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U.S. DEPARTMENT OF LABOR

Bureau of Labor Statistics

In this issue:

The U.S. Economy
in 1980: a preview of
BLS projections





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3 The United States economy in 1980

A preview of BLS projections:
productivity and GNP (page 6), employment (page 14),
labor force (page 24), implications (page 28)

Edward J. O'Boyle **35 The long-duration unemployed**

Special Labor Force Report focuses on Americans
who accumulate 15 weeks of unemployment or more in a year

H. M. Douty **69 Poverty programs: the view from 1914**

IRRA CONFERENCE PAPERS

Reese Hammond **44 Effective preparation for apprenticeship**

T. W. Kheel, L. B. Kaden **45 A plan to resolve impasses in hospital bargaining**

Richard B. Peterson **48 Worker participation in Sweden**

M. H. Moskow, K. McLennan **51 Impact of school decentralization on bargaining**

RESEARCH SUMMARIES

Charles M. O'Connor **54 Wages of nonteaching school employees**

Ronald W. Glass **55 Arbitration in Federal collective bargaining**

Edward T. O'Donnell **57 Measuring employment that results from tourism**

William M. Smith **59 White-collar pay in private industry**

62 Cost estimates for urban family budgets

64 Progress of U.S. Negroes during the 1960's

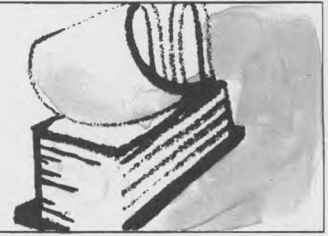
Michael J. Tighe **65 Wages of telephone and telegraph workers**

Thomas C. Mobley **66 Use of BLS survey data in wage setting at GPO**

DEPARTMENTS

- 2** Labor month in review
- 54** Research summaries
- 69** Communication
- 72** Foreign labor briefs
- 74** Significant decisions in labor cases
- 78** Major agreements expiring next month
- 80** Developments in industrial relations
- 84** Book reviews and notes
- 95** Current labor statistics

Labor Month in Review



Emergency disputes. National political leaders long have spoken of the need for new approaches to labor-management disputes that threaten the national health and safety. Last month, President Nixon spelled out a new approach and asked Congress to apply it to the Nation's transportation industries, where, he said, "emergency procedures of present laws have most frequently failed."

The President's plan would scrap the emergency disputes procedures of the Railway Labor Act, expand those of the Taft-Hartley Act, and apply the revised procedures to national emergency disputes in the railroad, airline, maritime, long-shore, and trucking industries.

As now written, the Taft-Hartley Act authorizes the President to go to court to request an 80-day cooling-off period when a work stoppage threatens the Nation's health or safety. If there is no settlement at the end of the period, the President's only recourse is to ask Congress for special legislation.

The new proposal would give the President three additional options in disputes involving transportation:

- he could extend the 80-day cooling-off period for as long as 30 days;
- he could require partial operation, "keeping essential segments of the industry in operation" for up to 6 months while letting "the major part of the strike or lockout continue;" or
- he could invoke a procedure empowering a neutral panel to select the final written position of one of the parties as the settlement binding both.

The plan permits the President to choose only 1 of the 3 options and gives both Congress and the courts veto power over the President's action.

Final offer selection. Under the President's third option, the parties would be required to submit their final offers, then bargain for 5 more days. If

they failed to agree, a neutral panel would choose one of the final offers in the exact form presented, without modifying its terms or attempting to mediate. Here is how Mr. Nixon explained the advantage of this procedure:

Unlike arbitration—it would also provide a strong incentive for labor and management to reach their own accommodation at an earlier stage in the bargaining. When arbitration is the ultimate recourse, the disputants will compete to stake out the strongest bargaining position, one which will put them at the greatest advantage when a third party tries to "split the difference." But when final offer selection is the ultimate recourse, the disputants will compete to make the most reasonable and most realistic final offer, one which will have the best chance to win the panel's endorsement.

Rather than pulling apart, the disputants would be encouraged to come together. Neither could afford to remain in an intransigent or extreme position.

Reaction. The President's proposal brought negative responses from both organized labor and the railroad industry. AFL-CIO President George Meany characterized the final offer selection procedure as "a novel form of compulsory arbitration." "We have," he added, "always opposed and will continue to oppose any scheme of compulsory arbitration, no matter what Administration proposes it and regardless of whether it is openly labeled as compulsory arbitration or is given a more euphemistic label such as 'Mediation to Finality' or 'Final Offer Selection.'"

John P. Hiltz, Jr., chairman of the National Railway Labor Conference, expressed concern over "the Administration's emasculation of the Railway Labor Act without any assurance that the substituted provision would prove nearly as effective." He announced that the railroads soon would offer "a far better way to improve the provisions and the processes of that Act."

Estimates
of labor force,
growth in the economy,
and employment
by industry and occupation

The U.S. economy in 1980: a preview of BLS projections

WHAT WILL BE the shape of the U.S. economy in 1980—its output of goods and services, its labor force, its employment? New projections by the Bureau of Labor Statistics indicate that:

▶ the labor force will have climbed by one-fifth to 100 million workers, and will include a large supply of young workers, age 25–34, totaling 26 million;

▶ the educational level of the labor force will have risen substantially;

▶ GNP, growing at the rate of 4.3 percent a year through the 1970's, will have reached \$1.4 trillion in 1968 dollars;

▶ productivity, advancing steadily if at a slightly slower pace than in the 1960's, will have increased 3 percent a year;

▶ hours will have declined to 38 a week, at the very slow pace of 0.1 percent a year through the 1970's;

▶ industry employment will have continued to shift toward the service industries, including trade and government; and

▶ occupational employment will have continued a long-term shift towards the white-collar occupations and those requiring the most education and training.

By themselves the projections summarized in this report do not represent sharp departures from the broad economic and manpower trends that prevailed during the 1960's. And yet, more people, more growth, more goods and services, even if in line with recent trends, could have cumulative effects that may make the 1970's quite different from the 1960's. Moreover, many crosscurrents within the total may yield some quite dissimilar trends from the 1960's for smaller segments of the economy.

This article presents highlights of the BLS projections and is intended to be an overview, limited for the most part, to the major sectors

of the economy. A more complete summary bulletin containing additional statistical detail covering employment in over 250 individual industries and detailed occupations will be published in the late spring. Further publications and articles will present more refined analysis and more detailed information on the various methodologies followed.

The economy in 1980

BACKGROUND OF THE PROJECTIONS, ASSUMPTIONS, AND TECHNIQUES

FOR THREE DECADES, the Bureau of Labor Statistics has been making economic projections to determine the Nation's manpower requirements. Following the recommendation of a Presidential Advisory Committee on Education in 1938, the Bureau's initial program was set up to conduct studies of projected employment trends and outlook by occupation for the career guidance of young people and for the use of educators responsible for planning programs of vocational education or training. As the decade of the 1970's begins, the Bureau's projections, now used for a wide variety of planning and policy development purposes, represent one of the longest continuous systematic efforts to make economic projections both in and out of Government.

In today's growing and complicated society it is not enough to know simply that the Nation will need 100 million jobs for 100 million workers by 1980. One must know what kinds of jobs? What skills? What industries? How will job requirements change as a result of technology? What will worker characteristics be—age, sex, educational attainment? Only this kind of information about tomorrow's manpower requirements

will equip private and public policy to take the measures to assure a reasonable balance between workers and jobs, between the Nation's demand for and supply of workers.

To meet these needs, the Bureau has developed and refined its projections so that they now encompass several integrated components that permit a comprehensive view of tomorrow's economy and its manpower needs. Specifically, the projections cover labor force, hours of employment, output per man-hour, potential demand (gross national product or GNP), the composition of demand, output and productivity by 82 detailed industry groups, and employment in over 250 industries and in detailed occupations. The projections are interrelated: the growth of GNP, a foundation of the projections, is conditioned upon labor supply, productivity changes, and hours of work. The rate and direction of changes in the major demand components of the GNP, in

turn, yield changing requirements for labor by industry and occupation.

In this article on the economy and its manpower requirements in 1980, the projections are often described categorically—"The labor force will expand by x percent by 1980"; "The gross national product will expand by y percent a year." The intent is to show the results emerging from the Bureau's research that seem most likely to occur but in all cases—even though the statements may be stated categorically for ease in presentation—they represent the Bureau's best judgment and are dependent on the realization of the various assumptions on which the projections rest.

Assumptions

The BLS projections about the world of 1980 discussed in this article are based on these specific assumptions:

► *The international climate* will improve. The United States will no longer be fighting a war, but, on the other hand, a still guarded relationship between the major powers will permit no major reductions in armaments. This would still permit some reduction from the peak levels of defense expenditures during the Viet Nam conflict.

► *Armed Forces strength* will drop back to about the same level that prevailed in the pre-Viet Nam escalation period.

► *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.

► *Fiscal and monetary policies* will be able to achieve a satisfactory balance between low unemployment rates and relative price stability without reducing the long-term economic growth rate.

► *All levels of government* will join efforts to meet a wide variety of domestic requirements, but Congress will channel more funds to State and local governments.

► *Efforts to solve the problems posed by air and water pollution and solid waste disposal*, although they may preempt an increasing amount of the Nation's productive resources, will not lead to a significant dampening of our longrun potential rate of growth.

About the contributors

The projections presented in this article represent the work of a number of Bureau personnel and their individual contributions will be given proper recognition in the separate detailed studies to be published later this year. Special mention should be made, however, of the senior economists who had primary responsibility for supervising the staff research underlying the projections and preparing the final detailed reports.

► Sophia C. Travis, chief of the Division of Labor Force Studies: labor force; Denis F. Johnston, statistician (demography), Office of Manpower and Employment Statistics, who was specifically responsible for the projection of the educational attainment of the labor force.

► Ronald E. Kutscher, chief of the Division of Economic Growth: economic growth, including gross national product, output, output per man-hour, and total employment by industry.

► Russell B. Flanders, chief of the Division of Manpower and Occupational Outlook: wage and salary employment by industry and employment by occupation.

The research activities were coordinated in the Office of Productivity, Technology and Economic Growth by Jerome Mark, Assistant Commissioner, and Jack Alterman, director of the Bureau's Economic Growth Studies, and in the Office of Manpower and Employment Statistics by Assistant Commissioner Harold Goldstein.

The article was written by Maxine G. Stewart, editor of the *Occupational Outlook Quarterly*.

► *Fertility rates will be lower* than they have been in the recent past.

Projection techniques

Labor force and occupational projections cover the period 1968 to 1980 because 1968 was the most recent year for which complete data were available at the time of the calculations. All other projections—GNP, hours, productivity, aggregate and industry demand, and industry employment—are based from 1965 because the next 3 years (1966 to 1968) were substantially affected by the demands of the Viet Nam war. Since it is assumed that these hostilities will be over by 1980, recent changes related to the impact of the Viet Nam war were considered to be atypical and unlikely to be characteristic of the years ahead.

Growth rates, in most cases, are shown not only for 1965–80, but also for 1968–80 to reflect the impact of the intervening years. Since the article was written, however, some 1969 data have become available. Because a slackening of growth in the economy occurred during 1969, the GNP would have to grow at the rate of 4.4 percent a year for the period 1969–80, rather than 4.3 percent as shown for the 1968–80 period, to reach the 1980 projected levels. Similarly, productivity would have to grow at 3.2 percent a year rather than the 3.0 percent shown. Projected employment growth remains unchanged at 1.7 percent a year.

The labor force projection, based on the Bureau on the Census projections of population, is developed through separate projections of labor force participation for the various age, sex, and color groups in the population. The detailed participation rates are then applied to the projected levels in each population group.

The economic growth projections are developed in consultation with the Interagency Committee on Economic Growth, which consists of representatives of the U.S. Department of Labor, the U.S. Department of Commerce, the Bureau of the Budget, and the President's Council of Economic Advisors. These projections have benefited from the advice of—and have utilized the research product of—several other government agencies and private research organizations that also participate in the Interagency Growth Studies Program. The input-output tables developed by the U.S. Department of Commerce's Office of Business

Economics provide the basic framework for the growth projections.

To explore the implications of alternative growth rates and patterns, two different demand structures of the economy are presented in this article: one is based upon a continuation of the long-term shift toward the purchase of more consumer and public *services*. The other assumes a slower growth in the trend toward services with correspondingly greater emphasis on *durable goods* production: Consumer, producer, and military. Both these demand structures start with approximately the same level of potential output in 1980; the differences lie only in the composition of final demand and its related components. Specific differences are spelled out in later sections of the article.

Within each set of demand projections, two alternative assumptions are outlined regarding the unemployment rate: one assumes a 3-percent unemployment rate by 1980; the other assumes a somewhat higher rate, 4 percent. Projections at the lower rate are based on the assumption that by 1980 the country will have been able to develop a mix of public and private policies that can assure such a low rate without creating inflationary pressures. Since the same structure of the economy for 1980 has been assumed for both the 3-percent and the 4-percent unemployment projections, the proportionate distribution of employment among major industry and occupational sectors is virtually the same for both projections except that all industries would have a slightly higher level of employment under the 3-percent unemployment assumption. It is recognized that this assumption may be an oversimplification; however, the magnitude of the difference in employment that would result from a more discriminating set of assumptions for pinpointing the employment difference of a 1-percent change in the unemployment level would be quite minor except for relatively few industries or occupations. The discussion in this article will be limited to the 3-percent unemployment assumptions. Tables, however, show industry data for both alternatives.

Industry and occupational employment projections—the end product of labor force and economic growth projections, are arrived at by utilizing two projection techniques. Total industry employment, which includes wage and salary workers, unpaid family workers, and the self-employed, is obtained by calculations involving

projected changes in demand, interindustry relationships, and output and productivity. The employment projections are initially developed for about 82 industries or industry groups, covering the entire economy. The employment estimates are also distributed into much greater industry detail (about 250 industries) by using regression analysis to estimate employment in each industry consistent with the basic assumptions of the economic projections. The results of the two methods are carefully analyzed and reconciled for consistency. Finally, the employment projections are converted into estimates of occupational requirements by projecting detailed occupational patterns, industry by industry, which, when combined with the industry employment estimates, yield the final product of the entire sequence of projections—occupational estimates.

(For a discussion of the uses to which the detailed projections of industry and occupational employment are put, see the *Monthly Labor Review*, November 1969, p. 20.)

The economy in 1980

PRODUCTIVITY AND GROSS NATIONAL PRODUCT

BEFORE MAKING projections of economic growth, the anticipated number of people in the Nation and the proportion working or seeking work must be estimated. As consumers, they provide the potential demand for the Nation's goods and services. As workers, they are also an essential element in the production of goods and services.

Expected labor force

By 1980, 100 million Americans will be in the labor force, if Bureau of Labor Statistics projections materialize, one-fifth more (22.4 percent) than the 1968 labor force of 82 million.

The working age population can be projected with more confidence than some of the other variables in economic projections since everyone who will be old enough to work during the 1970's has been born already, and death rates and net immigration are fairly steady. The U.S. Bureau of the Census projects about 167 million people

of working age (16 and over) in 1980, and BLS projects the labor force participation rate of these people to increase only slightly between 1968 and 1980. Thus, the decade of the 1970's will see increases in both population and the proportion of work-age people seeking jobs, but by far the largest contributor to labor force growth will be population expansion itself: 94 percent of the growth in the labor force will be attributable to a bigger population, with the remaining 6 percent caused by the expected increase in the participation rate.

Growth, hours, productivity

The most commonly used comprehensive measure of output in the economy is the value of all final goods and services produced—gross national product (GNP). For purposes of the BLS economic projections, the value of the total national output of goods and services is derived by projecting to 1980 the size of the work force, hours of work, and the dollar value of goods and services produced in each hour worked, referred to as output per man-hour or productivity. Arrived at in this way, BLS projections indicate the potential value of all goods and services produced in 1980 may reach \$1.4 trillion in 1968 dollars. If prices were to rise at the rate of 2.5 percent a year through the 1970's as they did through the 1960's, the potential GNP would be \$1.8 trillion in estimated 1980 dollars rather than \$1.4 trillion in 1968 dollars.

In 1968 the economy produced goods and services valued at \$866 billion. Output of \$1.4 trillion by 1980 implies a growth rate of 4.3 percent a year over the time span from 1968–80. Although very healthy, this potential growth rate allows for some slowdown in the economy from its performance of 4.5 percent growth a year during the 1960–68 period. This apparent slowdown is not due to a reduction in the potential growth rate, which is based on the assumption of the full utilization of labor and industrial resources, but to the actual growth in the 1960's, which was based, in part, on taking up the slack in resource utilization which existed in the early part of the decade.

HOURS OF WORK. Average weekly hours¹ have been declining for several years. From 1957 to 1965, hours declined at a rate of 0.2 percent a year for all private industry. The decline in hours,

projected over the 1968-80 period, slows this rate of decline somewhat to 0.1 percent per year.

In the early postwar period, the decline in hours resulted, to a considerable extent, from a reduction in the scheduled workweek. In later years, however, the increasing proportion of part-time employees contributed more to the decline than changes in the scheduled workweek. During the years from 1956 to 1968, for example, when employment was growing by 1.5 percent per year, part-time employment was speeding along at a growth rate of 5.7 percent per year. The significant increase in part-time employment is due to (a) the rapid growth in employment in the service and retail trade industries where part-time employment is common and (b) a companion increase in the proportion of part-time workers used by these industries and the availability of individuals interested in part-time work. For example, the mushrooming of suburban shopping centers that have many branch stores and mall shops has contributed to the expansion of the part-time work force. These centers are both growing rapidly and using an increasing proportion of part-time sales personnel as they stay open later in the evening. Part-time employees represented 6.8 percent of the total employed labor force in 1956; by 1968, this proportion had increased to 11.1 percent; by 1980, it is expected to be even larger.

This projected decline in average hours assumes that labor and management will not be negotiating major reductions in the nonfarm workweek by 1980. The continuing decline in hours will be caused by the persistent increase in part-time employment plus a continued small reduction of the average workweek on the farm. The trend in hours will differ among farm and nonfarm industries, and government.

On the farm, hours of work are expected to decline to 43.7 a week by 1980, or by 0.2 percent annually, on the average, through the 1970's (1968-80), reflecting a longtime downward trend.

Hours were 44.8 per week in 1968 and 45.7 in 1965, the base year for the projection period, just before the Viet Nam escalation.

Off the farm, excluding government, hours paid for are expected to continue to decline to 37.8 a week by 1980, or by 0.1 percent a year through the 1970's (1968-80). This rate of decline is somewhat less than has occurred since the mid-1950's. All nonfarm hours were 38.1 a week in 1968, and 39.0 a week in 1965.

In the goods-producing industries, except agriculture, hours paid for began to climb in 1964 after several steady years. The upward trend was caused primarily by an increase in overtime hours. This trend has now reversed and through the 1970's hours in the goods-producing industries are expected to be relatively stable.

In the service industries, on the other hand, hours paid for declined steadily from the end of World War II to 1968. Trade and services are expected to continue a decline, though at a more modest rate, through the 1970's.

For projection purposes, government hours are held constant.

PRODUCTIVITY IN MAJOR SECTORS. One of the most important elements in making projections, productivity, can be quite different among industries and quite different from year to year.

Productivity patterns have been and are expected to be different in each of the major industry groups through the 1970's (1968-80).

Farm productivity growth will be high at 5.7 percent a year. Productivity gains have been very high in recent decades because of more efficient machinery and improved fertilizers, farming techniques, and management practices.

Traditionally, gains in farm output per man-hour, although fluctuating widely from year to year, have been high. Through the 1970's it may increase, on the average, about 5.7 percent annually, somewhat less than the 6-percent rise annually in recent years. But even at this lower average rate, the increases in farm output per man-hour are expected to remain considerably above that of the nonfarm sector.

Nonfarm productivity will advance steadily at 2.9 percent a year. Even though nonfarm productivity is expected to advance through the 1970's at about its long-term rate, individual industries within the broad nonfarm sector may deviate from their past productivity rates. The average rate projected will permit productivity increases that are greater than recent increases in some industries counterbalanced by productivity change in other industries that will be lower than recent trends would suggest.

Productivity gains for both farm and nonfarm industries combined will drop a little to 3 percent a year through the 1970's (1968-80). The combined effect of these differing rates of gain in productivity for farm and nonfarm workers—5.7 percent

Table 1. Gross national product by major component, selected years and projected to 1980

In billions of 1968 dollars]

Component	1957	1965	1968	1980				Percent distribution		
				Services economy		Durables economy		1957	1965	1968
				3 percent unem- ployment rate	4 percent unem- ployment rate	3 percent unem- ployment rate	4 percent unem- ployment rate			
Gross national product.....	\$553.8	\$754.3	\$865.7	\$1,427.8	\$1,415.7	\$1,429.6	\$1,417.7	100.0	100.0	100.0
Personal consumption expenditures.....	342.8	472.0	536.6	903.2	895.6	888.9	881.4	61.9	62.6	62.0
Durable goods.....	42.9	68.8	83.3	137.6	136.5	146.8	145.5	7.7	9.1	9.6
Nondurable goods.....	162.4	209.1	230.6	346.5	343.6	335.0	332.2	29.3	27.7	26.6
Services.....	137.5	194.1	222.8	419.1	415.5	407.1	403.7	24.8	25.7	25.7
Gross private domestic investment.....	83.6	118.9	126.3	222.0	220.1	238.9	237.0	15.1	15.8	14.6
Nonresidential.....	56.1	78.0	88.8	152.3	151.0	160.4	159.1	10.1	10.3	10.3
Residential structures.....	26.2	30.9	30.2	53.0	52.5	60.7	60.2	4.7	4.1	3.5
Net inventory change.....	1.3	10.0	7.3	16.7	16.6	17.8	17.7	.2	1.3	.8
Net exports.....	7.7	7.9	2.5	12.9	12.9	12.9	12.9	1.4	1.0	.3
Government purchases.....	119.7	155.5	200.3	289.7	287.1	288.9	286.4	21.6	20.6	23.1
Federal.....	65.2	73.1	99.5	107.3	106.4	125.9	124.9	11.8	9.7	11.5
State and local.....	54.5	82.4	100.7	182.4	180.7	163.0	161.5	9.8	10.9	11.6

and 2.9 percent, respectively—averages out to an overall increase in productivity in the economy of roughly 3 percent annually through the 1970's, a smaller growth rate than the long-term postwar increase of 3.4 percent a year (1947-68).

Government productivity is assumed at a constant level through the 1970's, because of the difficulty of measuring the real output of government.² This assumption can have a big influence on what happens to average productivity in the coming years. Since government employment is expected to rise substantially, and its productivity, arbitrarily, is held constant, the increase in overall productivity is lower than the projected growth in output per man-hour in the private sector alone. If government employment were to expand beyond the projected levels, this dampening of productivity growth, of course, would be accentuated. (See chart 1.)

Purchasers of the GNP

The projected 1980 GNP of \$1.4 trillion will be divided among four major categories of final demand: Consumption, investment, government purchases, and foreign purchases. The changes that lie ahead in the composition of the total GNP may tell a great deal about the kinds of industries—the kinds of production—and ultimately, the kinds of jobs that will be available in 1980.

The mix of demand as between the services and durable goods economies becomes significant

at this point in the level of projection detail. Both BLS structures of the economy—services and durable goods—reflect a continuation of the past trend in aggregate demand through the 1970's. Differences are assumed in the pace of change, however, among the component purchasers of the GNP. These changes are shown in detail in table 1. To simplify this overview of the projections developed by the BLS, the initial discussion will be limited to projections based on the assumption of a continuation in the pace of the shift towards services in an economy with 3-percent unemployment. The extent to which these projections are modified in alternative views of the economy will be summarized at the end of each section.

PERSONAL CONSUMPTION EXPENDITURES. By far the largest purchasers of the GNP are consumers. In 1980 they are expected to spend close to \$900 billion on goods and services, more than the total value of the GNP in 1968 which was \$866 billion.

Consumer expenditures consist of three major subcategories—durable goods, nondurable goods, and services. By 1980, durable goods and services expenditures will be higher as a proportion of total PCE than at any time in the post-World War period in all projections. In contrast to the upward surge in expenditures for durables and services, the proportionate share of nondurable goods will be smaller than in any recent year; their rate of growth over this period will be the slowest of the three groups and about in line

Table 1. Continued—Gross national product by major component, selected years and projected to 1980

[In dollars]

Percent distribution				Average annual rates of change, 1965-80				Average annual rates of change, 1968-80				Component
Services economy 1980		Durables economy 1980		Services economy		Durables economy		Services economy		Durables economy		
3 percent unemployment rate	4 percent unemployment rate	3 percent unemployment rate	4 percent unemployment rate	3 percent unemployment rate	4 percent unemployment rate	3 percent unemployment rate	4 percent unemployment rate	3 percent unemployment rate	4 percent unemployment rate	3 percent unemployment rate	4 percent unemployment rate	
100.0	100.0	100.0	100.0	4.3	4.3	4.4	4.3	4.3	4.2	4.3	4.2	Gross national product.
63.3	63.3	62.2	62.2	4.4	4.4	4.3	4.3	4.4	4.4	4.3	4.2	Personal consumption expenditures.
9.6	9.6	10.3	10.3	4.7	4.7	5.2	5.1	4.3	4.8	4.2	4.8	Durable goods.
24.3	24.3	23.4	23.4	3.4	3.4	3.2	3.1	3.4	3.4	3.2	3.1	Nondurable goods.
29.4	29.3	28.5	28.5	5.2	5.2	5.1	5.0	5.4	5.3	5.2	5.1	Services.
15.5	15.5	16.7	16.7	4.3	4.2	4.8	4.7	4.8	4.7	5.5	5.4	Gross private domestic investment.
10.7	10.7	11.2	11.2	4.6	4.5	4.9	4.9	4.6	4.5	5.1	5.0	Nonresidential.
3.7	3.7	4.2	4.2	3.7	3.6	4.6	4.5	4.8	4.7	6.0	5.9	Residential structures.
1.2	1.2	1.2	1.2	3.5	3.4	3.9	3.9	7.1	7.1	7.7	7.7	Net inventory change.
.9	.9	.9	.9	3.3	3.3	3.3	3.3	14.7	14.7	14.7	14.7	Net exports.
20.3	20.3	20.2	20.2	4.2	4.2	4.2	4.2	3.1	3.0	3.1	3.0	Government purchases.
7.5	7.5	8.8	8.8	2.6	2.5	3.7	3.6	.6	.6	2.0	1.9	Federal.
12.8	12.8	11.4	11.4	5.4	5.4	4.7	4.6	5.1	5.0	4.1	4.0	State and local.

with the historical trend.

One of the major causes of the upsurge in the purchase of durables will be increased purchases of furniture and household equipment. Large expenditures for these items will come from the increasing number of new families that will be forming as many of the large number of young people born in the early post-World War II years set up housekeeping. In contrast, nondurable expenditures for food and beverages and clothing and shoes are projected to continue to decline as a proportion of total PCE in line with the longrun historical trend. Higher consumer expenditures for services will reflect the rapid growth of expenditures for medical care, private education, and recreation. Despite varying rates of growth, the dollar value of all categories of personal consumption expenditures will be higher in 1980 than it is today. (See chart 2.)

GOVERNMENT. By 1980, governments are expected to be spending more than they are today to attack domestic problems that defy individual solution. The Federal Government may participate directly in some programs, but more funds are projected to be channeled to State and local governments than at present through grants-in-aid.

Government purchases at all levels under the services economy are expected to rise to about \$289.7 billion in 1980, up from \$200 billion in 1968. Nonetheless, the government proportion of all GNP expenditures will decline somewhat—to 20.3 percent in 1980 in the services economy, down

from 23.1 percent in 1968. These declines are largely a reflection of the projected cut in defense spending; and they mask an accompanying increase in State and local governmental expenditures. In fact, total nondefense purchases, for Federal, State, and local governments combined, are projected to increase more than three-fourths from 1968 to 1980.

Federal purchases by 1980 are expected to be \$107.3 billion in a services economy. They were \$99.5 billion in 1968. If the projected expenditures materialize by 1980, the Federal share of GNP will be 7.5 percent, down from 11.5 percent in 1968. But if these 1980 Federal expenditures are compared with 1965, before the escalation of the Viet Nam war, the decline from 1965 is smaller—from 9.7 percent of GNP—because of lower defense expenditures at that time. Defense expenditures are projected to decline by 1980, reflecting the assumption that the Viet Nam hostilities will be over and the numbers in the Armed Forces will be lower than they are today.

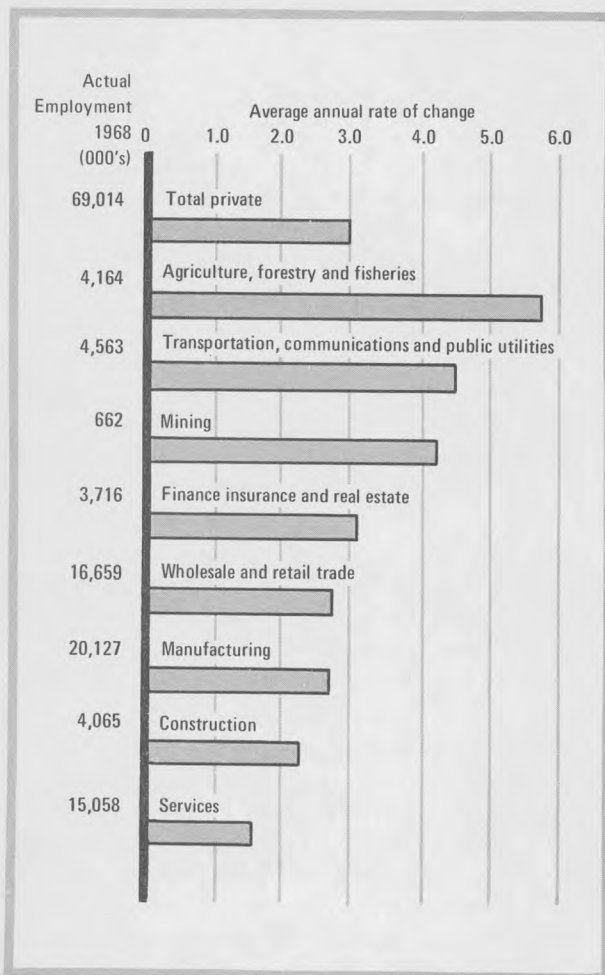
If the Viet Nam hostilities cool off, as is assumed, expenditures to meet domestic needs are expected to grow. Funds may be directed at a greater rate than during the 1960's into housing and community development, educational improvements, and the expansion of social welfare programs.

These expenditures, of course, depend upon a continuation of congressional appropriations for legislation recently enacted and concerned with health, education, conservation, pollution and poverty. The projected Federal spending reflects

only direct Federal purchases of goods and services, but many Federal costs show up elsewhere. For example, increased costs of medicare and many of the increased costs of environmental control will show up in the projected increases in consumer expenditures or business investment and increased public education costs will be reflected in increased State and local government expenditures, even though the funds may come from the Federal Government.

State and local governments are expected to benefit from both an increase in the Federal funds earmarked to help solve domestic problems at the State and local levels and increased revenues from higher tax collections. Reflecting this increased income, purchases are projected to rise in the services economy to the unprecedented height of

Chart 1. Projected productivity, by major sector, private economy, 1968-80



\$182.4 billion, up from \$100.7 billion spent in 1968 and exceeding projected purchases by the Federal Government by nearly 70 percent. The State and local government share of GNP will rise from 11.6 percent in 1968 to 12.8 percent in the services economy in 1980.

Education takes the lion's share of funds at the State and local levels, and its share will continue about the same in 1980. State governments usually pay for public higher education, and local governmental units pay the major share of public elementary and secondary education costs. Following the strain of rapid increases in the number of students in recent years, elementary school enrollments will begin to decline in the early 1970's, and secondary school enrollments will show a significantly slower expansion. Nonetheless, expenditures will continue to rise as school boards look to quality improvement. Little letup in pressures in higher education enrollment is seen for 1980 in public institutions despite a slowdown in population growth. Compared with the 1960's, a larger proportion of college-age people are expected to attend both community junior colleges and State universities.

Environmental control measures are expected to command a steadily increasing share of State and local expenditures as public concern about ecological health and safety accelerates. Some of the costs of these improvements will be met by higher tax revenues and others will be borne by the consumer through increased prices.

Highway construction and maintenance, which account for about one-fifth of all State and local government expenditures today, are expected to rise steadily in the 1970's. State and local governments together are responsible for ownership and maintenance costs of approximately 96 percent of the highway mileage; the Federal Government, the remainder. The Interstate Highway Program scheduled for completion in the mid-1970's will have added 41,000 miles of highway since the passage of the legislation in 1956. This additional mileage must be maintained by State and local governments.

Government activities concerned with urban renewal, redevelopment, and rehabilitation associated with the central cities all will require greater expenditures for construction and capital equipment. New low-income housing and urban

transit also will require heavy expenditures.

Public health, hospitals, and sanitation may require large additional expenditures. Widespread citizen concern for health care and additional Federal funding undoubtedly will lead to the development of many facilities for health care such as regional health centers, community mental health facilities, nursing homes, and establishments to aid the physically and mentally handicapped.

Conservation and development of natural and agricultural resources, including the operation of parks and recreational activities, are expected to require expanded expenditures in the coming years. Although a relatively small part of total State and local government costs, expenditures on parks and recreation will be among the fastest growing areas in terms of expenditures of all State and local functions.

GROSS PRIVATE DOMESTIC INVESTMENT. By 1980, business investment may total \$222.0 billion, up from \$126.3 billion in 1968. This investment would result in a slight increase in the proportionate share of GNP, from 14.6 percent in 1968 to 15.5 percent in 1980 in a services economy.

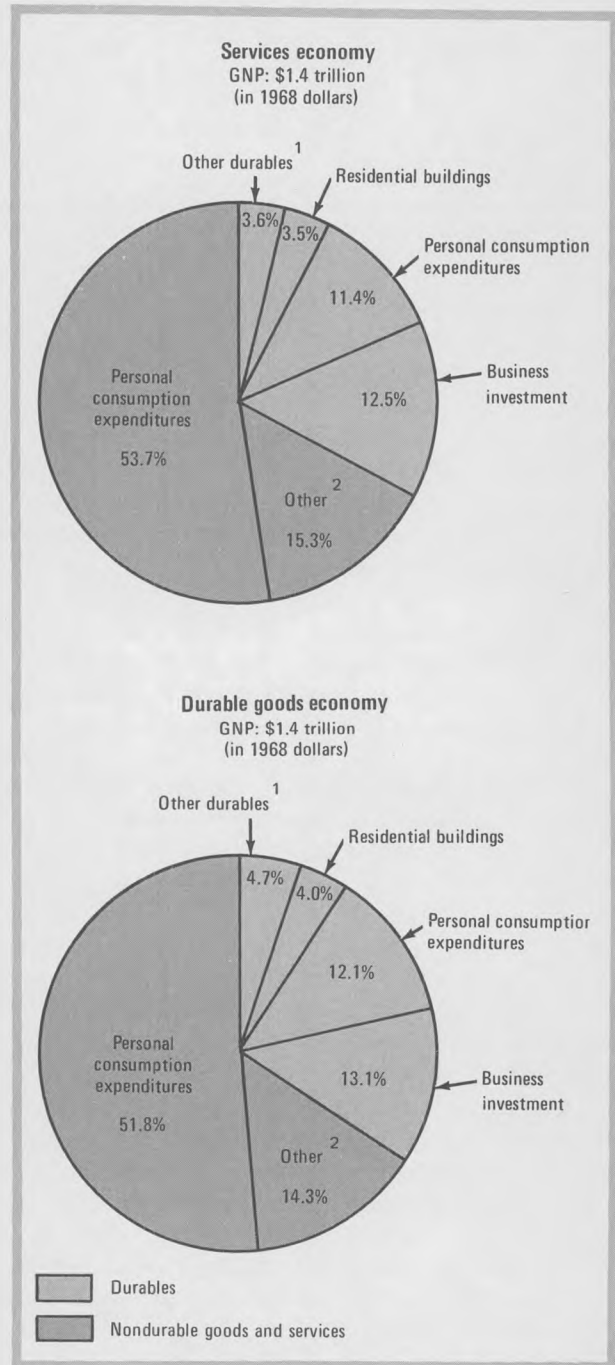
New housing expenditures are expected to double in value to \$53 billion by 1980, according to the services structure. Housing expenditures were \$30.2 billion in 1968. The need for housing is expected to command a great deal of national attention in the coming decade because of the strong demand arising from the need to improve living conditions in the ghettos, the large and growing numbers of young adults who will need housing—often apartments—for their new families, and the large number of retired persons seeking shelter in multiunit retirement developments.

Plant and equipment expenditures by business may rise to \$152.3 billion by 1980 in the services economy, up from \$88.8 billion in 1968. These expenditures are expected to account for roughly two-thirds or more of all gross private domestic investment in the services economy.

Spending for new plants is expected to grow more slowly than spending for equipment because the rate of construction growth for certain kinds of institutional and utility buildings and railroad and farm structures is expected to be slow. Indus-

trial building expenditures will not quite match the increases in equipment purchases, reflecting the historical downtrend in the ratio of plant to

Chart 2. Differences in demand structure in a services economy and in a durables economy, 1980 (both 3- and 4-percent unemployment levels)



¹ Includes net exports and government purchases.

² Includes government compensation and household services.

Table 2. Distribution of gross product originating,¹ by major sector, 1965, 1968, projected to 1980

[Percent distribution]

Major sector	1965	1968	1980	
			Services economy— 3 percent unemploy- ment ²	Durables economy— 3 percent unemploy- ment ²
Total.....	100.0	100.0	100.0	100.0
Agriculture, forestry, fisheries.....	3.7	3.1	2.9	2.8
Mining.....	1.7	1.6	1.4	1.4
Construction.....	5.1	4.6	4.8	4.9
Manufacturing.....	28.2	28.5	27.8	28.8
Transportation, communications, and public utilities.....	8.2	8.5	9.5	9.5
Wholesale and retail trade.....	16.5	16.5	17.0	17.0
Finance, insurance, and real estate.....	13.4	13.5	14.8	14.5
Services, including household services.....	11.0	11.0	11.4	11.1
Government, including government enterprises.....	12.1	12.4	10.2	9.9

¹ Gross product originating is the value added by each sector to the total product.² Distribution at 4-percent unemployment is identical.

NOTE: Detail may not add to total.

equipment expenditures. Through the 1970's a large gain is expected, however, in the construction of office buildings, hospitals, and social and recreational centers.

The net change in inventories—raw materials, semifinish goods, and finished goods—is estimated to total 1.2 percent of the 1980 output of \$16.7 billion in the services economy—well over double the 1968 level of inventories.

NET FOREIGN PURCHASES OF GOODS AND SERVICES. Net exports are expected to increase five-fold by 1980 to about \$13 billion in 1980, according to the projections for a services economy.

COMPONENT PURCHASERS IN A DURABLES GOODS ECONOMY. Although the assumptions in the durables projection that affect the real GNP growth rate are very similar to the services projection, the composition of demand shows the following differences: (1) Total personal consumption expenditures would be lower as a proportion of total gross national product, but durable goods would be a significantly higher proportion than in the services projection, and both nondurable goods and services would be somewhat lower. (2) Gross private domestic investment in the durable goods projection would be a slightly higher proportion of GNP. Each of the subcomponents of fixed investment would also be higher: Non-residential structures, producers' durable equipment, and residential structures. The residential structures component, however, is proportionately higher than the other components of investment. The level of residential structure assumed in a durables economy is sufficiently high to encompass

achievement of the housing goals of 26 million new dwelling units by 1978 and assumes a larger proportion of single family housing units.

Federal Government purchases are higher in a durables economy on the assumption of greater expenditures for military hardware. State and local government expenditures are lower, however, so that the proportion of GNP devoted to Government in the durables projection is similar to that found in the services economy. Even though the State and local government proportion of GNP in the durables economy is lower than in the services economy State and local government in the former would still grow faster than GNP or Federal purchases.

Industry output

After determining the potential size of the GNP and its principal component purchasers, the industrial outlines of 1980's economy emerge through a series of interrelated steps that involves translating the GNP into specific goods and services purchased, such as food, clothing, rent, automobiles, drugs, cosmetics, and medical expenses.

These purchases of specific goods and services are then allocated to 82 producing industries by the application of a variety of techniques and tools, different for each of the component purchasers of the GNP. The final demand of the 82 producing industries is traced back to all the other industries that contributed either directly or indirectly to this final production through the use of an input-output table; that is, a table used to identify the industry origins of all the goods and

services that go into the production of a final product. The great value of this kind of analysis to manpower planners is that it permits detailed analysis of the employment repercussions—or the ripple effect—of changes in demand in one industry on all others. For example, a change in the level of highway or school construction will affect not only employment in the construction industry but also in the steel industry and then in the iron ore industry. To determine both the direct and indirect effects on employment of a change in expenditures for school or highway construction requires knowledge of (a) what each industry in the economy buys from every other industry to produce its products (input-output relationships) and (b) what employment requirements are per dollar of output for each industry (productivity). When each of these elements is projected to the target year, it becomes possible to trace the impact on employment of the projected purchases of final goods and services back along the entire chain of production, transportation, and distribution.

Projections have been developed for the output in 82 industries, but this article will deal with these output projections aggregated into major sectors: Manufacturing, mining, and so on, converted into the value of the gross product originating, or value added terms, rather than the value of total output to avoid double counting materials and intermediate services.

In general, these industry sector projections continue long-term past trends except for a halt in the downward slide in construction's share of total output. The distribution of sector output over time has shown agriculture, mining, and

construction declining steadily in relation to total output; transportation and public utilities, finance, insurance, and real estate gaining in relation to total output; and manufacturing, trade, and services staying roughly the same (chart 3).

Agriculture's share of total output will decline by 1980 to just below 3 percent in both the services and durables projections. It was 3.1 percent in 1968. (See tables 2 and 3.)

Although consumer food purchases through the 1970's are expected to increase—more people, more demand for food—their proportionate share of total personal consumption expenditures (PCE) is declining. As the housewife buys more canned, frozen, or precooked food, which has been processed in some other way, the value added to the product by the manufacturing industry expands while the farm share declines.

Manufacturing's share of total output will continue at roughly 28 percent in 1980; it was 28.5 percent in 1968. Dissimilar trends will prevail, however, for durable goods and nondurable goods. Over the long run, durables—consumer, producer, and military—have been increasing as a share of total demand; nondurables, mainly consumer purchases of food and clothing, have been declining. These trends are projected to extend to 1980 in both projections, but in the durable goods economy the upward trend for durables is, of course, accelerated.

Transportation, communications, and public utilities will show a small increase in their share of total output through the 1970's, in all projections, rising from 8.5 percent in 1968—to about 9.5 percent in 1980.

Finance, insurance, and real estate industries

Table 3. Gross product originating: ¹ average annual rate of change, 1968–80 (projected)

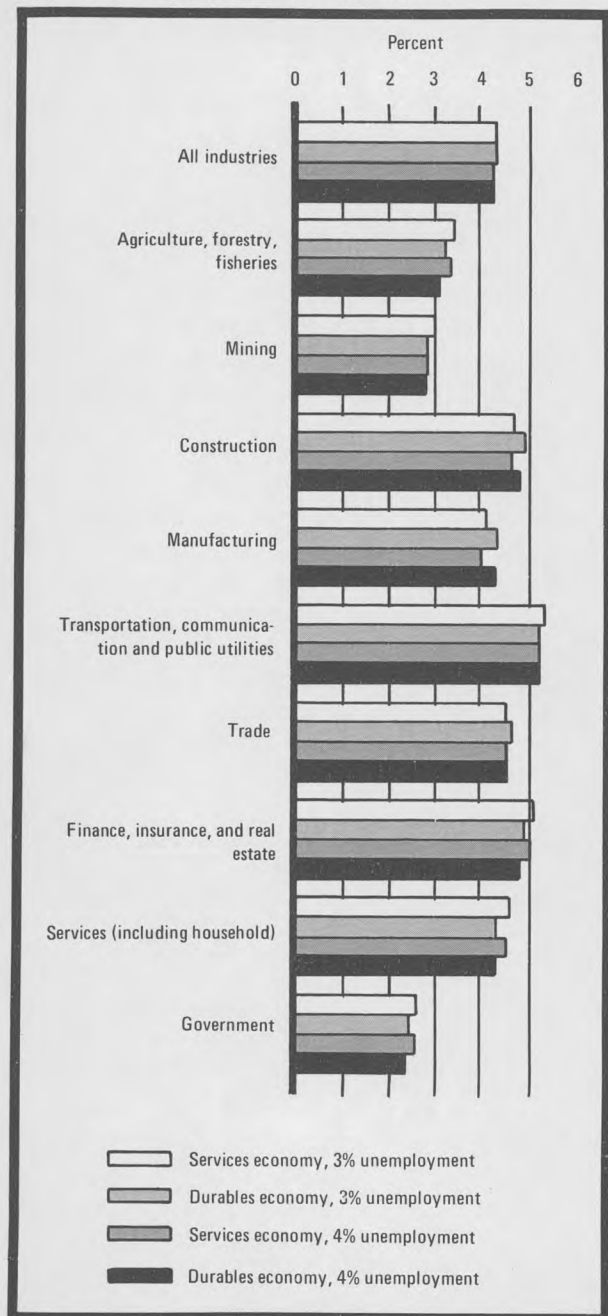
Major sector	1968–80 period			
	Services economy		Durables economy	
	3 percent unemployment	4 percent unemployment	3 percent unemployment	4 percent unemployment
Total.....	4.3	4.2	4.3	4.2
Agriculture, forestry, fisheries.....	3.4	3.3	3.2	3.1
Mining.....	3.0	2.9	2.9	2.8
Construction.....	4.7	4.6	4.9	4.8
Manufacturing.....	4.1	4.0	4.4	4.3
Transportation, communications, and public utilities.....	5.3	5.2	5.2	5.2
Wholesale and retail trade.....	4.5	4.5	4.6	4.5
Finance, insurance, and real estate.....	5.1	5.0	4.9	4.8
Services, including household services.....	4.6	4.5	4.3	4.3
Government, including government enterprises.....	2.6	2.5	2.4	2.3

¹ Gross product originating is the value added by each sector to the total product.

NOTE: Detail may not add to total.

will increase their share of total output in 1980 to close to 14.5 percent, up from 13.5 percent in 1968. This increase will reflect the surge in housing expenditures by consumers, which are reported as purchases from the real estate industry in the form of rent and rental value of owned homes.

Chart 3. Average annual rates of growth in value of output, 1968-80 (projected in 1968 dollars)



Service industries will expand slightly as a proportion of total output by 1980 to close to 11.5 percent. The anticipated increase in consumer expenditures for medical services will contribute to this increased share in the services economy.

Trade will increase a little by 1980, to 17 percent of total output in a service economy. It was 16.5 percent in 1968.

Construction's share of total output will rise slightly to about 5 percent by 1980, up from 4.6 percent in 1968. This modest increase brings to a halt a long run, severe downtrend. The increase in the total value of production, will reflect rising State and local government needs, increasing housing requirements, and expanding investment in plants.

Mining will continue a slow decline in its share of total demand through the 1970's to about 1.4 percent in the services projection. It was 1.6 percent in 1968.

The economy in 1980

PROJECTED EMPLOYMENT BY INDUSTRY AND OCCUPATION

PROJECTED CHANGE in output per man-hour in each industry is the final step in determining employment by industry. These projections are constructed on the basis of the estimated levels of industry output in 1980 and its past output and productivity behavior, taking account of the anticipated impact of technological innovations, as well as any structural change occurring within and between industries. Hence the kind and level of manpower requirements of the 1970's are intertwined with the nature of the industrial changes that seem likely to occur over the decade.

General trends and growth factors that are expected to affect industry employment in a services economy (with 3-percent unemployment) through the 1970's are described below for the major industry groups. (See table 4.)

Service-producing industries

The most dramatic change in industry employment in recent years has been the employment

Table 4. Changes in total and wage and salary employment by industry sector, 1965 and 1968 (actual) and 1980 (projected for services and durable goods economies)

[In thousands]

Industry sector	1965		1968		1980							
					Services economy				Durable economy			
					3-percent unemployment		4-percent unemployment		3-percent unemployment		4-percent unemployment	
	Total employment	Wage and salary employment	Total employment	Wage and salary employment	Total employment	Wage and salary employment	Total employment	Wage and salary employment	Total employment	Wage and salary employment	Total employment	Wage and salary employment
GOODS PRODUCING												
Manufacturing.....	18,454	18,062	20,125	19,768	22,358	21,935	22,133	21,712	23,240	22,817	23,005	22,584
Agriculture.....	4,671	4,521	4,154	4,012	3,188	3,030	3,156	3,000	3,192	3,034	3,160	3,004
Construction.....	3,994	3,186	4,050	3,267	5,482	4,600	5,427	4,553	5,595	4,713	5,539	4,665
Mining.....	667	632	646	610	590	550	584	544	588	548	582	542
SERVICE PRODUCING												
Services industries.....	13,722	11,501	15,113	12,826	21,080	18,660	20,867	18,474	20,585	18,165	20,376	17,983
Trade.....	15,352	12,716	16,604	14,081	20,487	17,625	20,282	17,450	20,501	17,639	20,296	17,464
Transportation, communications, and public utilities.....	4,250	4,036	4,524	4,313	4,976	4,740	4,926	4,692	4,961	4,725	4,911	4,677
Finance, insurance, and real estate.....	3,367	3,023	3,726	3,383	4,639	4,260	4,593	4,217	4,538	4,159	4,493	4,117
Government.....	10,091	10,091	11,846	11,846	16,800	16,800	16,632	16,632	16,200	16,200	16,038	16,038

shift towards service-producing industries. Shortly after the turn of this century, only 3 in every 10 workers were in service industries. By 1950, the weight had shifted to just over 5 in every 10 in service industries; by 1968 the proportion had inched to 6 in every 10. In 1980, close to 7 in every 10 workers—or 68 million—are projected to be in service industries. (See chart 4.)

TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES. Employment in this group of industries is expected to increase to close to 5 million in 1980, up from 4.5 million in 1968. Despite this small employment gain, its share of total employment will decline from 5.6 percent in 1968 to 5 percent.

Transportation employment has been dominated by the long, slow decline in railroad employment during the postwar period. Even though employment in trucking and air transportation has expanded, the decline in railroad employment has been severe enough to cause an overall decline in the average for all transportation industries. But a turn around is expected: trucking and air transportation will increase fast enough to offset whatever further small railroad declines occur; an overall slow gain in employment is projected.

Public utilities and communications are highly productive service industries. Hence, even though

the services provided by these industries are expected to expand significantly—output has the highest projected rate of increase through the 1970's among all nonfarm industries—employment will increase only moderately to 1980 and will decline as a proportion of total employment.

TRADE. The largest of the service industries, wholesale and retail trade, is interwoven throughout the economic system in a network of wholesale and retail establishments. Trade employment changes are expected to parallel those of the whole economy and with trade's relative share—one-fifth—of total employment remaining about the same in 1980. Employment, however, will rise from 16.6 million in 1968 to 20.5 million in 1980.

