6	101.9	101.7	102.7	103.5	104.4	105.1	105.9	107.1	108.0	p 108.6
Compensation per man-hour ¹	133.3	142.4	130.1	132.2	134.7	136.1	139.4	141.4	143.1	145.7	149.0	151.5	p 154.6
Real compensation per man-hour ²	109.9	113.7	108.8	109.4	110.4	111.0	112.7	113.4	113.8	114.8	115.8	115.3	p 115.0
Unit labor costs.....	122.6	126.2	121.0	122.4	123.3	123.6	125.9	125.7	126.3	126.9	128.5	130.9	p 133.0
Unit nonlabor payments ³	111.7	114.8	110.3	111.8	112.4	112.5	112.6	114.1	115.4	117.0	118.9	121.1	p 123.3
Implicit price deflator ⁴	118.4	121.8	116.9	118.2	119.1	119.3	120.7	121.2	122.0	123.1	124.8	127.1	p 129.2
Private nonfarm:													
Output per man-hour.....	107.6	112.1	106.1	107.0	108.1	109.1	109.8	111.3	112.9	114.2	115.6	115.4	p 115.9
Output ⁵	111.0	118.7	109.2	110.2	111.2	113.3	114.9	117.9	119.9	122.3	125.1	126.3	p 127.7
Man-hours.....	103.2	106.0	102.9	103.0	102.9	103.8	104.6	105.9	106.2	107.1	108.2	109.5	p 110.2
Compensation per man-hour ¹	131.8	140.9	128.4	130.9	133.1	134.6	137.8	139.5	141.8	144.2	147.9	149.8	p 152.7
Real compensation per man-hour ²	108.6	112.4	107.4	108.3	109.0	109.7	111.4	111.9	112.7	113.6	114.9	113.9	p 113.6
Unit labor costs.....	122.5	125.7	120.9	122.3	123.1	123.3	125.5	125.3	125.6	126.2	127.9	129.8	p 131.7
Unit nonlabor payments ³	112.1	114.0	110.9	111.9	113.0	112.6	112.5	113.5	114.5	115.8	116.4	118.0	p 118.5
Implicit price deflator ⁴	118.5	121.3	117.1	118.4	119.3	119.3	120.6	120.8	121.4	122.3	123.6	125.4	p 126.7
Manufacturing:													
Output per man-hour.....	115.6	121.8	113.7	115.9	116.4	116.4	118.6	120.7	123.2	124.9	126.1	r 127.3	p 129.0
Output ⁵	108.9	118.6	107.4	109.3	109.0	109.8	113.0	117.0	120.3	124.4	127.5	r 129.9	p 131.7
Man-hours.....	94.2	97.4	94.5	94.3	93.6	94.4	95.3	97.0	97.6	99.6	101.1	r 102.0	p 102.1
Compensation per man-hour ¹	130.7	139.0	128.3	130.0	131.7	132.9	136.4	138.1	139.6	141.9	145.6	r 148.5	p 151.8
Real compensation per man-hour ²	107.8	110.9	107.4	107.6	108.0	108.3	110.3	110.7	110.9	111.8	113.1	112.9	p 112.9
Unit labor costs.....	113.1	114.1	112.8	112.1	113.1	114.2	115.1	114.4	113.3	113.6	115.4	r 116.6	p 117.6
Nonfinancial corporations:													
Output per man-hour.....	113.4	117.9	113.3	112.5	114.3	115.3	116.6	117.3	118.3	119.3	121.4	r 122.0	(*)
Output ⁵	113.5	121.9	111.4	112.8	113.7	115.9	118.5	120.9	122.4	125.5	129.0	r 130.6	(*)
Man-hours.....	100.1	103.4	100.1	100.2	99.5	100.6	101.6	103.1	103.5	105.2	106.2	107.0	(*)
Compensation per man-hour ¹	132.3	141.3	129.2	131.2	133.9	135.1	138.8	140.2	142.3	144.0	148.2	150.9	(*)
Real compensation per man-hour ²	109.1	112.8	108.1	108.7	109.7	110.1	112.2	112.5	113.1	113.5	115.1	114.8	(*)
Total unit costs.....	119.3	121.6	118.8	119.1	119.7	119.8	120.8	121.5	121.8	122.1	123.0	r 124.4	(*)
Unit labor costs.....	116.7	119.9	116.1	116.6	117.1	117.2	119.1	119.6	120.2	120.7	122.0	r 123.7	(*)
Unit nonlabor costs ⁷	127.2	126.7	127.0	126.5	127.6	127.6	126.3	127.3	126.5	126.6	125.9	126.5	(*)
Unit profits ⁸	80.2	84.8	78.5	81.1	81.0	80.0	83.0	82.6	84.9	89.0	91.4	r 92.7	(*)
Implicit price deflator ⁴	113.4	116.0	112.7	113.3	113.9	113.8	115.1	115.6	116.2	117.1	118.2	119.6	(*)

¹ Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Except for nonfinancial corporations, where there are no self-employed, data also include an estimate of wages, salaries, and supplemental payments for the self-employed.

² Compensation per man-hour adjusted for changes in the Consumer Price Index.

³ Nonlabor payments include profits, depreciation, interest, rental income, and indirect taxes.

⁴ Current dollar gross product divided by constant dollar gross product.

⁵ Quarterly measures adjusted to annual estimates of output (gross product originating) from the Bureau of Economic Analysis, U.S. Department of Commerce.

⁶ Not available.

⁷ Include depreciation, interest, and indirect taxes.

⁸ Include corporate profits before taxes and inventory valuation adjustment.

p=preliminary.

r= revised.

NOTE: Manufacturing data have been revised beginning in the 1st quarter of 1972 to reflect revisions in the Federal Reserve Board Index of Industrial Production.

SOURCE: Output data from the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Compensation and man-hour data from the Bureau of Labor Statistics, U.S. Department of Labor, and the Bureau of Economic Analysis.

34. Percent change from preceding quarter and year in output per man-hour, hourly compensation, unit costs, and prices, private economy, seasonally adjusted at annual rate¹

[1967=100]

Item	Quarterly percent change						Annual percent change					
	I to II 1972	II to III 1972	III to IV 1972	IV 1972 to I 1973	I 1973 to II 1973	II 1973 to III 1973	II 1971 to II 1972	III 1971 to III 1972	IV 1971 to IV 1972	I 1972 to I 1973	II 1972 to II 1973	III 1972 to III 1973
Total private:												
Output per man-hour	6.5	3.1	5.2	4.1	-0.7	p 1.6	4.1	3.7	4.2	4.7	2.9	p 2.5
Output	10.4	5.8	8.4	9.3	2.6	p 3.7	6.6	7.2	7.5	8.5	6.5	p 6.0
Man-hours	3.6	2.6	3.0	5.0	3.2	p 2.1	2.4	3.3	3.1	3.6	3.5	p 3.3
Compensation per man-hour ²	5.9	4.9	7.4	9.5	6.9	p 8.4	7.0	6.3	7.0	6.9	7.2	p 8.0
Real compensation per man-hour ³	2.8	1.2	3.6	3.5	-1.7	p -.7	3.7	3.1	3.5	2.8	1.6	p 1.1
Unit labor costs	-5	1.7	2.0	5.2	7.6	p 6.7	2.8	2.4	2.6	2.1	4.1	p 5.4
Unit nonlabor payments ⁴	5.4	4.6	6.0	6.6	7.4	p 7.4	2.1	2.6	4.1	5.6	6.1	p 6.8
Implicit price deflator ⁵	1.5	2.8	3.5	5.7	7.5	p 6.9	2.5	2.5	3.2	3.4	4.9	p 5.9
Private nonfarm:												
Output per man-hour	5.7	5.6	4.7	5.0	-.8	p 1.9	4.1	4.4	4.6	5.3	3.6	p 2.7
Output	11.0	7.0	8.3	9.2	3.9	p 4.6	7.0	7.8	8.0	8.9	7.1	p 6.5
Man-hours	5.0	1.3	3.4	4.0	4.8	p 2.6	2.8	3.2	3.2	3.4	3.4	p 3.7
Compensation per man-hour ²	5.2	6.7	6.8	10.7	5.3	p 7.9	6.6	6.6	7.1	7.3	7.4	p 7.7
Real compensation per man-hour ³	2.0	2.9	3.1	4.6	-3.2	p -1.2	3.3	3.4	3.6	3.2	1.8	p .8
Unit labor costs	-5	1.0	2.0	5.4	6.2	p 5.9	2.4	2.0	2.4	1.9	3.6	p 4.8
Unit nonlabor payments ⁴	3.7	3.6	4.4	2.4	5.4	p 1.7	1.4	1.4	2.8	3.5	3.9	p 3.5
Implicit price deflator ⁵	1.0	1.9	2.9	4.3	5.9	p 4.4	2.1	1.8	2.5	2.5	3.7	p 4.4
Manufacturing:												
Output per man-hour	7.4	8.6	5.7	3.9	r 3.8	r 5.5	4.1	5.8	7.4	4.7	r 5.5	p 4.7
Output ⁶	15.3	11.4	14.3	10.3	r 7.7	r 5.7	7.1	10.4	13.3	12.9	10.9	p 9.5
Man-hours	7.4	2.6	8.2	6.2	3.8	.1	2.9	4.3	5.5	6.1	5.2	p 4.5
Compensation per man-hour ²	4.9	4.4	6.8	10.8	8.2	9.2	6.2	5.9	6.8	6.7	7.5	p 8.7
Real compensation per man-hour ³	1.6	-.8	3.2	4.7	r -.7	.1	2.9	2.7	3.2	2.6	r 2.0	p 1.8
Unit labor costs	-2.3	-3.8	1.1	6.6	r 4.2	r 3.5	2.0	.1	-.5	.3	r 1.9	p 3.8
Nonfinancial corporations:												
Output per man-hour	2.5	3.6	3.4	7.3	r 1.9	(?)	4.3	3.6	3.5	4.2	r 4.0	(?)
Output	8.6	5.1	10.4	11.6	r 5.0	(?)	7.2	7.7	8.3	8.9	r 8.0	(?)
Man-hours	6.0	1.5	6.8	4.0	3.1	(?)	2.9	4.0	4.6	4.5	3.8	(?)
Compensation per man-hour ²	4.2	5.9	4.9	12.1	7.5	(?)	6.9	6.3	6.6	6.7	7.6	(?)
Real compensation per man-hour ³	1.0	2.2	1.3	5.9	-1.2	(?)	3.5	3.1	3.1	2.6	2.0	(?)
Total unit costs	2.0	1.1	1.1	2.8	r 4.6	(?)	2.0	1.7	2.0	1.8	r 2.4	(?)
Unit labor costs	1.6	2.3	1.4	4.4	r 5.5	(?)	2.5	2.7	3.0	2.5	3.4	(?)
Unit nonlabor costs ⁴	3.1	-2.4	.3	-2.0	r 1.7	(?)	-.6	-.9	-.8	-.3	-.6	(?)
Unit profits ⁸	-2.0	12.0	20.4	11.6	r 5.5	(?)	1.9	4.9	11.2	10.2	r 12.3	(?)
Implicit price deflator ⁹	1.6	2.2	3.2	3.8	4.7	(?)	2.0	2.1	2.9	2.7	3.4	(?)