Retail trade employment will expand most rapidly in general merchandise stores and eating and drinking establishments. Technological developments such as vending machines, other self-service gadgets, and electronic computers for inventory control and billing will tend to retard employment growth.

Wholesale trade employment will increase more rapidly than that of retail trade. Employment in motor vehicles, automotive equipment, and machinery equipment and supply will be among the faster growing areas.

FINANCE, INSURANCE, AND REAL ESTATE. Employment in these industries is expected to increase at about the same rate as total employment each year through the 1970's and to account for only a slightly larger share—4.7 percent—of total employment in 1980 than in 1968. Employment, however, will rise from 3.7 million in 1968 to 4.6 million in 1980.

Banking employment is expected to grow at a slower pace than in the last decade as advancing automation eliminates many clerical functions. Electronic data processing equipment also is expected to slow employment growth in the security dealers and exchanges sector, a rapid growth area. Increase in the size of firms may also limit employment gains.

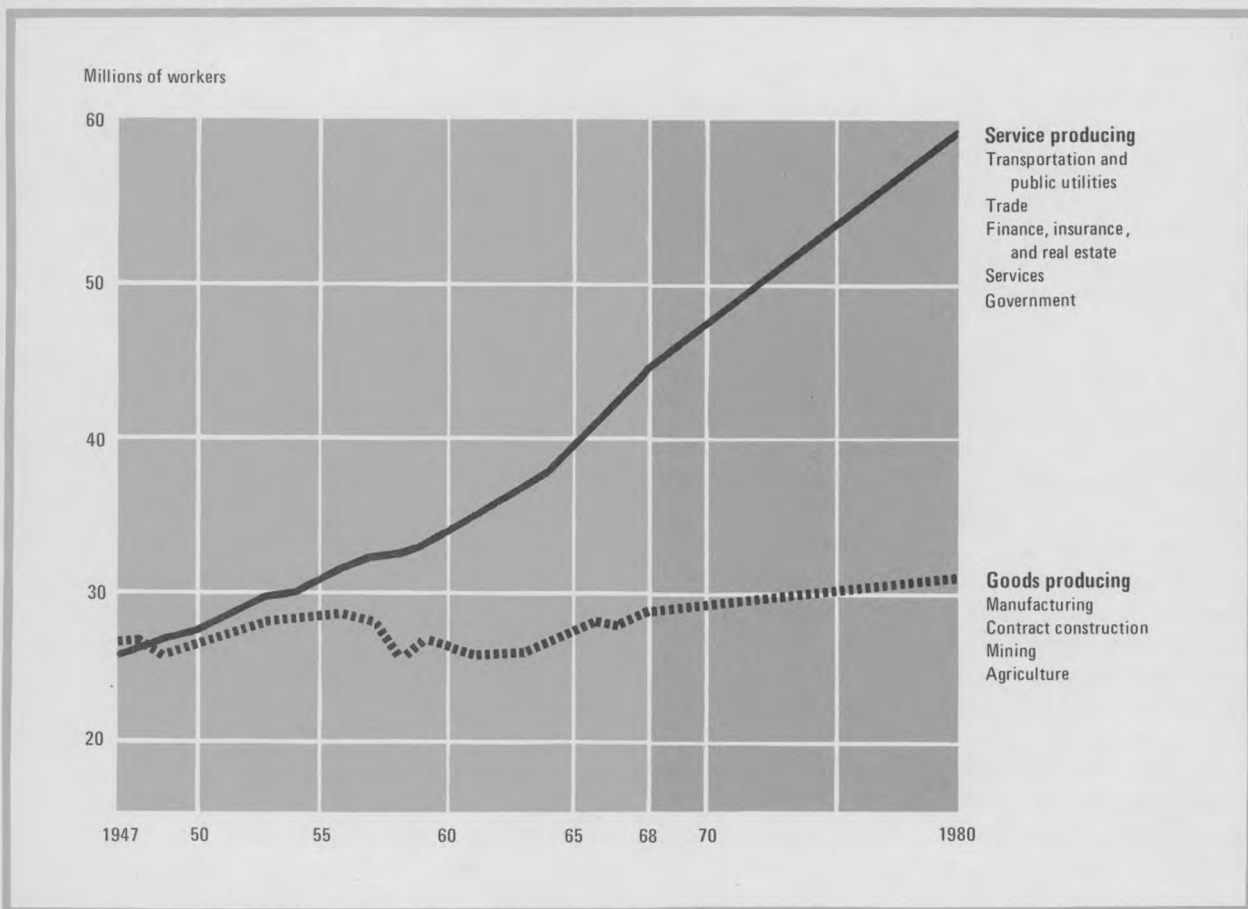
Although restrained somewhat by the com-

puterization of recordkeeping functions, insurance employment will continue to grow at about the same pace as during the 1960's because of the steadily rising population.

Real estate employment will grow at a slightly faster pace than in the past decade: it is little affected by technological advances but highly responsive to the rising number of family formations.

SERVICES. These industries, including private household employment, will increase their share of total employment by 1980, rising from 18.7 percent in 1968 to about 21 percent in 1980 and at a faster rate than total employment. Employment will rise to 21 million in 1980, up from 15

Chart 4. Employment¹ trends in goods-producing and services-producing industries, 1947-68 (actual) and 1968-80 (projected for a services economy with 3-percent unemployment)



¹ Wage and salary workers only, except in agriculture, which includes self-employed and unpaid family workers.

million in 1968.

Employment growth in this heterogeneous group of service industries, which include personal, business, health, and educational services, will be related to a substantial increase in population, a rapid rise in personal disposable income, expanding economic activity, and a growing demand for medical, educational, and other services. The output of these labor-intensive industries is less affected by technological change than many other industries, hence their employment growth is not restrained very much by productivity advances.

Within the services division, employment growth is expected in all major industries between 1968 and 1980, ranging from 14 percent for motion picture employment to almost 100 percent for miscellaneous business services. Growth in business services is expected to be particularly rapid as firms rely increasingly on advertising services to sell their products; on accounting, auditing, bookkeeping, and computing services to handle their recordkeeping; on contract firms to provide maintenance service; and on audit bureaus and collecting agencies to cope with mushrooming consumer credit.

GOVERNMENT. Employment has grown faster in government than in any other sector in the economy. From 1960–68 employment grew at the rate of 4.5 percent a year, nearly $2\frac{1}{2}$ times the rate for total employment. The sharp rise in recent years has been stimulated, however, by the needs of the Viet Nam war as well as by the rapid growth in population, the increasing proportion of young and old persons in the population who require more services, and the general growth in demand for more and better government services. Employment is projected to rise more slowly through the 1970's—at 2.9 percent a year—reaching 16.8 million in 1980, up from 11.8 million in 1968. Employment among Federal Government workers will rise only slightly, but State and local employment will continue to expand rapidly.

Although the rate of increase in State and local government employment will be higher compared with almost any other sector, the growth will be slower than during the 1960's, mainly because of an anticipated easing in the rate of growth for educational services, which account for roughly half of total employment in State and local governments.

Goods-producing industries

Despite a steadily rising total output of goods to unprecedented levels through the 1970's, the goods-producing industries encompass the only major industries in which employment is expected to decline—mining and agriculture—and one industry—manufacturing—for which employment growth is expected to be slower than during the 1960's. Only one goods producer, construction, is expected to show a quickened pace of employment growth through the 1970's. This modest employment expansion, overall, for goods-producing industries, in the face of an overall healthy increase in output, reflects, of course, their rising productivity.

Altogether, the goods-producing industries employed 29 million workers in 1968 and are expected to increase to 31.6 million by 1980. However, their share of total employment will drop to less than a third by 1980 from about 36 percent in 1968.

AGRICULTURE. Large increases in productivity, small gains in output, and a continuing concentration of employment on large farms will result in further decline, about 1 million, in agricultural employment between 1968–80. The agricultural share of total employment will also decline from 5.1 percent in 1968 to 3.2 percent in 1980.

MINING. Employment has been declining for many years because of above average gains in productivity and decreased demand, particularly for coal. Mining is projected to have the lowest rate of increase in output among all nonfarm industries. Continued employment declines are projected through the 1970's although at a reduced rate because of some resurgence in the demand for coal. Employment will be less than 600,000 by 1980.

Future employment growth will be limited by the increasing use of new and improved labor-saving devices and techniques, such as continuous mining machinery systems and more efficient exploration and recovery techniques in crude oil and natural gas extraction.

CONSTRUCTION. This industry may benefit from intensive application of existing technology that would increase the output per man-hour. Already, prefabricated panels and shells for houses show promise of more widespread use. At the same time

the national housing goal for the decade 1968-78 calls for the construction of 20 million new housing units in the private market and the production of 6 million new and rehabilitated units with public assistance in one form or another. This will spur growth in the construction industry, which is expected to grow at 2.5 percent a year in the 1970's, nearly twice its growth rate during the 1960's. Additional demand will come from an expansion in State and local government needs, particularly for highway construction and new and rehabilitated housing units, and from expanding investment in industrial plants. Employment will rise from 4 million in 1968 to nearly 5½ million by 1980.

MANUFACTURING. Still the biggest industry, manufacturing is expected to remain as the largest single source of jobs in the economy. Manpower requirements in manufacturing, however, are expected to increase at a slower pace, at 0.9 percent a year, than that experienced during the 1960's, chiefly because the recent increases in employment in industries heavily oriented toward defense—ordnance, communications equipment, electronic components, aircraft and parts, and shipbuilding—are not expected to continue at the same pace in the 1970's. Employment, however, will rise from 20 million in 1968 to 22.4 million in 1980.

In general, manpower requirements will continue to increase faster in durable goods manufacturing than in nondurable goods industries. Growth in the durable goods sector will be accelerated by the significantly increased demand for building materials for housing construction. As in the past, changes in employment in individual manufacturing industries are expected to vary widely, depending on the impact of technology as well as shifts in demand. The increasing application of technological innovations to manufacturing processes is expected to continue to reduce unit labor requirements in manufacturing. Major technological developments that will continue to limit growth in manufacturing employment include numerical control of machine tools, new metal processing methods, machinery improvements, improved materials handling (including layout), new and improved raw materials and products, instrumentation and automatic controls, and electronic computers.

How the employment projections differ

Employment projections for a durable goods economy, even though weighted more heavily toward the production of goods, still produce an economy weighted more toward the service sector than the present one. The rate at which employment shifts away from the goods-producing part of the economy, however, is slower in the durable goods projection than in the services projection.

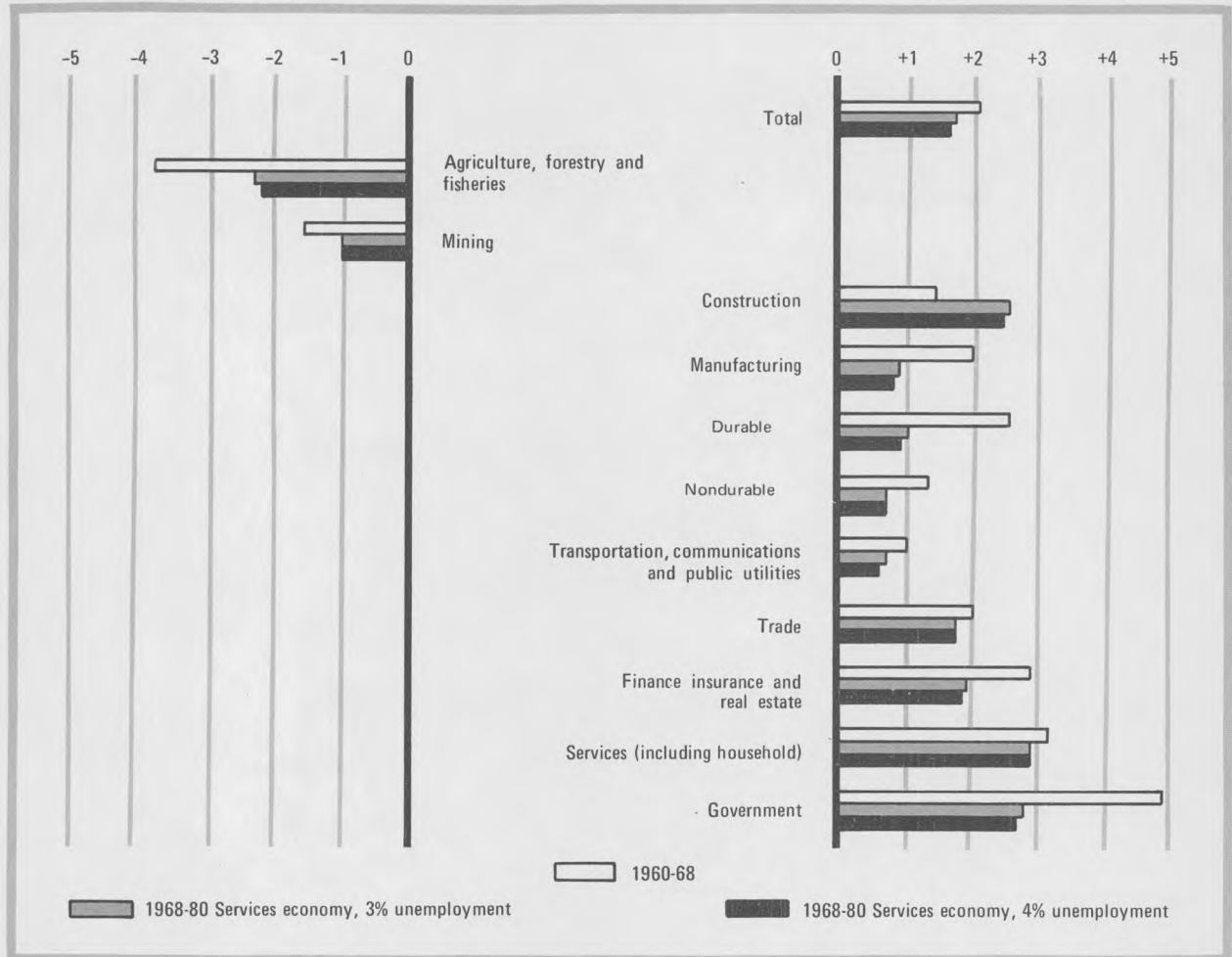
Durable goods manufacturing accounts for about 1 percent more of total employment under the assumptions upon which the durable goods economy projections in 1980 are based than under the assumptions used for the services economy projections. Employment in the nondurable goods industries, however, is only modestly changed between the two structures of the economy. Transportation and trade are both roughly the same; manufacturing is slightly higher; services and government, slightly lower. In both types of economy, manufacturing shows a declining proportion of total employment while services and government show increasing proportions of total employment. (See charts 5 and 6.)

Occupational employment

Industry changes during the 1970's will have a strong influence on occupations—which ones will grow and which will contract. Each industry in the economy requires a specific mix of occupations. As industries react to changes in final demand and in relation to each other, the relative importance of particular occupations also changes.

Beyond the effect of interindustry relationships, industry occupational structures are also affected by internal changes within industries. Just as technological advances that increase worker productivity have significantly affected employment and output, these advances significantly affected the occupational structure of the work force. As a result of technological innovations, new occupations have emerged; others have expanded, contracted, or even disappeared; and the content and skill requirements of a great many occupations have been altered. But technology and final demand are not the only factors affecting occupational shifts. Changes can occur as a result of revised work rules, new directions in governmental policy, and severe shortages that force substitutions in the kinds of workers hired (table 5).

Chart 5. Total employment: average annual rate of change, by major sector, 1960-68 (actual) and 1968-80 (projected for a services economy)



Several long-term occupational trends are expected to continue:

White-collar occupations, the fastest growing occupational group over the past 50 years, will continue in that mode. This group, which surpassed employment in blue-collar occupations for the first time in 1956, will account for about half of all employed workers (50.8 percent) by 1980. Employment in these occupations will rise from 35.6 million in 1968 to 48.3 million in 1980.

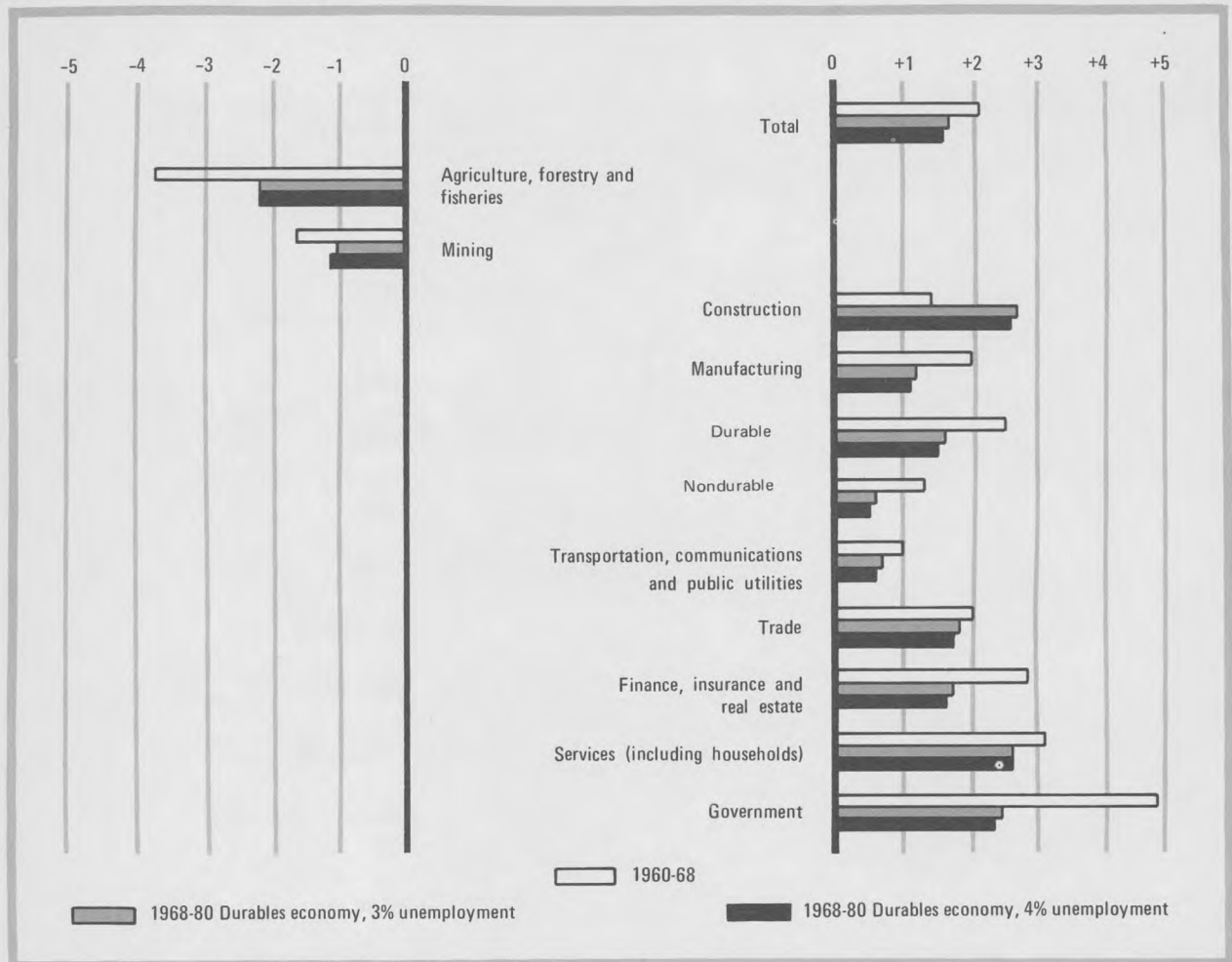
Blue-collar occupations, a slow growing occupational group, will account for almost one-third (32.7 percent) of the work force by 1980, down from 36.3 percent in 1968. Employment, however, will rise from 27½ million in 1968 to 31.1 million

in 1980. Many occupations within the group, particularly in the skilled craft and foremen category, require years of specialized training.

Farm workers will continue to decline—from 4.6 percent of the work force in 1968 to 2.7 percent in 1980—as machines take over many more of the production processes on the farm. Employment will also shrink from 3½ million in 1968 to 2.6 million in 1980.

Service occupations will continue to expand through the 1970's increasing by two-fifths, which is more than one and a half times the expansion for all occupations combined. Employment will rise to 13.1 million in 1980, up from 9.4 million in 1968. (See chart 7.)

Chart 6. Total employment: average annual rate of change, by major sector, 1960-68 (actual) and 1968-80 (projected for a durables economy)



Net occupational openings

Projections of occupational requirements, which encompass the total employed civilian work force, indicate that the total openings arising from occupational growth and replacement needs will be about 48 million between 1968-80, or about 4 million jobs to be filled every year throughout the period. Although the inflow to the labor force through the 1970's matches the overall number of net job openings³—transfers between occupations cancel out—this balance in no way suggests a perfect fit between entry requirements and worker qualifications. Such a match depends on the future education and training of young people, the degree of flexibility workers show in adapting to changing requirements and employers utilize

in adapting hiring standards to the available labor force. Average annual openings by detailed occupation may identify those areas where opportunities are numerous and help young people make their career plans based on the best available information. (See chart 8.)

Replacement needs—about 28 million in the 1970's—will be the most significant source of job openings in each of the major occupational areas—white-collar, blue-collar, service, and farm. The need to replace workers who leave the labor force—primarily due to death and/or retirement—will account for 3 in every 5 job openings during the period from 1968-80; occupational growth will account for 2 in every 5 openings.

Replacement needs are likely to exceed the overall in those occupations that (a) employ

Table 5. Average annual rate of employment change, by major occupational group, 1960-68 (actual) and 1968-80 (Projected for a services economy with 3-percent unemployment)

Occupational group	1960-68	1968-80
Total.....	1.8	1.9
White-collar workers.....	2.8	2.6
Professional, technical, and kindred.....	4.1	3.4
Managers, officials, and proprietors.....	1.2	1.7
Clerical.....	3.5	2.5
Sales.....	1.2	2.2
Blue-collar workers.....	1.7	1.0
Craftsmen and foremen.....	2.0	1.7
Operatives.....	2.0	0.8
Nonfarm laborers.....		-0.1
Service workers.....	2.0	2.8
Farm workers.....	-5.1	-3.4

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.

Growth needs—about 20 million—reflect industry changes as well as technological changes during the 1970's that, in turn, will determine, in large measure, which occupations will grow, which will contract.

Changes in occupational groups

Employment requirements to 1980 have been projected for the 9 major occupational groups and for about 250 detailed occupations (chart 9).

PROFESSIONAL, TECHNICAL, AND KINDRED. Employment growth in these occupations has outdistanced that in all other major occupational groups in recent decades. From less than a million in 1890, the number of these workers has grown to 10.3 million in 1968. And requirements for these occupations will continue to lead other categories between 1968 and 1980, increasing half again in size, which is twice the employment increase among all occupations combined. At 15½ million in 1980, employment in this occupational group will represent 16.3 percent of total employment, up from 13.6 percent in 1968.

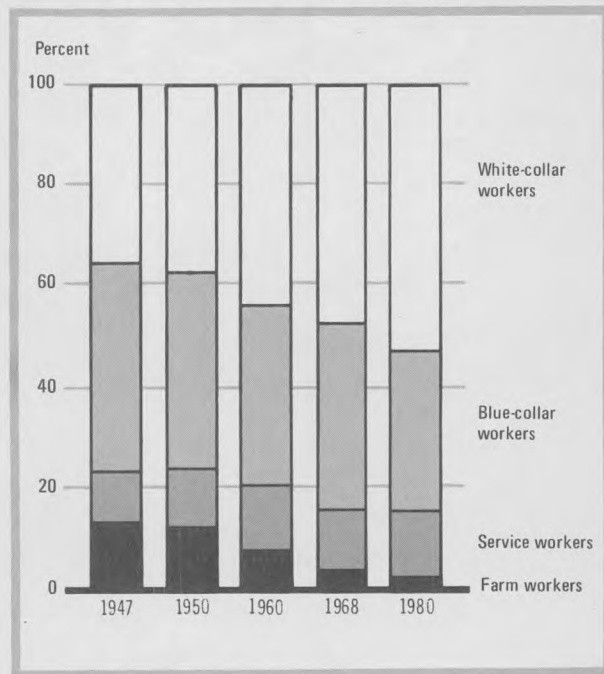
The long term rise in demand for goods and services, resulting from population growth and rising business and personal incomes, will account for much of the need for these highly trained workers (as well as for the increases among other groups of workers). The increasing concentration of the population in metropolitan areas also will

create new demands for professional and technical personnel to work on environmental protection, urban renewal, and mass transportation systems. In addition, efforts to develop further the Nation's resources and industry and the quest for scientific and technical knowledge will generate new requirements for professional workers.

MANAGERS, OFFICIALS, AND PROPRIETORS. Employment in this occupational group, rising more slowly than total employment, will reach 9½ million in 1980, up from 7.8 million in 1968. Its share of total employment will continue at about 10 percent.

Changes in the scale and type of business organization have had divergent effects upon the various segments of this occupational group. In retailing, for example, the establishment of chain stores such as supermarkets and discount houses has eliminated many small businesses, thus reducing the number of self-employed proprietors. In contrast, the number of salaried managers and officials has increased significantly. The net result of these opposing trends will probably be a slower increase in employment in the manager-proprietor

Chart 7. Employment trends among major occupational categories,¹ 1947-68 (actual) and 1980 (projected for a services economy with 3-percent unemployment)



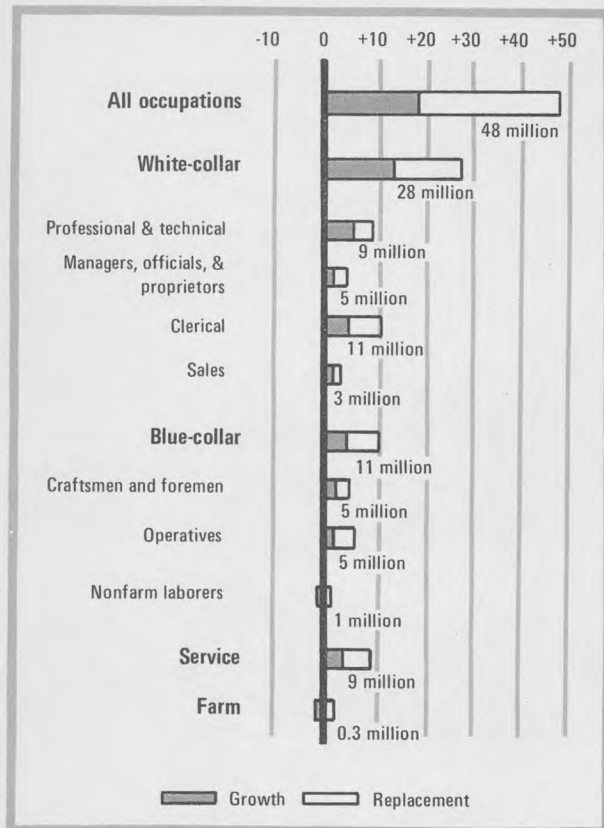
¹ Farm workers include farm managers.

group as a whole than in any other major group of white-collar workers.

Demand for salaried managers and officials is expected to grow rapidly with the increasing dependence of both business and government on trained management specialists. Technological development will contribute further to employment growth of these occupations. For example, an increasing number of technical managers is needed to plan research and development programs and to make decisions on the installation and use of automated machinery and automatic data processing systems.

Proprietors are expected to continue to decline as the trend toward larger firms restricts growth of the total number of firms, and as small grocery and general stores and hand laundries continue to disappear. The expansion of quick service grocery stores, self-service laundries and drycleaning shops, and hamburger and frozen custard drive-ins, however, will slow the rate of decline.

Chart 8. Net job openings in major occupational categories and groups, 1968-80 (projected for a services economy with 3-percent unemployment)



CLERICAL. Employment in clerical jobs is expected to grow considerably faster than total employment rising to 17.3 million in 1980, up from 12.8 million in 1968. This rate of growth, although rapid, is considerably slower than that experienced from 1960-68.

Clerical workers, the largest single category in white-collar employment, will be affected by the rapid technological developments in the fields of computers, office equipment, and communication devices in the 1970's. For some, the effect of these technological improvements will in time retard the growth of employment; for others, the demand for processing the increased information becoming available through these improvements will accentuate growth in their ranks.

Technological developments will limit employment growth for certain types of clerical workers. To illustrate, the use of electronic computers and bookkeeping machines to process routine and repetitive work is expected to reduce the number of clerks in jobs such as filing, payroll, inventory control, and customer billing. On the other hand, laborsaving innovations will be offset to some extent by growing requirements for clerical personnel to prepare computer inputs.

The rapid growth of industries that employ large clerical staffs, particularly those such as finance, insurance, and real estate, is a major factor in the projected level of clerical demand. Clerical employment will increase its share of total employment from 16.9 percent in 1968 to 18.2 percent in 1980.

SALES. The anticipated expansion of trade should increase the demand for sales personnel—particularly for part-time employees—but changing techniques in merchandising may hold down some of the increase. Employment is expected to rise from 4.6 million in 1968 to 6 million in 1980 and at a slightly faster rate of increase than is expected in total employment. Sales share of total employment will continue a little over 6 percent through the 1970's.

CRAFTSMEN, FOREMEN, AND KINDRED WORKERS. Employment in this highly skilled group of occupations is expected to expand more slowly than total employment, rising from 10 million in 1968 to 12.2 million in 1980. The craft share of total

employment will slide downward a little to 12.8 percent by 1980.

Different industries employ different proportions of craftsmen. Manufacturing employs a greater number than any other industry. In construction, however, these skilled workers are a much higher proportion of employees than in any other industry group—1 out of every 2, compared with 1 in 5 in manufacturing and transportation and fewer than 1 in 10 in other industries.

SEMISKILLED WORKERS. These occupations employ more workers than any other group. Employment in these occupations increased sharply as industry, aided by technological innovations, shifted to mass production processes. But now that these processes are well established, further and more sophisticated technological advances are apt to slow employment growth in these occupations in the years ahead. Employment is projected to rise from 14 million in 1968 to 15.4 million in 1980, at a rate of increase that will be about half the increase projected for total employment; the semiskilled share of total employment will slide downward from 18.4 percent in 1968 to 16.2 percent in 1980.

Three of every 5 semiskilled workers in 1968 were employed as factory operatives in manufacturing industries. Large numbers were assemblers or inspectors, and many worked as operators of material moving equipment such as powered forklift trucks. Among the nonfactory operatives, drivers of trucks, buses, and taxicabs by far made up the largest group.

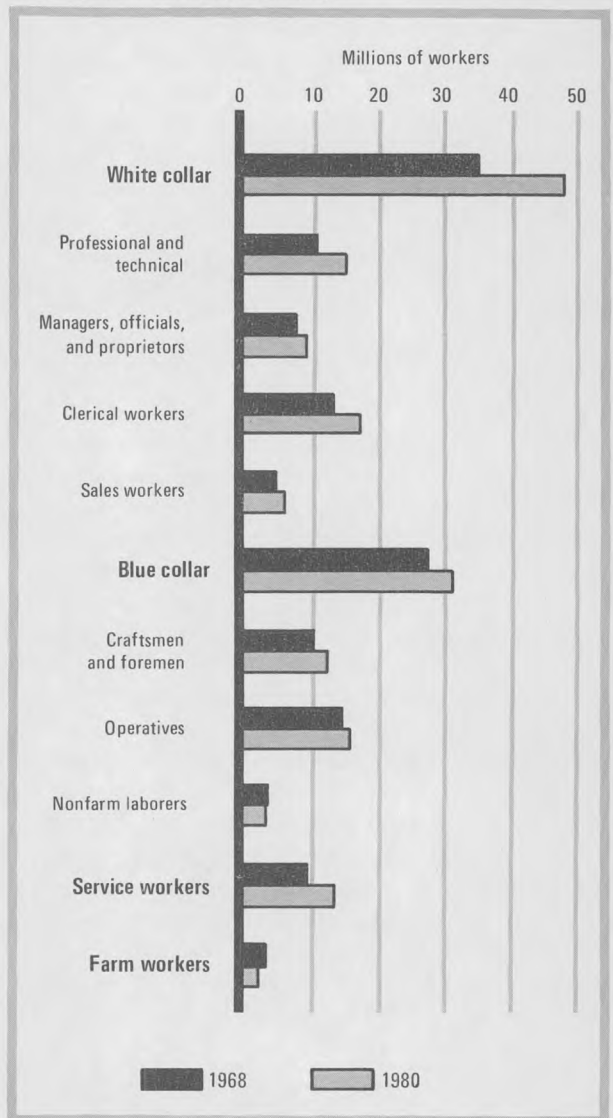
Employment trends among the individual semiskilled occupations since World War II have reflected different rates of growth in the industries in which the workers were employed as well as the differing impacts of technological innovations on occupations. For example, the rapid decline in employment of spinners and weavers reflected not only the relatively small increase in the demand for textile mill products but also the increased mechanization of spinning and weaving processes. Increases in production and growing motor truck transportation of freight will be major factors in expanding demands for operatives in the 1968-80 period.

NONFARM LABORERS. Employment requirements for these laborers are expected to continue at 3½ million despite the rapid employment rise antici-

pated in manufacturing and construction, the primary employers of laborers. The nonfarm labor share of total employment, however, will decline from 4.7 percent to 3.7 percent between 1968 and 1980.

Increases in demand are expected to be offset roughly by rising output per worker resulting from the continuing substitution of mechanical equipment for manual labor. For example, power-driven equipment such as forklift trucks, derricks, cranes, hoists, and conveyor belts will take over

Chart 9. Employment in major occupational groups, 1968 (actual) and 1980 (projected for a services economy with 3-percent unemployment)



more and more 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 of processing and handling of materials equipment will be installed in an increasing number of plants.

SERVICE WORKERS. Major factors underlying increased needs for service workers will be a growing population, expanding business activity, increasing leisure time, and higher levels of disposable personal income. This occupational group, a fast growing one, encompasses a wide variety of jobs and a wide range of skill requirements. It includes such diverse jobs as FBI agents, policemen, beauty operators, and janitors.

Employment requirements will rise from 9.4 million in 1968 to 13.1 million in 1980, at a rate of increase that is more than half again as fast as the rate projected for total employment. Private household employment, the slowest growing service area, will expand from 1.7 million to 2.0 million, an increase of about 15 percent between 1968 and 1980. The fastest growing service area will be health service, rising close to 90 percent, from 800,000 to 1.5 million between 1968 and 1980.

FARM WORKERS. These workers will decline one-third, from 3½ million in 1968 to 2.6 million in 1980. The share of total employment also will fall, from 4.6 percent to 2.7 percent in the same period.

Continuing earlier trends, decreasing requirements for farm workers will be related to rising productivity on the farms. Improvements in farm technology, better fertilizers, seeds, and feed will permit farmers to increase production with fewer employees. Improved mechanical harvesters for vegetables and fruits will decrease the need for seasonal or other hired labor. Innovations in live stock and poultry feeding and improved milking systems will allow more efficient handling of a greater volume of productivity. The expected development of automatic packing, inspection, and sorting systems for fruits, vegetables, and other farm products also will reduce employment requirements for farm workers. The continued trend toward larger and more efficient farms will also limit employment.

Farms and farm managers are expected to continue to be most affected by the decline in the

number of small farms, and requirements for these workers are expected to continue to decline faster than that for farm laborers and foremen.

Employment in a durables economy

Under the assumptions embodied in the durables economy, those occupations that predominate in durable goods industries would show different employment levels. Requirements for engineers, for example, would be 1 percent higher in a durables economy; tool and die makers, carpenters, and cement finishers would each be about 2½ percent higher; manufacturing salesmen would be nearly 3½ percent higher. On the other hand, occupations that predominate in services industries, such as government; finance, insurance, and real estate; and trade would show somewhat lower employment levels, securities and insurance salesmen, about 2½ percent less; and waitresses, about 2 percent less.

The economy in 1980

PROJECTED SHAPE OF THE LABOR FORCE

THE LABOR FORCE is affected by changing labor force participation rates by age groups. Past trends provide clues for predicting how these rates may change. Some past trends suggest that the increase in college enrollments will tend to reduce the labor force activity of the college-age groups as a whole even though many students

Table 6. Labor force balance sheet, 1960-70, 1970-80

	Number in millions
1960 DECADE (1960-70)	
Total labor force, 16 years and over, 1960	72.1
Less withdrawals, 1960 through 1969	20.9
1960 total labor force still in labor force in 1970	51.2
Plus new entrants, 1960 through 1969	26.4
Plus all other entrants, 1960 through 1969 ¹	8.0
Total labor force, 16 years and over, 1970 ²	85.6
1970 DECADE (1970-80)	
Total labor force, 16 years and over, 1970 ²	85.6
Less withdrawals, 1970 through 1979	26.3
1970 total labor force still in labor force in 1980	59.3
Plus new entrants, 1970 through 1979	33.7
Plus all other entrants, 1970 through 1979 ¹	7.7
Total labor force, 16 years and over, 1980	100.7

¹ Primarily reentrants plus immigrants.

² Estimated

continue to work part time. As has been the case in recent years, an expanding economy is likely to provide an abundance of jobs that will tend to encourage students, other young people, and women to move into the labor force, often for part-time jobs, in larger numbers than during the 1960's. Birth rates, which have been declining, are likely to continue to do so with the result that more women will enter the labor force. Finally, the level and coverage of retirement benefits will allow more workers to leave the labor force at earlier ages.

Labor force changes

The labor force is constantly changing. Workers enter and leave all the time. The expansion to 100 million by 1980 means that more workers will be coming into the labor force pool (41 million) than will be leaving (26 million). (See chart 10.)

Three kinds of workers will increase the supply of labor by 41 million through the 1970's:

- ▶ 34 million new, young workers looking for their first jobs,

- ▶ nearly 6 million women who either delayed their entry into the labor force or picked up the threads of work again after an absence, most frequently devoted to caring for young children,

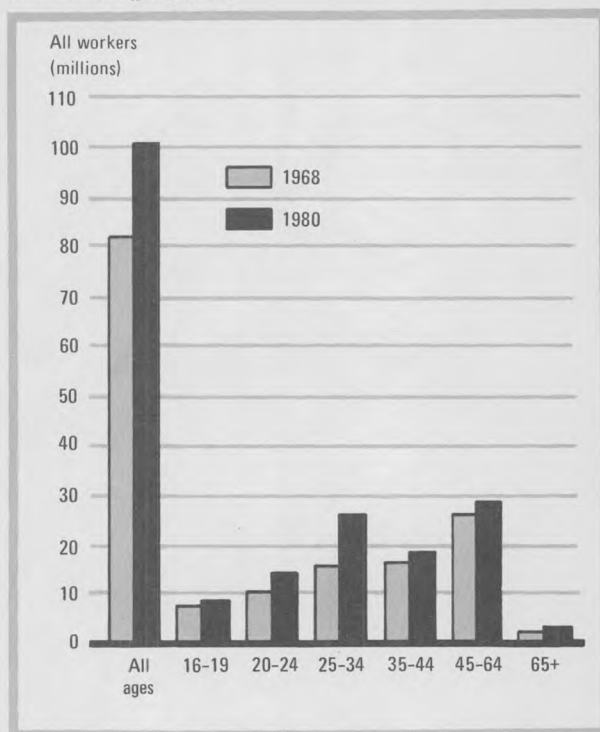
- ▶ over 1 million immigrants who will become part of the U.S. work force.

Three kinds of workers will leave the labor force during the 1970's reducing the total by 26 million: workers who die; workers who retire; and workers who decide not to work any longer, although sometimes only temporarily, for a variety of personal reasons including illness and the need to care for family or because of other responsibilities. (See table 6.)

The net effect of this inflow and outflow on the age composition of the labor force through the 1970's (1968-80) will be as follows:

The huge increase of teenagers in the 1960's will taper off. The proportion of the labor force that is composed of teenagers will actually decline a little—from 8.7 percent to 8.3 percent—as the 1970's advance to 1980, but even so their numbers will continue to rise. In 1960, teenagers in the labor force numbered about 5.2 million. Their average rate of increase through the 1960's (1960-68) was about 3.9 percent per year, resulting in 7.1 million being in the labor force by 1968;

Chart 10. The shape of the labor force, 1968 (actual) and 1980 (projected)



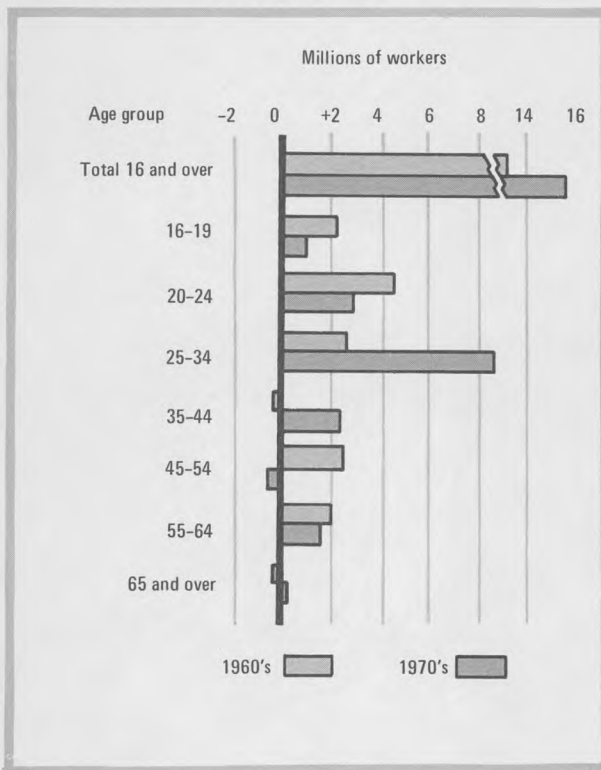
by 1980, there will be 8.3 million. Their annual average rate of increase through the 1970's (1968-80) will drop to 1.3 percent, about one-third of the growth rate of the preceding decade.

The rate of increase of 20- to 24-year-olds in the labor force will slow down. Young people, 20 to 24 years old, in the labor force will be increasing in numbers during the 1970's but at a slower rate than during the preceding decade. In contrast with the teenagers, the proportion these young adults constitute of the total labor force will continue to rise from 13.4 percent (11 million) in 1968, to 14.7 percent (almost 15 million) by 1980—a reflection primarily of the increase in population.

Altogether, young people under the age of 25 will account for a little more than a quarter of total labor force expansion of the 1970's, in contrast with over half (54 percent) of labor force growth from 1960 to 1968.

The number of early career workers, 25 to 34 years old, will increase precipitously. The big labor force news of the 1970's will be the significant increase in the numbers of workers in their late twenties

Chart 11. Major changes in the labor force, 1960's (estimated) and 1970's (projected)



and early thirties—the career development years, from 16½ million in 1968 to over 26 million in 1980, an increase of almost 60 percent. One out of every 4 workers will be in this age group in 1980 in comparison with 1 in every 5 in 1968. For the most part, these workers will have completed their education and training and will be ready to assume full harness in the world of work. The catalyst for the big expansion in young workers is the great upsurge in the fertility rate that occurred following World War II. The annual number of births increased from 2.7 million to 3.8 million between 1946 and 1947 and then moved up to 4.2 million by the late 1950's. Their schooling for the most part completed, these young people born in the early postwar years will provide a large pool of trained, young workers, unprecedented in numbers.

The increasing number of 25- to 34-year-olds in the labor force in the 1970's does not necessarily mean that 800,000 new jobs must be found every year for those moving into this age bracket.

A great many of these young workers came into the labor force during the 1960's and found jobs then. During the 1970's, they simply will be moving up the age ladder of the labor force. As they acquire additional training, experience, and maturity in the process of working their way up, they may be able to compensate for the short supply of older workers in the prime career age group where recent labor force expansion has been either slim or nonexistent.

The number of midcareer workers, aged 35 to 44, will show a small increase. Despite growth from 17 million to about 19 million from 1968 to 1980, the supply of these workers in the labor force still will be relatively thin. Their proportion of the total labor force will decline from about 21 percent in 1968 to about 19 percent by 1980. Generally, workers in this age group staff positions of maximum work responsibility and are at the peak of their performance. Their short supply will mean many more midcareer openings will be available for the younger 25- to 34-year-old workers.

A sharp slowdown will occur in the labor force growth rate among older workers, 45 to 64 years of age. These workers, who are normally at the top of their career ladders, will increase in number from 27½ million in 1968 to just over 29 million in 1980. But the increase will be only one-third as great as that between 1960 and 1968. Their proportion of the total labor force will decline sharply from about 33 percent to about 29 percent. This slowdown in the growth rate is related to a sizable decline in population growth in the 45-54 year old group, reflecting the comparatively small number of people born in the depths of the Great Depression when birth rates were low, who are moving into this age class.

There will be no significant change for workers beyond the usual retirement age of 65 who will number just over 3 million through the 1970's. They will represent a declining proportion of the work force. The decreased propensity to work after 65 reflects the improvement in retirement benefits that reduces the need for older workers to stay on the job to make ends meet; the greater security that comes with the health protection of medicare and medicaid; and the increased assets that may have resulted from full employment. (See chart 11.)

Participation rates

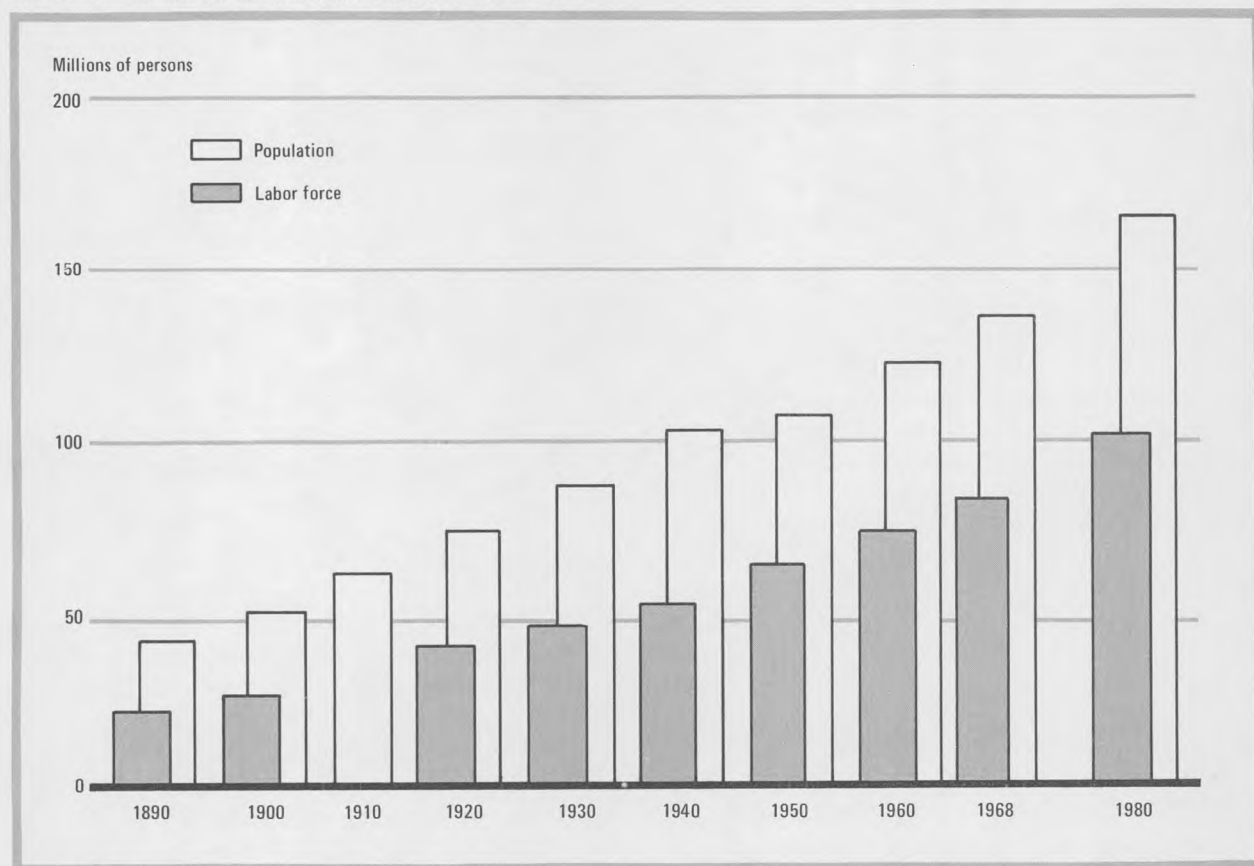
What makes people decide to work? Whatever the incentive for working, 6 in every 10 in the working age group (16 and over) are expected to be either working or seeking work in 1980, about the same as today; in 1890 only 5 in every 10 in the work-age population were workers. The long-run increase in labor force participation reflects primarily the increasing proportion of women who work. (See chart 12.)

WOMEN IN THE LABOR FORCE. Women workers—37 million expected in 1980—will continue to represent an increasing proportion of the working population. By 1980, more than 4 in every 10 women (43 percent) will be working, only slightly more than the proportion today (41.1 percent) but double the proportion (2 in 10) in 1890.

NEGROES IN THE LABOR FORCE. The Negro labor force⁴ is expected to total 12 million in 1980, 3 million more than in 1968. Its annual rate of growth, 2.4 percent, exceeds the comparable growth rate for whites, 1.6 percent, by one half. The difference reflects a more rapid increase in the Negro population of working age than that occurring among whites, particularly among those under 35 years of age.

The pattern of change between 1968 and 1980 for the Negro work force differs only in degree from that of their white counterparts. Workers under 25 years old will account for a large share of the increase for both Negroes and whites but will account for more of the increase among Negroes. For both groups, the most spectacular increase will take place in the group 25–34 years old, but again, a slightly greater relative increase for Negroes. The labor force 35 years old and over

Chart 12. Labor force and population,¹ 1890 to 1980



¹ Data for 1890–1980 refer to persons 14 years and over. Data for 1968 and 1980 refer to persons 16 years and over. Comparable labor force data not available for 1910.

Sources: U.S. Department of Commerce, Bureau of the Census; U.S. Department of Labor, Bureau of Labor Statistics; John D. Durand, *The Labor Force of the United States, 1890–1960* (New York, N.Y., Gordon & Breach, 1968); Gertrude Bancroft, *The American Labor Force* (New York, N.Y., John Wiley & Sons, 1958).

will show only a small amount of growth for both Negroes and whites.

The proportion of women who are in the labor force has always been higher for Negro than for white women, an indication of the greater need for many Negro women to contribute to family income. The difference between these labor force participation rates has been getting smaller as paid work outside the home has become more common among white women. In 1968, 49 percent of Negro and 40 percent of white women were workers. By 1980, it is expected that the difference will be reduced further, reflecting an improvement in the economic situation of Negro men, which, in turn, will mean that Negro women will be under less pressure to contribute toward the support of their families. Thus, the rate of participation for all Negro women in 1980 was projected as 47 percent and for white women at 42 percent.

Among Negro men, small increases are projected in the labor force participation rates from 75.9 percent in 1968 to 77.5 percent in 1980, at the same time that the rate for white males is edging down. These increases reflect the anticipated improvement in Negro men's employment opportunities, which will tend to minimize irregular work patterns and reduce withdrawals from the labor force that reflect discouragement over job prospects.

Educational attainment

The Nation's labor force will have higher educational qualifications in 1980 than in 1968: the proportion of workers with at least 4 years of high school will be rising among workers at all ages. By 1980, only 1 in 16 adult workers (25 and over)—about 5 million—will have less than 8 years of schooling; and 7 in every 10 adult workers—about 52 million—will have completed at least 4 years of high school. In contrast, over 1 in 10 adult workers in 1968—nearly 7 million—had completed less than 8 years of schooling while 6 in every 10 adult workers—about 37 million—had completed 4 years of high school or more.

Nearly 1 in 6 workers, 25 years and over—about 13 million—will have completed at least 4 years of college in 1980; in 1968, about 8.5 million, or 1 in 7 workers, 25 years and over, had a similar amount of education. The total number of college-educated workers of all ages in the work force

would, of course, exceed 13 million, since a significant number of workers under 25—perhaps as many as 2 to 3 million—will have completed 4 years of college in 1980. Moreover, about 9.2 million adult workers—1 in 8—in 1980 will have had some college training but less than 4 years.

The heavy influx to the labor force of relatively well-educated younger workers, which will occur at the same time that many less educated older workers are leaving the labor force, promises a major change in the educational background of the workers in the early age span. By 1980, about 4 out of 5 young adult workers (25 to 34 years old) will be high school graduates or better, and 1 in 5 will have completed 4 years of college or more; by contrast, in the 1968 work force, 3 in 4 workers in this age group were high school graduates and 1 in 6 were college graduates.

The economy in 1980

SOME IMPLICATIONS OF THE PROJECTIONS

ANY SET of economic projections carries with it certain implications for the future behavior of all aspects of the economy, including government policy. Three major aspects of the projections warrant further consideration:

1. growth of the economy;
2. demographic changes in the labor force; and
3. higher educational attainment of the labor force.

Growth of the economy

When the depression years of the 1930's were still within recent memory, optimistic economic projections inevitably raised a question about the ability of the economy to reach the projected levels. The sustained high levels of growth during the 1960's, however, have created confidence that the expected levels indicated for the 1970's may be quite reasonable. The projected GNP level for 1980 will be 65 percent above the level in 1968, a growth rate of 4.3 percent per year. Because of the anticipated higher rate of labor force increase,

this is somewhat higher than the potential growth rate of the 1960's. However, the 4.3 percent rate is somewhat lower than the rate actually achieved during the 1960's because advances in the early part of the decade resulted from taking up the slack in the economy.

The projections for certain sectors of the economy raise specific questions:

Expenditures for new or renovated housing, reflecting the needs of new family formation, are expected to about double by 1980. This may make possible attainment of the goal of 26 million housing units for the 1968-78 decade set by Congress in the Housing and Urban Development Act of 1968. However, if this goal is to be fulfilled, major advances will be necessary to assure an adequate supply of trained construction workers, to create sufficient sources of reasonably priced financing, and to put into practice the technological improvements necessary to higher output.

Strong demand for new and renovated housing is evident enough, even today, but the current limited availability of mortgage funds together with a high level of interest rates has caused buyers and builders to hesitate to take on long term commitments. If these conditions continue, the expected surge in residential construction activity may be seriously delayed.

In the decade ahead, special emphasis will undoubtedly be placed on developing new methods of training construction workers, expanding opportunities for minority applicants, and reducing seasonality to make more effective use of skilled craftsmen; and to institute new technology that will permit houses to be built faster and cheaper with the manpower available.

Business investment in plant and equipment is projected to at least maintain the high proportion of GNP attained during the last few years of relatively full employment, thus providing a basis for the continuation of the long-term trend in productivity.

Federal Government expenditures for defense purposes will fall as a proportion of total GNP. *Other public expenditures*—State and local and Federal nondefense—will rise as a share of the GNP. This implies a possible temporary dislocation of people and jobs in defense industries, particularly if the decline in defense expenditures occurs over a short period of time. Some defense industries may suffer

loss of their Federal contracts with a companion decline in output; some defense plants will either shut down or curtail their activities; and some regions and localities may experience, at least temporarily, increasing levels of unemployment.

Government programs to meet such dislocation include placement services to workers seeking jobs outside their labor market area and special assistance to enable defense plants hit by cutbacks to diversify production and seek other markets to maintain production levels.

State and local government expenditures between 1968-80 will shift from being less than half to more than half of total government expenditures. This shift will occur because of a large increase in State and local expenditures and a relative decline in Federal purchases.

While the 1980 projections do not include revenue estimates, it is clear that a major effort will be necessary to obtain the funds to finance this increase in State and local expenditures. Part of this expenditure increase will represent funds channeled from the Federal Government in the form of grants-in-aid and sharing of Federal revenues. At the same time a considerable effort by State and local governments will be necessary to increase their own revenues. A further difficult task will be to develop the programs and the management skills in State and local government to meet the complex problems that they will be facing.

Expenditures for services by both consumers and governments will account for a larger share of the GNP in 1980 than today. It is likely that the trend toward higher manpower requirements to provide these services may contribute to the goal of economic stability since service employment is normally less subject to layoffs at the onset of declines in economic activity.

Productivity, holding steady at 3.0 percent a year in the private nonfarm sector and remaining at high levels on the farm (5.7 percent a year), will yield an advance in output per man-hour of 3 percent a year for the entire economy through the 1970's. However, as the service sector expands in importance, it may become increasingly difficult to maintain the high level of productivity gains for the economy that have prevailed since World War II. The service industries are unlikely to experience large increases in output per worker, because they are less subject to mechanization,

and many of them depend for their value upon personal or individual attention. Thus, particular attention will be required to find means of applying cost-saving techniques to the service industries if the Nation's productivity is not to fall below the 3-percent level.

Hours of work are expected to decline slightly during the 1970's at a rate of 0.1 percent a year. This relatively small decline reflects in large part the continuing increase in part-time employment and to a lesser degree limited reductions in the scheduled workweek. In addition to this decline, which is based on hours for which payment is received, greater availability of leisure time can be expected as a result of longer paid vacations and an increasing number of paid holidays.

Demographic changes in the labor force

The 100 million labor force of 1980 will exhibit a distinctly different age profile. The rapid growth during the 1960's of teenagers and persons in their early twenties will inexorably be transferred in the coming decade to those in their late twenties and early thirties. In contrast, the 45-64 age group by 1980 will be barely 5 percent higher than a decade earlier.

For the Nation as a whole, the younger work force, averaging 35 years of age, may be a great boon. The large numbers of young workers may provide an abundance of new ideas—the eagerness, imagination, and flexibility of the young may contribute to developing new ways of business organization, production, and marketing.

Differences in the points of view, however, that today seem often to characterize those under and over 30 may, of course, bring some frictions and other problems. Industry's work force may suffer from workers who lack the patience and wisdom that come with age and experience. The differing viewpoints of young and old may bring forth more grievances, more altercations with management.

Likely implications of these changes on specific demographic groups in the population are as follows:

TEENAGERS. The slowdown in their rate of growth in the labor force may improve job opportunities for teenagers competing in an anticipated expanding economy.

YOUNG WORKERS. Projected changes may mean keen competition among workers in their twenties for entry-level jobs but better opportunities for advancement to higher levels where the number of competent older workers may be stretched thin.

EXPERIENCED MIDCAREER WORKERS. The big increase in the number of young trained workers may mean that the mature worker may be pushed hard to hold his own against the young, many of whom will probably be better educated and trained for tomorrow's jobs.

OLDER WORKERS. The improved supply of young workers may accelerate pressures on older workers to retire sooner than they might otherwise do. In any case, the trend toward earlier retirement is expected to continue and can be expected to lead to greater emphasis on preretirement planning and the development of community service projects for which retired workers could contribute paid or volunteer part-time work.

WOMEN WORKERS. The continuing increase in the labor force participation rates of women, particularly young women in their childbearing years, may mean that more day care centers for children must be provided to assure proper protection of the young children of working mothers; more part-time job opportunities must be made available for women whose home responsibilities do not permit full-time employment; some job requirements may need to be adjusted to meet women's physical characteristics.

As an increasing proportion of married women work, the added family income may serve to change patterns of consumption and living styles, more services may be purchased to replace the housewife's home services; more precooked foods may be demanded; more expenditures for leisure time recreational activities may be made.

NEGRO WORKERS. The one-third increase expected in the Negro labor force between 1968-80, bringing their total numbers to 12 million workers in 1980, may be accompanied by increased concern for their occupational upgrading during the 1970's. Since upward occupational mobility is conditioned, in part, upon improved job qualifications, the recent steady progress in the educational qualifications of Negroes brings promise of better occupational adjustments to come. The

proportion of Negro men 25-29 with 4 years of high school or more rose from 36 percent in 1960 to 60 percent in 1969 while the comparable increase for white males during the same period was from 63 percent to 78 percent. Negro females have made similar, but not so striking gains. A major increase in Negroes attending college also took place during the decade.

These higher levels of educational attainment, together with steady progress toward equal employment opportunities, have combined to produce major changes in the occupational progress of employed Negroes. From 1960 to 1969 Negro employment in the professional and technical occupations has more than doubled—from less than 350,000 to nearly 700,000 while white employment in these occupations increased 40 percent from 7 million to 10 million. Similar improvements have been made in the managerial, clerical, and sales occupations. In the manual occupations, there has been a sharp upgrading of Negro workers with a 70-percent increase in Negro craftsmen compared with a 17-percent increase for whites. At the same time, there has been a drop in Negro nonfarm laborers, private household workers, and farm workers.

Despite these encouraging gains, Negroes are still disproportionately concentrated in occupations such as nonfarm laborers that are expected to continue to decline throughout the 1970's or in occupations such as household workers, which will be increasing only slightly. Moreover, Negro workers in 1969 represented only 6 percent of total employment in professional occupations, 4 percent in sales and 3 percent in managerial occupations.

The prospects for improved Negro employment in 1980 will depend upon a continuing improvement in education, the relative success of efforts to open employment opportunities that have hitherto remained closed, and the impact of changing occupational patterns. The BLS expects to issue a more detailed study of Negro employment progress and outlook later in the year.

These demographic changes are likely also to affect the country's major job-oriented institutions.

EMPLOYERS. The large increase in the number of new young workers and women in the labor force will produce pressure for employers to provide improved on-the-job training, more effective supervision, and additional safety education. They will

have to expect greater turnover and will have to allow for more part-time workers.

UNIONS. In a strong economy, their membership swelled by youthful members, unions may lean more toward emphasizing take-home pay rather than job security, seniority, pensions, and other fringe benefits that are usually of greater interest to older workers. Divergent bargaining objectives between young and older workers may lead to intraunion problems.

SCHOOLS. The large number of young people entering the labor force directly from high school and vocational school will require improved preparation for obtaining the skills and work attitudes needed for success in the work world. Young workers will need better guidance and counseling as they enter the labor force. Young people who do not complete high school may find it harder to get a job as they compete with their peers who have had more schooling.

CHANGES IN THE LABOR MARKET. The projections assume that the 100 million labor force will mesh with the job requirements of the \$1.4 trillion economy. This close match between workers and jobs will not just happen. It will require greater flexibility in the labor market through education, realistic training programs geared to shifts in occupational requirements, improved placement services, removal of arbitrary barriers to occupational entry, and the willingness of employers to maintain flexible hiring requirements.

Educational attainment of the labor force

The continuing rise in educational achievement of the labor force has a number of specific implications for the 1980 labor market.

JOB ENTRY REQUIREMENTS. Faced by a rising supply of more highly educated applicants, some employers may prefer more highly educated job applicants and be reluctant to adjust their educational entry requirements to levels that are consistent with job requirements. Similarly, while job opportunities may open up more readily for disadvantaged workers who improve their educational qualifications, the job outlook for the disadvantaged with limited schooling is likely to

remain bleak. These possibilities underscore the importance during the coming decade of encouraging employers to make their educational entry requirements reflect actual job needs rather than simply the availability of a more educated labor supply.

WHITE-COLLAR OCCUPATIONS. By 1980, more workers will be in white-collar jobs than in the blue-collar and service groups combined. The impression may grow that white-collar jobs are only for highly educated workers. Jobs within the white-collar group actually have a wide range of educational requirements: managerial jobs range from the managers of large corporations to managers of hamburger carryout shops; clerical jobs cover executive secretaries and file clerks; and sales occupations include hucksters and peddlers as well as stock brokers.

Since many white-collar jobs do not require even a high school diploma, special means may be needed to keep young people whose education is limited informed of the variety of job openings in this area.

MANUAL OCCUPATIONS. The continuing emphasis on higher education poses a threat to the flow of energetic intelligent manpower to the skilled crafts. This emphasis, together with the generally higher esteem in which white-collar occupations are held, may make it difficult to fill blue-collar and service jobs. Whether or not this materializes would seem to depend on the possibility of:

1. A shift in attitudes toward higher education, at least to the extent that youngsters who may not be college material will no longer insist on having a "go" at college nor resist taking useful manual and service employment.
2. Adjustments in labor supply through removal of any remaining racial barriers to job entry and modified immigration policies.
3. Adjustments in pay and working conditions to make such jobs more attractive.
4. Programs to provide greater advancement opportunities for those who enter the manual occupations at the lower level of the job structure.

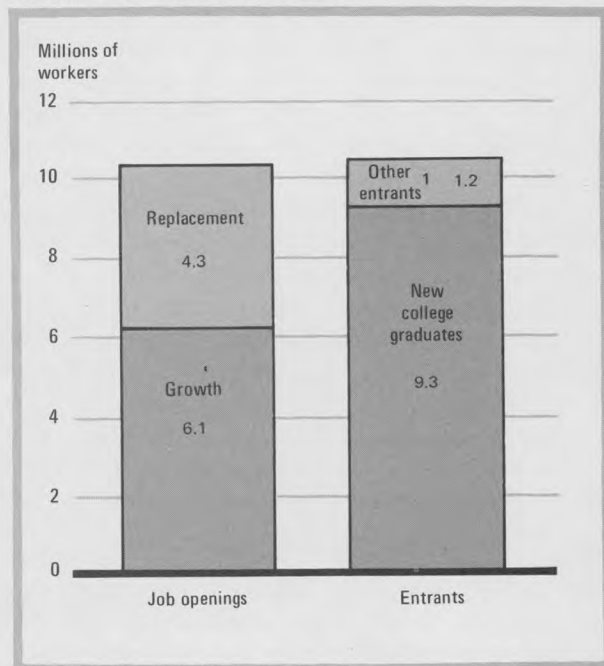
HIGHLY EDUCATED MANPOWER. The Nation's colleges and universities—principal suppliers of our most highly trained manpower—now are turning out record numbers of graduates and are expected to continue to do so throughout the 1970's. Numbers of persons earning bachelor's degrees will

climb by two-thirds, and those earning master's and doctor's degrees will double by 1980. Numerically, 13.3 million degrees are expected to be awarded between 1968 and 1980—10.2 million bachelor's, 2.7 million master's, and 400,000 doctorates.

Using past employment and educational patterns of degree recipients, BLS estimates that between 1968 and 1980 about 9.3 million college-educated persons will enter the civilian labor force after receiving their degrees: 8.4 million at the bachelor's level, 900,000 at the master's, and approximately 18,000 at the doctorate level. Presumably, most persons who will receive degrees during this period and who enter the Armed Forces will have returned to the civilian labor force by 1980. Therefore, the effect of the conflict in Viet Nam on labor force entry of college graduates was assumed to be limited.

This supply of new graduates will be augmented by another 1.2 million persons with college level training who will come into the labor force between 1968 and 1980. These additions are expected to consist primarily of women who delayed seeking a job but are expected to become available for work in the 1968-80 period, or who were working in earlier years but withdrew from the labor

Chart 13. Projected job openings for college graduates and projected entrants, 1968-80



¹ Includes reentrants, delayed entrants, and immigrants.

force. Thus, the new supply of college-educated manpower expected to enter the labor force from 1968-80 will total 10.5 million.

The need for workers stems generally from two sources: employment growth in occupations and the need to replace workers who die, retire, or otherwise leave the labor force. But another factor is relevant in considering the need for college educated manpower: rising job entry requirements that make a college degree necessary for jobs once performed by workers with lower educational attainment.

Assessing these three factors—growth, replacement, and rising entry requirements—it is estimated that 10.4 million new college graduates will be needed between 1968 and 1980: (1) 6.1 million to take care of occupational growth and rising entry requirements, and (2) 4.3 million to replace other workers. (See chart 13.)

Thus, an ample supply of graduates that is roughly in balance with manpower requirements seems in the offing for the 12-year period between 1968 and 1980. The large output of highly educated workers is expected to end many long-time occupational shortages and promises help for other occupations in which shortages may persist because of requirements for highly specialized graduate level training, lack of facilities, or comparatively low salaries. Many professional occupations have suffered from chronic worker shortages for many years, particularly teaching, engineering, physics, oceanography, chemistry, geophysics, and biomedical and health occupations.

An increased supply of graduates offers only the hope that students will elect to enter courses in numbers that match job vacancies by discipline. In an effort to predict how these individual choices will be made, BLS has made projections to 1980 for some of the principal occupations in the professional, technical, and kindred occupational group. (See table 7.)

Specific demand-supply assessments indicate potential sharp differences among occupations. Elementary and secondary school teaching is expected to experience the most dramatic change in supply-demand conditions. Long a shortage occupation, teaching is about to undergo a sharp change in prospects: the aggregate supply is expected to significantly exceed demand if recent entry patterns in the occupation continue. The anticipated surplus of applicants trained for ele-

Table 7. Distribution of college graduates by major occupational field, 1968 and 1980

Occupational group	1968			1980		
	Total employment ¹ (thousands)	College graduates ² (thousands)	Percent, graduates to total	Total employment ¹ (thousands)	College graduates ² (thousands)	Percent, graduates to total
All occupational groups.....	75,920	9,229	12.3	95,100	15,342	16.1
Professional and technical... Managers, officials, and proprietors.....	10,325	6,182	59.9	15,500	10,230	66.0
Sales.....	7,776	1,562	20.0	9,500	2,850	30.0
Clerical.....	4,647	463	10.1	6,000	780	13.0
All other.....	12,803	583	4.6	17,300	779	4.5
	40,369	439	1.1	46,800	703	1.5

¹ 16 years of age and over.

² Data include persons 18 years of age and over having 4 years of college or more.

mentary and secondary teaching assignments, the biggest single professional opportunity for women, may mean that many college-educated women will have to look to other professions, some long regarded as the principal province of men, such as engineering, law, medicine, dentistry, pharmacy. If employers in these fields accept women readily, this acceptance may help to reduce further some of the discrimination against women in professional schools that has prevailed in the past.

Professional health occupations should continue to experience shortages. The supply of physicians and dentists, for example, is expected to fall short of requirements because of the limited capacity of medical and dental schools currently in operation and scheduled to be in operation by 1980.

Engineers are also expected to continue to be in short supply. If the number of engineering graduates were to keep pace with the expected growth in total college graduates, the new supply would be adequate to meet projected requirements. Recent trends, however, do not suggest this development as bachelor's degrees in engineering continue to become a smaller proportion of total bachelor's degrees awarded.

In scientific fields, shortages of chemists, geologists, and geophysicists seem likely, but surpluses of mathematicians and life scientists may result if students continue to elect these fields in the same proportion as in the past. However, since transfers occur quite frequently among these occupations, part of the supply-demand imbalances may be remedied by such transfers.

Other areas for which potential shortages are in prospect include counseling, social work, urban

planning, and a variety of occupations related to the planning and administration of local governments.

These 1980 projections do have a rosy glow, inspired no doubt by the steady performance of economic growth during the 1960's. But the past decade has, in fact, left the stage to somewhat mixed notices. While economic growth performed beyond expectations, not all aspects of the

economy reached the same heights. The current difficulties of meshing the twin objectives of high employment and price stability and solving such social problems as urban congestion, the lack of equal opportunity, rising crime, the disaffection of the young, and environmental pollution are enough to cast doubt on any optimistic view of the future. The challenge to the Nation during the 1970's will be to solve these pressing problems before they seriously erode the economy's capacity to realize its growth potential. □

FOOTNOTES

¹ Two measures of hours are available: hours worked and hours paid for. Hours worked is a measure of hours on the job; hours paid for are hours on the job plus the additional hours which employees spent on paid leave such as vacations, sick leave, or holidays. Since hours worked data are not available in sufficient detail by industry, the discussion of hours in this section represents hours paid for.

² This technique is in accordance with the income accounting conventions of the Office of Business Economics

of the U.S. Department of Commerce.

³ This balance results, of course, from the assumptions underlying these projections, which were that the growth in employment would match that of the labor force, leaving only a level of unemployment (at either 3 or 4 percent) roughly similar to that in 1968.

⁴ Data refer to all races except white. Nationwide, Negroes make up about 92 percent of races other than white.

How projections are used

The final detailed projections of industry and occupational employment to 1980 may be useful for a variety of planning and policy development purposes:

State and city planners of higher education facilities need the best possible estimates of requirements for professionally trained workers in various disciplines to pinpoint educational activities that should be expanded.

Vocational educators need projections of employment in certain occupations to set up high school and post secondary training programs or to promote apprenticeship training to provide trained workers in these occupations.

Manpower and educational planners need manpower projections to develop realistic training programs. In several recent statutes, Congress has required that federally financed education and training programs be set up to meet specific local and regional manpower requirements.

Vocational counselors use projections to provide information that can be made available to young people, their parents, teachers, or counselors on long-range employment trends by occupational field to help them make sound vocational choices.

Industry and government rely on projections in policy planning for recruitment, salary scales, training, scholarship plans, and expansion of research programs.

Special Labor Force Report
shows that in 1968
about 2.5 million persons
accumulated 15 weeks
of unemployment or more

EDWARD J. O'BOYLE

America's less fortunate: the long-duration unemployed

MORE AMERICANS worked at the close of the 1960's than ever before in our Nation's history. From this vantage point, the late 1960's were years of abundance. Viewed against the larger numbers of unemployed persons at the start of the decade when the work force was much smaller, the lower jobless totals at the end represented a vast improvement. Still, in the late 1960's, about 2½ million Americans accumulated 15 weeks of unemployment or more during the year.

Who were these less fortunate Americans? What, if anything, sets them apart from those who had trouble finding or keeping a job at the start of the decade? How many were in the labor force all of 1968, that is, worked whenever they were not unemployed? How large was their loss of earnings? How many were working in February 1969 (the latest month for which data of this type are available) and in which occupations and industries did they find jobs?

This article deals with these questions and several others in some detail. It focuses on those Americans who shouldered the heaviest burden of joblessness in 1968—the ones who accumulated 15 weeks of unemployment or more over the course of the year. Throughout the article we refer to these individuals as the "long-duration" unemployed, whether they amassed their jobless weeks in one spell or in multiple spells. For analytical purposes, the long-duration segment is divided into two subsegments: The "long-term" unemployed (15 to 26 weeks) and the "very long-term" unemployed (27 weeks or more). Persons with 1 to 14 weeks of joblessness are designated the "short-duration" unemployed. The data are based principally on supplementary questions asked in the February 1969 Current Population Survey cover-

ing labor force activity in 1968, that is, the number of weeks a person worked, looked for work, or was not in the labor force.¹

Extent, composition, and risk

Roughly 2.5 million persons 14 years of age and over accumulated 15 weeks of unemployment or more in 1968, a decline of more than 50 percent since 1961 (table 1). There was an even greater decline among the very long-term jobless. These developments were attributable to the same upsurge in labor demand that increased the total number of persons with work experience and extended the regularity of employment so that 9.3 million more persons worked year round, full time in 1968 than in 1961.

This shift in demand had different effects on the work experience of men and women. A net increase of 5.3 million in the number of men working year round, full time was accompanied by a net decrease of 1.3 million men working full time for 27 to 49 weeks. Among women, on the other hand, a net increase of 4.0 million in the number of year-round, full-time workers was accompanied by a small rise in the number employed 27 to 49 weeks at full-time jobs.

This increase in manpower requirements had widely varying effects on different subgroups of the long-duration unemployed. The principal beneficiaries were men. In 1968, about 1.4 million men were unemployed for 15 weeks or more compared with 3.9 million in 1961. At the same time, the number of women with long-duration unemployment fell to 1.1 million from 1.9. Thus, at the close of this period proportionately more (but still less than one-half) of all the long-duration unemployed were women.

Fewer persons under age 25 experienced 15 weeks of unemployment or more in 1968 than in 1961. However, they accounted for a much larger

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Table 1. Extent of unemployment during the year, 1961-68

[Numbers in thousands]

Extent of unemployment	16 years old and over ¹		14 years old and over ²							
	1968	1967	1968	1967	1966	1965	1964	1963	1962	1961
Total working or looking for work.....	91,480	89,432	94,022	91,923	89,924	87,591	86,837	85,038	83,944	81,963
Worked during the year.....	90,230	88,179	92,672	90,554	88,553	86,186	85,124	83,227	82,057	80,287
Did not work but looked for work.....	1,250	1,253	1,350	1,369	1,371	1,405	1,713	1,811	1,887	1,676
Persons with unemployment.....	11,332	11,564	11,579	11,814	11,602	12,334	14,052	14,211	15,256	15,096
Percent of total working or looking for work.....	12.4	12.9	12.3	12.9	12.9	14.1	16.2	16.7	18.2	18.4
With unemployment of—										
1 to 14 weeks.....	8,909	8,946	9,120	9,145	8,848	8,858	9,378	9,081	9,751	9,291
15 weeks or more.....	2,423	2,618	2,459	2,669	2,754	3,476	4,674	5,130	5,505	5,805
15 to 26 weeks.....	1,512	1,619	1,531	1,639	1,688	2,126	2,647	2,760	2,940	2,991
27 weeks or more.....	911	999	928	1,030	1,066	1,350	2,027	2,370	2,565	2,814
Part-year workers with unemployment of—										
1 to 14 weeks.....	6,657	6,607	6,776	6,703	6,520	6,645	7,124	6,710	7,452	7,326
1 spell of unemployment.....	4,744	4,564	4,813	4,624	4,499	4,537	4,725	4,490	5,083	4,922
2 spells of unemployment or more.....	1,913	2,043	1,963	2,079	2,021	2,108	2,399	2,220	2,369	2,404
15 weeks or more.....	2,140	2,323	2,161	2,355	2,442	3,077	4,094	4,451	4,788	5,058
1 spell of unemployment.....	929	1,009	938	1,021	1,001	1,243	1,738	2,036	1,938	2,499
2 spells of unemployment or more.....	1,211	1,314	1,223	1,334	1,441	1,834	2,356	2,415	2,850	2,559

¹ Data refer to persons 16 years and over in accordance with the changes in age limit and concepts introduced in 1967.

² Figures on weeks of unemployment during the year are not available for persons 16 years and over for the entire period. Comparable data for persons 14 years and over are used.

proportion of the total with long-duration unemployment in the late 1960's and an even larger share of the very long-term unemployed. These increases in proportions far exceeded their greater representation in the labor force. Fewer men had 1 to 14 weeks of joblessness in 1968 than 7 years earlier. For women and young people, however, the number as well as the proportion with short-duration unemployment was much greater at the close of the period.

Part-year workers with long-duration unemployment in 1968 were less likely than their 1961 counterparts to have one spell of 15 weeks or more—this finding held for men as well as for women. In both years, however, women were more likely than men to have their jobless weeks at one time. This difference is attributable to several factors. First, women are far more likely than men to be entrants and to accumulate 15 weeks of unemployment in the often difficult transition from a nonwork to a work role. Second, women are more likely to work in industries and occupations in which employment is steady. Hence, they are less likely than men to be laid off and to have additional unemployment. Third, women who lose their jobs are more likely to leave the labor force and, thereby, avoid another period of joblessness.

In 1961, men with one spell of long-duration unemployment outnumbered women 2 to 1. Seven years later, with proportionately more women in the long-duration segment and given

the greater likelihood that they will have only one spell, this differential had been almost eliminated.

These changes in the composition of the unemployed, in turn, had an important effect on the operations of the unemployment insurance program. Because of their generally weaker attachment to the labor force, young people and adult women are less likely than adult men to meet the eligibility conditions for unemployment insurance (a specified amount of employment or wages or both during a "base period" preceding unemployment). In addition, for those who are eligible, an irregular work record may mean a smaller weekly benefit amount, a shorter benefit duration, and a greater probability of exhausting benefits soon after becoming unemployed. For these reasons, among others, persons with 15 weeks of unemployment or more in 1968 were less likely than the long-duration unemployed in 1961 to receive the maximum protection available through the unemployment insurance program.

Among persons 16 years and over, proportionately more 16- to 24-year-olds than any other age group experienced long-duration unemployment in 1968. This finding obtained in every comparison involving persons of the same sex with one exception: The difference in risk between 16- to 24-year-old women and those 65 years and over was not significant.

Among men and women alike, the overall risk of long-duration unemployment was significantly greater for Negroes and other races than for

whites (chart 1). These findings also applied to men below age 55 and to women below age 45. Differences of this kind turned up in the risk of long-term unemployment and the risk of very long-term unemployment. For men and women in the same age group, the risk of long-duration joblessness was approximately the same. Comparing men and women of like ages in the same duration subsegment, similar results followed.

Among all persons who worked in 1961, the risk of long-duration unemployment was highest for nonfarm laborers, operatives, and craftsmen and lowest for farmers, farm managers, and professional and technical workers along with managers, officials, and proprietors. Although the risk level in 1968 was lower in all major occupa-

tions, there were no major changes in high-risk or low-risk groups. In both years, wage and salary workers in construction, agriculture, and mining were most likely, and government workers least likely, to accumulate 15 jobless weeks or more.

Labor force activity in 1968

The balance of this article focuses on persons 18 to 64 years of age, a group that in 1968 accounted for about 9 out of every 10 persons in the labor force at least 1 week during the year and a like proportion of the long-duration unemployed. The men in these ages, especially those with dependents, need to work because lack of a job not only reduces their ability to meet financial

Table 2. Labor force activity for persons with unemployment in 1968

[Numbers in thousands]

Labor force activity, sex, and age	Total with unemployment	Weeks of unemployment			
		1 to 14	15 or more		
			Total	15 to 26	27 or more
Men					
Total, 18 to 24 years old: Number.....	1,859	1,513	346	229	117
Percent.....	100.0	100.0	100.0	100.0	100.0
Employed rest of year.....	46.3	40.5	71.7	67.7	79.5
Employed at times, otherwise not in labor force.....	48.1	54.4	20.8	27.1	8.5
Not in labor force rest of year ¹	5.5	5.1	7.5	5.2	12.0
25 to 44 years old: Number.....	2,189	1,762	427	319	108
Percent.....	100.0	100.0	100.0	100.0	100.0
Employed rest of year.....	82.2	80.9	87.6	91.5	75.9
Employed at times, otherwise not in labor force.....	15.5	17.8	5.9	6.3	4.6
Not in labor force rest of year ¹	2.3	1.3	6.6	2.2	19.4
45 to 54 years old: Number.....	848	601	247	170	77
Percent.....	100.0	100.0	100.0	100.0	100.0
Employed rest of year.....	82.0	80.5	85.4	90.6	74.0
Employed at times, otherwise not in labor force.....	15.3	18.5	7.7	7.6	7.8
Not in labor force rest of year ¹	2.7	1.0	6.9	1.8	18.2
55 to 64 years old: Number.....	612	435	177	110	67
Percent.....	100.0	100.0	100.0	100.0	(²)
Employed rest of year.....	81.2	80.5	83.1	81.8	-----
Employed at times, otherwise not in labor force.....	14.7	16.6	10.2	13.6	-----
Not in labor force rest of year ¹	4.1	3.0	6.8	4.5	-----
Women					
Total, 18 to 24 years old: Number.....	1,829	1,508	321	176	145
Percent.....	100.0	100.0	100.0	100.0	100.0
Employed rest of year.....	26.1	19.7	56.4	55.1	57.9
Employed at times, otherwise not in labor force.....	58.2	65.6	23.1	31.2	13.1
Not in labor force rest of year ¹	15.7	14.7	20.6	13.6	29.0
25 to 44 years old: Number.....	1,704	1,369	335	198	137
Percent.....	100.0	100.0	100.0	100.0	100.0
Employed rest of year.....	41.1	35.1	65.7	64.6	67.2
Employed at times, otherwise not in labor force.....	41.3	46.6	19.7	25.8	10.9
Not in labor force rest of year ¹	17.6	18.3	14.6	9.6	21.9
45 to 54 years old: Number.....	651	475	176	112	64
Percent.....	100.0	100.0	100.0	100.0	(²)
Employed rest of year.....	53.8	47.6	70.5	68.7	-----
Employed at times, otherwise not in labor force.....	32.7	37.7	19.3	22.3	-----
Not in labor force rest of year ¹	13.5	14.7	10.2	8.9	-----
55 to 64 years old: Number.....	379	268	111	66	45
Percent.....	100.0	100.0	100.0	(²)	(²)
Employed rest of year.....	60.7	54.9	74.8	-----	-----
Employed at times, otherwise not in labor force.....	24.3	29.5	11.7	-----	-----
Not in labor force rest of year ¹	15.0	15.7	13.5	-----	-----

¹ Includes small number of persons who were unemployed for entire year.

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

Chart 1. Long-duration unemployed as percent of total who worked or looked for work in 1968



¹ Difference between color groups statistically significant at 2 standard errors.
² No Negroes and other races reported with long-duration unemployment.

obligations but also may affect family stability. Although the psychological need for work is not as great among married women as among men, many working women in this age group make important contributions to family income. Hence, a loss of earnings leads to some adjustment in the family's standard of living.

Roughly 8 out of every 10 men 25 to 64 years

old with some unemployment in 1968 worked the rest of the year (table 2). There were no statistically significant differences between younger and older men in the same duration segment. Among men 25 to 44, but not among those who were older, a significantly larger proportion of the long-duration than the short-duration jobless worked whenever they were not unemployed.

The experience of men 18 to 24 was quite dissimilar. Compared with older men in the same duration segment, 18- to 24-year-olds were less likely to work whenever they were not unemployed. Further, the difference between the short-duration and the long-duration jobless was very large. This variance reflects greater proportions of students among the short-duration compared with the long-duration unemployed and the smaller proportion of students than nonstudents who work in any given month of the year.

There was no strong evidence to support the hypothesis that the risk of long-duration unemployment in 1968 would have been higher for 55- to 64-year-old men had they not decided to retire rather than face the rigors of many weeks of joblessness. The data permit three tests of the hypothesis. First, a finding that the short-duration unemployed were less likely than the long-duration jobless to work whenever they were not unemployed would support this hypothesis. This was true for men under 45 but not for those who were older. Second, a finding that in the same duration segment, younger men were more likely than older men to work the rest of the year likewise would support the hypothesis. But there were no significant differences of this type for men 25 and over, including the 10-percentage point spread between the 25- to 44-year-olds and the 55- to 64-year-olds with long-term unemployment. Finally, a finding that older jobless men were more likely than younger men to have short-duration unemployment would support the hypothesis. The data indicate that equal proportions in the two older age groups had 1 to 14 weeks of unemployment.

In all four age groups, women with long-duration unemployment were more likely than those with short-duration unemployment to work whenever they were not unemployed. As among the men, the differential between duration segments was greatest for the 18- to 24-year-olds, in part for the same reason. In contrast with the men, the proportion of women working the rest of the year was systematically greater for older than for younger

women in the same duration segment.

The evidence suggests that for women in the same age group the consistent variation between duration segments is not attributable to differences in marital status alone. Of both the long-duration and the short-duration jobless women 16 years and over, roughly one-half were married.² Moreover, there were no major differences between duration segments in the proportions in the other two marital groups.

All of the factors that influence the labor force activity of women and, therefore, account for the differences in the proportion of those who worked whenever they were not unemployed can be grouped into those that enable and those that compel women to work. The most significant of the enabling factors is the number and ages of their children. Women with few children or none at all are at greater liberty to accept a job than those with many children, particularly women with preschoolers. Moreover, the same relative freedom that enables women with smaller families to accept a job may also keep them looking for work when women with larger families would withdraw from the labor force.

A disproportionately large number of women with small families or older children among the long-duration unemployed would account for some of the intersegment differences in the proportion of younger women who worked whenever they were not unemployed. The systematically smaller intersegment variance among older women supports this argument because whatever the size of their families, women past 44 are not as likely as younger women to have small children to keep them at home. This, in turn, would account for the greater proportion of older women compared with younger women in the same duration segment who remained in the labor force and worked whenever they were not unemployed. The most important of the factors that compel women to work is the need for income. Given that a majority of the women with some unemployment were married, it is possible that some of the intersegment difference in the proportion who worked the rest of the year is attributable to the differing needs of married women's families.

Women also work to satisfy a psychological need. To the extent that women with few children have more time on their hands than women with many, the former may be more likely to work just to keep busy. This psychological drive for

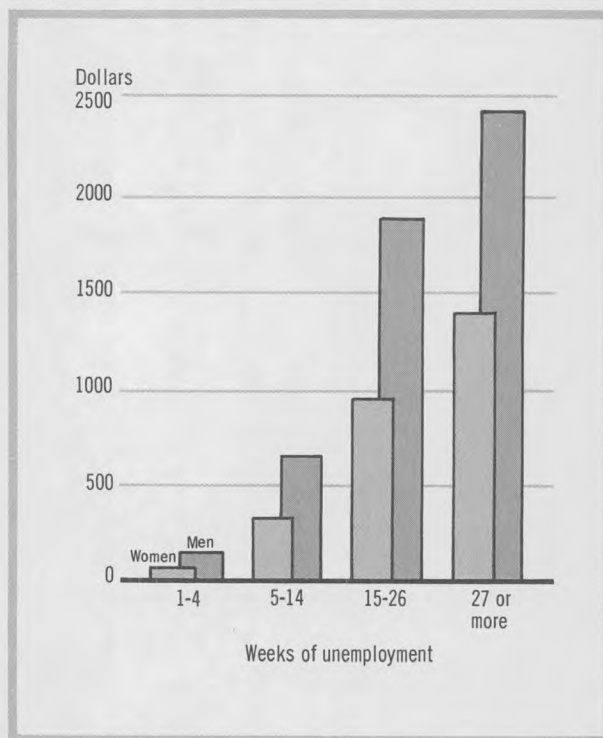
work means that they may be more likely to accumulate at least 15 jobless weeks over the course of a year and may be more likely to work rather than withdraw from the labor force whenever they are not unemployed.

Chart 2 presents some rough estimates of the minimum loss in annual earnings due to unemployment in 1968. They are based on data for 18- to 64-year-old wage and salary workers in the labor force year round. Predictably, the minimum loss was much greater for men than for women in the same duration segment because of the typically higher rates of pay for men. Most significant, these data strongly suggest that when the very long-term unemployed are successful in finding jobs, they work in occupations and industries where weekly earnings are comparatively low.

Even at the risk of repetition, two points are worth driving home. First, 760,000 persons 18 to 64 years old looked for work for at least 27 weeks in 1968. Close to 3 out of every 4 worked whenever they were not unemployed. Insofar as number of weeks in the labor force measures a person's attachment to the labor force, most of the very long-term unemployed had a strong attachment.

Chart 2. Estimated minimum loss in annual earnings due to unemployment in 1968

[18- to 64-year-old wage and salary workers in labor force year-round]



Second, the number of persons who accumulated at least 27 weeks of unemployment in 1968 was nearly 6 times greater than the monthly average of the number who experienced 27 consecutive weeks of unemployment or more. The significance of this point is that whatever differences follow from having very long-term unemployment in multiple spells rather than one spell, the loss in annual earnings is no different.

Employed in February

The work experience survey uncovered two elements in the relationship between weeks of unemployment in 1968 and the probability of being unemployed in February 1969. First, the chances of being unemployed in February were systematically greater for persons with more weeks of unemployment in 1968 (table 3). Second, there was some evidence that proportionately more men would have been looking for work in February had they not previously withdrawn from the labor force because of discouragement. However, their numbers were very small.

The second point calls for some explanation. If the discouraged worker hypothesis obtains,

relatively more men with many weeks of unemployment than those with fewer jobless weeks would have been nonparticipants in February for "other" reasons. The survey disclosed that this was true when the long-duration unemployed were compared with the short-duration unemployed and when the very long-term jobless were contrasted with the long-term jobless. The work experience data cannot be used to determine discouragement among women because those who leave the labor force as a result of inability to find work are likely to report that they are keeping house, and there is no way to separate these women from others in this classification who are not interested in working.

There were two major facets in the relationship between weeks of unemployment in 1968 and the likelihood of being employed in February 1969. First, persons with many jobless weeks in 1968 were less likely than those with fewer to be employed in February. This finding obtained for men and women alike in every comparison save the one between the subsegments of short-duration unemployment. Second, men in general were more likely than women with the same number of jobless weeks in 1968 to be working in February.

Table 3. Labor force status in February 1969 of persons with unemployment in 1968

[Thousands of persons 18 to 64 years old]

Weeks of unemployment in 1968 and sex	Total with unemployment ¹		Percent distribution						
	Number	Percent	Employed	Unemployed	Not in labor force				
					Total	Keeping house	Going to school	Unable to work	Other ²
Both sexes									
Total.....	8,132	100.0	68.8	15.2	15.9	7.5	5.0	.2	3.2
1 to 14 weeks.....	5,983	100.0	73.7	10.6	15.8	7.1	6.0	.1	2.6
15 weeks or more.....	2,149	100.0	55.3	28.3	16.4	8.8	2.3	.6	4.8
15 to 26 weeks.....	1,383	100.0	63.4	23.4	13.3	6.5	2.6	.5	3.6
27 weeks or more.....	766	100.0	40.5	37.2	22.3	12.8	1.7	.7	7.0
Men									
Total.....	4,518	100.0	73.7	15.9	10.4	(³)	5.3	.4	4.7
1 to 14 weeks.....	3,316	100.0	78.4	11.1	10.5	.1	6.5	.2	3.7
15 weeks or more.....	1,202	100.0	60.6	29.1	10.3	-----	1.8	1.0	7.5
15 to 26 weeks.....	829	100.0	68.2	23.2	8.6	-----	2.3	.8	5.4
27 weeks or more.....	373	100.0	43.4	42.3	14.2	-----	.8	1.4	12.0
Women									
Total.....	3,614	100.0	62.8	14.4	22.8	16.8	4.7	-----	1.2
1 to 14 weeks.....	2,667	100.0	67.8	9.9	22.3	15.8	5.4	-----	1.2
15 weeks or more.....	947	100.0	48.6	27.3	24.2	19.8	2.9	-----	1.5
15 to 26 weeks.....	554	100.0	56.1	23.6	20.2	16.2	3.1	-----	.9
27 weeks or more.....	393	100.0	37.8	32.4	29.8	24.9	2.6	-----	2.3

¹ Excludes 1,252,000 year-round workers with 1 to 2 weeks of unemployment and 703,000 nonworkers who looked for 1 to 14 weeks for whom data were not available. These two groups represent 19.4 percent of the 18- to 64-year-olds with unemployment.

² Includes retired persons, individuals reported as too old or temporarily unable to work, the voluntarily idle, seasonal workers for whom the survey week fell in an "off"

season and who were not reported as looking for work, and persons who did not look for work because they believed that no jobs were available in the area or that no jobs were available for which they could qualify.

³ Less than 0.05 percent.

Table 4. Occupation group of part-year workers with unemployment in 1968, who were employed in February 1969, by longest job in 1968

[Thousands of persons 18 to 64 years old]

Major occupation group and sex	Part-year workers with unemployment in 1968 who were employed in February 1969							
	Unemployed 1 to 14 weeks				Unemployed 15 weeks or more			
	Longest job in 1968	February job	February job in same occupation as longest job		Longest job in 1968	February job	February job in same occupation as longest job	
			Number	Percent of longest job			Number	Percent of longest job
Men								
All occupation groups.....	2,597	2,597	2,092	80.6	707	707	549	77.7
White-collar workers.....	577	603	449	77.8	90	106	75	83.3
Professional and technical.....	190	192	166	87.4	20	31	18	(1)
Managers, officials, and proprietors.....	130	129	95	73.1	33	36	28	(1)
Clerical workers.....	155	169	112	72.3	23	23	16	(1)
Sales workers.....	102	113	76	74.5	14	16	13	(1)
Blue-collar workers.....	1,800	1,758	1,486	82.6	532	519	418	78.6
Craftsmen and foremen.....	620	643	549	88.5	183	165	142	77.6
Operatives.....	801	753	651	81.3	207	213	169	81.6
Nonfarm laborers.....	379	362	286	75.5	142	141	107	75.4
Private household workers.....	1	1			1			
Service workers, except private household.....	155	167	108	69.7	45	51	34	(1)
Farmers and farm laborers.....	64	68	49	(1)	39	31	22	(1)
Women								
All occupation groups.....	1,808	1,808	1,576	87.2	435	435	367	84.4
White-collar workers.....	942	950	837	88.9	160	163	133	83.1
Professional and technical.....	168	184	159	94.6	29	29	25	(1)
Managers, officials, and proprietors.....	30	17	15	(1)	2	2	1	(1)
Clerical workers.....	638	648	586	91.8	106	110	92	86.8
Sales workers.....	106	101	77	72.6	23	22	15	(1)
Blue-collar workers.....	447	472	408	91.3	168	156	149	88.7
Craftsmen and foremen.....	13	11	11	(1)	5	4	4	(1)
Operatives.....	426	448	390	91.8	162	149	144	88.9
Nonfarm laborers.....	8	13	6	(1)	1	3	1	(1)
Private household workers.....	73	67	52	(1)	22	32	21	(1)
Service workers, except private household.....	326	313	274	84.0	74	75	56	(1)
Farmers and farm laborers.....	20	6	5	(1)	11	9	8	(1)

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

This variance is attributable to the fact that women more often than men enter the labor force, work for only a short time, and then voluntarily withdraw from the labor force.

The influence of weeks of unemployment on labor force status at some later date draws our attention to the relationship between length of unemployment and the occupational-industrial attachment of those who are employed at a later date. Specifically, it raises several questions. In which occupations and industries do the unemployed eventually find employment? Are they the same ones in which these individuals worked before becoming unemployed, or are they different? Are the unemployed more or less likely to find work in different occupations or different industries as weeks of unemployment accumulate?

Approximate answers to these questions for part-year workers with unemployment in 1968

who were employed in February 1969 were derived from a comparison of the occupation group and the industry group of their longest job in 1968 with that of their February job. However, the results must be interpreted cautiously. First, only changes between major occupation and industry groups were tabulated. Because some groups encompass occupations and industries of greater variety than others (for example, operatives compared with private household workers, durable goods contrasted with mining) proportionately more of the persons in the more encompassing groups will have their longest job and their February job in the same group. Second, persons who had their February job in a different occupation or industry group than their longest job include those who changed groups because of a spell of unemployment after their longest job and those who changed for other reasons. Separate

estimates for these two groups are not available. Third, differences in industry groups but not in occupation groups suggest a change in employers between longest job and February job. But even this evidence is not conclusive because a person can work in different industries without changing employers, by transferring from one operating division to another within the same parent organization. Lastly, large differences between percentages are required for statistical significance because the percentages are based on totals that are relatively small.

These limitations, in turn, impose the following definition. A person working in a different occupation (industry) group is one whose February job was in a different group than his longest job, whether his unemployment occurred before, dur-

ing, or after his longest job, and whether he changed employers or not.

About 3 out of every 4 men who worked part year and had some unemployment in 1968 were employed in February 1969. A smaller proportion of the long-duration than the short-duration unemployed were working in February. However, roughly 80 percent among the employed in both duration segments had their February job in the same occupation group as their longest job in 1968 (table 4). Further, there were no significant differences of this sort in any of the major occupation groups for which data were available. Nor were there any when white-collar workers were compared with blue-collar workers in the same duration segment.

Approximately equal proportions among the

Table 5. Industry group and class of worker of part-year workers with unemployment in 1968, who were employed in February 1969, by longest job in 1968

[Thousands of persons 18 to 64 years old]

Industry group, class of worker, and sex	Part-year workers with unemployment in 1968 who were employed in February 1969							
	Unemployed 1 to 14 weeks				Unemployed 15 weeks or more			
	Longest job in 1968	February job	February job in same industry as longest job		Longest job in 1968	February job	February job in same industry as longest job	
			Number	Percent of longest job			Number	Percent of longest job
Men								
All industry groups.....	2,597	2,597	2,013	77.5	707	707	519	73.4
Wage and salary workers, total.....	2,494	2,488	1,927	77.3	668	668	486	72.8
Agriculture.....	58	60	40	(²)	41	35	25	(²)
Mining.....	42	51	40	(²)	15	15	14	(²)
Construction.....	490	467	405	82.7	158	147	119	75.3
Manufacturing.....	934	880	738	79.0	215	211	164	76.3
Durable goods.....	706	661	581	82.3	154	145	121	78.6
Nondurable goods.....	228	219	157	68.9	61	66	43	(²)
Transportation and public utilities.....	193	209	154	79.8	38	52	34	(²)
Wholesale and retail trade.....	387	396	267	69.0	96	98	66	68.8
Service and finance.....	330	361	240	72.7	94	99	60	63.8
Finance, insurance, and real estate.....	56	60	43	(²)	10	14	10	(²)
Private household.....	11	10	8	(²)	7	6	3	(²)
Other services ¹	263	291	189	71.9	77	79	47	61.0
Public administration.....	60	64	43	(²)	11	11	4	(²)
Self-employed and unpaid family workers.....	103	109	86	83.5	39	39	33	(²)
Women								
All industry groups.....	1,808	1,808	1,453	80.4	435	435	354	81.4
Wage and salary workers, total.....	1,779	1,783	1,437	80.8	430	432	353	82.1
Agriculture.....	21	8	7	(²)	12	11	10	(²)
Mining.....	2	2	1	(²)	1	1	1	(²)
Construction.....	18	17	13	(²)	5	5	1	(²)
Manufacturing.....	498	519	424	85.1	155	144	129	83.2
Durable goods.....	211	215	172	81.5	66	49	48	(²)
Nondurable goods.....	287	304	252	87.8	89	95	81	91.0
Transportation and public utilities.....	85	90	72	84.7	10	12	8	(²)
Wholesale and retail trade.....	356	338	267	75.0	102	98	82	80.4
Service and finance.....	745	755	613	82.3	135	147	111	82.2
Finance, insurance, and real estate.....	125	120	90	72.0	10	7	6	(²)
Private household.....	75	72	55	73.3	22	32	21	(²)
Other services ¹	545	563	468	85.9	103	108	84	81.6
Public administration.....	54	54	40	(²)	14	14	11	(²)
Self-employed and unpaid family workers.....	29	26	16	(²)	5	3	1	(²)

¹ Includes forestry and fisheries.