¹ Computed from seasonally adjusted original data.² Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Except for nonfinancial corporations where there are no self-employed, data also include an estimate of wages, salaries, and supplemental payments for the self-employed.³ Compensation per man-hour adjusted for changes in the Consumer Price Index.⁴ Nonlabor payments include profits, depreciation, interest, rental income, and indirect taxes.⁵ Current dollar gross product divided by constant dollar gross product.⁶ Quarterly measures adjusted to annual estimates of output (gross product originating) from the Bureau of Economic Analysis, U.S. Department of Commerce.⁷ Not available.⁸ Include depreciation, interest, and indirect taxes.⁹ Include corporate profits before taxes and inventory valuation adjustment.

p = preliminary.

r = revised.

NOTE: Manufacturing data have been revised beginning in the 1st quarter of 1972 to reflect revisions in the Federal Reserve Board Index of Industrial Production.

SOURCE: Output data from the Bureau of Economic Analysis, U.S. Department of Commerce, and the Federal Reserve Board. Compensation and man-hours data from the Bureau of Labor Statistics, U.S. Department of Labor, and the Bureau of Economic Analysis.

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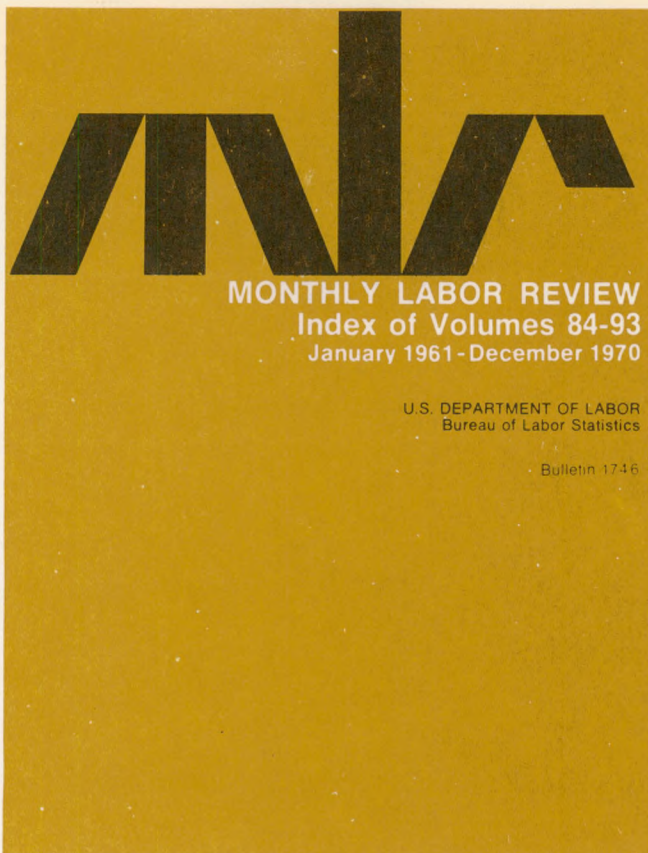
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