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

employed in both segments had their February job in the same industry group as their longest job, and there were no significant intersegment variances in any of the major industry groups (table 5). Finally, men with the same number of jobless weeks in 1968 were as likely to have their February job in the same industry group as to have that job in the same occupation group. In the main, these findings also applied to women even though they were less likely than men to be employed in February.

To sum up, these data suggest several conclusions. First, most of the unemployed eventually find employment in the same occupation group and in the same industry group in which they worked before becoming unemployed. Further, they are no more likely to change occupation groups than to change industry groups. Second, the unemployed are neither more nor less likely to find work in different occupation groups or different industry groups as weeks of unemployment accumulate. Third, other work experience data indicate that persons with some unemploy-

ment more frequently than those with none at all switch from one group to another. Less than 10 percent of all persons who worked, had no unemployment in 1968, and were employed in February had their February job in a different occupation group than their longest job. In contrast, about 25 percent of the part-year workers who had some unemployment in 1968 and who were employed in February had their February job in a different occupation group than their longest job. Similar differences appeared in the proportions working in different industry groups. □

—FOOTNOTES—

¹ See Vera C. Perrella, "Work Experience of the Population in 1968," *Monthly Labor Review*, February 1970, pp. 54-61, reprinted as Special Labor Force Report 115, for additional information from this survey and for the explanatory note which shows the standard errors for the 1968 data.

² Data on marital status of 18- to 64-year-olds are not available.

Youth's need for work experience

The school's exclusive responsibility for education in programs not directed toward preparing for college should end about the age of 16. Beyond that point, cooperation between local government, industry, business, and the technician-employing professions is essential for adequate job training and, incidentally, for the maximum efficiency of secondary schools as college preparatory institutions. There is no magic in the chronological age 16, of course; the person's degree of development as well as his talents and interests must be taken into consideration. But States generally permit the issuing of special work permits at about 16 or 17; they authorize limited licenses to drive an automobile. The childhood privilege of fishing without a license ends then; apprenticeship indentures may be entered into. . . .

Even the most conscientious and optimistic educators cannot hope to sustain the myth that the school is a "house of magic," capable of overcoming the reluctance of young people to take a vicarious classroom approach to specifically oriented job training. As of March 1964, fewer than 1 of 3 males and 1 of 5 females were employed in professional, technical, managerial, or proprietary positions for which secondary or higher education could be considered essential. This does not imply that more education would be undesirable, but simply that it is trying the patience of juvenile Jobs to insist that they forego the experience that comes with jobs.

—GEORGE A. PETTIT, *Prisoners of Culture*
(New York, Charles Scribner's Sons, 1970).

IRRA Conference Papers



THE FOLLOWING EXCERPTS are adapted from papers presented to the Twenty-second Annual Winter Meeting of the Industrial Relations Research Association, December 29-30, 1969, in New York City. Excerpts from five other papers appeared in the March issue of the *Review*.

The full text of all papers will appear in the forthcoming IRRA publication, *Proceedings of the Twenty-Second Annual Meeting*, available from IRRA, Social Science Building, Madison, Wis. 53706.

EFFECTIVE PREPARATION FOR APPRENTICESHIP

REESE HAMMOND

WHAT IS the best way—the most effective way—to prepare a young man for apprenticeship?

Around the turn of the century, the concept of free public education was accepted and the framework for a basic education for all of our youth was established. Unfortunately, six decades later, with few exceptions, vocationally oriented students don't get an effective preparation for apprenticeship. Despite the expenditure of some \$50 billion per year for education, less than \$1 billion is spent for vocational education,¹ and most of that doesn't prepare youngsters for work. Despite the fact that only 40 out of every 100 students entering the ninth grade go on to enter college, and only 20 of every 100 finish college, we spend less than 2 percent of our education budget on the 80 percent of our students who will not join the intellectually elite.

The first step towards effective preparation for entry into a skilled trade is an honest analysis of

the requirements of the trade. The second step is a realistic program to communicate these requirements to potential candidates at appropriate levels of understanding throughout their youth. The third step is to teach the youngster what will best prepare him for his future vocation.

Any professor who assembles a "do it yourself" bookcase becomes an expert on the carpenter's apprenticeship program; anyone who has refinished an antique commode can explain the intricacies of industrial painting; and any sidewalk superintendent who has ever watched a power shovel or a bulldozer will assure you that running equipment can't be much more difficult than driving the family station wagon.

I want to appeal to the "spray can painters," "faucet fixers," and the "extension cord wirers" to relate to the painters, plumbers, and electricians in the same fashion that they relate to the "guardhouse lawyer," the "parlor psychologist" and the "bathroom baritone" to law, medicine, and music.

Those qualified to analyze a craft include the master craftsman who works at his trade, supervises his trade, or has become a teacher. The record of the craftsman who has remained in the industry is written in thousands of apprenticeship standards administered jointly by labor and management across the nation and thousands of successful graduates of these apprentice programs.

Unfortunately, the record seems to be in on vocational teaching. With a handful of welcome exceptions, this country has no vocational education system. I am less inclined to blame the teachers than I am the elected school boards that either dilute meaningful skill training or use the vocational school as a dumping ground for the slow, the incorrigible, or the youngsters putting in time until they drop out.

I am sure there are others professionally qualified to analyze the skill requirements of a craft, but they seldom do. The Purdue study² on apprenticeship will be extremely interesting when it is formally released.

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Ohio State University and the University of Illinois, working under a \$1.3-million Office of Education grant, are just completing a 180-day Industrial Arts Curriculum Program³ which deals with the world of construction, from the owner's decision to buy right through the owner's acceptance of the product. The package is designed for junior high school students and comes complete with laboratory assignments, such as building a simple wood form, mixing concrete, pouring it in the form, and screeding it off. Other assignments include design sessions, role playing between contractors, architects, and owners, moving pictures of various trades at work, and discussions on bond issues and financing construction. There will be no segregation for the youngster who prefers to pound nails rather than design buildings or discuss financing. All of the components of construction, including the craftsmen, are treated with equal dignity and importance. This will be effective preparation for apprenticeship. But we have to reach youngsters in a meaningful way, earlier than junior high school.

The Connecticut State Building and Construction Trades Council is well on its way toward developing a cooperative work study program with the Commission on Higher Education of that State, which will enable some 60 male elementary school teachers to work annually for 8 to 10 weeks in the summer as construction workers at the same time they are attending a graduate level seminar for credit in the "World of Construction." For 5 days a week, the teacher will work under union conditions as a carpenter's helper plumber's helper, or heavy equipment oiler. On the sixth day, he will attend a 3- to 4-hour seminar on employment conditions peculiar to the construction industry. Hiring halls, apprentice programs, health, welfare, and pension programs, and the history of construction unions are proposed topics for discussion and related reading assignments. It is hoped that these teachers will be able to portray an accurate picture of the construction industry and its labor force, and the program will contribute to effective preparation for apprenticeship.

At a more general level, the Vocational Education Acts of 1963 and 1968 provide blueprints for improved preparation for apprenticeship. Unfortunately, legislative authorizations are not legislative appropriations. And history clearly demonstrates that money alone is no guarantee of quality

vocational education. Dr. Mangum's paper reveals that in 1967 there were 7 million vocational enrollments, split into 3.5 million in high school, 500,000 in vocational agriculture, 1.5 million in home economics, 1 million learning office skills, and 333,000 in trade and industry courses.⁴

We are already paying \$1 billion per year for vocational education. We have a lot of house cleaning to do before we can get a fair return on this investment—a fair return which will include effective preparation for apprenticeship for all of our potential building tradesmen. □

—FOOTNOTES—

¹ Garth L. Mangum, "Vocational Training: New Practices Needed?" *Vital Issues*, Vol. XIX, No. 4, p. 1.

² Alfred Drew, et al., *Educational and Training Adjustments in Selected Apprenticeable Trades* (Lafayette, Ind., Purdue University, 1969).

³ Edward R. Towers, et al., *The World of Construction* (Columbus, Ohio State University Research Foundation, 1968), 2nd ed.

⁴ Mangum, op. cit., p. 2.

A PLAN TO RESOLVE IMPASSES IN HOSPITAL BARGAINING

THEODORE W. KHEEL AND LEWIS B. KADEN

THE MOST PRESSING issues in hospital labor relations are first, the assurance of organizational rights in those areas where representational proceedings are not provided by law, and second, the design of procedures for resolving impasses. Like other workers, hospital employees seek greater participation and a larger voice in the determination of conditions of their work. For these workers, who are largely black, that quest for participation is part of the drive for racial equality and equal opportunity.

Once organization is achieved, the question is what form participation will take. There the dilemma is similar to that in other areas of public employment. Is there to be participation through joint determination, the process of collective bargaining which is dominant in the private sector of the economy, or is some form of third party determination to be imposed? Collective

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bargaining depends upon the possibility of a strike, since it is the prospect that service will be withheld if a settlement is not reached that injects urgency into the process and forces a decision. Withholding services or suspending operations if the terms offered or demanded are unacceptable is the logical as well as traditional method of supporting demands and counter-demands made at the bargaining table.

There are only two logical alternatives to collective bargaining: either the final determination is left to the employer's discretion or it is transferred to an outside party, through a process of third party determination, most commonly arbitration. Neither of these alternatives meets the demand for participation. It is the rare case where, the drive for organization won, employee satisfaction can result from mere consultation. And the difficulties of implementing compulsory arbitration as a method of setting contract terms in all cases has been proven by experience. Arbitration is inconsistent with the aim of placing more responsibility with the parties themselves. It may improperly place statutory decisionmaking responsibility in the hands of a third party. It is especially unworkable where the arbitrator is asked to resolve a variety of issues without any agreed upon standard, and that tends to become the rule where it is required. Regardless of how much data is given him, his judgment cannot adequately replace the decision of the parties who face and understand the pressures of the day-to-day activities. These are the tensions which can be effectively reflected in collective bargaining where the parties retain full control over the outcome of deliberations. If arbitration lies automatically at the end of the line, the result is predictably to stifle any collective consideration or bargaining. It is the flexibility induced by uncertainty that is a spur to resolution by the parties themselves.

Strike threat

In the private sector of the economy, collective bargaining has demonstrated its effectiveness as a method of dispute settlement. In public employment, it is gaining acceptance and improving its record for resolving disputes without a disruption of service. But true collective bargaining depends on the possibility of a strike, although not the certainty or even probability of it. Indeed, the probability is reduced, in our judgment, where

the possibility of a strike exists.

Nevertheless, in hospitals, whether public or private, the prospect of disrupted service may be uniformly unacceptable, especially where negotiations are conducted on a regional or citywide basis with a group of hospitals and many institutions may be affected at once. In practice, both public and private hospital employees tend to ignore strike prohibitions in order to achieve bargaining. For example, the provisions for compelling arbitration for New York voluntary institutions have never been invoked and have been generally ignored in negotiations between Local 1199 of the Retail, Wholesale, and Department Store Union and the hospitals. The problem,

Bargaining in public hospitals

Congressman Frank Thompson, Jr., of New Jersey commented on the Kheel-Kaden paper at the Industrial Relations Research Association meetings. Here is a portion of his statement:

As a result of the legislative policies and Labor Board decisions, the processes and procedures of collective bargaining are available for the resolution of labor-management disputes at private proprietary, profitmaking hospitals, but there are no orderly procedures for the ascertainment of majority union sentiment, for the adjustment of grievances, for the resolution of wage disputes in charitable or in public hospitals.

This does not make sense. If the processes of collective bargaining are useful to the peaceful resolution of labor disputes in private hospitals (which I think they are), why should not the same processes be made available to the resolution of labor disputes at public and at charitable hospitals? There is no constitutional barrier.

All hospitals are in interstate commerce and susceptible to the remedial powers of Congress. There is no question on this score. In 1966, Congress amended the Fair Labor Standards Act to make its minimum hourly wages applicable to hospitals and schools, "regardless of whether or not such hospital is public or private, operated for profit or not for profit." Over the objection of Maryland and 27 other States, the Supreme Court affirmed the constitutionality of this law in *Maryland v. Wirtz*.

If it is constitutional and wise for Congress to protect interstate commerce against strikes by a minimum wage at all hospitals, public or private, charitable or profitmaking, it is constitutional, and also wise, for Congress to seek the same objective by substituting at these institutions the peaceful processes of collective bargaining for the presently existing naked resorts to economic warfare.

then, is how to grant desired participation while preventing disruptions in service.

The situation is much the same whether we speak of voluntary or public hospitals. In each the workers are in the early stages of concerted efforts to improve conditions; the management is under increasing fiscal pressures to match inadequate revenue with spiraling costs for equipment, and materials as well as labor; the workers compete with other demands on limited revenues; the facility is conducted in a context of increasing public debate about reforms in finance and delivery of health services, and the potential of comprehensive and universal insurance schemes; and in each type of institution the sources of revenue are inflexible and substantially dependent on government payments or public assistance. When in July 1970 the city hospitals are transferred to a public corporation, under a board of city officials and public representatives, the administrative structure will closely resemble that of the nonprofit institutions. Thus it seems appropriate to consider the problems of labor relations in hospitals without distinguishing between public and voluntary institutions.

Major issues

The major issues are the same throughout hospital labor relations. First, questions of unit determination—whether supervisory personnel should be included in bargaining units; whether hospital bargaining should take place along functional or “craft” lines, or whether units should include broader groups of employees. Local 1199 has taken the position that separate groups representing different functions of manual, clerical, maintenance, and professional employees will initially establish their own identity and then proceed to joint bargaining with specialized committees setting forth their particular claims. In 1968 the hospitals grouped together for bargaining for the first time. Local 144, which represents most of the proprietary institutions, has preferred comprehensive units crossing functional lines. In the municipal hospitals, negotiations between District 37 and the city are conducted on a job title basis, with titles that apply to other departments as well as hospitals negotiated citywide. The result is substantial fragmentation of agreements, although an effort is being made to achieve greater coordination.

A second major issue in hospital bargaining is

that of wage differentials between workers of differing skills. As in any industrial union arrangement, the tensions between low and high skill employees is reflected in the issue of percentage or dollar increases. When, as is common in hospitals, the focus is initially on raising entry-level wages, the resulting narrowing produces pressure from the skilled people in subsequent negotiations.

Third, an important issue at the bargaining table is subcontracting. Hospitals faced with mounting costs look toward the possibility of savings through regionalized laundry and maintenance services or mechanized food preparation. Subcontracting can produce interunion conflict with nonhospital organizations. This was the result in 1962 when Flower Fifth Avenue Hospital attempted to subcontract dietary and house-keeping operations to an organization represented by the Hotel Service Employees, and Local 1199 set up pickets at the hospital gates.

The overriding issue in hospital labor relations remains the question of impasse resolution. If strikes are prohibited under all circumstances, as they are now for public and voluntary hospitals, collective bargaining is frustrated. If employees seek to achieve bargaining by raising the possibility of a strike, they threaten violations of law and bring into the arena the variety of penalties that are provided for such misconduct. The strike ban often becomes a challenge to the ingenuity of the workers—a challenge they appear capable of meeting. As the nurses demonstrated with their mass resignation, the mind of man (or woman) is more than a match for a statute that tries to dictate conduct indorsed as proper for some but deemed unacceptable for others. The result is law that is ignored and bargaining that exists in fact if not by statutory decree.

Bargaining to the fullest

It would be preferable to create a system that effectively resolves disputes, our primary objective, while granting participation. Such a system would encourage collective bargaining to the fullest extent possible, recognize the possibility of a strike, and protect the public against injury to health or safety through the flexible and discretionary use of an injunction for a limited period when all other procedures have failed. However, if in the hospital area, any prospect of a work stoppage is deemed unacceptable, then we suggest this plan to prevent

strikes while offering workers effective participation. It is a method of promoting collective bargaining to the fullest extent possible.

First, create a Board to Promote Collective Bargaining in hospitals and health services with the primary function of prompting joint decision-making by mutual agreement.

Second, designate this Board as the agent to decide when direct negotiations are no longer possible or productive and to determine what procedure should be followed as an alternative. If the Board does not believe the parties have exhausted the utility of negotiations, it would be able to insist on further meetings with mediation. If it decides that factfinding or recommendations are called for, it would have power to direct this procedure. No fixed procedure would be mandated in advance. The Board would have full flexibility to design procedures that met the particular situation.

Third, the Board should have authority to restrain a strike for a limited period, perhaps 20 days, to give it time to consider the next step to be taken.

Fourth, as a last resort, the Board would have power to submit a particular remaining issue or issues to arbitration. The Board would also frame the issue for the arbitrator. By holding this possibility in reserve, the process would have sufficient uncertainty to spur effective negotiations.

A Board to Promote Collective Bargaining would serve these purposes: (1) it would encourage direct negotiations to the fullest extent possible; (2) it would permit the submission of one issue or more to arbitration if that seemed appropriate, but the parties could not evade direct responsibility with any expectation that arbitration would be waiting at the end of the line; (3) it would carefully formulate the issue or issues for arbitration in order to avoid an unlawful delegation to a third party or the unnecessary submission of many minor issues because either or both of the parties are reluctant to assume the responsibility of decisionmaking.

Such a Board to Promote Collective Bargaining with a broad range of flexible reserve powers is a more workable method of resolving disputes than the procedures of the Taylor Law for public institutions or the mandated arbitration of the hospital labor relations amendment governing negotiations in voluntary institutions. It would bring the law into closer relation to the reality of hospital labor experience, and that is the indispensable

foundation for effective labor relations in the health service field. □

WORKER PARTICIPATION IN SWEDISH ENTERPRISE

RICHARD B. PETERSON

THERE are five principal levels of worker influence on managerial decisions or policy—no influence, providing information for the worker and his representatives, consultation, joint determination, and union initiation. The following analysis of these levels is based upon review of the Swedish Labor Court decisions, the Basic Agreement,¹ collaboration and collective agreements, interviews, and the responses to a questionnaire sent to 70 Swedish firms regarding managerial prerogatives.

There are a number of areas in which the worker and his union may have no influence on policy because of contractual concessions by the trade unions or legal (Labor Court) backing of the employer position such as article 23 (32).² However, from interviews with both union and employer officials, it appears that present day employers will rarely establish employee relations policy arbitrarily, without some participation of workers or local trade union leaders, or both. In terms of legal rights, the employer basically has the right to hire, transfer, and promote workers, to subcontract work, and to determine new production methods without consultation or acceptance by the trade union.

In some situations, providing information or notification to workers is required of the employer. The basic agreement has for years required such notification to the union concerning layoffs and dismissals. Under the original agreement, a notice of so many days was provided prior to the dismissal or layoff of workers with at least 9 months' service (with some specific exceptions). The notice would provide opportunity for an appeal if the dismissal or layoff was considered unfair. The employer was also required to state the reason

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for the dismissal. A mechanism for appealing seemingly unjust dismissals was provided by the creation of the Labor Market Council. Later amendments to the Basic Agreement required notification to the trade union or works council of plans for reemployment of laid-off workers.

The Works Council Agreement³ has also spelled out certain requirements regarding information about the firm. For example, the employer is obligated to disseminate and discuss with the works council economic, technical, and financial data about the firm such as its balance sheets, profit and loss statements, administrative reports, and auditors' reports. If this information is not legally required to be made public or is injurious to the firm, the firm is excused from furnishing it. However, the 1966 amendments encourage the firms to be as open as possible about their economic situation in the work council meetings.

Several important changes relative to the dissemination of information to the works councils resulted from the 1966 negotiations. These changes required further information on certain economic matters concerning the firm; information concerning the recruitment, selection, and promotion policies of the firm; consultation with the works council sufficiently in advance of decision by the firm's board of directors so it would have some effect on that decision; and the establishment of a joint Development Council on Collaboration to supervise research and evaluation on the works councils system.

Consultation and social duty

There are few situations in which the employer is obligated to consult with the workers' organizations. This obligation is confined largely to the problems of workers' job security.

Although required only in limited areas, consultation is a common practice in Swedish collective bargaining. The employer has the final say, but certain forces acting upon him make consultation advisable. The primary forces are the employer's sense of social obligation, full employment economy, the employer's sense of responsible bargaining, and political considerations.

It is generally agreed that, on the whole, Swedish employers recognize obligations to their employees as well as to society at large. Though the law favors the employer regarding managerial rights, such rights are used with discretion. For

instance, though a Swedish employer could move his plant to get away from a troublesome union situation, few employers would choose to do so because of their sense of responsibility to their workers and the community. Another example is the treatment of a worker who, because of age, is no longer able to perform his normal work satisfactorily. Approximately one half of the employers' replies to the questionnaire showed that the employer would not dismiss the worker even though it would be within his right to do so. Typically, the employer would reassign the worker to functions which he could perform.

The full employment labor market has acted as another restraining force on unilateral action by the employer. The unemployment rate has averaged approximately 1.5 percent over the last 10 to 15 years. Facing the difficulty of finding competent workers, the employer will use the club⁴ chairman or the works council as a sounding board for a proposed policy so as not to antagonize his employees.

Most Swedish employers have accepted the need for quid pro quo in dealing with the trade union organization. The very success of the Swedish industrial relations system is explained largely in terms of responsible bargaining by both sides.

Finally, politics is an important factor behind the Swedish management's discretion in decision-making. The employers are aware of the fact that the Confederation of Swedish Trade Unions might use the ruling Social Democratic (Labor) Party as a legislative vehicle toward greater worker participation if the employers are obstinate in considering legitimate changes.

Joint determination is the next stage of workers' influence in Swedish management. There are a number of illustrations of bilateral determination. The 1964 amendments to the Basic Agreement provided for an arbitration role for the Labor Market Council in considering appeals of personal dismissals. Because the union and management are equally represented on the council, joint determination exists.

The evolutionary nature of the Works Council Agreement has allowed more worker influence in the management deliberations as well. For example, the 1966 changes prescribed some additional responsibilities for the works councils. Now the councils may exercise the power not only to determine the value of a production

suggestion but also the amount of the award. A further illustration of joint determination is that the works council may allocate employee service funds within the prescribed budget.

The collective agreements contain a few requirements for joint determination. The hours within which the employer can schedule his workers is established by contract. Should the employer wish to revise these frame hours he must renegotiate.

Generally speaking, unilateral decisionmaking by the worker and his trade union is rare in Swedish collective bargaining. This may happen where the employer does not choose to exercise his options and thereby, through inaction, the worker plays the dominant role in the decision. One good illustration is the planning of vacation schedules and overtime assignments. Though the employer has the right to direct such activities, interviews brought out that, due to the fear of losing good workers, Swedish managers do not enforce assignments of overtime work or vacation schedules during certain times of the year. Finally, regarding the hiring of foreign workers, such workers are unable to receive labor permits to work in Swedish firms unless the request is approved by the local and national trade union organizations. In this way the workers' organization can limit the number and skill categories of foreign workers.

In conclusion, some generalizations can be made concerning worker participation in Swedish management. First, worker influence is largely found in decisions concerning employee relations. There is no evidence that the worker or his trade union plays a direct role in decisions concerning marketing, production, or financial matters. Second, worker influence is more likely to consist of receiving prior notification or being consulted by management rather than as a joint decision-maker. Finally, worker participation in Sweden may be considered evolutionary in the sense that workers have a larger role today than has been true in the past. Bilateral relationships (not necessarily joint determination) are more evident than is commonly assumed.

A glimpse of the future

The Confederation of Swedish Trade Unions has not yet taken a clear position on the future of worker participation. For instance, a 1961 report of the Confederation envisioned the future

codetermination as some type of corporate management system. A corporate cadre would administer "the common property of society" under this arrangement. The leadership would be responsible both to the employee and the consumer.

As for the Development Council For Collaboration, in June of 1969, it released a report outlining future activities regarding industrial democracy. The council has been quite interested in experiments in industrial democracy in Norwegian state-owned establishments, and its report placed major emphasis on designing and evaluating experiments with self-governing groups in Swedish industries. The report encouraged a number of experiments at different corporate levels, with different degrees of worker influence, and recommended that such experiments deal with worker participation in decisions concerning work practices and organization of work; formulation of personnel policies; consultation with management concerning selection of supervisors, personnel officers, work study engineers, and other executives who have a great influence upon the social and psychological climate of the work place; and improved communications between workers and management, including worker representation on the company board of directors. □

—FOOTNOTES—

¹ The "Basic Agreement" was concluded in 1938 by the Swedish Employer's Confederation (SAF), by far the largest employer organization in Sweden, the Confederation of Swedish Trade Unions (LO), and the Central Organization of Salaried Employees (TCO). The agreement provided the framework for supplementary agreements covering such issues as safety, vocational training, works councils, work study, and female labor.

² Article 23(32) of the Constitution of Swedish Employers' Confederation asserts the employers' rights to hire, dismiss, and direct the work force. In 1906, the trade unions agreed to respect this provision in return for labor's right of association. The managerial rights have been consistently upheld by the Swedish Labor Court.

³ The Swedish works council system was created by the Works Council Agreement for the purpose of mutual discussion and exchange of information on production and industrial safety. The works council system operates alongside the factory union organization, but independently of it. For more information on this subject, see Richard B. Peterson, "Swedish Experience With Industrial Democracy," *British Journal of Industrial Relations*, July 1968, pp. 185-203.

⁴ Factory clubs have responsibilities for grievance handling on the factory level. They are outposts of trade unions.

IMPACT OF SCHOOL DECENTRALIZATION ON COLLECTIVE BARGAINING

MICHAEL H. MOSKOW AND KENNETH McLENNAN

THE PRECISE IMPACT of school decentralization on teacher bargaining in urban school systems will depend on the nature of the particular decentralization plan.¹ However, all decentralization proposals which in effect change the environment in which a teacher organization operates are bound to encounter initial resistance. Teacher organizations are concerned with consolidating present gains as well as improving conditions of employment. Issues involving job security become crucial during the introduction of the decentralization plan. Urban teachers feel that there is a shortage of desirable job opportunities within the school system and, consequently, issues concerning seniority, hiring, assignment, and transfer must be discussed with teacher representatives, and the detailed provisions must be specified in the decentralization plan. Failure to do this will inevitably lead to labor conflict in urban education.

This prediction is supported by experience in the Ocean Hill-Brownsville school district of New York City and by recent research studies. A survey² of teachers' attitudes towards decentralization suggests that teachers overwhelmingly prefer their organization to be involved in the decisionmaking process on personnel policy issues. In most cases, they favored systemwide negotiations on these issues. On decisions covering some educational policy topics, there was substantial support for decentralizing to the district (community) level. But an overwhelming proportion (80 percent) of teachers in the system studied indicated that, if the system were decentralized, they would prefer salary and fringe benefits for all teachers in the system to be negotiated at the central rather than the local level. Central, systemwide bargaining was also preferred, though not to the same degree, for job security issues, such as transfers among local community districts, hiring, dismissal, and criteria for promotion.

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It appears that most teachers are willing to negotiate issues of policy on the instructional program at the local community level. For example, the proportion of respondents favoring central level negotiations was only 32 percent for class size, 41 percent for course content, 24 percent for textbook selection, and 20 percent for teacher aide selection. The tendency toward preference for negotiation on these issues at the local level probably reflects current dissatisfaction with the educational bureaucracy in urban school systems, and support for the idea of community participation in professional policy issues.

From research findings it seems likely that the most difficult issues created by decentralization will stem from the community's demand for control over personnel and budget allocation within the district. Teacher organizations will reflect their members' resistance to this type of community control. Their strategy most likely will be strong political pressure to prevent any decentralization plan from giving this power to the local community and, where this authority is decentralized, an attempt to negotiate uniform personnel provisions among the local district.

Structure of negotiations

The structure of collective bargaining is largely influenced by the legal bargaining unit. In urban educational systems, bargaining units are systemwide. They exclude nonteaching personnel and administrators, the rationale being that there is no community of interest between teachers and nonteaching personnel.

The introduction of a decentralization plan will not affect the teacher organization's legal responsibility to act as bargaining agent for all teachers in the city. Reorganization of the bargaining structure, however, will become an administrative necessity. The extent and nature of the reorganization will depend on the new locus of decisions regarding personnel and educational policy.

If salaries and working conditions as well as educational policy matters are decided at the district board level, the bargaining structure will tend to be decentralized. The leadership of the teachers' organization along with teachers' representatives from each district will negotiate separate contracts with each district in the system. Under this type of decentralization plan, there is greater possibility that, in the future, bargaining

units may be separated according to district demarcation. On the other hand, if only a limited number of decisions are delegated to the district boards, the structure of negotiation will remain fairly centralized, with a single uniform contract covering all districts.

Most of the decentralization plans so far proposed anticipate basic salary and working conditions to be decided at the central level, with selected personnel and educational policy topics (such as selection of teachers, tenure, curriculum, and textbook selection) decided at the local level. It is therefore likely that the bargaining structure will become somewhat more decentralized than at present. It may become analogous to the master agreement-local agreement arrangement in industry-wide bargaining in the private sector.

Teacher supply and salaries

Among the problems requiring adjustment as a result of decentralization will be the supply of teachers. Any situation which creates stress and conflict among the faculty will make it more difficult to hire teachers. Increased community participation in educational policy will, at least in the short run, result in some conflict between teachers, the school board, and the community. Since some teachers avoid disputes over such issues as curriculum, qualifications for teaching black history, and qualifications for school principals, the teachers at first will be in short supply. This is expected to occur in all local districts within the system, though in some districts community support for the goals advocated by teachers may actually attract teachers.

Social and economic differences between the residential areas where teachers live and the location of schools is one reason for different supply curves in local school districts within the system. As previously indicated, central cities are becoming increasingly black, and recent population surveys suggest that an increasing number of city census tracts are becoming racially segregated. In addition, comparisons between the central city, the rest of the city, and the suburbs indicate that the incidence of crime, unemployment, households headed by women, and poverty are not randomly distributed throughout the metropolitan area. Consequently, it has become difficult to attract teachers to schools located in areas with poor socioeconomic environments.

Economic theory suggests wage differentials as a means of allocating teachers among local districts in a system. For example, assume that one local district is located in the lower income central city and contains a large ghetto, while the other district is located in a middle-income residential area of the city. The teacher availability will be different for each district because the two districts differ in access to middle-income residential areas (where teachers are likely to live), in recorded crime rates, and in intellectual quality of entering students. At the prevalent wage rate, the ghetto district will be short of certified teachers and the central school system will have to "assign" more teachers to the ghetto district. It is, of course, possible that some teachers will not accept the assignment and will take jobs in suburban districts or find some other type of employment. The ghetto district is faced with two possibilities. It must either raise its wage rate or adjust its entry standards by accepting teachers who have not met the certification requirements. If the central school board sets the uniform salary schedule, the ghetto district must lower its entry standards.

The lack of salary differentials between the two districts will result in a lower quality of teachers in the ghetto district. This will occur because teachers with least seniority will usually be "assigned" to the ghetto school, and it is assumed that teaching ability increases with teaching experience; certified teachers are superior to noncertified teachers, assuming that certification standards are valid criteria for entry into the profession; and, even if seniority and certification are neutral in their effect on quality of teaching, the ghetto district has fewer teachers from which to select. Consequently, it will not have the advantage of applying any selection criteria.

Salary differences among local districts (and perhaps within districts) have much merit since they provide for an efficient allocation of manpower within the entire school system. It is, of course, difficult to predict the size of the differential necessary to attract teachers to the ghetto area local district. Over one-third of the respondents in the survey indicated salary differentials would not motivate them to teach in a ghetto school. When asked what differential would be necessary to get teachers to move to a ghetto school, most said that if a differential were to be effective, it would have

to be substantial (over 10 percent) before teachers would voluntarily move to a ghetto area school. The relatively higher birth rates among residents of the central city and the socioeconomic problems in ghetto areas are likely to increase the importance of the allocation of teachers as a topic in collective bargaining.

Under most decentralization plans it is unlikely that local districts will be responsible for negotiating basic salary schedules. As already indicated, teachers overwhelmingly favor salary determination at the central level. It is also obvious that leaders of teachers' organizations will strongly resist any attempt to have this issue negotiated by district boards. Nevertheless, it is possible that some degree of salary flexibility (as opposed to adjustments in qualification requirements) will emerge if the master agreement—local agreement model—for bargaining is established. One possibility would be for the master agreement to set the basic salary level and local districts would be free to negotiate differentials above this basic level. It is more likely, however, that interdistrict differ-

entials can be achieved through the master local agreement method by having extra pay features, such as longer preparation periods, smaller class size, or greater opportunities to teach summer school or to tutor students, included in the local negotiations. The introduction of differentials, no matter what method is used, is preferable to adjusting the entry requirements. □

—FOOTNOTES—

¹ In this paper, the term "school decentralization" means transfer of decisionmaking power from citywide school boards and administrators to lower levels of policy making and administration of the school system. It is not merely administrative decentralization, however, for implicit in this delegation of power is greater community control by lay persons residing in the local areas in which the schools are located.

² See Michael H. Moskow and Kenneth McLennan, "Teacher Negotiations and School Decentralization," in Henry Levin (ed.), *Community Control of Schools* (Washington, The Brookings Institution, 1970).

Situation report on California Indians

A recent report on *California Indian Health Status* notes that of all ethnic groups in the State, American Indians have the highest unemployment rate. Typically, the Indian worker is unskilled or semiskilled, and work when available is seasonal or intermittent.

The Indian's life span is short (42 years, compared with 62 years for all Californians) and the rate of death due to accident is more than 3 times the overall California rate. Indians are comparatively few in California, but nevertheless make up the State's fastest-growing minority, more than doubling in number in each of the past two decades.

These last 20 years have also seen a decided shift from rural to urban living. In 1950, 26 percent of California's Indians lived in cities and towns; in 1960, 53 percent; and today, probably 65 percent. The Indians in California cities (mostly in Los Angeles, San Francisco, Oakland, and San Jose) are, in the main, relocated from reservations in other States. They move to California at the rate of 6,000 to 10,000 a year, either on their own or under relocation programs for jobs or training. As many as one-third probably return to their reservations after a brief stay.

Single copies of the report are available without charge from the California State Department of Public Health, 2121 Berkeley Way, Berkeley, Calif. 94704.

Research Summaries



WAGES OF NONTEACHING EMPLOYEES IN EDUCATIONAL INSTITUTIONS

CHARLES M. O'CONNOR

STRAIGHT-TIME EARNINGS of the 2.2 million non-supervisory nonteaching employees in educational institutions averaged \$2.24 an hour in March 1969, up 1.8 percent since October 1968, according to a Bureau of Labor Statistics survey.¹ During this period, earnings levels rose 2.8 percent in the South, 1.8 percent in the North Central region, and less than 1 percent in the Northeast and West. Part of the rise in earnings was due to an increase in the Federal minimum wage for newly covered nonfarm workers, including certain employees in educational institutions. The minimum wage for these employees was raised from \$1.15 to \$1.30 an hour on February 1, 1969.

Average hourly earnings for employees in March 1969 ranged from \$1.84 in the South to \$2.54 in the West. Within each region, employees in metropolitan areas averaged more than those in smaller communities by amounts ranging from 26 cents an hour in the South to 53 cents in the West.

Employees in public schools averaged 34 cents an hour more than those in private schools in the North Central region and 41 cents more in the West. (See table 1.) In the Northeast and South, averages for the two types of schools were only a few cents apart. Public schools accounted for nearly two-thirds of the employees in colleges and universities and for more than nine-tenths of those in elementary and secondary schools.

Employees in elementary and secondary schools,

three-fifths of the workers covered by the survey, averaged \$2.26 an hour—6 cents more than those in colleges and universities. Averages were higher in elementary and secondary schools than in colleges and universities in the North Central region (\$2.38 and \$2.19) and the West (\$2.61 and \$2.42), and about the same in the South (\$1.83 and \$1.87) and Northeast (\$2.45 and \$2.46).

Earnings of more than nine-tenths of the employees were within a range of \$1.30 to \$3.50 an hour in March 1969. The middle half of the employees in the array earned from \$1.45 to \$2.51. Proportions of workers at or near the Federal minimum wage, earning \$1.30 but less than \$1.35 an hour, were three-tenths in the South, nearly one-eighth in the North Central region, and less than one-tenth in the Northeast and West. In each region, the proportions of workers in the \$1.30–\$1.35 interval were larger in nonmetropolitan than in metropolitan areas, larger in private than in public schools, and larger in colleges and universities than in elementary and secondary schools.

Five occupational groups, accounting for slightly more than seven-tenths of the employees covered by the survey, were studied separately. In March 1969, the number and average hourly earnings of workers in these five groups were:

Occupational group	Number (in thousands)	Average hourly earnings
Food service employees.....	419.3	\$1.68
Custodial employees.....	423.7	2.28
Office clerical employees.....	522.3	2.37
Busdrivers.....	145.8	2.62
Skilled maintenance employees.....	74.9	3.44

Since October 1968, average earnings rose slightly more than 3 percent for food service employees and 1½ percent or less for the other occupational groups.

School employees averaged 27 hours of work a week in March 1969. The average was nearly 19 hours a week for busdrivers, compared with 26 hours for food service employees, 31 hours for

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Table 1. Number and average hourly earnings of non-supervisory nonteaching employees in educational institutions, March 1969

Region	Number (in thousands)			Average hourly earnings		
	All schools	Public schools	Private schools	All schools	Public schools	Private schools
United States.....	2,181.1	1,790.9	390.2	\$2.24	\$2.25	\$2.16
Northeast.....	470.9	330.5	140.5	2.45	2.46	2.44
South.....	668.0	566.1	101.8	1.84	1.84	1.87
North Central.....	632.0	532.0	100.1	2.30	2.35	2.01
West.....	410.2	362.3	47.8	2.54	2.58	2.17

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

office clerical employees, 35 hours for custodial employees, and 40 hours for skilled maintenance employees.

The survey also developed information on the incidence of selected supplementary wage benefits and the extent of labor-management contract coverage for each of the occupational groups, except busdrivers. Educational institutions having labor-management contracts covering a majority of their custodial, food service, office clerical, and skilled maintenance employees accounted for less than three-tenths of the workers in each group.

Paid holidays were provided to slightly more than three-fifths of the food service employees and nine-tenths or more of the office clerical, custodial, and skilled maintenance employees. The number of paid holidays provided annually varied substantially within each group; most common provisions were for 8 to 11 days a year, except for food service employees who were usually granted fewer paid holidays.

Paid vacations, after qualifying periods of service, were provided to seven-eighths or more of the office, custodial, and skilled maintenance employees and one-third of the food service employees. Typical provisions were at least 2 weeks of vacation pay after 1 year of service and 3 weeks or more after 10 years.

Paid sick leave, nearly always at full pay with no waiting period, was provided to a large majority of the employees in the four groups. Except for food service workers, a majority of the employees were provided at least part of the cost of hospitalization, surgical, medical, and catastrophe (major medical) insurance. Retirement pension benefits, other than social security, applied to a majority of the employees in the four groups.

The survey covered all public and private elementary and secondary schools, colleges, univer-

sities, professional schools, junior colleges, and their separate auxiliary units. Excluded from the survey were federally owned and operated schools; university and college hospitals; correspondence schools; vocational schools (except vocational high schools); other nondegree granting schools; and all schools in Alaska and Hawaii. Earnings information developed by the survey included shift differential pay, but excluded premium pay for overtime and for work on weekends and holidays, as well as the value of room and board or other perquisites that may have been provided. Supplementary benefits were treated statistically on the basis that if formal provisions in a school were applicable to one-half or more of the workers regularly employed in an occupational group (e.g., food service, custodial) the benefits were considered applicable to all workers in the group. Similarly, if fewer than one-half of the workers were covered, the benefits were considered nonexistent. The full report on the survey is expected to be issued early this summer. □

—FOOTNOTE—

¹ Nonsupervisory nonteaching employees, for purposes of this survey, include all school employees engaged in nonsupervisory noninstructional functions. Excluded were members of religious orders, teachers and other professional personnel (except registered nurses), and administrative, executive, and technical employees. For ease in reading in subsequent paragraphs, workers covered by the survey are referred to simply as "employees."

IMPASSE, GRIEVANCE, AND ARBITRATION IN FEDERAL COLLECTIVE BARGAINING

RONALD W. GLASS

A NEW Bureau of Labor Statistics study took on special timeliness when Executive Order 11491 was issued October 29, 1969. The Order, "Labor-Management Relations in the Federal Service," introduced a number of significant changes in existing procedures for the settlement of employee grievances and negotiation impasses. Principal among these were permission to negotiate binding arbitration of grievances subject only to limited

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appeal rights (which could replace present advisory arrangements); the right of the parties to replace the present dual grievance system (consisting of that negotiated by the parties and that unilaterally established by the agency) with a single negotiated procedure; greater reliance on the Federal Mediation and Conciliation Service in resolving stalemated negotiations; and the creation of a Federal Services Impasses Panel, which will take final resolution of seemingly insoluble negotiation impasses away from the agency involved and place them with a neutral third party.

The new BLS study, based on Federal contracts in effect in 1967 and negotiated under Executive Order 10988, offers Federal union and management negotiators an opportunity to review grievance, arbitration, and impasse resolution provisions now in effect. Experiences under the old Order will be of interest in future negotiations and will serve as a benchmark against which changes in these procedures may be measured. Illustrative clauses are used extensively throughout *Negotiation Impasse, Grievance, and Arbitration in Federal Agreements*, the forthcoming BLS bulletin which provides the results of the study.

The study includes 685 Federal agreements, covering nearly 1 million employees in 25 Federal departments and agencies. In total, 64 labor or-

ganizations had negotiated contracts. Excluding the National Postal Agreement,¹ eight unions accounted for over three-quarters of the agreements and about 84 percent of the employees in the study. Over half the employees were in units which covered both classification act and wage board workers. The size of bargaining units ranged from as low as eight workers in the Tariff Commission to well over 1,000 in each of several agreements. The latter accounted for over three-fifths of all workers in the study, excluding the National Postal Agreement.

About 47 percent of the agreements studied contained one impasse resolution procedure or more. (See table 1.) Most frequently (in 201 agreements), these involved the referral of stalemated talks to higher agency officials for final resolution. Almost as often (in 187 agreements), factfinding committees were utilized to sharpen the issues in dispute. The findings, in some cases, were referred back to the stalemated parties, and in others to the final decision level in the agency. Mediation arrangements could be employed under provisions negotiated in 76 agreements.

Over half the agreements studied, covering almost two-thirds of the employees, contained negotiated grievance procedures. These covered a

Table 1. Impasse resolution, grievance procedures and advisory arbitration in Federal collective bargaining agreements, 1967¹

Agency	Total studied		Impasse resolution procedures		Negotiated grievance procedures		Advisory arbitration arrangements	
	Agreements	Employees	Agreements	Employees	Agreements	Employees	Agreements	Employees
Total.....	684	375,485	321	154,810	380	245,863	266	194,670
Agriculture.....	14	6,206	9	5,421	6	5,073	3	3,806
Commerce.....	10	2,309	5	259	7	1,810	5	506
Defense.....	6	2,766	3	563	5	2,565	4	2,344
Air Force.....	49	38,922	15	20,835	12	5,741	11	5,641
Army.....	110	53,931	39	24,952	53	31,849	42	25,845
Navy.....	181	140,739	5	3,568	127	127,321	100	114,576
Health, Education and Welfare.....	24	19,569	15	7,646	4	1,412	2	1,283
Interior.....	45	4,148	45	4,148	45	4,148	45	4,148
Justice.....	17	2,460	17	2,460	8	1,160	5	778
Labor.....	2	9,035	1	3,835	1	3,835	1	3,835
Transportation.....	34	4,387	2	191	30	4,130	12	2,141
Treasury.....	9	3,054	2	1,490	4	410	4	410
Atomic Energy Commission.....	7	397	3	77	-----	-----	-----	-----
Civil Service Commission.....	1	98	1	98	-----	-----	-----	-----
General Services Administration.....	47	5,240	46	5,223	8	670	6	534
Interstate Commerce Commission.....	1	19	-----	-----	-----	-----	-----	-----
National Aeronautics and Space Administration.....	5	5,484	-----	-----	5	5,484	3	509
National Labor Relations Board.....	5	1,529	-----	-----	5	1,529	2	1,260
Railroad Retirement Board.....	1	1,612	1	1,612	1	1,612	-----	-----
Small Business Administration.....	1	28	1	28	-----	-----	-----	-----
Smithsonian Institution.....	3	435	2	200	3	435	1	235
Tariff Commission.....	1	8	-----	-----	1	8	-----	-----
Tennessee Valley Authority.....	3	17,978	3	17,978	3	17,978	3	17,978
Veterans Administration.....	108	55,401	106	54,226	52	28,693	17	8,641

¹ Excludes the National Postal Agreement which covers 608,833.

variety of matters, including the rights of employees to select either the negotiated or agency procedures to process their complaints, the union's role in grievance processing, the scope of the grievance procedure and its steps, and the utilization of factfinding.

Seventy percent of the negotiated grievance procedures contained advisory arbitration arrangements; these applied to 4 of every 5 employees covered by negotiated grievance procedures. Included in these provisions were details on how the parties to a dispute could initiate advisory arbitration and how the arbitrator is to be selected. Other matters referred to are time limits for arbitrators to reach their opinions and cost-sharing arrangements.

In a separate section of the study, the issue of official time off for grievance preparation, grievance processing, and arbitration is discussed. Appendixes include a reproduction of procedures in the National Postal Agreement, a selection of advisory arbitration decisions, and the text of Executive Order 11491. □

—FOOTNOTE—

¹ Because of its size, the National Postal Agreement, which covers over 600,000 employees, is discussed separately.

HOW TO MEASURE THE EMPLOYMENT THAT RESULTS FROM TOURISM

EDWARD T. O'DONNELL

THE UBIQUITOUS TOURIST—a highly visible variety of invisible export—is increasingly recognized as an asset to the economy. Tourism's influence upon State and regional economies has been much studied. Government agencies and private economists have published volumes treating with the industry's contributions to State and local income. This literature typically devotes itself to types and optimal locations of facilities, traveler destinations and points of origin, composition of vacation parties, duration of visits to attractions, and patterns of tourist expenditures.

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Excellent and informative as these studies may be, they do not tell the full story. Systematic inquiry into measurement of employment directly generated by tourist travel has been lacking. Particularly noticeable is the dearth of information on the volume of tourist-based employment and payrolls that would permit measurement of changes over time or between States and areas.

Recognizing the need for such data, a special legislative commission on recreation and tourist travel in the Commonwealth of Massachusetts requested the Boston regional office of the Bureau of Labor Statistics to report on the direct generation of private employment by the vacation travel industry. (A tourist, for purposes of this study, was defined as a traveler for pleasure away from home at least one night.)

The Commission stipulated that only statistical material already available be used. Fortunately, much of the material necessary in preparing monthly current employment estimates under the cooperative State-Federal program was well adapted to the purposes of the Commission study. This was especially true of the quarterly summary tabulation (form ES-202) by the Massachusetts Division of Employment Security, by industry and county, of employment covered under provisions of the unemployment compensation law. These data were supplemented by the Passenger Transportation Study of 1963, the Census of Business of 1963, standard statistical reference books, trade and industrial association fact books, and private and governmental studies of patterns of tourist expenditures in Massachusetts and elsewhere.

Identifying tourist industries

Before the regional office began the project, three private consultants to the commission had identified 49 Standard Industrial Classification (SIC) three-digit industries as embodying the recreation and vacation travel industry. Review permitted BLS to pare this list, first to the 20 largest industries (accounting for 95 percent of employment) and then to the 10 that contributed practically all of the seasonal swing between February and August. These 2 months had been established by study of travel data as the low and high months of tourist mileage in Massachusetts. The 10 markedly seasonal industries were:

<i>SIC Code</i>	<i>Industry</i>
581.....	Eating and drinking places.
701.....	Hotels, tourist courts, motels.
554.....	Gasoline service stations.
794.....	Sports promotion, amusements, recreational services.
599.....	Retail stores, not elsewhere classified.
783.....	Motion picture theaters.
793.....	Theatrical producers, bands, and entertainers.
702.....	Rooming and boarding houses.
721.....	Laundries.
703.....	Trailer parks and camps.

Employment trends in each of these industries were charted and reviewed to assess, for each county, the proportion of jobs stemming directly from the needs of tourists.

Similar determinations were required for all industries in Cape Cod, Nantucket, and Martha's Vineyard, since in these locations the effect of the seasonal influx of vacationists was felt throughout the entire employment structure.

The thorniest difficulty of the exercise lay in determining tourist-generated jobs in industries or establishments not covered by unemployment compensation laws, and therefore not included in the basic ES-202. County and industry statistics in the selected services and retail trade volumes of the Census of Business, 1963, were most helpful in working around this puzzle. These, together with the tabulations of covered employment, permitted estimates (admittedly tentative) of the number of noncovered establishments together with inferences concerning their average employment. Although these secondary data were helpful, a truly satisfactory solution to the problem of noncovered employment is unlikely without adequate sample surveys of noncovered firms.

Estimates of weekly earnings were based on the summary reports of payrolls in covered industries. These, available in quarterly aggregates on form ES-202, were adjusted to weekly equivalents that were then related to estimated employment in each industry. Comparison with wage earnings data prepared elsewhere suggests that weekly earnings so derived may serve where moderate precision is sufficient.

Since Census data and special county tabulations of covered employment were available for 1963 and 1964, the research centered on those years. Results were moved by link-relatives to provide coverage from 1958 through 1967.

One of the prime purposes of the project was the development of a low-cost system for current estimates. After some testing, trend projection was accepted as a feasible approach. Advance estimates for 1967, 1968, and 1969, when compared

with actual covered employment reported later, possessed precision generally sufficient for each separate industry—and rather surprisingly high precision for all industries in combination—particularly during the summer months when tourism is at its maximum.

Adaptability to other States

This approach to measurement of tourist-generated employment is adaptable to other States. The necessary statistics are available—U.S. Census publications, for example, and the indispensable tabulations of covered employment prepared by State employment security agencies. Coded according to the Standard Industrial Classification by coders working to generally uniform instructions, these are definitionally consistent and highly comparable between States. Results based upon them could readily be combined into regional totals.

Tests of New England States apart from Massachusetts showed that in the benchmark year 1964, each State's 10 most volatile industries enrolled at least 95 percent of all covered employment in tourism's 49 component industries. In four States, the 10 accounted for 95 percent or more of the February–August seasonal rise, while in Vermont—where winter recreation was most highly developed—the volatile 10 provided 92.9 percent of the upward movement.

Moreover, State-to-State similarities were marked in the composition and seasonal patterns of the 10 volatile industries, suggesting the possibility of sharing costs of direct survey of components of the troublesome noncovered sector. Separate surveys of every industry by adjacent States seems needlessly expensive. If what is true of a set of seasonal industries in one State is equally true in adjoining ones, why not divide the burdens and pool the resulting data?

In time, an interstate exchange of information on employment could evolve, based upon statistics already in existence supplemented by limited direct surveys, with cost spread among the States.

Massachusetts tourism in 1969

Highlighting the Massachusetts study was the fact that, at the peak of the 1969 summer vacation season, over 59,000 workers (other than govern-

ment) were employed in direct service to tourists. Tourism's 1969 summer jobs outnumbered 1968's by more than 2,200 and 1960's by 13,000, a 29-percent advance compared with a 15-percent gain in all nonagricultural employment during the same period.

At 1969's midsummer crest, tourism directly generated more jobs than all but 2 of the 19 two-digit SIC categories into which statisticians divide factory employment. Only machinery production and the fabrication of electrical and electronic equipment employed more workers than tourist vacation travel at its seasonal peak.

Payrolls, exclusive of tips and gratuities, approached \$4 million a week during July and August. Much of this money went to student workers of limited experience, many of them earning money for school expenses.

Massachusetts' vacation travel industry in 1969 employed 41,300 more workers at its August peak than at its February low of about 15,700. The benefits of the industry's midsummer rise are unevenly distributed among counties. In the counties of Barnstable (Cape Cod), Nantucket, and Dukes (Martha's Vineyard), the effect upon total employment is extreme. In other counties, the effect is considerable but less weighty.

The detailed study, *An Essay on Method of Measurement of Employment Directly Generated by Tourism in Massachusetts, 1958-1967*, is available from the Clearinghouse for Federal Scientific and Technical Information, U.S. Department of Commerce, Springfield, Va. 22151, for \$3 a copy (65 cents microfiche). Reference should be made to Accession No. PB-185982. □

WHITE-COLLAR PAY IN PRIVATE INDUSTRY

WILLIAM M. SMITH

SALARIES of white-collar workers in the private sector rose almost 6 percent during the year ending in June 1969, marking the largest annual increase since 1961, when the Bureau of Labor Statistics began its yearly studies of these workers'

pay. Continuing the trend noted since the beginning of the series, average salaries generally increased at higher rates for professional and administrative employees than for the others. These gains ranged from 3 to 9 percent for most of the professional and administrative levels surveyed, and from 4.5 to 7 percent for clerical and most of the technical support levels.¹

A wide dispersion of salaries was reported within each of the 78 job levels studied, with salaries of the highest paid employees at least twice those of the lowest paid in almost all the levels. There was also a substantial overlapping of individual salaries between work levels of the same occupations, largely because of different pay practices among the establishments.

These were among the findings of the latest BLS survey, summarized in table 1.

Salary trends

The accompanying chart shows changes that occurred in salaries between 1961 and 1969 for four selected employee groups. Salary indexes for each of the groups have been plotted on a ratio scale, starting from a base of 100 for 1961.

The largest increases over the 8-year period were for the beginning and developmental professional and administrative occupational group (43.4 percent), and the experienced professional and administrative group (39.0). The clerical and technical support groups showed practically identical lower increases (32.4 and 32.5 percent, respectively). The chart also shows the accelerating rate of increase in salaries for all four employee groups. The 1968-69 increases were the largest for each group for any annual period since the survey's inception. Increases in average salaries between June 1968 and June 1969 for the beginning and developmental professional and administrative employee group were 7.2 percent. They reflected the tight labor market that existed during the period and increased competition among employers in bidding for the services of recent college graduates. Increases for the other three groups were between 5.4 and 5.9 percent. An effect of the larger increase for the beginning and developmental professional and administrative group was a narrowing of salary differentials between beginning and experienced professional and administrative workers, and a compression of salary ranges within occupations.

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Using data from the past surveys, the Bureau, for the first time, has constructed an index² of white-collar salaries:

Year	Index (1961=100)
1969.....	135.5
1968.....	128.2
1967.....	121.6
1966.....	116.4
1965.....	112.7
1964.....	109.3
1963.....	106.0
1962.....	102.9
1961.....	100.0

After 5 years of relatively stable increases, the salaries of white-collar workers began to climb sharply in the year ending in June 1967, and continued to rise at an accelerated rate through the next 2 years. The 5.7-percent increase in 1968-69 was nearly double the average annual rate of increase (3.1 percent) between 1961 and 1966.

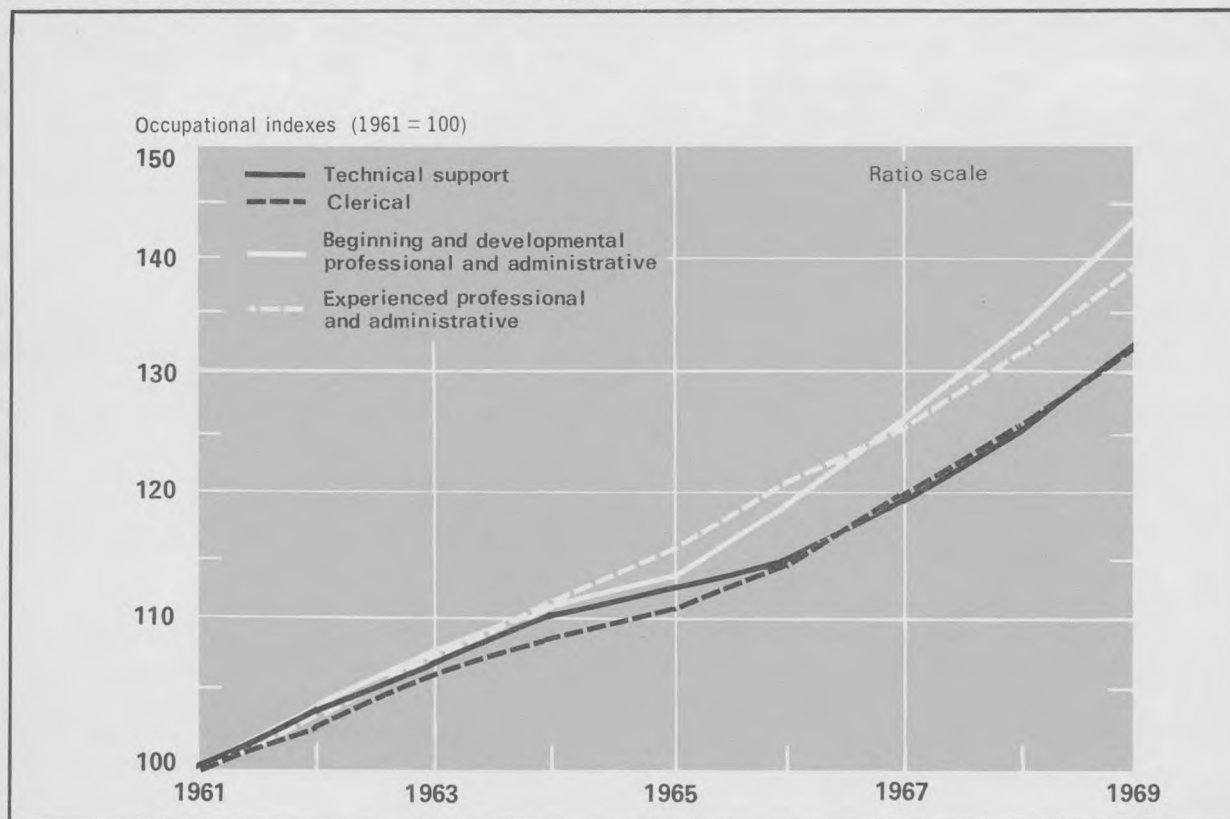
The rise in white-collar salaries in the last 3 yearly periods corresponded with large increases in wages of blue-collar workers, as reported in the Bureau's occupational wage surveys in metro-

politan areas.³ In the year ending in February 1969, wage increases were larger for both skilled maintenance men (6.5 percent) and unskilled plant workers (6.1 percent) than in any other year since February 1961.

Metropolitan areas

The proportion of workers employed in metropolitan areas⁴ was close to nine-tenths for each of the occupational groups surveyed, except attorneys (96 percent) and directors of personnel (72 percent). Average salaries for most occupations were higher in metropolitan areas than for the full survey, although the differences were slight because of the predominance of employment in metropolitan areas. For example, in only 1 of the 78 work levels studied did the metropolitan area average exceed the full survey average by more than 2 percent. Metropolitan area salaries were higher than the salaries in the full survey in 67 work levels, lower in 7, and the same in 4.

Chart 1. Salary indexes for selected occupational groups, 1961-69



Large establishments

Establishments employing 2,500 persons or more accounted for almost two-fifths of the total white-collar employment within scope of the survey, and approximately the same proportion of total employment in the selected occupations studied. As shown in the following tabulation of 62 job categories which could be compared, pay levels in large establishments (expressed as a

percent of the all-survey average) tended to be higher than the all-survey average:

	Professional and administrative	Technical support	Clerical
All levels.....	42	9	31
96-99.....	4		
100-104.....	22	6	2
105-109.....	10	3	11
110 and over.....	6		8

Percent salary differences were generally greater for clerical than for nonclerical jobs. Median pay

Table 1. Employment and average salaries for selected professional, administrative, technical, and clerical occupations,¹ June 1969, and percent increase in mean salaries during the year²

Occupation and work level	Number of employees	Monthly salaries ²			Percent increase in mean salary ⁴	Occupation and work level	Number of employees	Monthly salaries ²			Percent increase in mean salary ⁴
		Mean	Median	Middle range ³				Mean	Median	Middle range ³	
Accountants and auditors						Chemists and engineers					
Accountants I.....	5,579	\$667	\$668	\$617- \$717	7.4	Chemists I.....	1,949	\$728	\$735	\$660- \$785	8.4
Accountants II.....	11,138	751	750	683- 820	8.9	Chemists II.....	4,577	802	800	733- 860	7.8
Accountants III.....	24,550	836	825	750- 910	7.1	Chemists III.....	9,084	922	900	833-1,000	8.6
Accountants IV.....	16,629	997	990	900-1,083	6.2	Chemists IV.....	11,059	1,113	1,095	990-1,235	4.8
Accountants V.....	6,451	1,198	1,187	1,065-1,311	6.2	Chemists V.....	8,797	1,340	1,333	1,208-1,470	5.4
Auditors I.....	719	697	673	625- 778	9.4	Chemists VI.....	4,486	1,544	1,540	1,399-1,683	7.0
Auditors II.....	1,848	774	750	691- 850	6.7	Chemists VII.....	1,848	1,873	1,805	1,627-2,083	9.3
Auditors III.....	4,195	894	875	793- 976	7.5	Chemists VIII.....	534	2,258	2,118	1,916-2,616	6.6
Auditors IV.....	2,295	1,094	1,083	982-1,200	6.7	Engineers I.....	13,848	805	808	773- 845	7.1
Chief accountants I.....	731	1,101	1,052	958-1,250	7.5	Engineers II.....	34,224	871	869	824- 919	7.0
Chief accountants II.....	1,288	1,220	1,208	1,085-1,333	3.6	Engineers III.....	88,587	975	975	900-1,045	6.7
Chief accountants III.....	756	1,476	1,465	1,300-1,625	6.9	Engineers IV.....	121,882	1,158	1,150	1,054-1,251	6.1
Chief accountants IV.....	325	1,716	1,740	1,500-1,848	8.1	Engineers V.....	79,139	1,342	1,330	1,216-1,451	5.8
Attorneys						Engineers VI.....	41,032	1,548	1,540	1,400-1,680	7.0
Attorneys I.....	568	918	875	824- 999	(⁵)	Engineers VII.....	14,953	1,767	1,755	1,586-1,926	4.9
Attorneys II.....	1,316	1,065	1,050	916-1,195	(⁵)	Engineers VIII.....	3,466	2,002	1,950	1,761-2,173	3.2
Attorneys III.....	1,640	1,323	1,309	1,150-1,458	(⁵)	Engineering technicians					
Attorneys IV.....	1,626	1,597	1,570	1,337-1,749	(⁵)	Engineering technicians I.....	6,100	495	498	443- 547	6.4
Attorneys V.....	655	1,974	1,920	1,749-2,166	(⁵)	Engineering technicians II.....	15,752	584	582	526- 633	5.3
Attorneys VI.....	469	2,452	2,395	2,042-2,750	(⁵)	Engineering technicians III.....	28,185	670	665	608- 726	5.8
Buyers						Engineering technicians IV.....	32,337	775	765	704- 840	6.1
Buyers I.....	2,708	656	650	583- 715	7.3	Engineering technicians V.....	16,908	860	850	791- 925	5.4
Buyers II.....	9,884	772	760	685- 842	7.0	Draftsmen					
Buyers III.....	13,809	912	902	817-1,000	6.6	Draftsmen-tracers.....		442	428	382- 491	7.1
Buyers IV.....	4,909	1,096	1,080	978-1,208	5.8	Draftsmen I.....	21,501	538	530	466- 598	5.6
Buyers V.....	234	1,306	1,250	1,181-1,404	(⁵)	Draftsmen II.....	34,292	666	659	591- 735	5.8
Personnel management						Draftsmen III.....	28,689	813	795	723- 878	5.7
Job analysts I.....	129	678	683	600- 760	(⁵)	Clerical					
Job analysts II.....	319	757	750	695- 835	3.0	Clerks, accounting I.....	89,004	412	395	350- 453	4.9
Job analysts III.....	648	883	890	800- 963	1.9	Clerks, accounting II.....	57,324	537	525	458- 607	4.4
Job analysts IV.....	573	1,069	1,077	963-1,165	2.0	Clerks, file I.....	31,134	324	313	293- 345	5.7
Directors of personnel I.....	1,101	987	980	850-1,077	7.4	Clerks, file II.....	29,488	361	348	317- 388	5.3
Directors of personnel II.....	2,105	1,160	1,125	1,020-1,250	5.4	Clerks, file III.....	8,978	443	430	374- 500	5.2
Directors of personnel III.....	1,142	1,395	1,355	1,211-1,575	4.6	Keypunch operators I.....	62,838	400	387	348- 435	5.1
Directors of personnel IV.....	409	1,715	1,666	1,491-1,925	4.4	Keypunch operators II.....	45,568	457	450	403- 504	5.6
						Office boys or girls.....	28,066	357	343	313- 384	6.7
						Secretaries I.....	87,275	489	483	433- 543	5.5
						Secretaries II.....	82,602	549	543	482- 614	5.0
						Secretaries III.....	48,037	586	584	505- 655	5.1
						Secretaries IV.....	15,051	641	630	551- 725	5.9
						Stenographers, general.....	71,379	433	424	374- 481	6.8
						Stenographers, senior.....	56,212	490	480	425- 553	4.8
						Switchboard operators I.....	14,035	402	391	346- 452	5.1
						Switchboard operators II.....	10,826	474	469	416- 528	4.5
						Tabulating-machine operators I.....	5,297	418	402	360- 465	6.8
						Tabulating-machine operators II.....	10,130	505	494	435- 565	4.9
						Tabulating-machine operators III.....	5,058	614	604	546- 673	5.2
						Typists I.....	85,292	371	361	326- 400	5.8
						Typists II.....	45,409	430	417	378- 470	5.4

¹ The study relates to establishments in the United States except Alaska and Hawaii. Industry coverage includes establishments with 250 workers or more in manufacturing and retail trade; 100 or more in transportation, communications, electric, gas, and sanitary services, wholesale trade, engineering and architectural services, and research, development, and testing laboratories operated on a commercial basis; and 50 or more in the finance, insurance, and real estate industry division. The definitions used in classifying employees by occupation and level appear in appendix C, BLS Bulletin 1654.

² Salaries relate to the standard salaries that were paid for standard work schedules—

i.e., to the straight-time salary corresponding to the employees' normal work schedule excluding overtime hours. Nonproduction bonuses are excluded, but cost-of-living payments and incentive earnings are included.

³ The middle (interquartile) range is the central part of the array of employees by salary, excluding the upper and lower fourths.

⁴ Annual salaries were used to compute percent increases.

⁵ Because of changes in the number and definitions of levels between surveys year-to-year comparisons for attorneys could not be presented.

⁶ Not included in 1968.

levels in large establishments, as a percent of the all-survey average, were 107 for the clerical occupational group and 104 for the other two groups.

Industry differences

In all but one of the professional, administrative, and technical occupations, and in most of the clerical, more workers were reported in manufacturing than in any other industry division. Finance, insurance, and real estate employed more attorneys than any other division and, as a group, was the second largest employer of auditors, chief accountants, job analysts, and directors of personnel. It also accounted for more than a third of all file clerks, office boys and girls, and typists.

In all of the clerical and in most of the professional and administrative occupations in which comparisons could be made, relative salary levels were lower in retail trade and in finance, insurance, and real estate than in the other industry divisions. Consequently, in clerical and other occupations where the retail trade and finance industries contributed a substantial portion of the total employment, salary levels in the high-salary industries, such as manufacturing, were well above the all-industry averages. But, since manufacturing accounted for a very high percentage of the employees in most professional, administrative, and technical occupations, manufacturing salary levels for these occupations were quite close to all-industry levels.

While the finance industries had relatively lower salaries than the other industries surveyed, they also reported a shorter workweek. For a majority of occupations, workweeks in these industries averaged 38 hours, compared with 39.5 hours in manufacturing and 39 or 39.5 in the remaining industries. □

—FOOTNOTES—

¹ The 1969 survey covered 21 clerical, 9 technical support (draftsmen and engineering technicians), and 48 professional and administrative occupational work levels in all States except Alaska and Hawaii. The full report, *National Survey of Professional, Administrative, Technical, and Clerical Pay, June 1969* (BLS Bulletin 1654, 1970), provides a detailed description of the scope and method of the survey and includes the occupational definitions used to classify workers. A major purpose of the annual survey, designed by the BLS in collaboration with the Bureau of

the Budget and the Civil Service Commission, is to provide a basis for comparing Federal salaries with pay levels in private industry. See L. Earl Lewis, "Federal pay comparability procedures," *Monthly Labor Review*, February 1969, pp. 10-13.

² The index was derived by linking annual percent changes for the survey occupations. Annual percent changes were arrived at by averaging the increases for the two broad groups of workers included in the survey: clerical, and professional, administrative, and technical support occupations. The increases for each of these two groups was determined by averaging the increases of each occupation within the group. The percent increases for each occupation were obtained by adding the aggregate salaries (employment in the most recent year times average salary) for each level in each of 2 successive years and dividing the later sum by the earlier sum. The resultant relative, less 100, shows the percent of increase. Changes in the scope of the survey or in the occupational definitions were incorporated into the series as soon as two comparable periods were available.

³ Summary release, "Wage Trends for Occupational Groups in Metropolitan Areas, February 1968 to February 1969," issued in December 1969.

⁴ Standard Metropolitan Statistical Areas in the United States, except Alaska and Hawaii, as revised through April 1967 by the Bureau of the Budget.

SPRING 1969 COST ESTIMATES FOR URBAN FAMILY BUDGETS

THE Bureau of Labor Statistics has prepared preliminary estimates showing the spring 1969 cost of its three budgets for an urban family of four. According to these estimates, the lower budget cost \$6,567, the intermediate budget \$10,077, and the higher budget \$14,589 in the spring of 1969. (See table 1.) Preliminary estimates also were prepared for 39 metropolitan areas and for 4 regional classes of nonmetropolitan areas.

The budgets describe a specified manner of living for an urban family of four persons—employed husband, wife, 13-year-old boy, and 8-year-old girl. The budgets were first published in *Three Standards of Living for an Urban Family of Four Persons, Spring 1967* (BLS Bulletin 1570-5) and in the April 1969 issue of the *Monthly Labor Review*, Reprint 2611.

The "food at home" costs for spring 1969 are final estimates. For other consumption costs, preliminary estimates were derived by applying price changes between spring 1967 and spring 1969,

reported in the Consumer Price Index, to the appropriate spring 1967 cost of each budget class of goods and services. These estimates are preliminary because the Consumer Price Index reflects prices paid for commodities and services purchased by urban wage earners and clerical workers generally, without regard to their family type and level of living. The final estimates will utilize specific price data considered more appropriate to each budget level than is the Consumer Price Index.

Users should keep in mind that the budget-type family of four is very precisely defined, and that it is an urban, not a rural, family. Comparable estimates are not available for rural families.

This urban family has average inventories of clothing, home furnishings, major durables, and other equipment. After about 15 years of married life—that is, at a middle stage in the life cycle—the family is well established and the husband an experienced worker.

Thus the budget is an illustrative one and the dollar estimates are applicable only to an urban family with the specified characteristics. They are not typical of all families.

An equivalence scale has been prepared for use in estimating family consumption costs for other urban families differing in size and composition from the specific city worker's family for which the four-person family budgets were constructed.

Table 1. Estimated annual costs and comparative indexes of 3 budgets for a 4-person family,¹ spring 1969

Area	Total budget ²	Cost of family consumption							Personal taxes	
		Total	Food	Housing ³	Transportation ⁴	Clothing and personal care	Medical care ⁵	Other family consumption		
Annual costs		Lower budget								
Urban United States.....	\$6,567	\$5,285	\$1,778	\$1,384	\$484	\$780	\$539	\$320	\$619	
Metropolitan areas ⁶	6,673	5,364	1,803	1,418	457	796	557	333	638	
Nonmetropolitan areas ⁷	6,092	4,935	1,663	1,237	603	713	460	261	536	
Indexes of comparative costs										
Urban United States.....	100	100	100	100	100	100	100	100	100	
Metropolitan areas ⁶	102	101	101	102	94	102	103	104	103	
Nonmetropolitan areas ⁷	93	93	94	89	126	91	85	82	87	
Annual costs		Intermediate budget								
Urban United States.....	\$10,077	\$7,818	\$2,288	\$2,351	\$940	\$1,097	\$543	\$601	\$1,348	
Metropolitan areas ⁶	10,273	7,968	2,322	2,426	925	1,113	561	621	1,387	
Nonmetropolitan areas ⁷	9,204	7,151	2,135	2,012	1,006	1,023	464	511	1,176	
Indexes of comparative costs										
Urban United States.....	100	100	100	100	100	100	100	100	100	
Metropolitan areas ⁶	102	102	101	103	98	102	103	103	103	
Nonmetropolitan areas ⁷	91	92	93	86	107	93	85	85	87	
Annual costs		Higher budget								
Urban United States.....	\$14,589	\$10,804	\$2,821	\$3,544	\$1,215	\$1,609	\$565	\$1,050	\$2,523	
Metropolitan areas ⁶	14,959	11,064	2,876	3,677	1,214	1,628	584	1,085	2,618	
Nonmetropolitan areas ⁷	12,942	9,645	2,572	2,954	1,217	1,527	482	893	2,101	
Indexes of comparative costs										
Urban United States.....	100	100	100	100	100	100	100	100	100	
Metropolitan areas ⁶	103	102	102	104	100	101	103	103	104	
Nonmetropolitan areas ⁷	89	89	91	83	100	95	85	85	83	

¹ The family consists of an employed husband, age 38, a wife not employed outside the home, an 8-year-old girl, and a 13-year-old boy.

² In addition to family consumption and personal taxes shown separately in the table, the total cost of the budget includes allowances for gifts and contributions, life insurance, occupational expenses, and social security, disability, and unemployment compensation taxes.

³ Housing includes shelter, household operations, and housefurnishings. The average costs of shelter are weighted by the following proportions: Lower budget, 100 percent for families living in rented dwellings; intermediate budget, 25 percent for renters, 75 percent for homeowners; higher budget, 15 percent for renters, 85 percent for homeowners. The higher budget includes an allowance for lodging away from home city.

⁴ The average costs of automobile owners and nonowners in the lower budget are weighted by the following proportions of families: Boston, Chicago, New York, and Philadelphia, 50 percent for both automobile owners and nonowners; all other metropolitan areas, 65 percent for automobile owners, 35 percent for nonowners; nonmetro-

politan areas, 100 percent for automobile owners. The intermediate budget proportions are: Boston, Chicago, New York, and Philadelphia, 80 percent for owners, 20 percent for nonowners; Baltimore, Cleveland, Detroit, Los Angeles, Pittsburgh, San Francisco, St. Louis, and Washington, D.C., with 1.4 million inhabitants or more in 1960, 95 percent for automobile owners and 5 percent for nonowners; all other areas, 100 percent for automobile owners. The higher budget weight is 100 percent for automobile owners in all areas. Intermediate budget costs for automobile owners in autumn 1966 were revised prior to updating to spring 1967 cost levels.

⁵ In total medical care, the average costs of medical insurance are weighted by the following proportions: 30 percent for families paying full cost of insurance; 26 percent for families paying half cost; 44 percent for families covered by noncontributory plans (paid by employer).

⁶ For a detailed description, see the 1967 edition of the "Standard Metropolitan Statistical Areas," prepared by the Bureau of the Budget.

⁷ Places with 2,500 to 50,000 inhabitants.

Table 2. Comparative budgets for families of different size, type, and age at three levels of living, urban United States, spring 1969¹

Age, size, and type of family	Lower budget	Intermediate budget	Higher budget
Single person under 35 years ²	\$1,850	\$2,740	\$3,780
Husband—wife under 35 years ²			
No children.....	2,590	3,830	5,290
1 child under 6 years.....	3,280	4,850	6,700
2 children older under 6 years.....	3,810	5,630	7,780
Husband—wife, 35-54 years			
1 child 6-15 years ²	4,330	6,411	8,860
2 children older 6-15 years ³	5,285	7,818	10,804
3 children oldest 6-15 years ²	6,130	9,070	12,530
Husband—wife retired, 65 years and over ⁴ ..	2,777	3,940	5,811
Single person retired, 65 years and over ⁵	1,530	2,170	3,200

¹ Excludes gifts and contributions, life insurance, occupational expenses, social security and disability payments, and personal taxes.

² Estimated by applying the revised equivalence scale in table 2 to cost of family consumption for the 4-person family (see footnote 3) budgets and rounding to nearest \$10.

³ Estimates for the 4-person family described in "Three Budgets for an Urban Family of Four Persons, Preliminary Spring 1969 Cost Estimates," December 1969.

⁴ Estimates for the retired couple described in "Three Budgets for an Urban Retired Couple, Preliminary Spring 1969 Cost Estimates," January 1970.

⁵ Estimated by applying the ratio of the revised equivalence scale value for one person to husband and wife families 65 or over to cost of family consumption in Retired Couples Budget (see footnote 4) and rounding to nearest \$10.

The equivalence scale shows the percentage of the four-person budget needed by households with different characteristics. For example, consumption costs for a single person under 35 years of age would be 35 percent of the consumption costs of the four-member family. The corresponding figure for a husband under 35, a wife, and a child under 6 would be 62 percent. Consumption costs account for approximately four-fifths of living costs. (The other major costs are taxes on personal income, social security taxes, gifts, contributions, personal life insurance, and occupational expenses.) A derivation of the scale is described in *Revised Equivalence Scale for Estimating Equivalent Incomes or Budget Costs by Family Type* (BLS Bulletin 1570-2, 1968).

The estimates of living costs for selected family types, obtained by applying the equivalence scale values to the cost of consumption for the four-person urban family, are shown in table 2.

Other costs and Old Age, Survivors', Disability and Health Insurance were also updated to 1969, but personal taxes were computed from tax rates in effect for 1968. Final detailed estimates based on the complete repricing of the budgets in spring 1969 will be published later in 1970.

The preliminary budget estimates for spring 1969 and the revised equivalence scale are available upon request from the Bureau and its regional

offices. Also available without charge are copies of *Monthly Labor Review* Reprint 2611. Bulletin 1570-5 may be purchased from the Bureau's regional offices and from the Superintendent of Documents, Washington, D.C. 20402 (price \$1).

Similar preliminary estimates of the spring 1969 costs of three budgets for a retired couple were published in the November 1969 issue of the *Monthly Labor Review*. The article (Reprint 2646) is available upon request from the Bureau and its regional offices. A detailed description of the spring 1967 costs of these budgets will be provided in forthcoming BLS Bulletin 1570-6, *Three Budgets for a Retired Couple*, which may be purchased from the Bureau's regional offices and from the Superintendent of Documents, Washington, D.C. 20402. □

PROGRESS OF U.S. NEGROES DURING THE 1960's

"IMPRESSIVE PROGRESS has been made, but wide discrepancies remain," says a joint report by the Bureau of Labor Statistics and the Bureau of the Census in appraising the American Negroes' progress toward social and economic equality during the 1960's. Negroes now are "more likely" to have higher incomes, hold better jobs, and live in better homes than they did a decade ago. There are now more Negroes among high school and college graduates, they continue to move into higher status jobs, and they are mostly full-time employees.

But "Negroes are still disadvantaged in terms of educational and occupational attainment," and they are "more likely than whites" to be poor or disabled, and to live in poverty neighborhoods of large cities.

Negro employment rose continuously during the 1960's, particularly in the upper half of the occupational pyramid. But the unemployment rate among Negroes in 1969 continued to be twice the rate for the whites, and two-fifths of Negroes and persons of other races still remained in service, labor, and farm jobs—more than the proportion of whites in these jobs.

School enrollment among Negro youths 18 and 19 rose from 35 percent in 1960 to 45 percent in 1968, and Negro college enrollment increased 85 percent.

The proportion of Negro population in the United States has been about the same since the beginning of the century—11 percent in 1969. Most of its growth occurred in the central cities of metropolitan areas (about one-third of it due to immigration), and now 55 percent of all Negroes—compared with 26 percent of all whites—reside in central cities, making up one-fifth of their inhabitants.

The national ratio of the median family income of Negroes to that of whites has been rising since 1965, but was still only 60 percent 3 years later. About 1.4 million (roughly 29 percent) of Negro families—a total of 7.6 million (35 percent) persons—were below the poverty line in 1968. The corresponding figures for the whites that year were 3.6 million (8 percent) for families and 17.4 million (10 percent) for individuals.

In the area of family conditions, the report found that “the proportion of female-headed families of Negro and other races has increased since 1950”—from 17.6 percent of all families to 27.3 percent in 1969. “One half of Negro female heads of families are separated or divorced, as compared with one-third of white female heads.”

As regards politics, Negroes now have 10 members in the Congress (a rise from 4 in 1962), but their representation in State legislatures dropped from 148 in 1966 to 138 in 1968. Of the 36 mayoralities in Negro hands, 22 are in the South.

The Social and Economic Status of Negroes in the United States, 1969 (BLS Report No. 375 and Bureau of the Census Current Population Reports, Series P-23, No. 29) is available for \$1 from any of the BLS regional offices, or from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. □

WAGES OF TELEPHONE AND TELEGRAPH WORKERS

MICHAEL TIGHE

BASIC WAGE RATES of the 759,000 employees of the Nation's principal communications carriers averaged \$3.47 an hour in late 1968—6.8 percent

above a year earlier. The term “employee” as used here excludes officials and managerial assistants. This annual percentage increase in wage levels was larger than the advance recorded the year before (3.8 percent) and has been exceeded only three times since BLS in 1947 began its series of annual studies of wages of telephone and telegraph carrier employees: 1957-58 (7.0 percent), 1951-52 (7.5 percent), and 1947-48 (7.3 percent).

Telephone employees—96 percent of the workers covered by the latest annual study—averaged \$3.48 an hour in December 1968. Wage levels varied by region. Percentage increases in wage levels since December 1967 were greatest in the North Central region and smallest in the Middle Atlantic and South Central regions, as indicated below:

	Average hourly earnings, December 1968	Percent increase, 1967-68
Middle Atlantic.....	\$3.69	6.0
Pacific.....	3.68	7.9
New England.....	3.53	8.6
Great Lakes.....	3.52	7.6
Chesapeake.....	3.36	7.0
Mountain.....	3.35	7.7
North Central.....	3.32	9.9
South Central.....	3.14	6.1
Southeast.....	2.99	7.2

Employment of telephone carriers covered by the study rose about 4 percent during the December 1967-68 period, from 701,000 to 728,000. It increased 6 to 7 percent in the Southeast, South Central, and Chesapeake regions, and from 2 to 4 percent in all other regions, except the North Central where a 2 percent decline was recorded.

Of the telephone workers studied, 95 percent were employees of Bell System carriers. They averaged \$3.52 in December 1968, up 7.3 percent over the previous year. The average for employees of other telephone carriers was \$2.77, an increase of 5.7 percent. Much of the increase in wage levels for Bell System employees was due to general wage adjustments provided in collective bargaining agreements negotiated during 1968. Agreements reached in May 1968 between the Communications Workers of America (CWA) and various companies of the Bell System provided initial wage increases of \$4 to \$12 a week to plant craftsmen and \$4 to \$8 a week to clerical employees and telephone operators. The agreements also provided deferred wage increases of \$5.50 to \$6 a week for

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plant craftsmen and \$3.50 to \$4 a week for clerical employees and operators in both 1969 and 1970.¹

Almost three-fifths of the telephone workers were women, employed mostly as telephone operators and clerical workers. Men accounted for a large majority of professional and semiprofessional employees and for almost all construction, installation, and maintenance workers. Nonsupervisory clerical workers (93 percent women) averaged \$2.69 an hour in December 1968, and experienced switchboard operators (virtually all women), \$2.46. Averages for numerically important occupations predominantly staffed by men were cable splicers (\$3.70), central office repairmen (\$3.66), PBX and station installers (\$3.60), and linemen (\$2.97).

Straight-time rates of pay for the approximately 23,000 nonmessenger employees of the Western Union Telegraph Co. averaged \$3.37 an hour in October 1968. The 1,600 motor messengers averaged \$2.42 an hour and the 1,700 walking and bicycle messengers, \$1.63. Since October 1967, average pay rates increased 4.7 percent for non-messenger employees, 4.8 percent for motor messengers, and 13.2 percent for walking and bicycle messengers. The company's total employment (excluding officials and managerial assistants) remained virtually unchanged during the October 1967-68 period.

A majority (55 percent) of Western Union's nonmessenger employees were men. Average hourly rates of pay among jobs staffed largely by men were \$3.82 for traffic testing and regulating employees, \$3.78 for subscribers' equipment maintainers, and \$3.71 for linemen and cablemen. Nonsupervisory clerical workers and experienced telegraph operators (except Morse), two jobs mostly staffed by women, averaged \$2.93 and \$2.59 an hour, respectively.

Annual BLS studies of occupational wages in the telephone and telegraph industries are based on data submitted to the Federal Communications Commission by telephone carriers with annual operating revenues exceeding \$1 million and engaged in interstate or foreign communication service, the Western Union Telegraph Co., and international telegraph companies having annual operating revenue exceeding \$50,000. A full report on the latest study will be available this year. □

—FOOTNOTE—

¹ These agreements, ending the first nationwide telephone strike since 1947, covered approximately 200,000

employees. They also set the pattern for 200,000 other CWA workers at Bell and for another 200,000 workers in other unions having agreements with Bell System carriers. For further details on these agreements, see BLS *Current Wage Developments*, June 1, 1968, No. 246, and later issues.

USE OF BLS SURVEY DATA IN WAGE SETTING AT GPO

THOMAS C. MOBLEY

UNDER THE KIESS ACT, effective in 1924, the U.S. Public Printer is responsible for establishing pay rates for all employees of the Government Printing Office.¹ A number of pay systems are used to determine wage and salary rates for the various kinds of occupations.² Under one of these, GPO has since 1948 used data provided by the Bureau of Labor Statistics to establish hourly rates of pay for some 2,500 journeymen bindery, printing, and maintenance employees in Washington, D.C.

Prior to 1924, the rates of pay for journeymen crafts at GPO were fixed either directly by Congress, in appropriation bills, or by the Public Printer as he sought to implement the intent of Congress. Although the Kiess Act authorized the Public Printer to regulate and fix rates of pay, it was not until 1948 that there was any set formula for determining if, and to what extent, wage rates should be changed. In these early years, conferences between the Public Printer and representatives of the various crafts were held only when one of the parties was of the opinion that the movement of wages in the private sector of the printing industry justified a change in wage rates. It is not clear how such "opinions" were developed, but it is assumed that they were based on some general knowledge of collective bargaining agreements in the industry and of general economic conditions. Conferences did not always result in wage changes, and rates were adjusted only 7 times during the 23-year period.

In 1947, the Public Printer asked representatives of the various crafts to help him develop a more systematic and objective plan for determining rates of pay for journeymen craftsmen. The

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following year, the Joint Committee approved and adopted a system—one of several proposed by the compositors—calling for an annual review of hourly rates for each of the major journeymen crafts with 10 workers or more. The system provided that hourly rates would be set either in accordance with the average union wage scale paid for that same craft in commercial print shops in the Nation's 25 most populous cities, or the rate paid in Washington, D.C., whichever was higher, as determined from annual surveys by the Bureau of Labor Statistics.³ In 1962, the formula was changed to include employer contributions to welfare (insurance, medical, surgical, and hospital benefits) and pension funds.

In actual practice, the 25-city average has been used in all but one instance since the current formula was adopted in 1962. In 1968, the Washington, D.C., scale for journeymen bindery workers exceeded the 25-city average for these workers.

BLS data

Each year the Bureau of Labor Statistics provides separate tabulations for bindery workers and for each of the 10 journeyman printing and binding crafts. Copies of the tabulations are sent simultaneously to the Public Printer and to designated representatives of the craft at GPO. Each tabulation includes the basic day-shift wage scale and the amount of employer contributions for welfare and pension funds required by contracts between labor organizations and commercial printing establishments (book and job shops) in the 25 most populous cities—separately for each city and a 25-city average. To obtain the 25-city average, the current union scales and the employer payments to welfare and pension funds from each agreement are multiplied by the membership data, the aggregates are summed, and the product is divided by the total union membership for the craft in the companies covered by the agreements.

The wage scale used in BLS tabulations indicates the minimum rate that may be paid; in practice, many workers received rates in excess of those specified. Employer payments to welfare and pension funds are tabulated only when the agreement specifies these payments in a manner permitting their computation on an hourly basis. Thus a few contracts—that indicate the existence of employer contributions but provide no basis for computation—are omitted from the tabulations of these benefits.

GPO specifies the reference date of each tabulation (1 year from the effective date of the last GPO pay adjustment for the craft) and a delivery date 2 or 3 weeks prior to the reference date. Occasionally, a contract in one city or more has expired and settlement has not been reached at the time the tabulations are due for delivery, and the most recent negotiated rate must be used. When this occurs, the craft representatives may ask the Public Printer to withhold setting a new pay rate, and BLS is asked to submit a retabulation when data on the new settlement are available.

Rates for craftsmen

Representatives of the printing and binding crafts meet separately with the Public Printer to determine the rate of pay for their specific craft: Bookbinders, compositors, pressmen (cylinder and offset), electrotypers, offset photographers, offset platemakers-strippers, photoengravers, offset-strippers and stereotypers.

The pay scale for compositors—numerically the largest craft at GPO—is also used to set rates for crafts with fewer than 10 members, maintenance crafts,⁴ and any crafts for which BLS is not able to provide adequate information. The following tabulation lists for compositors the data provided by BLS and the rates set by GPO since 1948:

Effective date	GPO rate ¹	25-city average ²	Washington, D.C., rate ³
December 19, 1948.....	\$2.38	\$2.38	\$2.36
March 3, 1950.....	2.43	2.42	(*)
March 22, 1951.....	2.54	2.51	2.54
March 22, 1952.....	2.67	2.67	2.61
May 13, 1953.....	2.80	2.80	2.61
June 21, 1954.....	2.87	2.87	2.83
July 25, 1955.....	2.93	2.93	2.89
July 25, 1956.....	3.01	3.01	2.94
August 16, 1957.....	3.13	3.13	3.04
August 18, 1958.....	3.26	3.26	3.12
August 18, 1959.....	3.34	3.33	3.12
April 19, 1961.....	3.52	3.51	3.33
May 2, 1962.....	3.77	3.76	3.44
May 2, 1963.....	3.90	3.90	3.44
May 19, 1964.....	4.02	4.02	3.83
May 19, 1965.....	4.20	4.20	4.07
May 19, 1966.....	4.32	4.32	4.20
May 19, 1967.....	4.49	4.49	4.32
May 19, 1968.....	4.80	4.80	4.59
May 19, 1969.....	5.11	5.11	4.87

¹ In a few instances, the GPO rate was raised 1-cent above the 25-city average because of odd mills in the average.

² BLS data prior to 1962 was limited to the basic day-shift hourly scale; since 1962 the data have included employer payments to welfare and pension plans.

³ Data not available.

Offset pressmen represent an exception to this principle. Prior to 1968, BLS was unable to obtain membership data required to develop a 25-city

average for these workers. The Public Printer agreed that the rate for this craft would be the rate for cylinder pressmen plus the difference in scale between offset and cylinder pressmen as provided in the Washington, D.C., area collective bargaining agreement.

Bindery workers

At the Government Printing Office, journeymen bindery workers perform various skilled hand and

machine operations—such tasks as folding, sewing, and inserting, as well as completing work on stitching, gathering, stripping, and such operations. The pay system currently includes five pay grades.

Although the workers in this occupation do not meet with the Public Printer as the crafts do, the BLS average is used to fix the rate for bindery workers in pay grade 2, and the Public Printer determines rates for the other grades to provide appropriate ranges. □

—FOOTNOTES—

¹ The Kiess Act provides that changes in rates of pay for occupations with 10 employees or more are to be determined in accordance with an agreement between the Public Printer and representatives of the trade or occupation affected; that rates agreed upon shall become effective upon approval of the Joint Committee on Printing; that if an agreement is not reached, each party has the right to appeal to the Joint Committee, and the Committee's decision shall be final; and that wages shall not be subject to change more often than once a year.

² Other pay systems at GPO include: (1) The General Grade covering professional, administrative, technical, and clerical employees which is similar to the system used for employees under the General Schedule (GS) of the Federal Salary Act; and (2) wage setting for certain semiskilled and unskilled printing plant workers (including those in the Departmental and Field Service Offices), based on conferences between GPO's Personnel Director and

employee representatives and subject to approval of the Public Printer. Journeymen bindery workers (formerly bindery women) are included under the latter system; BLS does, however, provide wage data for the occupation.

³ BLS conducts annual surveys of wage rates and scheduled hours of work for selected crafts or jobs as provided in labor-management agreements in the printing industries. The studies provide separate information for book and job shops (commercial), for newspaper plants, and for lithography shops. They cover all cities with 100,000 inhabitants or more (except Honolulu), with separate tabulations for 69 of these cities. For results of the most recent survey, see *Union Wages and Hours: Printing Industry, July 1, 1968* (BLS Bulletin 1623, 1969).

⁴ Blacksmiths, carpenters, electricians, elevator mechanics, knife grinders, machinists, masonry mechanics, painters, pipefitters, sheet metal workers, stationary engineers, upholsterers, and welders.

The probabilities of job changing

What is the probability of an employed man, aged in his middle 30's, continuing in his same job or with his same firm until about age 60? . . .

The longer a man has worked on his job, the more likely he is to continue to work in it. We estimate that of a group of men age 35-37 who had held the same job for 10 years or longer, about 54 percent will be alive and remain on the same job at age 59-61. . . .

Of men age 35-37 who had held the same job for 5 to 9 years, about 12 percent will continue on the same job until age 59-61. Of a cohort of beginning Middle Years men who had been on their job only 3 or 4 years, about 6 percent will continue until age 59-61. . . .

The older the man is, the more likely he is to remain on the same job until age 59-61. Thus, for example, among men who had been on the same job 10 years or longer: of those age 41-43, 60 percent will continue until age 59-61; of those age 50-52, 79 percent will continue until age 59-61; of those age 53-55, 84 percent will continue until age 59-61.

—A. J. JAFFE,

"How Long Will You Stay on Your Job?"

The New York Statistician, January-February 1970.

Communications



POVERTY PROGRAMS: THE VIEW FROM 1914

H. M. DOUTY

THE FIRST DECADE and a half of the present century resembled the 1960's in its concern with poverty.¹ By that time, statistical work in the United States on wages, prices, and working class budgets had begun to provide a foundation for the evaluation of living standards. Hunter's *Poverty* (1904) aroused wide interest.² Spargo's *The Bitter Cry of the Children* (1906) was a powerful tract on the consequences of malnutrition and its contribution, in modern terminology, to the cycle of poverty.³ Between 1907 and 1909, the Bureau of Labor Statistics, at the request of the Congress, conducted a series of studies on the status of women and child wage earners.⁴ Trade union membership was expanding. A widespread movement for minimum wage and other forms of labor legislation at the State level was under way. All in all, it was a period in which old social values were being questioned, and proposals for reform, ranging from moderate to revolutionary, were being widely advocated.

In 1914, Professor Jacob H. Hollander published a small book entitled *The Abolition of Poverty*.⁵ Hollander was a distinguished professor at the Johns Hopkins University, and was to become, in 1921, president of the American Economic Association. His interests were eclectic. He wrote in the fields of public finance, economic theory, and labor. His views on poverty undoubtedly reflected a substantial body of opinion among economists and others.

Hollander was concerned with the working poor. He defined poverty in terms of economic

insufficiency for "the masses who, not lacking in industry and thrift, are yet never really able to earn enough for decent existence and who toil on in constant fear that bare necessities may fail." His definition excluded pauperism, that "pathological disorder of the social body," which involves dependence on private or public assistance. It also excluded differences in levels of living arising from inequality as such in income distribution.

The standard of poverty used by Professor Hollander can best be described as one of minimum physical adequacy, with little or no margin for savings or the amenities of life. He estimated that an annual income of about \$825 would provide this standard for a family of five (father, mother, and three children under 14 years of age). Since the level of consumer prices increased approximately three and a half times between 1914 and 1969, the Hollander standard in 1969 would have cost close to \$3,000. Such a computation is extremely tenuous, of course, because of changes in consumption patterns and social standards. On the extent of poverty, Hollander adopted Hunter's rough estimate of about 20 percent of the population in the industrial States, 10 percent in other States, or about 10 million persons in all.⁶

In Hollander's view, the economy of the United States had reached a point at which a "social surplus" of goods and services was being produced. The existence of this surplus provided the basis for the elimination of poverty. Moreover, "there is no assignable limit to the increase of the economic product." The Malthusian dilemma was dismissed in light of the observed tendency in modern nations for output, even of foodstuffs, to increase more rapidly than population. On a variety of grounds he rejected the socialist approach to the elimination of poverty, but he also repudiated *laissez-faire* in favor of "constructive social regulation."

In essence, Hollander held that "poverty, in its

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practical aspect, is a phase of the wage question," and that proper standards of remuneration would go far toward its abolition. He contended that industry generally had the capacity to pay an economically sufficient wage, and that the failure of many workers to secure such a wage "must be in consequence of [their] relatively weaker position in industrial bargaining as compared with the capitalist employer." Where feasible, therefore, collective bargaining should replace individual bargaining. In addition to wages, trade unionism would tend also to improve other conditions of employment, such as working hours, shop rules, and apprentice regulations. Hollander was by no means uncritical of some trade union policies and tactics, but he felt that "new types of labor leadership are being evolved, shortsighted policies are becoming discredited, and a sounder and wiser unionism is in sight."

But trade unionism alone cannot be relied upon to raise the wages of two categories of employed workers above the poverty level. The first group consisted of those workers who were, in Hollander's view, simply unorganizable. The second was composed of workers in employments in which "the valuation placed by society upon the marginal unit of product is less than enough to permit the payment of a sufficient wage after the deduction of the prevailing rate of profit." Such industries were described as parasitic. In both cases, Hollander believed that the establishment of legal minimum wage levels was required. He discounted the possibility of severe adverse employment effects in the light of minimum wage experience abroad, and on the assumption that caution would be exercised in setting minimum wage standards.

In addition to low wages, another source of poverty for competent workers arises from unemployment. "More, perhaps, than any other single cause," Hollander wrote, "involuntary idleness is responsible for the economic injury and mental bitterness of self-respecting toilers." He urged a two-prong attack on unemployment. The first involved better organization of the labor market through the provision of public employment exchanges, supplemented by such measures as decasualization (e.g., of dock labor) and greater elasticity in the wage rates and working hours of employed workers to minimize temporary reductions in employment. He also suggested the establishment of "compulsory industrial training

and continuation schools for all youths, designed to avoid the recruiting of 'blind-alley' occupations, as well as to reduce the supply of juvenile labor and to hasten the absorption of unemployed adult labor."

However, well organized the labor market, some involuntary unemployment will continue to arise from seasonal or cyclical variations in output, individual business failures, or decline in demand for specific products. In these circumstances, Hollander argued, prompt relief could best be afforded by a system of unemployment insurance. He felt that the practicality of such a proposal had been demonstrated by the success of some trade unions in providing unemployment benefits to their members.

There remain—aside from those who have fallen into chronic dependence on private or public assistance—workers who are unemployable due to sickness, industrial accident, or old age. Hollander recommended compulsory State insurance against these hazards. Although he gave priority to the enactment of workmen's compensation laws, which were beginning to appear in the several States, he pointed out that disease and sickness were even greater causes of poverty than industrial accidents. In the case of old age, "a large proportion of the body of wage-earners find it sooner or later impossible to secure employment because of failing efficiency." He cited estimates to the effect that about one-third of all persons over the age of 65 were being supported by public or private charity, and observed that among the remaining two-thirds were "large bodies of men and women who have lived decent and useful lives and who now drag out their last years in want and penury—less acute only than the bitterness of outright dependence."

Such was the program more than half a century ago for the abolition of poverty among the working population. Despite the remarkable extent to which the measures outlined by Professor Hollander have become part of the fabric of our economic and social life, the program has a distinct air of modernity. This is because institutions, to remain viable, need at least occasional amendment and change. We remain preoccupied today not only with the administrative but with substantive aspects of these anti-poverty institutional arrangements.

Collective bargaining is much more widespread today than 50 years ago, but there are still rela-

tively low-wage unorganized or partially organized segments of the working population. A minor split in the union movement has occurred recently over, among other issues, organizing priorities and effort. The coverage of Federal and State minimum wage legislation is now extensive, but questions of additional coverage and of changes in minimum wage standards continually arise. More effort probably is being devoted today than ever before to improve the functioning of the labor market, including government-supported training programs of impressive dimensions. We now have workmen's compensation, unemployment insurance, old-age pensions, and the beginnings of government-sponsored health insurance, but such programs require adjustment to changing conditions.

Hollander's poverty line, although nowhere precisely defined, appears to have represented a level of income just high enough to keep workers efficient and dependents nourished. He argued that this minimum standard could be achieved through the wage system and better organization of the labor market, with social insurance to provide for loss of income occasioned by involuntary unemployment, industrial accidents, illness, or old age. With the protection afforded by such social insurance systems, and with incomes from work at or above the poverty level, he believed that the ranks of those dependent on public or private charity would greatly diminish. Aided by a long

upward trend in per capita output, the substantial implementation of the measures urged by Hollander have largely, but not entirely, eliminated poverty in his sense among the working population.

In fact, given the size of our national income, and the generally high level of employment in recent decades, Hollander no doubt would be surprised at the volume of poverty that continues to exist. Since the concept of poverty in relation to income is elastic, and can be viewed in either relative or absolute terms, the matter is partly one of definition. But it also reflects the fact that the causes of poverty are complex, and that, in particular, problems of individual adjustment to work in a highly dynamic economy, and to the tensions of an increasingly demanding urban environment, are frequently difficult.

Nonetheless, the extent to which public and private assistance is still required to prevent destitution would have distressed Hollander and others concerned with poverty at the beginning of the century. They had an abhorrence of economic dependence, and they had genuine insight into some of its psychological and social consequences. The early poverty fighters considered income from welfare an undesirable substitute for income from work. Their proposals were calculated greatly to reduce economic dependence. In the meantime, however, they urged that the dependence then existing be met, in Hollander's words, "in a new spirit of communal responsibility and social conservation." □

—FOOTNOTES—

¹ However poverty may be defined, two conditions are essential for the question of its elimination to emerge as a practical issue of social policy. The first is a rise in income relative to population sufficiently great to lift a substantial segment of the working class above a "subsistence" level of living. The second is a general expectation that the income-population ratio will continue to grow. These conditions correspond with advancing productivity in agriculture, the rise of factory production, and the development of an urban working class. By the beginning of the twentieth century, these conditions were fully present in the United States.

Poverty, in fact, was the subject of serious discussion by the middle of the nineteenth century. One strain was filtered through the great stream of utilitarian thought and, as John Stuart Mill tells us in his *Autobiography*, sought to secure "full employment at high wages to the whole laboring population through a voluntary restriction of the increase of their numbers." Another strain, best represented by Marx, held that escape from poverty and degradation required a transformation of the economic

system. Other reformers or reform groups had more limited aims or stressed particular issues, and trade unions, beneficial societies, and other working class institutions sought practical ways to influence wage determination and provide a measure of protection against some of the hazards of economic life.

² Robert Hunter, *Poverty* (New York, Macmillan Co., 1904). This eloquent and perceptive study is still worth reading.

³ John Spargo, *The Bitter Cry of the Children* (New York, Macmillan Co., 1906).

⁴ The studies were published, under the general title of *Condition of Women and Child Wage Earners in the United States*, in 19 volumes as Senate Document No. 165, 61st Cong. 2d Sess. A summary appeared as BLS Bulletin 175 (Washington, Government Printing Office, 1916).

⁵ Jacob H. Hollander, *The Abolition of Poverty* (Boston, Houghton Mifflin Co., 1914).

⁶ Hunter, *op. cit.*, chapter 1, especially pp. 59-60.

Foreign Labor Briefs



Czechoslovakia

Recent government measures indicate a tightening control over labor. In a move to reduce the role of workers in industrial management, several factory workers' councils have been dissolved. The most important of the banned councils was that at the Pilsen Skoda works.

Union activity also is being discouraged. Toward the end of 1969, the Czech Ministry of Culture announced it would no longer guide socialist culture in cooperation with the unions of artistic and creative workers, but would deal directly with these workers. Last January 7, the Czech Union of Film and Television Artists was expelled from the communist-dominated National Front of the Czechoslovak Republic for persisting in political opposition. Leaders of the Czech Union of Writers and the Czech Union of Radio and Theater Artists were warned to follow the current National Front political line and to disassociate themselves from alleged rightwing exponents still active in their unions and from those who have left the country. Leadership of the Czech Union of Journalists already has been dissolved.

(The National Front of the Czechoslovak Republic was created in 1945 by the major political parties. It now unites the leading organizations in Czechoslovakia for the purpose of promoting socialist ideas and fulfilling the country's economic tasks. Included among the leading organizations are the labor unions, political parties, and the youth organizations.)

In another move, the Government has put a brake on wage increases as a part of new wage and price controls to combat inflation. The State

economic plan for 1970 provides for a lower average annual wage increase of about 3 percent, in contrast with the unplanned 8-percent increase of last year. Since 1968, the year of the Moscow-directed military occupation of Czechoslovakia, wage increases have exceeded productivity increases. For example, during 1969 wages increased 8 percent and productivity only 4.5 percent. This discrepancy has been one of the chief factors in the development of serious shortages in the supply of consumer goods. The Czech press has reported that excessively high wages resulted in unplanned increases in employment and a maldistribution of the available labor reserves. The press has further reported that worker morale and labor discipline declined during 1968 and 1969.

The Government has exhorted enterprises to try to improve their financial situation by economy in the use of labor and materials, rather than by increasing the prices of their products.

Australia

Shortage of labor caused mainly by economic prosperity is holding back Australian manufacturing production, according to a quarterly survey conducted at the end of 1969 by the Associated Chambers of Manufactures and the Bank of New South Wales. Although 30 percent of the firms surveyed had increased their labor force, substantially more overtime was being worked than in the previous quarter, and there were longer delays in delivery of orders.

At the same time, college graduates are having a difficult time being placed. In contrast to the increasing demand for skilled labor, jobs for college graduates are not coming into existence rapidly enough. Formerly graduates operated in a seller's market, but during 1969, shortages among the holders of first degrees in arts, science, economics, and business administration ceased to

Prepared in the Office of Economic and Social Research, Bureau of Labor Statistics, on the basis of material available in early February.

exist. Particularly affected are women, whose difficulty in finding satisfactory employment has become more intense.

Another recent development on the Australian labor front was the exploration by the Federated Miscellaneous Workers' Union (mwu) of the possibility of organizing the 121,000 members of Australia's Armed Forces in a trade union. The mwu, with 75,000 members, is the second largest union in the country. Its general secretary, who is studying the legal situation, claims that servicemen are in a position corresponding to that of policemen, who have been organized for many years. He expressed a belief that a need exists for peacetime coverage of working conditions and pay rates for servicemen and for the enforcement of their general legal rights.

France

The transfer of hourly paid workers to a monthly pay status, called "mensualization," is gaining support of the Government and labor. A special committee appointed by the Minister of Labor is studying a comprehensive program that would extend monthly pay status to all blue-collar workers.

In the past, white-collar employees, usually paid on a monthly basis, have had advantages vis-à-vis the hourly rated blue-collar workers with regard to payment for time lost due to absence from work, annual leave, and severance and retirement benefits. Participation of blue-collar workers in the benefits traditionally granted white-collar employees is now demanded by the unions, which support the drive for mensualization. Such demands are expected to be voiced frequently in future collective bargaining. Representatives of four major labor groups—the French Democratic Confederation of Labor, the General Confederation of Labor, the General Confederation of

Labor—Workers' Force, and the General Confederation of Supervisory Employees—recently negotiated collective agreements which provide for mensualization.

An agreement of January 9, 1970, with the Berliet truck manufacturing firm changes the pay status of 1,500 workers and modifies the provisions for sick leave, separation, retirement, and other benefits as of January 1.

A collective agreement with the Bull General Electric Co. will transfer 1,400 workers to a monthly pay basis over the next 4 years. Benefits derived from the monthly pay status will include payments for absences involving illness, maternity, or work injury, and for holidays, dismissals, and seniority and retirement bonuses. Company officials indicated they had agreed to the mensualization provision as a means of reducing worker turnover, and because they believe the Government soon will ask industry as a whole to consider such arrangements.

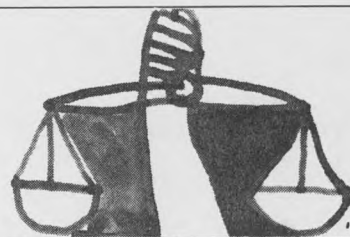
India

Money flowing into the pockets of India's landowning farmers during the past 3 years of bumper crops is causing discontent among millions of sharecroppers and landless laborers. With the growing mechanization of farms, hundreds of thousands of such laborers are unable to secure jobs. Hostility toward the landowning farmers is building up in the rural areas where more than 80 percent of India's population lives. Violence already has broken out in the rural areas of West Bengal and Kerala and is spreading to other states. There have been increasing incidents of landless workers, taking over farms by force. A crash land-reform program as a means of forestalling further disorders will be an issue during the 73d plenary session of the Congress Party faction headed by Prime Minister Indira Gandhi.

A note on communications

The *Monthly Labor Review* welcomes communications that supplement, challenge, or expand on research published in its pages. To be considered for publication, communications should be factual and analytical, not polemical in tone. Communications should be addressed to the Editor-in-Chief, *Monthly Labor Review*, Bureau of Labor Statistics, U.S. Department of Labor, Washington, D.C. 20212.

Significant Decisions in Labor Cases



Equal pay for women

"No employer . . . shall discriminate . . . between employees on the basis of sex by paying wages to employees . . . at a rate less than [that he pays] the employees of the opposite sex . . . for equal work . . ., except where such payment is made pursuant to . . . (iv) a differential based on any . . . factor other than sex." These are the basic elements of the Equal Pay Act of 1963—an amendment to the Fair Labor Standards Act of 1938, usually referred to as the "equal pay for women provision."¹

Violations of this provision are common, although not always intentional, and in virtually all instances justification is sought in the law's exemption of factors "other than sex." And the most convenient and most frequently cited of those factors, especially in manufacturing, are tasks allegedly requiring physical strength and endurance beyond those of an average woman—the "weightlifting" factors.

Recently the Secretary of Labor brought one such weightlifting situation before a Federal court of appeals, and the court reemphasized that "equal work" means "substantially equal," not "identical" work (*Shultz v. Wheaton Glass Co.*).²

A customized glassware manufacturing plant employed men and women as "selector-packers" (hereinafter also referred to as "selectors") whose job was inspecting the products for defects and packing them in cartons. Men selectors were also used for miscellaneous other functions, usually performed by "snap-up boys," which included lifting and moving of heavy cartons, climbing over boxes, and generally working as handymen. They did this miscellaneous work (snap-up work)

particularly during the frequent shutdowns of ovens, and their availability for this purpose allegedly was of economic value to the company. They also volunteered for overtime work when necessary. Men selector-packers were trained 6 months, women only 3 months. Hourly rates of pay were \$2.335 for men selectors, \$2.16 for the snap-up boys, and \$2.14 for women selectors.

At one time, selecting and packing was done by men only, but shortage of men necessitated hiring of women. A union (Glass Bottle Blowers) then insisted that the women's job be "carved out" of the men selectors' classification. The new classification was included in a collective bargaining agreement, as were also the union's demands that women never replace men except when vacancies occur, and that they be forbidden to lift weights over 35 pounds.

The court faced the question of whether the difference between the work of men and of women selector-packers was such as to make it a "factor other than sex" in the computation of wages. The answer hinged on the meaning of the statutory phrase "equal work."

Viewing the Equal Pay Act in a historical perspective, the court emphasized that its overall purpose was to provide "a broad charter of women's rights in economic field." The law sought "to overcome the age-old belief in women's inferiority and to eliminate the depressing effects on living standards of reduced wages for female workers and the economic and social consequences which flow from it."

But the language of the act is difficult to construe, the court said; it has not been authoritatively interpreted by the Supreme Court, and its legislative history "yields little guidance." Without stating its rationale or citing any source, the court said that "Congress, in prescribing 'equal' work did not require that the jobs be identical, but only that they must be substantially equal."³

Prepared by Eugene Skotzko of the Office of Publications, Bureau of Labor Statistics, in cooperation with the Office of the Solicitor of Labor.

Any other interpretation would destroy the remedial purpose of the act."

Referring to the fact that the women selectors' job was carved out of the men selectors' classification, the court said that, although distinctions in job classifications are beyond the act's coverage, "Congress never intended . . . that an artificially created job classification which did not substantially differ from the genuine one could provide an escape for an employer from the operation of [the act]. This would be too wide a door through which the content of the act would disappear."

Contrary to the lower court's finding, the court of appeals held that the Secretary of Labor had proved the company's discrimination on the basis of sex. He had shown that men selectors received wages 10 percent higher than the wages of women, even though the extra work they did commanded a pay rate (for snap-up boys) almost equal to the rate of women selectors. The Secretary had also cited the fact that the women selectors' classification had been carved out of the original men's classification. "Under the statute, the burden . . . thereupon fell on the company to prove . . . that it came within exception (iv)" of the act, the court said.

Disagreeing with the district court that the company had met the burden of proof, the appellate court said the employer had failed to provide evidence to show the economic value of the snap-up work of the men selectors. Nor was there anything to indicate that what the lower court called the factor of 'flexibility'—the men selectors' availability for this work—justified the 10-percent differential. Furthermore, there was no finding in the lower court's decision that all the men selectors were able and willing to do, and actually did, the snap-up work; or that no women selectors were available for such work. In short, the company had failed to prove that it was paying lower wages to women on the basis of factors other than sex.

Religion and good-faith bargaining

The National Labor Relations Act does not require anyone to believe in it; it merely demands compliance, even if that is contrary to one's religious beliefs. The law's command to bargain "in good faith" means, not acceptance of its philosophy but an honest attempt "to come to some workable

agreement despite [the bargainers'] belief that what they were doing was wrong in a religious sense." In fact, away from the bargaining table, a person who rejects the law for any reason "may fully devote his time, influence, and resources to campaign for [its] repeal."

What appeared to be a conflict of law and religion in the area of labor relations recently came before the U.S. Court of Appeals for the District of Columbia in two companion cases, *Cap Santa Vue* and *Campbell*.⁴ The court upheld the NLRB's ruling that the two employers were not insulated from the operation of the NLRA by their religious precepts.

As members of the Seventh Day Adventist Church, the two employers objected to holding representation elections among their employees. After the elections had nevertheless taken place, they refused to bargain with the certified union. They said that dealing with a labor union was contrary to the teaching of their faith, and cited Holy Scriptures in support of their position. Compelling them to deal with the union and thus to comply with the NLRA, they held, violated their religious freedom guaranteed by the First Amendment to the Constitution.

The employers did not oppose the principle, established through a long process of judicial opinion, that, for self-preservation, society may regulate conduct based on religious beliefs. What they did oppose was pushing such regulation to the point where, in effect, it becomes suppression of the constitutional right to hold religious beliefs—a right that, unlike the freedom to act in accordance with these beliefs, is absolute under the First Amendment and cannot be interfered with legislatively.⁵

Specifically, the employers maintained that the NLRA's sections 8(a)(5) and (1), under which refusal to bargain or interference with the employees' right to bargain is unlawful, "require more than mere compliance with the objective law" (court's language). For section 8(d) of the act demands that the bargaining be "in good faith," and this is possible only when the bargaining party believes in bargaining, that is, when he believes in and agrees with the law. Compliance with the requirement is impossible for one who—like themselves—does not believe in bargaining. For him the good-faith requirement is a compulsion to agree with the law, and the Constitution

protects him against such compulsion.

Surveying the legislative history of section 8(d), the court did not uncover "any indication of a congressional intent that a party to the collective bargaining process must believe in collective bargaining as an economic, social, political, or religious philosophy. It is enough if he recognizes it as a legal requirement and complies with [it]." For "the act is concerned not with an employer's belief in the act but with his conduct under the act, including in the term 'conduct' not only the process of bargaining but an honest purpose to arrive at an agreement."

The employers also argued that, even if their refusal to bargain was subject to regulation, the NLRB had failed to cite any compelling public interest that would justify the invasion of their constitutionally guaranteed religious freedom.⁶ To this the court replied, after elucidating the act's purposes and stressing the importance of its enforcement, "[W]e hold that the bargaining requirements under the act are sufficiently invested with the public interest to justify applying the good-faith bargaining requirement of the act to the employers."

Direct confrontation

Direct bargaining with employees over conditions of employment is not impossible, either as a matter of law or of practice. But the employer ought to make sure that the circumstances for the venture are right—primarily, that the initiative emanates from "a spontaneous grass-roots movement [of] the employees themselves," as it happened in a situation recently brought before a Federal court of appeals in *Gallaro*.⁷

The dispute involving a small retail store developed as follows: a 1-year contract covering the store's work force was about to expire and the union requested renegotiation. The union had been certified more than a year earlier⁸ after winning an election by a one-vote margin (8-7). (At the time of the dispute the work force was 10 persons.) Before the management was able to reply to the request, it was presented with a petition signed by a majority of the employees repudiating the union's representation. Subsequently, all the employees—with a "possible exception of one," as the court found—held a

meeting and decided to ask for a 25-cent-an-hour wage increase. The store manager was called in several times during the meeting, and he warned the employees that their action might be illegal. He rejected the 25-cent demand, but eventually accepted one for a 15-cent raise—only "if it is perfectly legal." At no time did the management instigate or encourage the move away from the union.

Under the circumstances, the company challenged the union's majority status and the union charged it with coercion of employees and refusal to bargain. The National Labor Relations Board ruled in favor of the union.

Overruling the NLRB, the court pointed out that the circumstances could hardly have failed to inspire doubt that the union still represented a majority of the employees. Normally there is a "rebuttable presumption" of a union's majority status after the expiration of the certification year; in this case, the presumption was "weak at best." The employer was free to refuse to bargain with the union.

As for the coercion and interference with the rights of employees, the court held that the situation offered sufficient evidence "so to rebut the presumption [of the union's majority status] as to permit the employer to bargain with someone other than the union whose certification had expired." The manager's "bargaining" at the employee's meeting under these conditions was no interference with the workers' rights, the court said.

The court issued a warning that the decision is not intended to open the sluice to a flood of direct management-employee negotiations under the pretext of alleged justifications. "We limit this holding to the particular facts of this case. . . ."

A dissenting member of the court argued that "something more than good-faith doubt is required to sanction negotiation with the employees directly. [An] employer cannot actively negotiate with someone other than the former majority representative until . . . he has evidence as to who now represents the majority. . . ." To this the majority of the court replied, "The doctrine [of the dissent] would compel [the employees] to negotiate through the repudiated union or remain in a state of suspended animation for an indefinite period with no one to negotiate or speak on their behalf." □

—FOOTNOTES—

¹ 29 U.S.C., section 206 (d)(1).

² C.A. 3, January 13, 1970.

³ At this point the court cited an earlier decision (*Wirtz v. Rainbo Baking Co.*, 303 F. F. Supp. 1049, E.D. Ky., 1967), holding that "equal work does not mean identical work and that different tasks which are only incidental and occasional would not justify a wage differential." (The present court's language.)

⁴ *Cap Santa Vue, Inc. v. NLRB; Campbell v. NLRB* (C.A.-D.C., January 20, 1970).

⁵ In *Cantwell v. Connecticut* (310 U.S. 296, 303-04, 1940), the U.S. Supreme Court said with regard to religion,

"[The First Amendment] embraces two concepts—freedom to believe and freedom to act. The first is absolute but, in the nature of things, the second cannot be. Conduct remains subject to regulation for the protection of society. . . ."

⁶ "In every case the power to regulate must be so exercised as not, in attaining a permissible end, unduly to infringe the protected freedom," said the Supreme Court. (Ibid.)

⁷ *NLRB v. Gallaro* (C.A. 2, December 8, 1969).

⁸ Section 9(e) of the Labor Management Relations Act protects a union from decertification during the first 12 months following the date of certification.

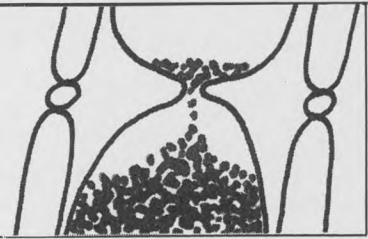
Emigration of high-level manpower from India

Perhaps 5-10 percent of India's high-level manpower has been permanently or temporarily diverted abroad. The order of magnitude represents the proportion of gross emigration of university-trained Indians with degrees comparable to European or reasonably good American degrees. There is no telling how many of the estimated 30,000 Indians abroad (mostly in the United Kingdom, the United States, and Canada) may eventually return to India. The best estimate is that something like 15 percent of India's annual output of high-level manpower goes abroad soon after graduation in pursuit of work or further study, and that something like 40 percent of these fail to return. The proportions vary considerably by field of study and by level of degree: the higher the level of study, the greater the loss (e.g., perhaps 10-20 percent of Indians with post-graduate degrees are today living and working abroad). The proportion of the new output of engineers who go abroad is today around 25 percent; of doctors, perhaps 30 percent. But these high figures represent little loss in view of the widespread unemployment among engineers and doctors in India. Over the next few years unemployment among educated Indians, including those in science, technology, and medicine, is expected to rise, not fall. Consequently any brain drain that may be said to exist concerns only the normal shortage of exceptional people that exists in almost all countries. When specific Indian institutions (e.g., the Indian Institute of Technology at Kanpur) have developed careful arrangements to identify and to invite home outstanding individuals needed for specific critical openings, they have often been able to repatriate them even at India's much lower salaries.

There is practically no one, in India or outside, who feels that India's economic growth is being held back because the country has lost educated manpower. Indeed, government officials have more than once said they hoped that educated Indians in large numbers would not return, since the country has no way of putting them to work.

—GEORGE B. BALDWIN, "Brain Drain or Overflow,"
Foreign Affairs, January 1970.

Major Agreements Expiring Next Month



This list of collective bargaining agreements expiring in May was prepared in the Bureau's Office of Wages and Industrial Relations. The list includes agreements on file with the Bureau covering 1,000 workers or more in all industries except government.

Company and location	Industry	Union ¹	Number of workers
Allied Construction Employers' Association, Inc. (Milwaukee, Wis., vicinity)	Construction	Carpenters	4,000
Allied Construction Employers' Association, Inc. (Milwaukee, Wis., vicinity)	Construction	Operating Engineers	2,600
Allied Construction Employers' Association, Inc., and the Mason Contractors Association of Milwaukee, Wis. (Wisconsin)	Construction	Bricklayers	1,800
Arkansas Power and Light Co. (Arkansas)	Utilities	Electrical Workers (IBEW)	1,750
Armstrong Cork Co. (Macon, Ga.)	Paper	Cement Workers	1,100
Arrow-Hart & Hegeman Electric Co. (Connecticut)	Electrical products	Electrical Workers (IBEW)	1,700
Associated General Contractors of America, Inc.:			
Cincinnati Chapter (Ohio and Kentucky)	Construction	Carpenters	3,900
Arizona Chapter and 4 other associations (Arizona)	Construction	Carpenters; Laborers; Plasterers and Cement Masons; and Teamsters (Ind.)	6,000
Oregon-Columbia Chapter and Portland Home Builders Association, Inc. (Oregon and Washington)	Construction	Operating Engineers	4,200
Oregon-Columbia Chapter and 4 other associations (Oregon and Washington)	Construction	Laborers	10,000
Nevada Chapter and 3 other associations (Nevada)	Construction	Operating Engineers	1,000
Nevada Chapter and 3 other associations (Nevada)	Construction	Plasterers and Cement Masons; and Laborers	1,500
Heavy and railroad construction (Alabama)	Construction	Operating Engineers; Carpenters; Laborers; Teamsters (Ind.); and Plasterers and Cement Masons	1,400
Rhode Island Chapter (Rhode Island)	Construction	Laborers	1,500
Building Trades Employers Association of Westchester and Putnam Counties, New York, Inc. (New York)	Construction	Operating Engineers	1,100
Builders' Association of Chicago (Chicago, Ill.)	Construction	Plasterers and Cement Masons	2,000
Builders' Association of Chicago (Chicago and Cook County, Ill.)	Construction	Bricklayers	3,700
Brewers Board of Trade, Inc. (New York, N.Y.)	Food products	Teamsters (Ind.)	4,500
California Beer Distributors (California)	Wholesale trade	Teamsters (Ind.)	3,000
California Brewers Association (California)	Food products	Teamsters (Ind.)	3,000
Calumet Builders Association Inc., The Industrial Contractors and Builders Association of Indiana, Inc., The Laporte-Porter Contractors Association, Inc. (Indiana and Michigan)	Construction	Carpenters	3,000
Champion Papers Inc., Champion Papers Division (Pasadena, Tex.)	Paper	Pulp, Sulphite Workers	1,150
Cleveland Pneumatic Tool Co. (Cleveland, Ohio)	Transportation equipment	Aerol Aircraft Employees' Association (Ind.)	1,600
Defoe Shipbuilding Co. (Bay City, Mich.)	Transportation equipment	Marine and Shipbuilding Workers	1,000
E. I. du Pont de Nemours and Co. Repauno Works and Eastern Laboratory, Explosives Department (Gibbstown, N.J.)	Chemicals	Chemical and Industrial Union (Ind.)	1,050
Eastern Airlines, Inc. ² (pilots)	Air transportation	Air Line Pilots Association	3,800
Erwin Mills, Inc. (Durham, N.C.)	Textiles	United Textile Workers	2,600
Fruehuf Corp., Fruehuf Div. (Avon Lake, Ohio)	Transportation equipment	Allied Industrial Workers	1,600
General Contractors and Builders Association of Newburgh, Hudson Valley Construction Employers Association, Orange County Contractors Association, Inc., and Tri-County Construction Associates (New York)	Construction	Carpenters	2,500
General Tire and Rubber Co. (Ohio and Texas)	Rubber	Rubber Workers	3,050
Goodrich, B. F. Co., B. F. Goodrich Footwear Co. Division (Watertown, Mass.)	Rubber	Directly Affiliated Local Union of the AFL-CIO	3,650
Graphic Arts Association of Delaware Valley, Inc., Allied Printing Employees' Association Div. (Philadelphia, Pa., Area)	Printing and Publishing	Typographical Union	1,100
Greater Blouse, Skirt, and Neckwear Contractors' Association, Inc. (New York, N.Y.)	Apparel	Ladies' Garment Workers	2,850
Greater Blouse, Skirt, and Undergarment Association, Inc. (New York, N.Y.)	Apparel	Ladies' Garment Workers	1,000
Harley-Davidson Motor Co. (Milwaukee, Wis.)	Transportation equipment	Allied Industrial Workers	1,050
Hoerner Waldorf Corp. (St. Paul, Minn.)	Paper	Pulp, Sulphite Workers; Firemen and Oilers	1,000
Houston Lighting and Power Co. (Texas)	Utilities	Electrical Workers (IBEW)	2,000
Hudson Valley Construction Employers Association and the General Contractors and Builders of Newburgh (Newburgh, N.Y.)	Construction	Laborers	1,500
Ice Cream Council, Inc. (Chicago, Ill., area)	Food products	Teamsters (Ind.)	1,800
Industrial Employers and Distributors Association (California)	Wholesale trade	Longshoremen and Warehousemen (Ind.)	5,000
Infants' and Children's Coat Association, Inc., and Manufacturers of Snowsuits, Novelty Wear, and Infants' Coats, Inc. (Interstate)	Apparel	Ladies' Garment Workers	10,000

Major agreements expiring next month—Continued

Company and location	Industry	Union ¹	Number of workers
International Paper Co., Northern Div. (New York, Maine, and Pennsylvania).	Paper.....	Papermakers and Paperworkers; Pulp, Sulphite Workers; and Firemen and Oilers.	4,150
International Paper Co., Southern Kraft Div. (Interstate).....	Paper.....	Papermakers and Paperworkers; Pulp, Sulphite Workers; and Electrical Workers (IBEW).	11,500
Ironworker Employers Association of Western Pennsylvania.....	Construction.....	Iron Workers.....	1,950
Jordan Marsh Co. (Boston, Mass.).....	Retail trade.....	Retail Clerks.....	1,500
Los Angeles Coat & Suit Manufacturers' Association (Los Angeles, Calif.).....	Apparel.....	Ladies' Garment Workers.....	3,500
Litton Industries, Louis Allis Co. Div. (Milwaukee, Wis.).....	Electrical products.....	Electrical Workers (IUE).....	1,300
Master Builders' Association of Western Pennsylvania, Inc. (Pennsylvania).....	Construction.....	Operating Engineers.....	2,500
Master Builders' Association of Western Pennsylvania, Inc. (Pennsylvania).....	Construction.....	Carpenters.....	4,500
Master Builders' Association of Western Pennsylvania, Inc. (Pennsylvania).....	Construction.....	Laborers.....	5,000
Metropolitan Detroit Plumbing Contractors Association, and Mechanical Contractors' Association of Detroit; and Plumbing, Heating and Cooling Contractors Association of Southeastern Michigan, Inc. (Michigan).....	Construction.....	Plumbers and Pipefitters.....	2,200
Monsanto Co. (Texas City, Texas).....	Chemicals.....	Texas Metal Trades Council.....	1,100
National Association of Blouse Manufacturers, Inc. (Interstate).....	Apparel.....	Ladies' Garment Workers.....	4,000
National Skirt and Sportswear Association, Inc. (Interstate).....	Apparel.....	Ladies' Garment Workers.....	11,550
Nekoosa-Edwards Paper Co. (Port Edwards and Nekoosa, Wis.).....	Paper.....	Papermakers and Paperworkers; Pulp, Sulphite Workers; Machinists; and Plumbers and Pipefitters.	1,850
Niagara Mohawk Power Corp. (New York).....	Utilities.....	Electrical Workers (IBEW).....	7,150
New Jersey Brewers' Association, Anheuser Busch, Inc., Pabst Brewing Co., and Rheingold Breweries, Inc.	Food products.....	Teamsters (Ind.).....	2,200
Northwest Brewers Association (Seattle, Tacoma, and Olympia, Wash.).....	Food products.....	Teamsters (Ind.).....	1,000
New York Coat and Suit Association, Inc. (New York, N.Y.).....	Apparel.....	Ladies' Garment Workers.....	42,000
Pennsylvania Electric Co. (Pennsylvania).....	Utilities.....	Electrical Workers (IBEW).....	1,500
Painting and Decorating Contractors of America, Pittsburgh Chapter (Pittsburgh, Pa.).....	Construction.....	Painters.....	1,000
Pottlatch Forests, Inc., Bradley-Southern Division (Warren, Ark.).....	Lumber.....	Woodworkers.....	1,250
Public Service Co. of Colorado (Colorado).....	Utilities.....	Electrical Workers (IBEW).....	2,100
Sacramento Hotel, Restaurant and Tavern Association (Sacramento, Calif.).....	Hotels.....	Hotel and Restaurant Employees.....	3,500
San Francisco Employers Council (San Francisco, Calif.).....	Wholesale trade.....	Teamsters (Ind.).....	1,700
Scott Paper Co. (Everett, Wash.).....	Paper.....	The Association of Western Pulp and Paper Workers (Ind.).....	1,650
Scott Paper Co., S. D. Warren Co. Division, Cumberland Mills (Westbrook, Maine).....	Paper.....	Pulp, Sulphite Workers; Papermakers and Paperworkers.	1,750
Slate Belt Apparel Contractors' Association, Inc. (Pennsylvania).....	Apparel.....	Ladies' Garment Workers.....	9,000
Sperry Rand Corp., Univac Div. (St. Paul, Minn.).....	Machinery.....	Electrical Workers (IBEW).....	4,000
Squibb, E. R. & Sons, Inc. (New Brunswick, N.J.).....	Chemicals.....	Oil, Chemical and Atomic Workers.....	1,000
Steel Fabricators Association of Southern California, Inc. (Los Angeles, Calif.).....	Primary metals.....	Iron Workers.....	2,500
The Stanley Works (New Britain, Conn.).....	Fabricated metal products.....	Machinists.....	2,800
Torrington Co. (Torrington, Conn.).....	Machinery.....	Auto Workers (Ind.).....	1,450
Twin City Hospitals ² (Minnesota).....	Hospitals.....	Minnesota Nurses Association (Ind.).....	3,000
Union Carbide Corp., Chemicals and Plastics Division (Bound Brook, N.J.).....	Chemicals.....	Chemicals and Crafts Union, Inc. (Ind.).....	1,400
United Parcel Service, Inc. (Chicago, Ill.).....	Trucking.....	Teamsters (Ind.).....	1,600
Upholstering Manufacturing Agreement ² (Chicago, Ill.).....	Furniture.....	Upholsterers.....	1,500
Vornado Corp., Two Guys From Harrison, Inc., Food Department, Non-Food Department (Newark, N.J.).....	Retail trade.....	Retail Clerks.....	4,000
Wagner Electric Corp. (Newark and Bloomingdale, N.J.).....	Electrical products.....	Electrical Workers (IUE).....	1,100
Washington Gas Light Co. (D.C., Virginia, and Maryland).....	Utilities.....	International Union of Gas Workers (Ind.).....	1,400
Whirlpool Corp., St. Joseph Div. (St. Joseph, Mich.).....	Electrical products.....	Machinists.....	1,550
Wholesale Bakers' Group (Los Angeles, Calif.).....	Food products.....	Bakery and Confectionery Workers.....	2,250
Wholesale Grocers, Chain Store and Retail Owned Warehouse Operators of Minneapolis ² (Minneapolis, Minn.).....	Wholesale trade.....	Teamsters (Ind.).....	1,000
Wisconsin Power and Light Co. (Wisconsin).....	Utilities.....	Electrical Workers (IBEW).....	1,300
Woodworkers Association of Chicago Mill Div. (Chicago, Ill.).....	Lumber.....	Carpenters.....	2,000

¹ Union affiliated with AFL-CIO except where noted as Independent (Ind.).
² Information is from newspaper account of settlement.

³ Industry area (group of companies signing same contract).

Developments in Industrial Relations



Equal employment opportunity

Secretary of Labor George P. Shultz announced a national program for achieving equal employment opportunity in federally funded construction work in 19 cities. It calls for special efforts to develop such programs in the cities named, including the possible installation of "Philadelphia-type plans" for those communities unable to develop acceptable area-wide agreements on their own initiative. (The controversial Philadelphia Plan, implemented in September 1969,¹ stipulates that bidders on federally assisted construction projects in the Philadelphia area submit "affirmative action plans" providing for minority membership of at least 19 percent of the work force in six skilled building trades by 1973.)

In urging contractors, unions, minority group organizations, and local officials in the 19 cities to speed development of area-wide agreements to provide equal employment opportunities in construction, Secretary Shultz said, "We favor voluntary, area-wide agreements to the imposition of specific requirements by the Government." He added that the Labor Department's Office of Federal Contract Compliance (ofcc) will first "focus attention" on six cities—Boston, Detroit, Atlanta, Los Angeles, Seattle, and Newark.

The selection of these six cities was based on indications of need and the ofcc's resources. Criteria used in selecting all the cities included labor shortages, availability of minority craftsmen and their representation in critical trades, total population and the minority proportion, and the volume of Federal construction in the areas.

Other cities named included Buffalo, Cincinnati, Denver, Houston, Indianapolis, Kansas City,

Miami, Milwaukee, New Orleans, New York, San Francisco, St. Louis, and Pittsburgh. Even though Pittsburgh was originally included on the list, a tripartite "memorandum of understanding" covering minority group hiring had been reached for the Pittsburgh area on January 30 by the Pittsburgh Building Trades Unions, contractors' associations, and the Black Construction Coalition. The Pittsburgh agreement called for an affirmative action program for training and employing 1,250 new minority journeymen within 4 years. A 12-man committee will govern the program; a chairman without vote will be appointed as the 13th committee member. Under the program, the committee may enter into contracts with the Government and other organizations to recruit, counsel, train, and orient persons for the construction industry. (A similar agreement to bring 4,000 Negroes into Chicago-area construction jobs was signed on January 12.²) The Labor Department later issued a statement approving the Pittsburgh agreement.

In another move intended to equalize job opportunities, the Department of Labor issued an order specifying "affirmative action" requirements for Federal contractors outside the construction industry. The new rules implement a July 1968 directive from the Department requiring such contractors to develop minority-group hiring plans. An employer with at least 50 employees and Government contracts exceeding \$50,000 must draw up compliance plans and submit them within 120 days of the start of the contracts. Until these plans are found acceptable, the Department said, the "contractors will not be complying with the equal opportunity requirements." However, the contractor will not be considered in noncompliance with the order if he has made a "good-faith" effort to meet his equal employment opportunity obligations.

The order specified that a contractor conduct an analysis of all major job categories and provide explanations if minorities "are being underutilized

Prepared by Leon Bornstein and other members of the staff of the Division of Trends in Employee Compensation, Bureau of Labor Statistics, and based on information from newspapers and other secondary sources available in February.

in one or more jobs." Up to nine points must be considered in determining minority underutilization, including the minority percentage of total population and work force in the area in question, the minorities' possession of required skills, and the availability of training.

If the analysis reveals deficiencies in minority employment, the contractor is required to establish "goals and timetables" as part of an affirmative action program in minority hiring. If a contractor lacks an acceptable program, the Department's Office of Federal Contract Compliance could cancel his contract after 30 days.

Prefabricated plumbing

In a further attempt to increase the volume of housing and job opportunities, the Plumbers and Pipefitters signed an agreement with American Standard, Inc., providing for factory assembly of plumbing systems. The pact marked the third time in a 2-month period in which the union was involved in agreements which Plumbers' President Peter T. Schoemann described as "designed to solve one of the greatest challenges of our times—more jobs for more people." In November 1969, the Plumbers were 1 of 3 unions signing an agreement with Prestige Structures, Inc., a subsidiary of VTR, Inc., to participate in the construction of prefabricated housing.³

The American Standard agreement provides that the union members will build and assemble the plumbing systems, including piping, fixtures, and fittings for bathrooms and kitchens. The factory-built plumbing will be shipped and installed on site anywhere, as long as it bears a specially designed union label. In the past, plumbing systems have been built on the job site, rather than in a factory, and the Plumbers had resisted their shipment across local union jurisdictional lines.

Training

In a program hailed by Secretary of Labor Shultz as an "innovative" step forward in construction industry training, the Plumbers Union and 33 construction companies signed a contract to recruit and train 500 minority-group members as journeymen pipefitters outside the regular apprenticeship program. The pact, signed by the union, the National Constructors Association, and

the Department of Labor on January 27, is primarily designed for persons who have some experience in pipefitting but are not eligible for regular apprentice training because of age or lack of education. Those selected will be known as journeymen trainees and will be paid the union's apprentice starting rate—about 60 percent of the journeyman's pay scale.

Under the agreement, the Department of Labor will provide about \$1.4 million in on-the-job training funds to cover the cost of orientation, classroom instruction, and training. Secretary Shultz said that he was optimistic that the program would have an impact on the length and composition of training throughout the industry. He said that he was hopeful some men would be able to qualify as journeymen after a year, instead of the usual 5 years.

The Stirling Homex Corp. of Avon, N.Y., a producer of modular homes, announced that it would start a training program for the employed and unskilled under which graduates would be admitted to the Carpenters' Union within 30 days of employment. (In June 1969, the company had signed an agreement with the Carpenters under which the union provides journeymen to erect factory-built housing at job sites throughout the Nation and the company uses only union labor at the sites.)⁴ A company spokesman stated that 100 Rochester-area residents would be hired, educated, and trained in groups over the next 9 months. It was also announced that the Labor Department would finance up to \$275,000 of the project's costs.

AFL-CIO Executive Council

Secretary Shultz delivered to the mid-winter meeting of the AFL-CIO Executive Council President Nixon's assurance that he stands ready "to take strong measures" if it should appear "unemployment was going to rise in any major way." Speaking later at a press conference, Secretary Shultz termed "unlikely" Federation President George Meany's prediction that there was a "distinct possibility" the jobless rate would climb to 6 percent in the near future as a result of the Administration's anti-inflation measures.

The Council members, who met at Bal Harbour, Fla., in late February, heard a report from the Federation's Civil Rights Department criticizing the Government's Philadelphia Plan. According to the report, the Plan's "main result may be to

maximize opposition of union membership and its main proposal seems to be to divide civil rights and liberal critics of the administration from the labor movement." The report advised the Federation's building trades unions to proceed with their own affirmative minority hiring plans rather than reacting to the "provocation" of the Philadelphia Plan. The report charged that the building trades have been singled out as "a favorite whipping boy," and cited the enlistment of more than 5,100 minority apprentices, a fourfold increase, in the past 2 years.

The Council declared that workers "have no other recourse than to seek substantial wage gains in collective bargaining," noting that increases in the cost of living "have been washing out the bargaining power of much of workers' wage gains" and that many workers have experienced declines in real wages, while profits during much of the 1960's have "skyrocketed and executive compensation moved up sharply."

In other actions, the Council endorsed the idea of a comprehensive national health plan financed by employees, employers, and the Federal Government and indicated that some remaining differences must be worked out before the Federation would rejoin the International Confederation of Free Trade Unions. It elected S. Frank Raftery, president of the Painters, to a council seat, replacing Anthony J. DeAndrade, president of the Printing Pressmen, who died in January.

Manufacturing

Honeywell, Inc., and Local 1145 of the International Brotherhood of Teamsters reached agreement January 28 on a 3-year pact for 12,500 workers at 14 plants in the Minneapolis, Minn., area. The pact provided for general wage increases of 30 cents effective immediately and 25 cents in February 1971, plus 1- to 12-cent and 1- to 6-cent increment increases on the respective dates. There was also a provision for reopening the contract in 1972 on wages and benefits, and there were some immediate benefit changes, including a ninth paid holiday, and improvements in vacation, hospital, and sickness and accident provisions.

The J. I. Case Co. and the Auto Workers have negotiated an 18-month agreement covering 6,000 employees at six plants.⁵ The pact provided a 15-cent-an-hour general wage hike effective Jan-

uary 1, 1970, with an additional 15 cents for skilled workers. A 5-cent general increase will become effective January 1, 1971. The 8-cent annual maximum on the escalator clause was continued (4 cents for the final 6 months of the contract) with the stipulation that the limit will be automatically removed if the union's 1970 round of bargaining with other farm equipment firms resulted in removal of their limits. Three additional paid holidays (between Christmas and New Year's) brought the total to 12, and would provide 11 consecutive days off during the holiday season. Sickness and accident benefits were raised \$10 a week (to \$85) and bridge and transition benefits to employees' survivors were hiked from \$100 to \$150 a month. The pact also gives the union the right to strike over unresolved disputes on new or changed incentive standards or hourly classifications.

Nonmanufacturing

About 9,000 employees in the New York City area were covered by a settlement between R. H. Macy & Co. and the Retail, Wholesale and Department Store Union. Wages for the 37½-hour

Earnings Index

The Bureau's index of manufacturing production workers average hourly earnings (excluding overtime premium pay and the effects of interindustry employment shifts) rose 0.8 in November, to 151.0. Data for prior periods are shown below.

	Index (1957-59 = 100)		Index (1957-59 = 100)
1967-----	131.5	1969	
1968-----	139.5	January-----	144.4
		February-----	144.9
1968		March-----	145.2
November-----	142.6	April-----	146.0
December-----	143.6	May-----	146.6
		June-----	146.9
		July-----	147.8
		August-----	148.4
		September-----	149.5
		October-----	150.2
		November-----	151.0

Monthly data from 1947-68 and data for selected periods from 1939 to 1947 are contained in *Summary of Manufacturing Production Workers Earnings Series, 1939-68* (BLS Bulletin 1616, 1969).

workweek were increased by \$10 effective immediately and \$16 on February 1, 1971. The minimum starting rate was raised to \$85 and \$93.75 on the corresponding dates, from \$75. Other benefits included a seventh paid holiday, 4 weeks of vacation after 20 years and 5 weeks after 25 years, monthly pensions of \$36 to \$157.50, up from \$22.50 to \$131.25, and improved health and welfare benefits.

An arbitration panel issued an award that ended a contract dispute between D.C. (District of Columbia) Transit System, Inc., and Division 689 of the Amalgamated Transit Union in January. The panel had been selected after the parties were unable to agree on a contract to replace one that expired October 31, 1969. The award, which covered 2,400 busdrivers and related employees, provided for a total of 40.5 cents in general wage increases, plus some inequity adjustments, during a 3-year term beginning November 1, 1969. In addition, the escalator clause was revised to provide guaranteed cost-of-living wage increases of 4 cents on July 1, 1970, and 6 cents on October 1, 1970. The workers will also receive 6-cent cost-of-living increases on January 1, and July 1, 1971, but the 12-cent total will be corrected up or down on October 1, 1971, to correspond with an amount determined by providing a 1-cent increase for each 0.4-point change in the Washington area Consumer Price Index between August 1970 and August 1971. Similarly, there will be a 6-cent boost

on April 1, 1972, that will be corrected on October 1, 1972, based on the August 1971 to August 1972 Index change. Changes were also made in supplementary benefits, including company assumption of the full cost of the health and welfare plan by November 1, 1971.

Statistical summary

Idleness caused by strikes in January rose to 3.7 million man-days, or .25 percent of the estimated total working time. This compared with .18 percent in January 1969,⁶ and .09 percent the previous January. The strike against the General Electric Co. accounted for a large portion of the January idleness. (Most of the 147,000 striking members of a 14-union coalition did not return to work until February, despite a tentative settlement reached on January 26.⁷) □

—FOOTNOTES—

¹ See *Monthly Labor Review*, November 1969, p. 73-4.

² See *Monthly Labor Review*, March 1970, p. 66.

³ See *Monthly Labor Review*, January 1970, p. 75.

⁴ See *Monthly Labor Review*, August 1969, p. 73.

⁵ Racine, Wis.; Burlington and Bettendorf, Iowa; Rockford and Rock Island, Ill.; and Terre Haute, Ind.

⁶ Data for 1970 and 1969 are preliminary.

⁷ See *Monthly Labor Review*, March 1970, p. 65.

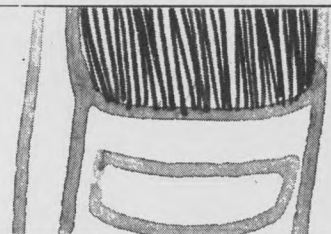
History of U.S. social insurance programs

A new tool is now available to aid social scientists, writers, and other researchers who wish to learn from original documents more about the early history of U.S. social insurance and public assistance programs.

Social Security Sources in Federal Records, 1934-1950 provides a comprehensive guide to the files and other archival materials generated during the first 15 of the Social Security Administration's 35 years of existence. A box-by-box inventory and a subject index catalog references to operating statistical and fiscal data, as well as administrative reports and correspondence, relating not only to the old-age and survivors insurance program, but also to unemployment compensation, public assistance, child health and welfare services, and other programs initiated or fostered by the Social Security Act.

The 118-page booklet (Research Report No. 30) is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at 65 cents a copy.

Book Reviews and Notes



Negotiating for prestige

The Educational Enclave: Coercive Bargaining in Colleges and Universities. By Norman Matlin. New York, Funk and Wagnalls, 1969. 226 pp. \$8.95.

In the context of the times, perhaps the first point to be made about Mr. Matlin's book is that the term "coercive bargaining" used in the title does not refer to the tactics of student protest in the universities, but to a process that the author regards as more pervasive and fundamental. The author's two major themes are (1) that the essence of education is "the certification of prestige," an activity that has become important because modern society has replaced distinctions based on social class with a prestige-graded social continuum, and (2) that education is best analyzed, not as a flow or a process, but as a series of "transactions" between the individuals and the institutions that make up the "semi-autonomous, quasi-society" that is the educational enclave. The negotiation of these transactions involves what Matlin calls coercive bargaining. I find a more familiar term, implicit bargaining, to be more accurate and descriptive. An example of the bargaining in question is the enrollment of a student in a professor's course. This has some elements of a bargain in that each party has expectations as to how the other will behave in terms of class attendance, performance of assignments, and grading standards, and if these expectations are not realized, the aggrieved party may try to use some form of pressure to insure performance.

Mr. Matlin's analysis of academic ritual and practice is extremely comprehensive, and he is ingenious in fitting virtually every conceivable facet of faculty, student, and institutional behavior into his system. To give the flavor of the book, here is Matlin on the subject of cutting classes:

... Minimizing the number of appearances is obviously beneficial. While the appearance or non-appearance of any particular student is of no great import to the institution, the simultaneous non-appearance of large numbers tends to be conspicuous. Prudence suggests that the nonappearance of students be staggered. In situations of comparative inelasticity, the relative infrequency of nonattendance allows for this solution with a minimum of formal organization. In situations of higher elasticity, a fair amount of cooperation and coordination among students may be necessary to maximize minimization.

This comprehensiveness is both a strength and a weakness. There are many instances in which academic folkways are analyzed with considerable insight; for example, the discussion of the lecture system on pp. 136-139. On the other hand, the relentless translation of every bit of academic minutiae into sociological jargon over more than 200 pages makes for heavy going. Taking a course is too often described as "opting for a specific sub-bargain;" getting a degree as "acquiring a prestige token."

With regard to his basic argument, surely Mr. Matlin dismisses too easily the tremendous variety of American higher education. A great deal of educational activity is based on the generation and distribution of prestige, but a surprising amount of transmission of knowledge also takes place. Even on his own ground, the prestige ranking of adults is more a function of occupation than educational level, and the educational system might be more profitably viewed as an arrangement for allocating occupational opportunities. As a final comment, the book would have benefited from a greater degree of selectivity in characteristics analyzed and a more straightforward style.

—J. W. GARBARINO

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The importance of policy

Industrialization in an Open Economy: Nigeria 1945-1966. By Peter Kilby. New York, Cambridge University Press, 1969. 399 pp., bibliography. \$14.50.

About half of this book is devoted to a micro-level analysis of the industrial sector in Nigeria, including a number of detailed industry and firm case studies, of the process of import substitution as it has evolved in Nigeria, and the Nigerian experience with processing its raw materials for export markets. The remaining half is given over to a variety of issues related to industrialization—labor productivity, industrial research, education and manpower development, industrial relations, and entrepreneurship.

The author emphasizes the importance of organizational efficiency, stating in several places that it is the major factor in faster growth; the concept itself, however, is not much discussed. Where organizational problems are most thoroughly considered—notably in discussions relating to interfirm differences in productivity—it is difficult to distinguish “organization” from the more conventional notions of “management.” In most of the book, poor public sector policy-making is at issue; the relationship between policy-making and organization is mentioned only briefly.

Mr. Kilby's analysis of government policy shows that the industrial incentive legislation in Nigeria is badly conceived and has been of very limited value in encouraging industrial investment. The most important and productive investments have come from firms established in Nigeria who are more eager to protect their market than to take advantage of the kinds of concessions given in the incentive legislation. Public sector industrial projects, furthermore, have been almost uniformly ineffective, leading to inefficient, high-cost operations, exaggerated levels of tariff protection, and in the end small positive and even negative effects on real output or foreign exchange balances. Industrial research policies have been too small in scope and poorly designed to provide needed information for industrial policies. Government's industrial relations policy (defined here as encouragement of voluntary collective bargaining) and wages policy have been unsuitable. The export sector has been adversely affected by agricultural price policies.

This stress on the importance of policy is

refreshing, and it is not the only useful aspect of the book. The richness of detail, the concern over what actually happens, the refusal to accept at face value conventional arguments about “externalities” and similar purported phenomena, all make this a valuable addition to the literature.

Some readers may be unsettled by the profusion of figures of uncertain origin (feasibility studies?) and reliability. There are occasional lapses in analysis, and the succinct treatment given to complex issues leaves a number of important questions unanswered. In his brief discussion of the urban labor supply function, for example, Professor Kilby omits the wage rate in the unorganized sector as a determinant of migration without mentioning why. There are also some matters of interpretation which are hard to accept. The author argues that “the Anglo-Saxon model” has “failed” in Nigeria, but his criterion is not so clear. It seems to be that the trade unions, through political pressures, have raised wages above what they would be otherwise. But real wages have risen very slowly in Nigeria in the past 20 years, and there is little persuasive evidence that organized labor's political potency has been responsible for this rise. In any case, the crux of the matter is the absence of feasible, more desirable alternatives to collective bargaining. Some people would argue that “the Anglo-Saxon model” of collective bargaining has “failed” in New York City, too, but nobody has yet been able to come up with better ways of dealing with the problems involved. In this, as in several other respects, Mr. Kilby's policy proposals are very sketchy and simplistic, and are in contrast to the care and detail that characterizes much of his diagnosis. The measures he puts forward in the industrial relations area, for example, are the removal of foreign sources of support for Nigeria trade unions and the tying of wage changes to a cost-of-living index. His recommendations for improvements in the policymaking process generally—“promulgation of basic procedural guidelines” and recruitment of better personnel—are even more straightforward. But these hardly begin to do justice to the complexity of the issues involved, as Mr. Kilby's own analysis makes abundantly clear.

—ELLIOT J. BERG
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Unification of the field

Essays in Industrial Relations Theory. Edited by Gerald G. Somers. Ames, Iowa, Iowa State University Press, 1969. 200 pp. \$6.50.

Industrial relations specialists, and especially those responsible for conducting university degree programs, have long been troubled by the untidy, fragmented character of their field. It has appeared to lack a distinguishable domain; scholars have been hard-pressed, therefore, to demonstrate that it merits the status of an academic discipline offering a uniquely useful perspective from which to acquire competent knowledge about important aspects of society. Whether industrial relations can establish in fact its claim to represent a systematically related field of study is the central concern of this volume of essays. Each essay examines the state of knowledge in a different area or specialty, and it is the editor's task to assemble the various theoretical strands and to project how they might be woven into a more general framework for organizing the field's diverse materials.

As the editor readily acknowledges, the essays do not establish the case for industrial relations as a separate discipline. If one can distinguish a common theme, it is the view of industrial relations as a complex set of social interactions, originating in the division of labor, and governed by the necessities of exchange. While several authors illustrate the value of the exchange concept in analyzing such phenomena as bargaining behavior and organizational decisionmaking, it remains to be shown that the notion of exchange, even if limited to behavior arising out of work relationships, provides a sharp enough focus for defining an orderly or unified field of study.

Not all the contributors share the same passion for large-scale conceptualizing or for carving out a special domain for industrial relations. William F. Whyte, for example, proposes a different kind of synthesis when he urges, in the interests of scientific progress, abandonment of collective bargaining as a subject matter area and a "re-conceptualization of the field" as a study of basic social processes of conflict resolution. Myron Joseph, on the other hand, would focus research interests inward, retaining collective bargaining as a useful descriptive term but partitioning its subject matter severely to permit the kind of rigorous analysis essential, in his view, to the acquisition of reliable knowledge. Professor

Joseph's list of research priorities—largely a catalog of traditional concerns—is, in turn, precisely the set of specific tasks that Murray Edelman, from a system's perspective, labels of minor consequence in assessing the true functional significance of the bargaining process. It is also the kind of small-scale theorizing that is the bane of the industrial relations generalist.

A brief review must leave to the reader the task of sorting the overlapping and partially contrasting views in the five essays addressed to the development of a general theory. A word is in order, however, concerning Herbert Heneman's introductory essay on scientific method. This essay misconceives the role of theories and models in scientific explanations, and these misconceptions lead the author into error, especially in his criticism of Dunlop's well-known theory of industrial relations systems. Hopefully, its mistaken views will not deter the reader from evaluating the other essays on their merits.

—ROBERT M. MACDONALD

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Working Maryland's mines

The Best-Dressed Miners: Life and Labor in the Maryland Coal Region, 1835-1910. By Katherine A. Harvey. Ithaca, N.Y., Cornell University Press, 1969. 488 pp. \$14.50.

In this book, the author presents a thoroughly researched study of coal mining in western Maryland. She describes the procedures of coal mining, the job conditions experienced by the miners, and traces in detail the evolving relations between mine operators and the workers. The history of the industry is set in its broader community context—a clear picture is provided of the cultural and educational life of the mining towns, of the everyday life of the miner and his family. The coal industry is viewed as it shapes direct economic conflict between the corporation and the union and also as it affects the politics of the local community and the State. The conflicts of the coal industry were fought on the streets and also in the legislature in Annapolis that considered proposals for regulating coal mining. Mrs. Harvey makes extensive use of newspaper accounts and the records of corporations and unions.

As portrayed in this volume, the coal miners in western Maryland enjoyed a somewhat privileged position in comparison with miners in other areas; they often owned homes and only rarely experienced major mine disasters. Still, the industry did exploit the miners—it sought to maintain profits by frequently cutting wages, depended heavily on child labor, and met strikes with injunctions and scab labor. What stands out clearly in this account are the primitive conditions that prevailed in coal mining, the incidence of the company store system, inadequate standards of mine safety, and insecurity of striking miners.

The unions and the corporations clashed repeatedly in this area. In various strikes—those of 1876, the great strike of 1882, 1894, and 1900—the unions were defeated and miners returned to work on corporation terms. The operators made skillful use of propaganda, scabs, and the local judiciary and police. The mine strikes were most often defensive in character, launched against company attempts to cut wages. It is likely that the threat of strikes somewhat restrained the operators from further depressing the workers' conditions. The operators took a consistent position; the unions were not to be legitimized by recognition. The companies sought to teach the lesson that ultimately the worker would have to come to terms with his employer.

Employers effectively pursued the policy of divide and conquer, perhaps because ethnic divisions separated the largely Anglo-Saxon workers of western Maryland from the "new" immigrants of other communities, or possibly because it was difficult to unite the Maryland miners with more poorly paid workers. Miners saw the union organizer as the outsider who came to meddle in local affairs and they noted that national unions, especially the Knights of Labor, were not always able or willing to support local struggles. Finally, after 1890, the miners turned to an organization that was clearly a labor union; the United Mine Workers had a precarious existence until the New Deal period, however. The mine operators set the terms of conflict between themselves and the miners; the very right of the union to exist and to effectively function was only established after a protracted battle.

This book is a comprehensive, factual account of the industry. The author's style, however, is somewhat dry and the dramatic story of the coal miner is somehow obscured. There is heavy use

of statistics and reports with no real attempt to view what happened from the perspective of the miner. We get little sense of what the workers thought and felt about their situation and little information about the internal history of the unions. This is labor history written from "outside" and the volume's impact is thereby limited. The workers' viewpoint is not the only perspective but the historian who fails to explore it misses a vital element of American economic history.

—HERBERT SHAPIRO

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Autogestion in Algeria

The Land to Those Who Work It: Algeria's Experiment in Workers' Management. By Thomas L. Blair. Garden City, N.Y., Doubleday & Co., Inc., 1969. 275 pp., \$5.95.

This interesting book tells the story of Algeria's experiment in workers' management, called autogestion, from spring 1962 to spring 1965, the first stage in Algeria's new independent history. The period runs from Ben Bella to Boumedienne, when workers' management came forth from the debris of colonialism and revolution under the banner of "Land to the Peasants; Factories to the Workers."

The author sets out to describe "the ways in which Algeria, with an impoverished colonial inheritance, a small core of ex-settler property, and a revolutionary élan, devised a system of autogestion and attempted to move the economy and society leftward toward socialism." He attempts to answer a number of preliminary questions concerning the structure of power and influence on the eve of independence, the emergence of new goals, and the reason for the *colon* exodus of French settlers. The principal part of the text documents and critically examines Algeria's bold attempt at decolonization and economic self-determination and explains its significance within the economy and society. Questions from earlier cases of workers' management, outlined in chapter I, that occur again in Algeria's experiment are: What social and economic structures would best sustain a transition from a century of colonialism to socialism? What is the role of state capitalism, collectivization, and agrarian reform in this transition? How could all classes be united, land and prosperity brought to the disinherited, and a new socialist man be created, confidently seeking his

destiny through democratic forms of self-government and an international fraternal perspective? In closing chapters, the author returns to problems of theory and practice in his assessment of noncapitalist change in Algeria, but except by implication he provides no positive answers to those questions.

Dr. Blair's work is well written and provides useful reading for those concerned with economic development in poor countries having a colonial background. Those persons who advocate political and social revolution as a primary means of achieving economic development and improved economic and social status for the urban masses and peasants will be disappointed with Algeria's experience. Although the fertile estates of French settlers were eventually taken over by the government for their workers' use and management and this limited land has again become productive, Algeria nevertheless had to continue its dependence on French capital, administrative and technical expertise, and on continental markets for exploitation of the oil and gas of the Sahara regions, for training efficient managers, and for establishing industrial plants in cooperation with the government. Thus, workers' management did not spread widely, an Algerian bourgeoisie emerged in the former French estates, industry, and the civil service with economic interests of its own, and the millions of Fellahin continued to dwell in poverty on the poor lands and in the hills. The encouraging development that occurred on the limited fertile land and in industry, transport, and education has not materially improved the lot of these people because of the shortage of good land, of industrial and town jobs, and of education and skills. In a word, although the story is unfinished, the political revolution and the decolonialization of the fertile estates have not solved the poverty and distress in Algeria.

—JAMES C. NELSON

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Washington State University

History of revolution

The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present. By David S. Landes. New York, Cambridge University Press, 1969. 566 pp. \$8.50.

Described by the author as an "interpretive

essay" on the Industrial Revolution, this study began as a contribution to the Cambridge Economic History for the period 1750–1870. The author has revised the scope of the study to include the present. The result is actually a self-contained survey of British industrial development in the 18th century, its subsequent spread to the continent, and its 20th century regeneration as a cumulative international movement of great impact. The volume is an impressive work of analytical scholarship in economic history and provides a valuable base (in some respects a welcome anti-thesis) to theoretical formulations now prevalent in development economics.

Professor Landes asks many of the key questions about the historical development process: Why did the Industrial Revolution occur in 18th century Britain, and why not elsewhere and earlier? Why did industrial leadership pass in the closing decades of the 19th century from Britain to Germany? How was recovery from the crisis of 1929–32 achieved in Europe? The answers are always thoughtful and reasonably comprehensive, although with respect to the first question they tend to be conventional, possibly because the literature is so exhaustive. Some recognition might have been given to the explanation put forward by C. E. Ayres some years ago that western Europe at the time of the Industrial Revolution was technologically continuous with Mediterranean civilization, yet because of its frontier situation was institutionally discontinuous.

In his explanation of the process of invention, Professor Landes, like other historians, at times becomes teleological. On page 66 he says, "We are now come full circle: the inventions came in part because the growth and prosperity of the industry made them imperative; and the growth and prosperity of the industry helped make their early and widespread utilization possible." This seems to confuse invention with commercial adaptation and exploitation.

Nevertheless, the author appreciates profoundly the force of technology as a prime mover in economic development and its relation to institutional inertia. His description of the breaking of the "crust of custom" which enabled the industrial system to take root in Germany and France, as well as the peculiar technical problems that had to be solved, is well done. He effectively describes the role of evolving financial institutions such as

crédit mobilier, while recognizing that economists have tended to exaggerate the formation of capital as a motor of economic growth.

Professor Landes' essay throughout is a piece of literary craftsmanship of the first order. His passages on the technology of steelmaking, the application of the principle of interchangeable parts, and the significance of the sewing machine are gems of compressed historical and analytical writing. In a single footnote on page 229, he provides a neat assessment of W. W. Rostow's stages theory of development. In his final chapter, the author offers some further cautions about the conclusions that can be drawn for the less-developed countries from the experience of the industrially advanced countries.

—JAMES H. STREET
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Inner city enterprise

Black Economic Development. Edited by William F. Haddad and G. Douglas Pugh. New York, Prentice-Hall, Inc., 1969. 171 pp. \$4.95.

The editors have assembled 12 background essays to form this book. John Z. Delorean's essay ascribes black frustration to discrimination and through black capitalism, the black man seeks to control his own economic institutions and destiny. He divides the problem into two parts: (1) the conceptual, and (2) the practical. Gerson Green and Geoffrey Faux address themselves to the conceptual when they outline the controversy between the economic (profit and loss approach) versus the social utility approach. Although conceding that the majority view favors job training, they indicate a weakness of this approach by saying, "the economic structure puts the ghetto at a competitive disadvantage," hence evaluation should be in terms of social advantages (as defense is viewed).

Roy Innis favors a "new social contract," or separatism. He would build a viable economic ghetto, include alliances with the "outside world," but have the ghetto retain economic and political power to protect the "infant black community." Wright Elliott compares the differences between black and traditional capitalism; explores the limitations of "special privilege," and cautions

that "special privilege may make the black community less viable." He is opposed to separatism, emphasizing mutuality and job training. Dunbar S. McLaurin and Cyril D. Tyson in, "Ghetto Economic Development and Industrialization," conclude the conceptual aspects of the problem. They contend that their proposal, Ghediplan, is more inclusive and that all other proposed plans are piece-meal and stress only the economic side. They envisage the ghetto as part of a larger economic structure.

On the practical side, Peter F. McNeish asserts that interest in minority involvement is associated with the economic potential of minority group enterprises. In the chapter, "Where Does the Money Come From," he maintains that investment in the ghetto would lessen tensions, reduce the rotting core of metropolitan areas and strengthen the entire economy. In conjunction with McNeish's essay, Lawrence Johnson and Wendell Smith discuss the need for qualified black managers. They maintain that the black management group could be recruited from the black community. Howard J. Samuels stresses governmental intervention, by the Small Business Administration, through underwriting black enterprise. Like Green and Faux, David B. Hertz stresses underutilization of human resources in the ghetto, but he emphasizes economic integration via a black-white partnership. G. Douglas Pugh reviews the "Oakland Plan," bonding of minority contractors, a requisite for bidding on large construction jobs, and the trend toward white craft union and employer construction trades councils cooperating with black contractors in finding skilled labor, assisting in the preparation and submission of bids, and so on. The concluding essay offers a thumbnail sketch of current black experiences in "inner city" enterprises.

From an organizational standpoint, this reviewer found the lack of historical perspective, the repetitiveness of the essays, and the lack of a cohesive whole rather disconcerting. Despite these comments, the book should provide the uninitiated with some explanation of the black-white economic paradox. Should a new addition be contemplated, the participant's reaction to the background papers would round out the book.

—HERMAN D. BLOCH
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Man and the machine

Automation and Industrial Labor. By Julius Rezler. New York, Random House, Inc. 1969. 224 pp., bibliography. \$5.95.

Every once in a while, I run into the question, "Whatever happened to concern about automation?" As one who worried and urged that we learn from the statesmanship of the Armour and Kaiser agreements, I sometimes wonder, too. Automation is still marching forward, upsetting accustomed work relationships and individual habits. This is not to say that the great benefits which flow from technological progress should therefore be postponed, but rather that foresight and planning should be hitched up to reduce waste of human resources. Perhaps one aspect of the new emphasis on physical conservation could be a revival of interest in human conservation. To some, it seems that unemployment figures, for example, are being dismissed like so many lifeless chess figures—the economy can take a 4- or a 5-percent unemployment rate, but we should begin worrying if it goes over 5. This kind of discussion suggests that it is a matter of little moment if 1 in every 20 workers in our Nation needs a job to become a man again and regain a place in respectable society.

Well, sir, if that is the way the pendulum has swung, there is little future for Professor Rezler's thorough and thoughtful volume. I hope not, for it deserves a better fate. On the other hand, there was that hefty report, "Technology and the American Economy," put out by the National Commission on Technology, Automation and Economic Progress, a top-flight group chartered by the Congress and appointed from the leadership of business, labor, and the rest of us by the President of the United States. That was 4 years ago, and some restless souls are already asking, "Whatever happened to the report of those fellows from Texas Instruments, United Auto Workers, and M.I.T.?"

But enough of this mourning for the wisdom of yesteryear. Let those of us who believe clap hands and give life to Professor Rezler's brainchild. He has focussed on many varied aspects of the impact of automation and has recited an impres-

sive list of studies and sources to reinforce them.

His chapter on "Automation's Effects on the Job Satisfaction and Mental Health of Workers" offered several provocative findings. The Loyola University of Chicago professor, in contrast to those who urge the smaller plant and the smaller company as a way to better relate employee to employer, declares, "The notion that the general public has about automated plants also contributes to the pride of workers who are employed in them. . . . Automated plants have more prestige with the public not only because they are new, clean, and located in suburbia, but also because they are generally affiliated with large companies. In American society, one criterion of 'goodness' is the size of the organization, and the prestige of the individual worker is enhanced from his affiliation with a large, automated company."

The author packs much more into this trim volume, touching on the effect of automation on skill requirements, supervision, leisure time, location of work, unionization, and labor-management devices to humanize the changeover from manual to automated production. His notes and bibliography indicate the work of a meticulous writer.

—SAM ZAGORIA

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Productivity in the ports

Collective Bargaining and Productivity: The Longshore Mechanization Agreement. By Paul T. Hartman. Berkeley, Calif., University of California Press, 1969. 307 pp., bibliography. \$8.50.

The major thrust of the book is an analysis of the restrictive work rules in Pacific Coast longshoring and the steps taken to eliminate them through the Mechanization and Modernization Agreement (M&M) between the Pacific Maritime Association (PMA) and the International Longshoremen's and Warehousemen's Union (ILWU).

After describing the historical development of the employers' association and the union, Dr. Hartman does an excellent job of analyzing the

ways in which the ILWU obtained its extremely high degree of job control in longshoring and the reasons for gaining that control. He has examined several job control mechanisms such as gear priority (the individual worker's right to a job to which he was properly assigned and put to work), manning, sling-loads, standard gang size, and multiple-handling rules. Interestingly enough, these restrictive work rules were not implemented by a conservative business union, but one led by men with revolutionary goals.

The development of the M&M Agreement is described in detail. For agreeing to eliminate restrictions in the labor contract and working rules, the union received a share of the productivity increase by providing for a guaranteed weekly wage, a trust fund for death or permanent disability, and a trust fund for early retirement.

A major contribution of the book is the development of productivity measures in longshoring. During the first 3 years of the agreement, the employers kept productivity figures. However, the PMA was reluctant to concede that productivity had improved and doubted the validity of the employer-gathered data. The author used several types of estimates to show that productivity had increased dramatically during the 1960-65 period. These estimates included indexes of average productivity, man-hour savings, estimated man-hours required and saved at 1960 rates, and tonnage. In general, productivity increased approximately 40 percent from 1960 to 1965.

In analyzing the reasons for the increase in productivity, the author cited the elimination of make-work rules and practices as most important. Specific changes were the curtailment of multiple handling, the relaxation of jurisdictional claims to piling or breaking down piles on the dock, abandoning manning requirements on the dock, improving methods of handling, and using new machinery. Another contribution to the productivity increase was the substantial investment in new bulk-handling facilities and equipment.

The impact of the agreement upon the work force has been substantial, but in a very unexpected direction. Rather than the feared oversupply of labor, there has been a severe manpower shortage due to the inaccurate estimates of the demand for labor by both parties. The impact

upon the employers has been substantial in terms of increased revenues and profits.

Although the book has some highly technical sections (primarily in the appendixes), it certainly is a "must read" for those interested in featherbedding. The author has contributed a superb analysis of the relationship between restrictive make-work rules and productivity.

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Current Labor Statistics



Employment and unemployment—household data

1. Employment status of noninstitutional population, 1947 to date.....	96
2. Employment status, by color, sex, and age, seasonally adjusted, quarterly averages.....	96
3. Full- and part-time status of civilian labor force.....	97
4. Employment and unemployment, by age and sex, seasonally adjusted, quarterly data.....	97
5. Employment totals, by occupation, with unemployment rates, seasonally adjusted, quarterly averages.....	98
6. Unemployed persons, by reason for unemployment.....	98
7. Unemployment rates, by age and sex, seasonally adjusted.....	99
8. Unemployment indicators, seasonally adjusted.....	100
9. Duration of unemployment, seasonally adjusted.....	100
10. Unemployment insurance and employment services.....	101

Nonagricultural employment—payroll data

11. Employment by industry, 1947 to date.....	102
12. Employment by State.....	102
13. Employment by industry division and major manufacturing group.....	103
14. Employment by industry division and major manufacturing group, seasonally adjusted.....	104

Labor turnover rates

15. Labor turnover in manufacturing, 1959 to date.....	105
16. Labor turnover in manufacturing, by major industry group.....	106

Hours and earnings—private nonagricultural payrolls

17. Hours and earnings, by industry division, 1947 to date.....	107
18. Weekly hours, by industry division and major manufacturing group.....	108
19. Weekly hours, by industry division and major manufacturing group, seasonally adjusted.....	109
20. Hourly earnings, by industry division and major manufacturing group.....	110
21. Weekly earnings, by industry division and major manufacturing group.....	111
22. Spendable weekly earnings in current and 1957-59 dollars.....	112

Prices

23. Consumer and Wholesale Price Indexes, 1949 to date.....	112
24. Consumer Price Index, general summary and selected items.....	113
25. Consumer Price Index, selected areas.....	119
26. Wholesale Price Index, by group and subgroup of commodities.....	120
27. Wholesale Price Index, for special commodity groupings.....	122
28. Wholesale Price Index, by stage of processing.....	123
29. Wholesale Price Index, by durability of product.....	124
30. Industry-sector price index for output of selected industries.....	125

Labor-management disputes

31. Work stoppages and time lost.....	126
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Productivity

32. Indexes of output per man-hour, hourly compensation, and unit labor costs.....	127
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Schedule of release dates for major BLS statistical series.....	127
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1. Employment status of the noninstitutional population, 16 years and over, 1947 to date

[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	

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

[In thousands]

Characteristic	1969				1968				1967				1966	Annual average	
	4th	3d	2d	1st	4th	3d	2d	1st	4th	3d	2d	1st	4th	1969	1968
WHITE															
Civilian labor force	72,475	71,942	71,466	71,285	70,392	70,045	69,851	69,587	69,440	68,944	68,210	68,226	67,951	71,778	69,975
Men, 20 years and over	41,956	41,842	41,639	41,656	41,423	41,373	41,235	41,230	41,175	40,972	40,673	40,607	40,373	41,772	41,317
Women, 20 years and over	24,156	23,949	23,684	23,566	23,122	22,843	22,741	22,565	22,632	22,276	21,775	21,709	21,638	23,838	22,820
Both sexes, 16-19 years	6,363	6,151	6,143	6,036	5,847	5,829	5,875	5,792	5,633	5,696	5,762	5,910	5,940	6,168	5,838
Employed	70,096	69,575	69,260	69,135	68,267	67,804	67,617	67,311	67,032	66,576	65,888	65,970	65,747	69,518	67,750
Men, 20 years and over	41,091	40,995	40,871	40,926	40,677	40,553	40,405	40,376	40,300	40,101	39,772	39,775	39,524	40,978	40,503
Women, 20 years and over	23,327	23,120	22,891	22,794	22,372	22,066	21,987	21,777	21,766	21,416	20,963	20,902	20,921	23,032	22,052
Both sexes, 16-19 years	5,678	5,460	5,498	5,415	5,218	5,185	5,225	5,158	4,966	5,059	5,153	5,293	5,302	5,508	5,195
Unemployed	2,379	2,367	2,206	2,150	2,125	2,234	2,276	2,268	2,368	2,322	2,256	2,256	2,204	2,260	2,225
Men, 20 years and over	865	847	768	730	746	820	830	854	875	871	901	832	849	794	814
Women, 20 years and over	829	829	793	772	750	777	754	788	866	860	812	807	717	806	768
Both sexes, 16-19 years	685	691	645	648	629	644	650	634	667	637	609	617	638	660	643
Unemployment rate	3.3	3.3	3.1	3.0	3.0	3.2	3.2	3.3	3.5	3.4	3.4	3.3	3.2	3.1	3.2
Men, 20 years and over	2.1	2.0	1.8	1.8	1.8	2.0	2.0	2.1	2.1	2.1	2.2	2.0	2.1	1.9	2.0
Women, 20 years and over	3.4	3.5	3.3	3.3	3.2	3.4	3.3	3.5	3.8	3.9	3.7	3.7	3.3	3.4	3.4
Both sexes, 16-19 years	10.8	11.2	10.5	10.7	10.8	11.0	11.1	10.9	11.8	11.2	10.6	10.4	10.7	10.7	11.0
NEGRO AND OTHER															
Civilian labor force	9,056	8,979	8,867	8,914	8,737	8,700	8,828	8,762	8,733	8,632	8,632	8,599	8,544	8,954	8,759
Men, 20 years and over	4,622	4,593	4,549	4,554	4,513	4,517	4,562	4,543	4,496	4,507	4,505	4,500	4,492	4,579	4,535
Women, 20 years and over	3,616	3,595	3,535	3,550	3,468	3,414	3,467	3,433	3,444	3,348	3,347	3,362	3,322	3,574	3,446
Both sexes, 16-19 years	818	791	783	810	756	769	799	786	793	777	780	737	730	801	778
Employed	8,500	8,394	8,271	8,371	8,164	8,132	8,233	8,147	8,073	8,006	7,986	7,974	7,923	8,384	8,169
Men, 20 years and over	4,445	4,416	4,382	4,397	4,335	4,349	4,388	4,351	4,305	4,328	4,303	4,299	4,268	4,410	4,356
Women, 20 years and over	3,429	3,372	3,307	3,352	3,264	3,205	3,246	3,200	3,191	3,112	3,115	3,118	3,098	3,365	3,229
Both sexes, 16-19 years	626	606	582	622	565	578	599	596	577	566	568	557	557	609	584
Unemployed	556	585	596	543	573	568	595	615	660	626	646	625	621	570	590
Men, 20 years and over	177	177	167	157	178	168	174	192	191	179	202	201	224	169	179
Women, 20 years and over	187	223	228	198	204	209	221	233	253	236	232	244	224	209	217
Both sexes, 16-19 years	192	185	201	188	191	191	200	190	216	211	212	180	173	192	194
Unemployment rate	6.1	6.5	6.7	6.1	6.6	6.5	6.7	7.0	7.6	7.3	7.5	7.3	7.3	6.4	6.7
Men, 20 years and over	3.8	3.9	3.7	3.4	3.9	3.7	3.8	4.2	4.2	4.0	4.5	4.5	5.0	3.7	3.9
Women, 20 years and over	5.2	6.2	6.4	5.6	5.9	6.1	6.4	6.8	7.3	7.0	6.9	7.3	6.7	5.8	6.3
Both sexes, 16-19 years	23.5	23.4	25.7	23.2	25.3	24.8	25.0	24.2	27.2	27.2	27.2	24.4	23.7	24.0	24.9

3. Full- and part-time status of the civilian labor force

[In thousands—not seasonally adjusted]

Employment status	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
FULL TIME															
Civilian labor force.....	69,018	68,869	69,204	69,296	69,491	70,350	73,713	73,514	72,365	67,818	67,921	67,799	67,700	69,700	68,332
Employed:															
Full-time schedules ¹	63,997	64,155	65,302	65,517	65,594	66,206	68,854	68,471	67,011	64,346	64,244	63,778	63,588	65,503	64,225
Part-time for economic reasons.....	2,117	2,135	1,998	1,916	1,955	2,069	2,607	2,456	2,522	1,672	1,704	1,961	1,906	2,055	1,970
Unemployed, looking for full-time work.....	2,904	2,579	1,904	1,864	1,942	2,075	2,251	2,587	2,831	1,799	1,973	2,060	2,206	2,142	2,138
Unemployment rate.....	4.2	3.7	2.8	2.7	2.8	2.9	3.1	3.5	3.9	2.7	2.9	3.0	3.3	3.1	3.1
PART TIME															
Civilian labor force.....	12,266	11,850	12,212	12,131	12,019	10,634	8,803	9,283	9,991	11,745	11,699	11,467	11,404	11,032	10,405
Employed (voluntary part-time).....	11,375	11,023	11,488	11,284	11,122	9,751	8,185	8,688	9,422	11,245	11,130	10,781	10,687	10,343	9,726
Unemployed, looking for part-time work.....	890	827	724	847	898	883	618	594	568	500	569	686	717	689	679
Unemployment rate.....	7.3	7.0	5.9	7.0	7.5	8.3	7.0	6.4	5.7	4.3	4.9	6.0	6.3	6.2	6.5

¹ Employed persons with a job but not at work are distributed proportionately among the full- and part-time employed categories.

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

[In thousands]

Employment status	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL															
Total labor force.....	85,590	85,599	85,023	84,872	85,051	84,868	84,517	84,310	84,028	83,652	83,950	83,883	83,674	84,239	82,272
Civilian labor force.....	82,277	82,213	81,583	81,379	81,523	81,325	80,987	80,789	80,504	80,130	80,434	80,379	80,199	80,733	78,737
Employed.....	75,322	79,041	78,737	78,528	78,445	78,194	78,142	77,931	77,741	77,321	77,589	77,650	77,524	77,902	75,920
Agriculture.....	3,779	3,426	3,435	3,434	3,446	3,498	3,614	3,561	3,683	3,777	3,661	3,710	3,836	3,606	3,817
Nonagriculture.....	71,543	75,615	75,302	75,094	74,999	74,696	74,528	74,370	74,058	73,544	73,928	73,940	73,688	74,296	72,103
Unemployed.....	3,427	3,172	2,846	2,851	3,078	3,131	2,845	2,858	2,763	2,809	2,845	2,729	2,675	2,831	2,817
MEN, 20 YEARS AND OVER															
Total labor force.....	49,707	49,736	49,534	49,544	49,642	49,642	49,488	49,405	49,334	49,290	49,294	49,336	49,259	49,406	48,834
Civilian labor force.....	46,336	46,826	46,578	46,531	46,599	46,586	46,443	46,338	46,236	46,194	46,203	46,255	46,203	46,351	45,852
Employed.....	43,534	45,674	45,553	45,533	45,511	45,465	45,485	45,335	45,303	45,251	45,282	45,374	45,323	45,388	44,859
Agriculture.....	2,479	2,473	2,499	2,482	2,575	2,593	2,670	2,646	2,676	2,713	2,678	2,701	2,720	2,636	2,816
Nonagriculture.....	41,055	43,201	43,054	43,051	42,936	42,872	42,815	42,689	42,627	42,538	42,604	42,673	42,603	42,752	42,043
Unemployed.....	1,302	1,152	1,025	998	1,088	1,121	958	1,003	933	943	921	881	880	963	993
WOMEN, 20 YEARS AND OVER															
Civilian labor force.....	28,066	28,073	27,875	27,671	27,767	27,634	27,664	27,524	27,341	27,055	27,227	27,192	27,178	27,413	26,266
Employed.....	26,925	27,060	26,897	26,663	26,699	26,543	26,626	26,512	26,322	26,041	26,193	26,216	26,200	26,397	25,281
Agriculture.....	650	586	585	555	554	535	582	547	610	622	607	626	718	593	606
Nonagriculture.....	26,295	26,474	26,312	26,108	26,145	26,008	26,044	25,965	25,712	25,419	25,586	25,590	25,482	25,804	24,675
Unemployed.....	1,114	1,013	978	1,008	1,068	1,091	1,038	1,012	1,019	1,014	1,034	976	978	1,015	985
BOTH SEXES, 16-19 YEARS															
Civilian labor force.....	7,347	7,314	7,130	7,177	7,157	7,105	6,880	6,927	6,927	6,881	7,004	6,932	6,818	6,970	6,618
Employed.....	6,363	6,307	6,287	6,332	6,235	6,186	6,031	6,084	6,116	6,029	6,114	6,060	6,001	6,117	5,780
Agriculture.....	390	367	351	397	317	370	362	368	397	442	376	383	398	377	394
Nonagriculture.....	5,973	5,940	5,936	5,935	5,918	5,816	5,669	5,716	5,719	5,587	5,738	5,677	5,603	5,739	5,385
Unemployed.....	934	1,007	843	845	922	919	849	843	811	852	890	872	817	853	839

5. Employment totals, by occupation, with unemployment rates, seasonally adjusted, quarterly averages

Characteristic	1969				1968				1967				1966	Annual average	
	4th	3d	2d	1st	4th	3d	2d	1st	4th	3d	2d	1st	4th	1969	1968
EMPLOYMENT (in thousands)	78,570	78,090	77,550	77,418	76,409	76,017	75,898	75,392	75,121	74,630	73,911	73,862	73,648	77,902	75,921
White-collar workers	37,509	36,923	36,677	36,264	35,906	35,732	35,419	35,140	34,888	34,456	33,943	33,635	33,693	36,845	35,551
Professional and technical	10,936	10,764	10,740	10,638	10,473	10,392	10,295	10,142	10,067	9,952	9,761	9,734	9,605	10,769	10,325
Managers, officials, and proprietors	8,141	7,970	7,993	7,841	7,897	7,827	7,661	7,716	7,633	7,630	7,453	7,261	7,429	7,987	7,776
Clerical workers	13,655	13,478	13,281	13,171	12,876	12,823	12,816	12,694	12,624	12,343	12,250	12,115	12,158	13,397	12,803
Sales workers	4,777	4,711	4,663	4,614	4,660	4,690	4,647	4,588	4,564	4,531	4,479	4,525	4,501	4,692	4,647
Blue-collar workers	28,389	28,425	27,931	28,202	27,774	27,491	27,513	27,297	27,279	27,343	27,175	27,240	26,963	28,237	27,525
Craftsmen and foremen	10,265	10,174	10,044	10,298	10,147	9,972	10,003	9,936	9,827	9,790	9,853	9,918	9,700	10,193	10,015
Operatives	14,412	14,589	14,208	14,264	14,051	13,911	13,956	13,896	13,918	13,999	13,787	13,822	13,831	14,372	13,955
Nonfarm laborers	3,712	3,662	3,679	3,640	3,576	3,608	3,554	3,465	3,534	3,554	3,535	3,500	3,432	3,672	3,555
Service workers	9,589	9,493	9,467	9,558	9,411	9,385	9,395	9,337	9,330	9,277	9,276	9,418	9,405	9,528	9,381
Farmworkers	3,089	3,231	3,417	3,438	3,346	3,400	3,507	3,649	3,654	3,556	3,448	3,584	3,612	3,292	3,464
Unemployment rate	3.6	3.6	3.5	3.4	3.4	3.6	3.6	3.7	3.9	3.9	3.9	3.8	3.7	3.5	3.6
White-collar workers	2.2	2.2	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.2	2.0	2.1	2.0	2.1	2.0
Professional and technical	1.5	1.4	1.3	1.1	1.2	1.3	1.2	1.2	1.3	1.3	1.4	1.4	1.3	1.3	1.2
Managers, officials, and proprietors	.9	1.0	.9	.9	1.0	1.1	.9	.9	1.0	.9	.9	.9	.8	.9	1.0
Clerical workers	3.2	3.2	2.8	2.9	2.8	2.9	3.0	3.1	3.4	3.3	2.8	3.0	3.0	3.0	3.0
Sales workers	2.8	3.0	2.9	2.9	2.8	2.6	2.7	3.0	3.2	3.6	2.9	3.2	2.4	2.9	2.8
Blue-collar workers	4.3	4.0	3.8	3.7	3.8	4.2	4.0	4.4	4.5	4.5	4.6	4.2	4.1	3.9	4.1
Craftsmen and foremen	2.2	2.2	2.1	2.1	2.2	2.4	2.5	2.5	2.5	2.3	2.8	2.3	2.8	2.2	2.4
Operatives	5.0	4.4	4.3	4.1	4.3	4.5	4.3	4.8	5.1	5.1	5.0	4.7	4.2	4.4	4.5
Nonfarm laborers	6.9	7.2	6.5	6.4	6.7	7.4	7.0	7.7	7.8	7.6	8.0	7.2	7.5	6.7	7.2
Service workers	3.9	4.5	4.4	4.0	4.3	4.5	4.6	4.3	4.9	4.5	4.2	4.5	4.5	4.2	4.5
Farmworkers	1.8	2.2	1.9	1.6	1.6	2.4	2.3	1.9	2.3	2.4	2.4	2.2	2.0	1.9	2.1

6. Unemployed persons, by reason for unemployment

[In thousands—not seasonally adjusted]

Reason for unemployment, age, and sex	1970		1969										Annual average		
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
Total, 16 years and over	3,794	3,406	2,628	2,710	2,839	2,958	2,869	3,182	3,400	2,299	2,542	2,746	2,923	2,831	2,817
Lost last job	1,767	1,595	1,133	939	882	823	894	979	875	892	1,088	1,186	1,245	1,017	1,070
Left last job	473	485	378	421	451	586	507	459	448	325	394	391	409	436	431
Reentered labor force	1,158	999	825	1,011	1,093	1,105	997	1,010	1,275	796	770	869	947	965	909
Never worked before	377	328	292	339	414	445	471	734	802	286	290	301	323	413	407
Male, 20 years and over	1,678	1,456	1,052	909	906	914	888	945	905	810	901	1,048	1,134	963	993
Lost last job	1,144	997	693	524	458	440	469	534	427	438	575	686	707	556	599
Left last job	105	197	150	141	141	209	192	170	183	148	145	139	167	164	167
Reentered labor force	310	230	188	226	267	235	200	195	262	204	164	203	232	216	205
Never worked before	39	32	20	18	40	30	24	46	33	19	17	19	28	27	22
Female, 20 years and over	1,238	1,086	840	994	1,097	1,202	1,119	987	1,058	867	967	964	1,061	1,015	985
Lost last job	451	418	303	309	314	288	310	307	336	344	374	353	394	335	341
Left last job	200	177	138	183	209	237	196	184	172	107	159	144	153	171	167
Reentered labor force	529	437	354	457	501	596	549	434	480	377	399	414	457	455	422
Never worked before	58	54	46	45	72	81	64	62	69	39	35	52	57	55	55
Both sexes, 16 to 19 years	878	864	736	807	836	842	865	1,250	1,437	623	674	734	729	853	839
Lost last job	192	180	137	106	110	95	115	138	112	110	139	147	145	126	130
Left last job	68	111	90	97	101	140	119	105	93	70	90	107	89	101	97
Reentered labor force	319	331	283	328	324	274	248	380	533	214	207	252	257	294	281
Never worked before	280	241	226	276	301	334	383	627	699	228	238	229	238	331	330

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

Age and sex	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL															
16 years and over.....	4.2	3.9	3.5	3.5	3.8	3.8	3.5	3.5	3.4	3.5	3.5	3.4	3.3	3.5	3.6
16 to 19 years.....	13.4	13.8	11.8	11.8	12.9	12.9	12.3	12.2	11.7	12.4	12.7	12.6	12.0	12.2	12.7
16 and 17 years.....	16.3	17.2	13.7	14.3	16.5	16.1	15.8	14.6	13.5	14.0	14.8	13.8	13.8	14.5	14.7
18 and 19 years.....	11.7	11.6	10.2	9.2	10.4	10.6	9.8	10.3	10.1	11.5	11.4	11.6	11.0	10.5	11.2
20 to 24 years.....	7.3	6.1	5.8	5.8	6.4	6.5	5.4	5.8	5.4	5.5	5.7	5.4	5.4	5.7	5.8
25 years and over.....	2.6	2.4	2.2	2.2	2.4	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.3
25 to 54 years.....	2.7	2.5	2.3	2.1	2.4	2.5	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.3	2.3
55 years and over.....	2.4	2.0	2.1	1.9	2.3	2.2	2.0	2.0	2.0	1.7	2.0	1.9	2.0	2.0	2.2
MALE															
16 years and over.....	3.6	3.3	2.9	2.9	3.1	3.2	2.8	2.9	2.7	2.7	2.7	2.6	2.6	2.8	2.9
16 to 19 years.....	13.0	12.6	11.0	11.7	11.8	12.0	11.3	11.8	10.7	11.1	11.5	11.5	11.0	11.4	11.6
16 and 17 years.....	15.4	14.9	13.1	13.7	14.4	15.0	15.5	14.4	13.0	13.9	13.1	13.2	13.0	13.7	13.9
18 and 19 years.....	11.0	10.8	9.3	8.9	9.6	9.4	7.8	9.7	8.5	9.2	10.4	10.0	9.4	9.3	9.6
20 to 24 years.....	6.9	6.1	5.5	5.3	6.3	6.4	4.5	5.3	4.8	4.8	4.8	4.6	4.8	5.1	5.1
25 years and over.....	2.2	2.0	1.8	1.7	1.9	1.8	1.7	1.7	1.6	1.7	1.6	1.6	1.5	1.7	1.8
25 to 54 years.....	2.1	2.0	1.7	1.4	1.8	1.8	1.6	1.7	1.5	1.7	1.6	1.5	1.4	1.6	1.7
55 years and over.....	2.4	2.1	2.2	1.9	2.2	2.0	2.0	1.9	1.8	1.6	1.8	1.8	1.8	1.9	2.1
FEMALE															
16 years and over.....	5.1	4.8	4.5	4.5	4.9	5.0	4.8	4.6	4.7	4.8	4.9	4.6	4.5	4.7	4.8
16 to 19 years.....	13.9	15.2	12.8	11.9	14.2	14.2	13.6	12.7	13.0	14.0	14.3	14.0	13.2	13.3	14.0
16 and 17 years.....	17.3	20.3	14.7	15.0	19.2	17.7	16.2	14.8	14.3	14.2	17.1	14.9	15.1	15.5	15.9
18 and 19 years.....	12.7	12.4	11.2	9.6	11.3	12.0	12.0	11.0	11.9	14.1	12.6	13.3	12.9	11.8	12.8
20 to 24 years.....	7.6	6.2	6.1	6.5	6.5	6.6	6.3	6.3	6.0	6.4	6.7	6.4	6.2	6.3	6.7
25 years and over.....	3.3	3.0	3.0	3.1	3.4	3.4	3.3	3.2	3.3	3.1	3.2	3.0	3.1	3.2	3.2
25 to 54 years.....	3.6	3.3	3.3	3.4	3.6	3.7	3.6	3.5	3.6	3.4	3.5	3.4	3.3	3.5	3.4
55 years and over.....	2.3	1.7	1.9	2.0	2.5	2.5	2.1	2.3	2.3	1.9	2.5	2.0	2.4	2.2	2.3

A note on revised seasonal adjustment

The household data appearing in tables 2, 4, 5, 7, 8, and 9 of this issue have been revised to reflect new seasonal factors. The Bureau recomputes seasonally adjusted labor force series at the beginning of each year, incorporating data through December of the previous year. In most cases, the changes are minimal. For a discussion of the seasonal adjustment procedures and the historical seasonally adjusted series, see the February 1970 issue of *Employment and Earnings*.

8. Unemployment indicators, seasonally adjusted

[In percent]

Selected categories	1970		1969										Annual average		
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
Total (all civilian workers).....	4.2	3.9	3.5	3.5	3.8	3.8	3.5	3.5	3.4	3.5	3.5	3.4	3.3	3.5	3.6
Men, 20 years and over.....	2.8	2.5	2.2	2.1	2.3	2.4	2.1	2.2	2.0	2.0	2.0	1.9	1.9	2.1	2.2
Women, 20 years and over.....	4.1	3.6	3.5	3.6	3.8	3.9	3.8	3.7	3.7	3.7	3.8	3.6	3.6	3.7	3.8
Both sexes, 16-19 years.....	13.4	13.8	11.8	11.8	12.9	12.9	12.3	12.2	11.7	12.4	12.7	12.6	12.0	12.2	12.7
White.....	3.8	3.6	3.2	3.2	3.5	3.5	3.2	3.2	3.0	3.1	3.1	3.1	3.0	3.1	3.2
Negro and other.....	7.0	6.3	5.7	6.2	6.6	6.7	6.4	6.5	6.8	6.4	7.0	6.1	5.9	6.4	6.7
Married men.....	2.0	1.8	1.7	1.5	1.6	1.7	1.5	1.6	1.5	1.5	1.5	1.4	1.4	1.5	1.6
Full-time workers.....	3.7	3.4	3.2	3.1	3.1	3.3	3.1	3.1	3.1	3.1	3.2	3.0	2.9	3.1	3.1
Unemployed 15 weeks and over ¹6	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5	.4	.4	.5	.5
State insured ²	2.7	2.5	2.4	2.4	2.2	2.2	2.1	2.2	2.1	2.0	2.1	2.1	2.2	2.1	2.2
Labor force time lost ³	4.5	4.2	3.9	4.0	4.3	4.3	4.0	4.0	3.8	3.8	3.8	3.7	3.7	3.9	4.0
OCCUPATION															
White-collar workers.....	2.3	2.1	2.1	2.1	2.4	2.2	2.2	2.2	2.1	2.0	1.8	2.0	1.9	2.1	2.0
Professional and managerial.....	1.4	1.3	1.5	1.1	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.0	1.2	1.1
Clerical workers.....	3.2	3.1	2.8	3.5	3.4	3.2	3.2	3.2	3.0	2.9	2.5	3.0	2.7	3.0	3.0
Sales workers.....	3.4	2.8	2.6	2.2	3.5	2.8	2.9	3.2	2.8	2.9	3.1	2.9	3.2	2.9	2.8
Blue-collar workers.....	5.0	4.6	4.3	4.2	4.2	4.4	3.8	3.8	3.7	3.8	4.0	3.7	3.6	3.9	4.1
Craftsmen and foremen.....	2.5	2.3	2.3	2.1	2.4	2.6	2.1	1.9	1.9	2.3	2.2	2.2	2.1	2.2	2.4
Operatives.....	6.0	5.1	5.0	4.9	4.9	4.7	4.2	4.2	4.3	4.1	4.6	3.9	4.2	4.5	4.4
Nonfarm laborers.....	7.7	8.5	7.4	6.9	6.5	7.6	6.8	7.1	6.1	6.5	6.8	6.9	5.7	6.7	7.2
Service workers.....	4.8	4.5	3.6	4.0	4.2	4.8	4.5	4.3	4.4	4.2	4.5	3.9	4.0	4.2	4.5
INDUSTRY															
Nonagricultural private wage and salary workers ⁴	4.3	3.9	3.6	3.6	3.8	3.9	3.5	3.5	3.5	3.5	3.5	3.4	3.3	3.5	3.6
Construction.....	7.9	7.1	6.0	5.4	7.3	7.4	7.0	5.9	5.1	5.7	6.0	6.1	5.6	6.0	6.9
Manufacturing.....	4.6	3.8	3.8	3.7	3.6	3.7	2.9	3.2	3.3	3.1	3.2	3.1	2.9	3.3	3.3
Durable goods.....	4.7	3.8	3.7	3.6	3.2	3.2	2.3	3.1	3.2	2.9	3.0	2.8	2.5	3.0	3.0
Nondurable goods.....	4.4	3.8	3.9	3.9	4.2	4.3	3.7	3.3	3.4	3.4	3.4	3.5	3.6	3.7	3.7
Transportation and public utilities.....	2.4	2.9	2.4	2.4	2.9	2.0	2.0	2.0	1.9	2.4	2.3	2.3	1.9	2.2	2.0
Wholesale and retail trade.....	4.7	4.3	3.9	3.9	4.2	4.5	4.3	4.1	4.2	4.1	4.2	3.9	4.0	4.1	4.0
Finance and service industries.....	3.2	3.1	2.7	3.2	3.1	3.4	3.4	3.6	3.2	3.3	3.3	3.1	3.2	3.2	3.4
Government wage and salary workers.....	2.0	2.2	2.0	2.1	2.4	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.7	1.9	1.8
Agricultural wage and salary workers.....	5.8	6.2	6.5	5.2	6.3	6.5	6.5	8.9	5.6	5.3	5.8	5.9	4.6	6.1	6.3

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 as a percent of potentially available labor force man-hours.⁴ Includes mining, not shown separately.

9. Duration of unemployment, seasonally adjusted

[In thousands]

Period	1970		1969										Annual average		
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
Less than 5 weeks.....	1,973	1,756	1,515	1,558	1,882	1,756	1,646	1,656	1,578	1,720	1,711	1,625	1,461	1,629	1,594
5 to 14 weeks.....	1,016	914	893	912	882	995	854	824	812	639	748	777	833	827	810
15 weeks and over.....	465	409	392	389	363	392	385	400	385	400	381	359	351	375	412
15 to 26 weeks.....	306	276	272	249	233	240	250	233	255	263	246	240	238	242	256
27 weeks and over.....	159	133	120	140	130	152	135	167	130	137	135	119	113	133	156
15 weeks and over as a percent of civilian labor force.....	.6	.5	.4	.4	.4	.4	.4	.4	.4	.5	.6	.6	.5	.5	.5

10. Unemployment insurance and employment service operations ¹

[All items except average benefits amounts are in thousands]

Item	1969													
	1970	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.
Employment service: ²														
New applications for work.....	950	658	711	762	801	750	874	1,237	850	822	745	794	849	
Nonfarm placements.....	326	311	372	463	503	471	469	512	437	454	397	373	392	
Rate unemployment insurance programs:														
Initial claims ^{3,4}	1,548	1,363	866	745	655	731	1,105	710	613	756	709	890	1,240	
Insured unemployment ⁵ (average weekly volume) ⁶	1,847	1,375	1,030	864	840	948	1,021	852	906	1,090	1300	1,459	1,491	
Rate of insured unemployment ⁷	3.6	2.7	2.0	1.6	1.6	1.8	2.0	1.7	1.8	2.2	26	2.9	3.0	
Weeks of unemployment compensated.....	6,418	4,692	3,054	3,156	3,104	3,496	3,626	3,123	3,519	4,496	4,998	5,159	5,547	
Average weekly benefit amount for total unemployment.....	\$48.49	\$47.42	\$46.47	\$46.25	\$45.70	\$46.16	\$45.30	\$44.88	\$45.14	\$46.03	\$46.71	\$46.80	\$46.16	
Total benefits paid.....	\$299,352	\$214,260	\$136,585	\$139,536	\$136,182	\$156,707	\$159,161	\$135,004	\$152,966	\$200,052	\$226,516	\$234,199	\$246,117	
Unemployment compensation for ex-servicemen: ^{8,9}														
Initial claims ^{3,6}	44	39	30	29	26	27	32	26	20	22	24	27	32	
Insured unemployment ⁵ (average weekly volume).....	61	48	38	32	32	37	36	30	29	35	40	43	44	
Weeks of unemployment compensated.....	242	193	126	127	133	148	143	114	122	155	163	169	191	
Total benefits paid.....	\$11,957	\$9,517	\$6,240	\$6,256	\$6,514	\$7,156	\$6,946	\$5,511	\$5,847	\$7,425	\$7,794	\$7,997	\$9,046	
Unemployment compensation for Federal civilian employees: ^{9,10}														
Initial claims ³	14	12	13	11	10	8	11	10	8	8	8	9	13	
Insured unemployment ⁵ (average weekly volume).....	28	24	22	18	17	18	19	18	17	20	23	24	24	
Weeks of unemployment compensated.....	110	101	75	76	74	77	78	69	73	88	94	97	102	
Total benefits paid.....	\$5,194	\$4,748	\$3,465	\$3,494	\$3,163	\$3,497	\$3,597	\$3,155	\$3,318	\$4,038	\$4,265	\$4,362	\$4,595	
Railroad unemployment insurance:														
Applications ¹¹	9	5	5	10	6	7	17	11	11	5	5	6	12	
Insured unemployment (average weekly volume).....	21	17	14	15	13	13	13	10	18	17	21	23	24	
Number of payments: ¹²	47	35	28	36	28	28	26	25	39	41	46	47	54	
Average amount of benefit payment ¹³	\$94.78	\$96.02	\$96.28	\$89.31	\$93.64	\$94.12	\$91.74	\$90.69	\$75.65	\$88.32	\$91.06	\$92.20	\$91.23	
Total benefit paid ¹⁴	\$4,091	\$3,241	\$2,513	\$2,918	\$2,478	\$2,375	\$2,113	\$2,043	\$2,804	\$3,386	\$4,056	\$4,251	\$4,797	
All programs: ¹⁵														
Insured unemployment ⁶	1,957	1,464	1,105	929	902	1,015	1,088	911	970	1,162	1,384	1,550	1,584	

¹ Includes data for Puerto Rico.² Includes Guam and the Virgin Islands.³ Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transition claims under State programs.⁴ Includes interstate claims for the Virgin Islands.⁵ Number of workers reporting the completion of at least 1 week of unemployment.⁶ Initial claims and State insured unemployment include data under the program for Puerto Rican sugarcane workers.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 programs.⁹ 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 Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs and the Railroad Unemployment Insurance Act.

SOURCE: U.S. Department of Labor, Office of Manpower Management Data Systems for all items except railroad unemployment insurance which is prepared by the U.S. Railroad Retirement Board. Data for latest month are subject to revision.

11. Employees¹ on nonagricultural payrolls, by industry division, 1947 to date

[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 ²	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	67,860	610	3,267	19,768	4,313	14,081	3,618	10,464	3,383	10,592	11,846	2,737	9,109
1969	70,141	628	3,411	20,121	4,448	14,644	3,767	10,876	3,559	11,103	12,227	2,757	9,469

¹ The industry series have been adjusted to March 1968 benchmarks (comprehensive counts of employment) and data are not comparable with those published in issues prior to August 1969. Historical data for a particular industry are available upon request to any of the Bureau's eight regional offices (see inside front cover for addresses) or to the Bureau of Labor Statistics, Washington, D.C. 20212.

These series are based upon establishment reports which cover all full- 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.

² 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.

12. Employees on nonagricultural payrolls, by State

[In thousands]

State	Jan. 1970	Dec. 1969	Jan. 1969	State	Jan. 1970	Dec. 1969	Jan. 1969
Alabama	(1)	995.5	958.5	Montana	189.8	196.4	186.1
Alaska	80.0	81.7	74.3	Nebraska	473.5	483.3	460.8
Arizona	536.0	540.5	494.9	Nevada	189.0	191.5	177.9
Arkansas ²	524.9	536.0	515.0	New Hampshire	250.5	256.0	247.7
California	6,901.4	7,067.3	6,706.5	New Jersey	2,523.7	2,579.4	2,477.2
Colorado	712.6	725.9	689.3	New Mexico	285.7	291.4	276.9
Connecticut ²	1,187.5	1,224.3	1,162.2	New York	(1)	7,226.3	6,973.5
Delaware	209.1	212.7	207.3	North Carolina ²	1,733.6	1,767.6	1,706.4
District of Columbia	(1)	683.4	674.4	North Dakota	(1)	158.8	151.3
Florida	2,177.6	2,183.8	2,051.3	Ohio ²	3,872.9	3,970.9	3,765.6
Georgia ²	1,528.9	1,556.3	1,481.4	Oklahoma ²	760.2	772.7	737.0
Hawaii	(1)	275.8	261.5	Oregon	691.4	709.0	671.2
Idaho	197.2	201.7	191.6	Pennsylvania	4,253.6	4,358.8	4,221.6
Illinois	4,333.0	4,438.0	4,281.3	Rhode Island ²	336.2	346.0	339.1
Indiana	1,827.5	1,880.4	1,825.7	South Carolina ²	813.0	825.3	796.2
Iowa	865.4	886.4	857.0	South Dakota	168.1	171.8	163.8
Kansas	678.1	691.5	673.0	Tennessee	(1)	1,326.7	1,284.8
Kentucky	863.4	890.1	880.0	Texas ²	3,650.8	3,720.3	3,479.6
Louisiana	1,060.4	1,075.4	1,041.4	Utah	342.9	354.9	334.4
Maine ²	326.4	1,333.9	321.5	Vermont	145.4	147.3	138.8
Maryland ²	1,277.5	1,315.1	1,231.4	Virginia	1,431.8	1,462.1	1,397.4
Massachusetts	2,209.9	2,264.4	2,184.6	Washington	1,102.4	1,137.6	1,080.7
Michigan	3,038.2	3,120.9	3,022.7	West Virginia ²	507.6	519.4	498.0
Minnesota ²	1,296.4	1,322.5	1,242.8	Wisconsin ²	1,512.3	1,551.6	1,474.2
Mississippi	559.1	569.5	550.5	Wyoming	102.7	106.3	98.6
Missouri	1,631.4	1,673.4	1,624.8				

¹ Not available.² Revised series; not strictly comparable with previously published data.

NOTE: Data for the current month are preliminary.

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.

Historical data for tables 11 and 13 through 22 are published periodically by the Bureau of Labor Statistics in the Bulletin 1312 series "Employment and Earnings, United States." The next edition, covering the period 1909 to 1970, is scheduled for publication in the fall of 1970. Publication of the edition covering the period 1909 to 1969 has been cancelled. Historical data for a particular industry are available from any of the Bureau's eight regional offices (see inside front cover for addresses) or from the Bureau of Labor Statistics, Washington, D.C. 20212.

13. Employees ¹ on nonagricultural payrolls, by industry division and major manufacturing group

[In thousands]

Industry division and group	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL	69,655	69,755	71,629	71,227	71,198	70,814	70,607	70,347	70,980	69,929	69,462	68,894	68,403	70,141	67,860
MINING	614	617	631	631	632	639	647	645	638	624	619	610	610	628	610
CONTRACT CONSTRUCTION	3,037	3,015	3,373	3,530	3,623	3,663	3,707	3,681	3,601	3,404	3,255	3,077	2,999	3,411	3,267
MANUFACTURING	19,632	19,764	20,056	20,143	20,339	20,421	20,435	20,114	20,336	19,982	19,952	19,978	19,891	20,121	19,768
Production workers ²	14,238	14,370	14,647	14,732	14,918	14,997	14,971	14,665	14,923	14,624	14,604	14,644	14,584	14,735	14,505
Durable goods.....	11,490	11,606	11,785	11,816	11,991	12,014	11,976	11,874	12,036	11,846	11,835	11,841	11,785	11,880	11,624
Production workers ²	8,263	8,370	8,544	8,570	8,733	8,755	8,691	8,600	8,781	8,615	8,612	8,623	8,585	8,639	8,456
Ordnance and accessories... 286.4	291.3	300.1	306.0	307.7	315.1	323.4	331.7	335.3	338.7	341.2	345.5	346.8	328.5	341.5	
Lumber and wood products... 563.1	573.5	585.9	589.4	593.9	605.3	617.8	616.3	624.4	604.1	593.4	594.2	590.1	600.2	597.8	
Furniture and fixtures..... 478.1	483.7	491.0	494.3	496.9	495.9	497.9	485.0	496.0	489.6	490.7	490.6	491.1	492.3	474.2	
Stone, clay, and glass products..... 632.4	636.8	655.8	666.9	669.6	674.2	679.1	676.2	676.1	657.2	654.8	646.6	639.2	661.2	637.0	
Primary metal industries... 1,331.6	1,343.0	1,360.1	1,357.0	1,355.9	1,365.5	1,367.9	1,366.7	1,375.6	1,346.1	1,336.8	1,333.3	1,326.0	1,350.2	1,314.3	
Fabricated metal products... 1,435.7	1,449.7	1,471.0	1,470.9	1,468.0	1,472.5	1,461.9	1,441.7	1,469.1	1,445.5	1,441.6	1,441.1	1,435.4	1,454.3	1,393.7	
Machinery, except electrical..... 2,033.3	2,019.1	2,018.5	2,004.2	2,011.9	2,009.7	1,999.3	2,009.3	2,025.6	2,000.9	2,007.0	2,005.2	2,002.6	2,006.5	1,960.5	
Electrical equipment..... 2,029.1	1,958.5	1,975.5	1,981.7	2,094.9	2,083.1	2,074.2	2,047.7	2,058.7	2,035.8	2,027.7	2,025.9	2,026.1	2,037.5	1,981.9	
Transportation equipment... 1,820.4	1,965.8	2,009.2	2,015.2	2,054.8	2,063.8	2,023.4	1,991.0	2,053.7	2,018.9	2,037.3	2,057.8	2,037.8	2,035.4	2,028.4	
Instruments and related products..... 455.2	463.9	470.1	469.4	469.2	469.8	475.7	470.9	474.1	470.3	469.6	469.3	467.1	470.0	459.9	
Miscellaneous manufacturing..... 424.6	420.5	447.7	460.7	467.7	458.9	455.8	437.5	447.6	439.2	435.3	431.0	422.7	443.8	434.6	
Nondurable goods..... 8,142	8,158	8,271	8,327	8,348	8,407	8,459	8,240	8,300	8,136	8,117	8,137	8,106	8,241	8,144	
Production workers ² 5,975	6,000	6,103	6,162	6,185	6,242	6,280	6,065	6,142	6,009	5,992	6,021	5,999	6,096	6,049	
Food and kindred products... 1,724.5	1,739.1	1,790.3	1,833.6	1,860.4	1,920.2	1,932.0	1,827.6	1,785.3	1,725.3	1,710.8	1,706.7	1,710.9	1,793.6	1,780.8	
Tobacco manufactures..... 77.7	78.6	82.2	85.0	91.3	93.9	90.0	71.9	72.1	71.3	71.6	75.6	79.3	80.6	83.8	
Textile mill products..... 967.0	974.2	981.8	984.4	982.3	984.7	988.1	980.7	1,000.9	984.7	988.4	992.1	990.8	987.2	990.6	
Apparel and other textile products..... 1,407.2	1,394.0	1,412.9	1,423.4	1,428.6	1,427.3	1,433.3	1,375.8	1,440.1	1,419.1	1,411.2	1,426.5	1,414.7	1,417.5	1,407.9	
Paper and allied products... 716.9	720.1	727.1	724.9	720.6	722.2	726.8	719.8	725.0	707.6	703.5	707.3	706.2	716.2	692.5	
Printing and publishing... 1,100.6	1,101.1	1,108.9	1,106.3	1,100.5	1,091.6	1,091.1	1,085.4	1,085.0	1,071.1	1,077.3	1,077.0	1,073.6	1,086.5	1,063.1	
Chemicals and allied products..... 1,049.3	1,045.2	1,049.7	1,048.1	1,046.2	1,052.2	1,064.4	1,064.5	1,060.9	1,045.1	1,046.9	1,043.2	1,036.9	1,049.1	1,026.1	
Petroleum and coal products..... 189.9	189.1	190.0	192.0	192.7	192.9	196.0	196.3	193.7	188.9	187.8	183.9	166.3	183.8	187.0	
Rubber and plastics products, nec..... 573.8	580.3	586.7	588.2	587.2	585.8	586.2	576.1	586.2	577.0	575.7	575.8	574.9	581.0	557.1	
Leather and leather products..... 335.3	336.6	341.4	341.1	338.3	336.2	351.0	341.4	350.3	345.5	343.8	348.5	352.2	345.2	355.5	
TRANSPORTATION AND PUBLIC UTILITIES	4,430	4,450	4,498	4,506	4,502	4,529	4,533	4,528	4,512	4,431	4,403	4,346	4,303	4,448	4,313
WHOLESALE AND RETAIL TRADE	14,594	14,683	15,642	15,090	14,847	14,702	14,660	14,662	14,717	14,517	14,398	14,201	14,097	14,644	14,081
Wholesale trade..... 3,836	3,833	3,875	3,849	3,834	3,806	3,821	3,818	3,793	3,709	3,688	3,678	3,666	3,767	3,618	
Retail trade..... 10,758	10,850	11,767	11,241	11,013	10,896	10,839	10,844	10,924	10,808	10,710	10,523	10,431	10,876	10,464	
FINANCE, INSURANCE, AND REAL ESTATE	3,617	3,603	3,609	3,599	3,591	3,597	3,642	3,629	3,585	3,534	3,517	3,490	3,467	3,559	3,383
SERVICES	11,178	11,136	11,229	11,230	11,255	11,183	11,253	11,266	11,243	11,131	11,044	10,913	10,792	11,103	10,592
Hotels and other lodging places..... 690.7	687.9	693.7	695.8	718.8	743.5	825.9	829.2	763.0	727.4	714.6	691.7	681.2	729.6	719.4	
Personal services..... 1,008.3	1,007.4	1,022.2	1,025.4	1,028.0	1,021.8	1,023.0	1,036.0	1,042.2	1,031.1	1,025.4	1,016.6	1,012.7	1,025.2	1,031.3	
Medical and other health services..... 2,980.2	2,959.0	2,947.0	2,935.7	2,913.7	2,893.8	2,891.0	2,889.3	2,866.6	2,816.9	2,804.3	2,789.5	2,772.1	2,855.7	2,637.7	
Educational services..... 1,174.2	1,163.7	1,170.8	1,175.5	1,155.4	1,053.4	951.1	967.2	1,062.5	1,158.3	1,159.8	1,164.7	1,157.6	1,108.7	1,065.9	
GOVERNMENT	12,553	12,487	12,591	12,498	12,409	12,080	11,730	11,822	12,348	12,306	12,274	12,279	12,244	12,227	11,846
Federal ³ 2,696	2,690	2,760	2,705	2,715	2,733	2,804	2,841	2,832	2,740	2,747	2,737	2,739	2,757	2,737	
State and Local..... 9,857	9,797	9,831	9,793	9,694	9,347	8,926	8,981	9,516	9,566	9,527	9,542	9,505	9,469	9,109	

¹ For comparability of data with those published in issues prior to August 1969, and coverage of these series, see footnote 1, table 11.

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.

³ Beginning January 1969, Federal employment includes approximately 39,000 civilian technicians of the National Guard, who were transferred from State to Federal status in accordance with Public Law 90-486.

NOTE: Data for the 2 most recent months are preliminary.

14. Employees¹ on nonagricultural payrolls, by industry division and major manufacturing group, seasonally adjusted

[In thousands]

Industry division and group	1970		1969										
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.
TOTAL	70,766	70,778	70,679	70,635	70,651	70,390	70,500	70,247	70,300	70,013	69,789	69,710	69,487
MINING	632	632	635	632	631	631	631	629	622	622	624	626	628
CONTRACT CONSTRUCTION	3,409	3,328	3,459	3,461	3,418	3,420	3,410	3,434	3,466	3,407	3,363	3,374	3,366
MANUFACTURING	19,806	19,964	20,007	20,004	20,156	20,197	20,334	20,164	20,198	20,118	20,111	20,122	20,061
Production workers ²	14,388	14,548	14,582	14,588	14,732	14,772	14,922	14,772	14,811	14,740	14,739	14,771	14,731
Durable goods.....	11,544	11,664	11,738	11,740	11,932	11,965	12,081	11,912	11,931	11,874	11,868	11,881	11,839
Production workers ²	8,308	8,423	8,487	8,492	8,674	8,701	8,823	8,668	8,687	8,630	8,634	8,654	8,628
Ordnance and accessories.....	286	290	299	304	306	314	325	332	337	342	343	346	346
Lumber and wood products.....	579	591	591	591	589	595	598	600	607	610	604	608	607
Furniture and fixtures.....	481	485	486	488	491	492	493	491	496	496	496	494	494
Stone, clay, and glass products.....	659	661	664	664	662	660	659	658	662	656	658	664	666
Primary metal industries.....	1,336	1,352	1,371	1,378	1,381	1,378	1,361	1,348	1,347	1,333	1,326	1,332	1,330
Fabricated metal products.....	1,444	1,454	1,459	1,456	1,456	1,468	1,465	1,456	1,456	1,453	1,450	1,451	1,444
Machinery, except electrical.....	2,027	2,017	2,025	2,012	2,030	2,020	2,005	2,007	2,010	1,999	1,999	1,993	1,997
Electrical equipment.....	2,029	1,953	1,952	1,958	2,076	2,075	2,076	2,070	2,063	2,058	2,046	2,036	2,026
Transportation equipment.....	1,804	1,950	1,972	1,983	2,030	2,054	2,183	2,032	2,035	2,009	2,029	2,042	2,020
Instruments and related products.....	456	465	468	468	469	469	473	471	473	474	472	470	468
Miscellaneous manufacturing.....	443	446	451	438	442	440	443	447	445	444	445	445	441
Nondurable goods.....	8,262	8,300	8,269	8,264	8,224	8,232	8,253	8,252	8,267	8,244	8,243	8,241	8,222
Production workers ²	6,080	6,125	6,095	6,096	6,058	6,071	6,099	6,104	6,124	6,110	6,105	6,117	6,103
Food and kindred products.....	1,815	1,812	1,803	1,808	1,777	1,791	1,797	1,787	1,789	1,793	1,795	1,793	1,801
Tobacco manufactures.....	81	80	76	78	78	80	83	81	81	82	81	83	82
Textile mill products.....	975	986	982	979	977	979	979	988	990	987	991	995	999
Apparel and other textile products.....	1,402	1,421	1,414	1,409	1,410	1,412	1,414	1,423	1,429	1,426	1,425	1,417	1,409
Paper and allied products.....	724	726	724	722	720	718	718	716	717	714	710	714	713
Printing and publishing.....	1,104	1,107	1,102	1,103	1,099	1,093	1,089	1,084	1,083	1,075	1,078	1,078	1,077
Chemicals and allied products.....	1,057	1,055	1,055	1,053	1,050	1,051	1,052	1,054	1,055	1,046	1,044	1,045	1,044
Petroleum and coal products.....	194	194	193	193	191	189	190	191	191	190	190	187	170
Rubber and plastics products, nec.....	576	581	581	581	583	583	586	585	584	581	579	579	577
Leather and leather products.....	334	338	339	338	339	336	345	343	348	350	350	350	350
TRANSPORTATION AND PUBLIC UTILITIES	4,502	4,518	4,489	4,484	4,480	4,480	4,484	4,483	4,467	4,444	4,439	4,399	4,373
WHOLESALE AND RETAIL TRADE	14,978	14,913	14,773	14,836	14,809	14,716	14,702	14,671	14,665	14,609	14,533	14,508	14,468
Wholesale trade.....	3,887	3,864	3,837	3,815	3,807	3,787	3,776	3,773	3,774	3,758	3,737	3,726	3,714
Retail trade.....	11,091	11,049	10,936	11,021	11,002	10,929	10,926	10,898	10,891	10,851	10,796	10,782	10,754
FINANCE, INSURANCE, AND REAL ESTATE	3,654	3,647	3,623	3,613	3,595	3,586	3,581	3,568	3,557	3,541	3,531	3,515	3,502
SERVICES	11,360	11,352	11,297	11,264	11,244	11,150	11,120	11,067	11,066	11,065	11,044	11,034	10,967
Hotels and other lodging places.....	743	753	749	742	740	721	704	706	724	730	741	745	733
Personal services.....	1,023	1,018	1,017	1,021	1,025	1,026	1,026	1,030	1,026	1,025	1,024	1,026	1,027
Medical and other health services.....	2,986	2,974	2,956	2,936	2,917	2,897	2,874	2,861	2,850	2,831	2,813	2,795	2,778
Educational services.....	1,128	1,125	1,121	1,118	1,113	1,092	1,094	1,099	1,102	1,120	1,119	1,117	1,112
GOVERNMENT	12,425	12,424	12,396	12,341	12,318	12,210	12,238	12,231	12,259	12,207	12,144	12,132	12,122
Federal ³	2,723	2,714	2,720	2,721	2,729	2,749	2,752	2,777	2,790	2,754	2,758	2,759	2,767
State and local.....	9,702	9,710	9,676	9,620	9,589	9,461	9,486	9,454	9,469	9,453	9,386	9,373	9,355

¹ For comparability of data with those published in issues prior to August 1969, and coverage of these series, see footnote 1, table 11.

² For definition of production workers, see footnote 2, table 13.

³ See footnote 3, table 13.

NOTE: Data for the 2 most recent months are preliminary.

15. Labor turnover rates in manufacturing, 1959 to date ¹

[Per 100 employees]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual average
Total accessions													
1959	3.8	3.7	4.1	4.1	4.2	5.4	4.4	5.2	5.1	3.9	3.4	3.6	4.2
1960	4.0	3.5	3.3	3.4	3.9	4.7	3.9	4.9	4.8	3.5	2.9	2.3	3.8
1961	3.7	3.2	4.0	4.0	4.3	5.0	4.4	5.3	4.7	4.3	3.4	2.6	4.1
1962	4.1	3.6	3.8	4.0	4.3	5.0	4.6	5.1	4.9	3.9	3.0	2.4	4.1
1963	3.6	3.3	3.5	3.9	3.9	4.8	4.3	4.8	4.8	3.9	2.9	2.5	3.9
1964	3.6	3.4	3.7	3.8	3.9	5.1	4.4	5.1	4.8	4.0	3.2	2.6	4.0
1965	3.8	3.5	4.0	3.8	4.1	5.6	4.5	5.4	5.5	4.5	3.9	3.1	4.3
1966	4.6	4.2	4.9	4.6	5.1	6.7	5.1	6.4	6.1	5.1	3.9	2.9	5.0
1967	4.3	3.6	3.9	3.9	4.6	6.7	5.1	5.5	5.3	4.7	3.7	2.8	4.4
1968	4.2	3.8	3.9	4.3	4.6	5.9	5.0	5.7	5.7	5.0	3.8	3.0	4.6
1969	4.6	3.9	4.4	4.5	4.8	6.6	5.1	5.6	5.9	4.9	3.6	2.9	4.7
1970	4.0												
New hires													
1959	2.0	2.1	2.4	2.5	3.7	2.7	3.0	3.5	3.5	2.6	1.9	1.5	2.6
1960	2.2	2.2	2.0	2.0	2.3	3.0	2.4	2.9	2.8	2.1	1.5	1.0	2.2
1961	1.5	1.4	1.6	1.8	2.1	2.9	2.5	3.1	3.0	2.7	2.0	1.4	2.2
1962	2.2	2.1	2.2	2.4	2.8	3.5	2.9	3.2	3.1	2.5	1.8	1.2	2.5
1963	1.9	1.8	2.0	2.3	2.5	3.3	2.7	3.2	3.2	2.6	1.8	1.4	2.4
1964	2.0	2.0	2.2	2.4	2.5	3.6	2.9	3.4	3.5	2.8	2.2	1.6	2.6
1965	2.4	2.4	2.8	2.6	3.0	4.3	3.2	3.9	4.0	3.5	2.9	2.2	3.1
1966	3.2	3.1	3.7	3.6	4.1	5.6	3.9	4.8	4.7	4.2	3.1	2.1	3.8
1967	3.0	2.7	2.8	2.8	3.3	4.6	3.3	4.0	4.1	3.7	2.8	2.0	3.3
1968	3.0	2.7	2.9	3.2	3.6	4.7	3.7	4.3	4.5	4.0	2.9	2.2	3.5
1969	3.3	3.0	3.4	3.5	3.8	5.4	3.9	4.3	4.8	4.0	2.8	2.1	3.7
1970	2.9												
Total separations													
1959	3.7	3.1	3.3	3.6	3.5	3.6	4.0	4.6	5.3	5.5	4.7	3.9	4.1
1960	3.6	3.5	4.0	4.2	3.9	4.0	4.4	4.8	5.3	4.7	4.5	4.8	4.3
1961	4.7	3.9	3.8	3.4	3.5	3.6	4.1	4.2	5.1	4.2	4.0	4.0	4.0
1962	3.9	3.4	3.6	3.6	3.8	3.8	4.4	5.1	5.0	4.4	4.0	3.8	4.1
1963	4.0	3.2	3.5	3.6	3.6	3.4	4.1	4.8	4.9	4.1	3.9	3.7	3.9
1964	4.0	3.3	3.5	3.5	3.6	3.5	4.4	4.3	5.1	4.2	3.6	3.7	3.9
1965	3.7	3.1	3.4	3.7	3.6	3.6	4.3	5.1	5.6	4.5	3.9	4.1	4.1
1966	4.0	3.6	4.1	4.3	4.3	4.4	5.3	5.8	6.6	4.8	4.3	4.2	4.6
1967	4.5	4.0	4.6	4.3	4.2	4.3	4.8	5.3	6.2	4.7	4.0	3.9	4.6
1968	4.4	3.9	4.1	4.1	4.3	4.1	5.0	6.0	6.3	4.9	4.1	3.8	4.6
1969	4.5	4.0	4.4	4.5	4.6	4.5	5.3	6.2	6.6	5.3	4.3	4.1	4.9
1970	4.7												
Quits													
1959	1.1	1.0	1.2	1.4	1.5	1.5	1.6	2.1	2.6	1.7	1.2	1.0	1.5
1960	1.2	1.2	1.2	1.4	1.3	1.4	1.4	1.8	2.3	1.3	.9	.7	1.3
1961	.9	.8	.9	1.0	1.1	1.2	1.2	1.7	2.3	1.4	1.1	.9	1.2
1962	1.1	1.1	1.2	1.3	1.5	1.5	1.4	2.1	2.4	1.5	1.1	.8	1.4
1963	1.1	1.0	1.2	1.3	1.4	1.4	1.4	2.1	2.4	1.5	1.1	.8	1.4
1964	1.2	1.1	1.2	1.3	1.5	1.4	1.5	2.1	2.7	1.7	1.2	1.0	1.5
1965	1.4	1.3	1.5	1.7	1.7	1.7	1.8	2.6	3.5	2.2	1.7	1.4	1.9
1966	1.9	1.8	2.3	2.5	2.5	2.5	2.5	3.6	4.5	2.8	2.1	1.7	2.6
1967	2.1	1.9	2.1	2.2	2.2	2.3	2.1	3.2	4.0	2.5	1.9	1.5	2.3
1968	2.0	1.9	2.1	2.2	2.4	2.2	2.3	3.7	4.1	2.8	2.1	1.6	2.5
1969	2.3	2.1	2.4	2.6	2.7	2.6	2.6	4.0	4.4	2.9	2.1	1.6	2.7
1970	2.1												
Layoffs													
1959	2.1	1.5	1.6	1.6	1.4	1.4	1.8	1.8	2.0	3.2	2.9	2.4	2.0
1960	1.8	1.7	2.2	2.2	1.9	2.0	2.4	2.4	2.4	2.8	3.1	3.6	2.4
1961	3.2	2.6	2.3	1.9	1.8	1.8	2.3	1.8	2.1	2.0	2.2	2.6	2.2
1962	2.1	1.7	1.6	1.6	1.6	1.6	2.2	2.2	1.9	2.2	2.3	2.5	2.0
1963	2.2	1.6	1.7	1.6	1.5	1.4	2.0	1.9	1.8	1.9	2.1	2.3	1.8
1964	2.0	1.6	1.6	1.4	1.4	1.3	2.1	1.4	1.5	1.8	1.7	2.1	1.7
1965	1.6	1.2	1.2	1.3	1.1	1.1	1.8	1.6	1.3	1.4	1.5	1.9	1.4
1966	1.3	1.0	1.0	1.0	.9	1.0	2.0	1.1	1.0	1.1	1.3	1.7	1.2
1967	1.5	1.3	1.5	1.3	1.1	1.1	1.9	1.2	1.2	1.3	1.3	1.6	1.4
1968	1.5	1.2	1.1	1.0	1.0	.9	1.7	1.2	1.1	1.2	1.2	1.4	1.2
1969	1.2	1.0	1.0	.9	.9	.9	1.6	1.1	1.1	1.3	1.3	1.8	1.2
1970	1.6												

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11.

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 for the following reasons: (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.

NOTE: Data for the current month are preliminary.

16. Labor turnover rates¹ in manufacturing, by major industry group

[Per 100 employees]

Major industry group	Accession rates						Separation rates								
	Total			New hires			Total			Quits			Layoffs		
	Jan. 1970	Dec. 1969	Jan. 1969	Jan. 1970	Dec. 1969	Jan. 1969	Jan. 1970	Dec. 1969	Jan. 1969	Jan. 1970	Dec. 1969	Jan. 1969	Jan. 1970	Dec. 1969	Jan. 1969
MANUFACTURING	4.0	2.9	4.6	2.9	2.1	3.3	4.7	4.1	4.5	2.1	1.6	2.3	1.6	1.8	1.2
Seasonally adjusted.....	4.3	4.6	4.9	3.3	3.5	3.8	4.8	4.6	4.6	2.5	2.5	2.7	1.4	1.4	1.1
Durable goods	3.6	2.6	4.4	2.5	1.9	3.2	4.6	3.9	4.2	1.9	1.4	2.1	1.7	1.7	1.1
Ordnance and accessories.....	1.9	1.3	2.5	1.3	.6	1.9	4.5	4.1	3.3	1.3	1.0	1.6	2.4	2.6	1.0
Lumber and wood products.....	5.6	3.4	5.9	3.5	2.8	5.0	6.2	5.4	6.2	3.0	2.6	3.8	2.5	2.1	1.3
Furniture and fixtures.....	4.6	3.3	6.2	3.8	2.9	5.4	6.3	4.6	5.8	3.1	2.6	4.0	1.6	1.2	.6
Stone, clay, and glass products.....	3.7	2.9	4.3	3.0	2.3	3.2	5.3	4.7	5.1	2.3	1.9	2.3	2.1	2.0	1.9
Primary metal industries.....	3.2	2.5	4.3	2.2	1.7	2.7	3.9	3.2	3.2	1.6	1.2	1.6	1.0	1.1	.5
Fabricated metal products.....	4.3	3.3	5.2	3.5	2.5	4.2	5.1	4.0	5.2	2.3	1.8	2.7	1.7	1.3	1.3
Machinery, except electrical.....	3.3	2.4	3.7	2.6	1.8	2.9	3.2	2.3	3.2	1.6	1.1	1.7	.7	.5	.5
Electrical equipment.....	3.2	2.4	4.0	2.3	1.8	2.9	4.4	3.2	4.0	1.9	1.4	2.0	1.5	1.1	.8
Transportation equipment.....	3.3	2.2	4.1	1.5	1.1	2.6	5.1	4.5	4.2	1.2	.9	1.6	3.1	2.9	1.7
Instruments and related products.....	2.8	2.0	3.5	2.3	1.6	3.0	3.6	2.5	3.5	1.7	1.2	1.9	1.0	.6	.5
Miscellaneous manufacturing.....	6.3	2.8	7.1	3.4	2.3	4.4	5.8	10.2	6.3	2.7	1.9	3.0	2.1	7.3	2.1
Nondurable goods	4.6	3.2	4.8	3.4	2.4	3.5	4.8	4.5	5.0	2.5	1.9	2.7	1.4	1.9	1.4
Food and kindred products.....	5.7	4.3	5.3	4.0	3.2	3.7	6.2	6.8	6.7	2.8	2.6	2.9	2.5	3.5	2.8
Tobacco manufactures.....	2.4	5.7	3.6	1.9	3.6	2.6	4.8	5.8	7.0	1.8	2.0	2.2	2.2	3.2	3.9
Textile mill products.....	5.1	3.4	5.4	3.9	2.6	4.1	5.3	4.2	5.3	3.4	2.4	3.6	.8	1.0	.7
Apparel and other textile products.....	6.2	3.3	6.2	4.0	1.9	3.8	5.7	5.3	5.7	3.0	1.9	2.9	1.7	2.7	1.9
Paper and allied products.....	3.2	2.6	3.9	2.7	2.2	3.4	3.7	3.1	4.0	2.1	1.6	2.3	.7	.8	.6
Printing and publishing.....	3.7	2.8	3.6	3.1	2.3	2.9	3.6	3.4	3.8	2.2	1.7	2.3	.8	1.0	.7
Chemicals and allied products.....	2.4	1.8	2.8	1.9	1.4	2.2	2.4	2.0	2.5	1.3	.9	1.4	.5	.5	.3
Petroleum and coal products.....	2.2	1.3	2.3	1.9	1.2	1.8	1.7	2.6	2.4	.9	.8	1.1	.2	1.3	.3
Rubber and plastics products, n.e.c.....	5.1	3.5	5.4	4.0	2.6	4.2	5.4	4.7	5.1	2.8	2.1	2.9	1.4	1.6	.9
Leather and leather products.....	5.3	4.4	6.5	4.0	3.2	4.3	6.4	5.5	6.4	3.1	2.6	3.7	2.1	2.0	1.6

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11. For relationship to employment series see footnote 1, table 15.

NOTE: Data for the current month are preliminary. For additional detail see Employment and Earnings, table D-2.

17. Gross hours and earnings of production and nonsupervisory workers ¹ on private nonagricultural payrolls by industry division, 1947 to date

Year	Averages			Averages			Averages			Averages		
	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings
	Total private			Manufacturing			Durable goods			Nondurable goods		
1947	\$45.58	40.3	\$1.131	\$49.17	40.4	\$1.217	\$51.76	40.5	\$1.278	\$46.03	40.2	\$1.145
1948	49.00	40.0	1.225	53.12	40.0	1.328	56.36	40.4	1.395	49.50	39.6	1.250
1949	50.24	39.4	1.275	53.88	39.1	1.378	57.25	39.4	1.453	50.38	38.9	1.295
1950	53.13	39.8	1.335	58.32	40.5	1.440	62.43	41.1	1.519	53.48	39.7	1.347
1951	57.86	39.9	1.45	63.34	40.6	1.56	68.48	41.5	1.65	56.88	39.5	1.44
1952	60.65	39.9	1.52	67.16	40.7	1.65	72.63	41.5	1.75	59.95	39.7	1.51
1953	63.76	39.6	1.61	70.47	40.5	1.74	76.63	41.2	1.86	62.57	39.6	1.58
1954	64.52	39.1	1.65	70.49	39.6	1.78	76.19	40.1	1.90	63.18	39.0	1.62
1955	67.72	39.6	1.71	75.70	40.7	1.86	82.19	41.3	1.99	66.63	39.9	1.67
1956	70.74	39.3	1.80	78.78	40.4	1.95	85.28	41.0	2.08	70.09	39.6	1.77
1957	73.33	38.8	1.89	81.59	39.8	2.05	88.26	40.3	2.19	72.52	39.2	1.85
1958	75.08	38.5	1.95	82.71	39.2	2.11	89.27	39.5	2.26	74.11	38.8	1.91
1959 ²	78.78	39.0	2.02	88.26	40.3	2.19	96.05	40.7	2.36	78.61	39.7	1.98
1960	80.67	38.6	2.09	89.72	39.7	2.26	97.44	40.1	2.43	80.36	39.2	2.05
1961	82.60	38.6	2.14	92.34	39.8	2.32	100.35	40.3	2.49	82.92	39.3	2.11
1962	85.91	38.7	2.22	96.56	40.4	2.39	104.70	40.9	2.56	85.93	39.6	2.17
1963	88.46	38.8	2.28	99.63	40.5	2.46	108.09	41.1	2.63	87.91	39.6	2.22
1964	91.33	38.7	2.36	102.97	40.7	2.53	112.19	41.4	2.71	90.91	39.7	2.29
1965	95.06	38.8	2.45	107.53	41.2	2.61	117.18	42.0	2.79	94.64	40.1	2.36
1966	98.82	38.6	2.56	112.34	41.3	2.72	122.09	42.1	2.90	98.49	40.2	2.45
1967	101.84	38.0	2.68	114.90	40.6	2.83	123.60	41.2	3.00	102.03	39.7	2.57
1968	107.73	37.8	2.85	122.51	40.7	3.01	132.07	41.4	3.19	109.05	39.8	2.74
1969	114.61	37.7	3.04	129.51	40.6	3.19	139.59	41.3	3.38	115.53	39.7	2.91
Year	Averages			Averages			Averages			Averages		
	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings	Weekly earnings	Weekly hours	Hourly earnings
	Mining			Contract construction			Wholesale and retail trade			Finance, insurance, and real estate		
1947	\$59.94	40.8	\$1.469	\$58.87	38.2	\$1.541	\$38.07	40.5	\$0.940	\$43.21	37.9	\$1.140
1948	65.56	39.4	1.664	65.27	38.1	1.713	40.80	40.4	1.010	45.48	37.9	1.200
1949	62.33	36.3	1.717	67.56	37.7	1.792	42.93	40.5	1.060	47.63	37.8	1.260
1950	67.16	37.9	1.772	69.68	37.4	1.863	44.55	40.5	1.100	50.52	37.7	1.340
1951	74.11	38.4	1.93	76.96	38.1	2.02	47.79	40.5	1.18	54.67	37.7	1.45
1952	77.59	38.6	2.01	82.86	38.9	2.13	49.20	40.0	1.23	57.08	37.8	1.51
1953	83.03	38.8	2.14	86.41	37.9	2.28	51.35	39.5	1.30	59.57	37.7	1.58
1954	82.60	38.6	2.14	88.91	37.2	2.39	53.33	39.5	1.35	62.04	37.6	1.65
1955	89.54	40.7	2.20	90.90	37.1	2.45	55.16	39.4	1.40	63.92	37.6	1.70
1956	95.06	40.8	2.33	96.38	37.5	2.57	57.48	39.1	1.47	65.68	36.9	1.78
1957	98.65	40.1	2.46	100.27	37.0	2.71	59.60	38.7	1.54	67.53	36.7	1.84
1958	96.08	38.9	2.47	103.78	36.8	2.82	61.76	38.6	1.60	70.12	37.1	1.89
1959 ²	103.68	40.5	2.56	108.41	37.0	2.93	64.41	38.8	1.66	72.74	37.3	1.95
1960	105.44	40.4	2.61	113.04	36.7	3.08	66.01	38.6	1.71	75.14	37.2	2.02
1961	106.92	40.5	2.64	118.08	36.9	3.20	67.41	38.3	1.76	77.12	36.9	2.09
1962	110.43	40.9	2.70	122.47	37.0	3.31	69.91	38.2	1.83	80.94	37.3	2.17
1963	114.40	41.6	2.75	127.19	37.3	3.41	72.01	38.1	1.89	84.38	37.5	2.25
1964	117.74	41.9	2.81	132.06	37.2	3.55	74.28	37.9	1.96	85.79	37.3	2.30
1965	123.52	42.3	2.92	138.38	37.4	3.70	76.53	37.7	2.03	88.91	37.2	2.39
1966	130.24	42.7	3.05	146.26	37.6	3.89	79.02	37.1	2.13	92.13	37.3	2.47
1967	135.89	42.6	3.19	154.95	37.7	4.11	81.76	36.5	2.24	95.46	37.0	2.58
1968	143.05	42.7	3.35	164.56	37.4	4.40	86.40	36.0	2.40	101.75	37.0	2.75
1969	154.73	43.1	3.59	181.64	38.0	4.78	91.14	35.6	2.56	108.33	37.1	2.92

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11.

Data relate to production workers in mining and manufacturing; to construction workers in contract construction, and to nonsupervisory workers in wholesale and related trade, finance, insurance, and real estate; transportation and public utilities and services. These groups account for approximately four-fifths of the total employ-

ment on private nonagricultural payrolls. Transportation and public utilities, and services are included in total private but are not shown separately in this table.

² Data include Alaska and Hawaii beginning 1959.

NOTE: For additional detail see Employment and Earnings, table C-1.

18. Gross average weekly hours of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL PRIVATE	37.2	37.1	37.7	37.5	37.7	38.0	38.2	38.1	38.0	37.7	37.5	37.6	37.2	37.7	37.8
MINING	42.7	42.3	43.4	43.4	43.4	43.5	43.7	43.1	42.5	43.5	43.6	42.2	42.5	43.1	42.7
CONTRACT CONSTRUCTION	36.7	35.6	37.7	37.1	38.4	39.3	39.2	38.8	38.5	38.2	37.6	37.2	36.6	38.0	37.4
MANUFACTURING	39.8	40.1	41.0	40.6	40.7	41.0	40.6	40.5	40.9	40.7	40.5	40.7	40.0	40.6	40.7
Overtime hours.....	3.0	3.2	3.6	3.6	3.7	4.0	3.7	3.5	3.7	3.6	3.5	3.5	3.3	3.6	3.6
Durable Goods	40.4	40.6	41.7	41.2	41.4	41.7	41.1	40.9	41.5	41.4	41.2	41.4	40.8	41.3	41.4
Overtime hours.....	3.0	3.3	3.8	3.7	3.9	4.2	3.8	3.6	3.9	3.7	3.6	3.7	3.6	3.8	3.8
Ordinance and accessories	41.0	41.1	41.0	40.7	40.3	40.6	40.2	39.8	40.8	40.6	40.5	40.6	40.1	40.5	41.5
Lumber and wood products.....	39.7	39.1	40.2	39.9	40.4	40.4	40.2	39.7	40.7	40.7	40.2	40.7	40.0	40.2	40.6
Furniture and fixtures.....	38.6	38.9	40.8	40.3	40.6	40.7	40.8	39.7	40.8	40.4	40.1	40.4	39.7	40.4	40.6
Stone, clay, and glass products.....	41.3	40.7	42.0	42.0	42.2	42.6	42.6	41.9	42.4	42.4	41.9	41.7	41.3	42.0	41.8
Primary metal industries.....	41.1	41.3	41.6	41.4	41.7	42.1	41.8	41.6	42.0	41.9	42.1	42.0	41.5	41.8	41.6
Fabricated metal products.....	40.4	41.0	41.9	41.6	41.7	42.1	41.7	41.2	42.0	41.7	41.4	41.6	40.8	41.6	41.7
Machinery, except electrical.....	41.7	42.2	43.1	42.2	42.4	42.7	42.0	41.8	42.6	42.6	42.6	43.0	42.4	42.5	42.1
Electrical equipment and supplies.....	39.8	40.3	40.9	40.5	40.4	40.7	40.3	39.8	40.7	40.5	40.3	40.6	39.7	40.4	40.3
Transportation equipment.....	39.7	40.1	42.2	41.5	41.9	42.3	40.5	41.6	41.6	41.3	41.0	41.2	41.0	41.5	42.2
Instruments and related products.....	40.6	40.5	41.3	41.1	40.9	41.2	40.7	40.5	41.0	40.7	40.5	40.7	39.7	40.7	40.5
Miscellaneous manufacturing industries	38.9	38.7	39.4	39.3	39.3	39.2	39.1	38.4	39.2	39.0	39.1	39.1	37.7	39.0	3.93
Nondurable goods	39.0	39.3	40.0	39.8	39.7	40.0	39.9	39.8	39.9	39.7	39.4	39.7	38.9	39.7	39.8
Overtime hours.....	2.9	3.1	3.4	3.4	3.5	3.7	3.5	3.4	3.4	3.3	3.2	3.2	3.0	3.4	3.3
Food and kindred products	40.1	40.5	41.0	41.0	40.7	41.8	41.4	41.2	40.9	40.6	40.1	40.3	40.0	40.8	40.8
Tobacco manufactures.....	36.4	37.2	36.9	37.4	38.4	38.9	37.5	37.7	39.9	37.6	35.8	35.6	36.2	37.4	37.8
Textile mill products.....	40.0	40.1	41.3	41.1	40.9	41.0	41.0	40.7	41.4	40.9	40.4	40.9	39.9	40.8	41.2
Apparel and other textile products.....	35.4	35.2	35.9	35.8	35.8	35.8	36.3	35.9	36.3	36.1	35.9	36.3	35.2	35.9	36.1
Paper and allied products.....	42.2	42.5	43.2	42.9	43.0	43.2	43.0	43.0	43.0	43.0	42.9	43.0	42.1	43.0	42.9
Printing and publishing.....	37.6	37.8	39.0	38.4	38.4	38.6	38.6	38.4	38.4	38.3	38.1	38.3	37.7	38.3	38.3
Chemicals and allied products.....	41.6	41.7	42.0	42.0	41.7	41.7	41.7	41.7	41.8	41.9	41.9	41.7	41.5	41.8	41.8
Petroleum and coal products.....	40.7	41.8	41.7	42.7	42.7	42.6	42.9	43.6	42.5	43.3	43.2	42.7	41.7	42.6	42.5
Rubber and plastics products, nec.....	40.8	40.7	41.5	41.1	41.3	41.5	41.0	40.8	41.3	41.2	41.0	41.1	40.3	41.1	41.5
Leather and leather products.....	37.1	37.8	38.3	37.4	37.0	36.8	37.1	37.4	37.8	37.3	36.5	37.3	35.7	37.2	38.3
WHOLESALE AND RETAIL TRADE	35.1	35.1	35.6	35.2	35.3	35.7	36.6	36.5	35.9	35.4	35.3	35.4	35.3	35.6	36.0
Wholesale trade.....	40.2	40.2	40.6	40.2	40.3	40.3	40.5	40.3	40.1	40.0	40.0	40.0	39.9	40.2	40.1
Retail trade.....	33.4	33.5	34.1	33.6	33.7	34.2	35.3	35.2	34.5	33.9	33.8	33.9	33.8	34.2	34.7
FINANCE, INSURANCE, AND REAL ESTATE	37.1	37.0	37.0	37.2	37.1	37.0	37.0	37.1	37.1	37.0	37.1	37.1	37.1	37.1	37.0

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: Data for the 2 most recent months are preliminary. For additional detail, see Employment and Earnings, table C-2

19. 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	1970		1969										
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.
TOTAL PRIVATE	37.5	37.4	37.5	37.6	37.6	37.8	37.8	37.8	37.8	37.8	37.8	37.8	37.5
MINING	43.5	42.7	43.4	43.8	42.9	43.2	43.2	42.6	42.0	43.4	43.8	42.8	43.3
CONTRACT CONSTRUCTION	38.1	37.1	38.2	38.2	37.5	38.1	37.9	37.5	37.6	38.1	38.0	37.9	38.0
MANUFACTURING	39.9	40.3	40.7	40.5	40.5	40.8	40.6	40.7	40.7	40.7	40.8	40.9	40.1
Overtime hours.....	3.2	3.3	3.5	3.5	3.5	3.7	3.7	3.6	3.6	3.6	3.7	3.7	3.5
Durable Goods	40.5	40.8	41.3	41.1	41.2	41.5	41.3	41.2	41.3	41.4	41.4	41.5	40.9
Overtime hours.....	3.2	3.4	3.6	3.5	3.7	3.9	3.8	3.8	3.9	3.8	3.8	3.9	3.8
Ordnance and accessories.....	41.2	40.7	40.5	40.4	40.1	40.4	40.4	40.2	40.9	40.6	40.9	40.8	40.3
Lumber and wood products.....	40.5	39.5	40.4	40.3	40.0	40.1	39.8	39.7	40.2	40.3	40.2	40.9	40.8
Furniture and fixtures.....	39.0	39.5	40.0	39.9	39.9	40.1	40.3	40.1	40.7	40.9	40.9	40.7	40.1
Stone, clay, and glass products.....	42.2	41.4	42.1	42.0	41.7	42.1	42.1	41.7	41.9	42.1	42.0	42.3	42.2
Primary metal industries.....	41.2	41.2	41.6	41.6	42.2	42.2	42.0	41.5	41.7	41.7	41.8	41.9	41.6
Fabricated metal products.....	40.8	41.4	41.6	41.4	41.4	41.5	41.6	41.6	41.8	41.6	41.8	41.9	41.2
Machinery, except electrical.....	41.6	42.3	42.6	42.2	42.4	42.7	42.6	42.2	42.5	42.6	42.6	42.7	42.3
Electrical equipment and supplies.....	39.8	40.4	40.3	40.1	40.2	40.5	40.4	40.3	40.6	40.6	40.9	40.7	39.7
Transportation equipment.....	40.3	40.0	41.5	40.6	41.3	41.8	41.2	42.3	41.6	41.1	41.5	41.6	41.6
Instruments and related products.....	40.6	40.7	40.9	40.9	40.7	41.0	40.9	40.9	40.9	40.8	40.8	40.7	39.7
Miscellaneous manufacturing industries.....	38.8	39.2	39.2	38.9	38.8	39.0	39.0	39.1	39.2	39.1	39.5	39.0	37.6
Nondurable Goods	39.2	39.7	39.8	39.6	39.5	39.7	39.6	39.7	39.8	39.8	39.8	39.9	39.1
Overtime hours.....	3.1	3.4	3.3	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.2
Food and kindred products.....	40.8	40.8	40.8	40.8	40.5	41.0	40.9	40.6	40.7	40.8	40.9	40.9	40.7
Tobacco manufactures.....	36.8	38.3	36.3	37.4	37.2	37.4	37.2	38.2	39.5	38.1	36.4	36.5	36.6
Textile mill products.....	40.0	40.3	40.9	40.8	40.6	40.8	40.9	41.2	41.2	41.0	41.1	40.9	39.9
Apparel and other textile products.....	35.4	35.7	36.0	35.8	35.7	35.8	35.9	36.0	36.2	36.1	36.0	36.0	35.2
Paper and allied products.....	42.6	43.1	42.8	42.7	42.7	42.8	42.8	43.0	42.9	43.0	43.4	43.2	42.5
Printing and publishing.....	37.8	38.3	38.6	38.4	38.3	38.3	38.4	38.5	38.4	38.4	38.3	38.3	37.9
Chemicals and allied products.....	41.8	42.0	41.8	41.9	41.7	41.6	41.9	41.9	41.8	41.8	41.6	41.7	41.7
Petroleum and coal products.....	41.6	42.3	42.2	42.7	42.6	42.0	42.8	42.9	42.2	43.0	42.9	43.2	42.6
Rubber and plastics products, nec.....	41.2	40.9	41.1	40.8	40.9	41.0	40.9	41.2	41.3	41.4	41.4	41.4	40.7
Leather and leather products.....	36.7	37.7	37.7	37.4	37.3	37.1	36.8	37.0	37.4	37.6	37.7	37.6	35.3
WHOLESALE AND RETAIL TRADE	35.5	35.4	35.4	35.5	35.5	35.7	35.8	35.7	35.7	35.7	35.6	35.7	35.7
Wholesale Trade.....	40.4	40.3	40.4	40.2	40.3	40.3	40.3	40.0	40.0	40.1	40.2	40.1	40.1
Retail trade.....	33.8	33.9	33.8	34.0	33.9	34.2	34.3	34.2	34.2	34.3	34.1	34.3	34.2
FINANCE, INSURANCE, AND REAL ESTATE	37.1	37.0	36.9	37.2	37.1	37.1	37.0	37.0	37.2	37.0	37.1	37.1	37.1

¹ For comparability of data with those published in issues prior to August, 1969, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: Data for the 2 most recent months are preliminary.

20. Gross average hourly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry and division group	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL PRIVATE	\$3.15	\$3.13	\$3.11	\$3.12	\$3.11	\$3.10	\$3.05	\$3.04	\$3.03	\$3.01	\$2.98	\$2.97	\$2.96	\$3.04	\$2.85
MINING	3.80	3.73	3.70	3.70	3.68	3.63	3.59	3.58	3.55	3.57	3.55	3.52	3.52	3.59	3.35
CONTRACT CONSTRUCTION	5.02	5.05	5.02	4.96	4.95	4.91	4.79	4.74	4.71	4.71	4.64	4.62	4.56	4.78	4.40
MANUFACTURING	3.28	3.29	3.29	3.26	3.24	3.24	3.19	3.19	3.17	3.16	3.15	3.13	3.12	3.19	3.01
Durable Goods	3.47	3.49	3.49	3.45	3.44	3.44	3.39	3.37	3.36	3.35	3.33	3.32	3.31	3.38	3.19
Ordnance and accessories.....	3.56	3.56	3.54	3.55	3.50	3.49	3.46	3.44	3.45	3.42	3.41	3.38	3.38	3.44	3.27
Lumber and wood products.....	2.79	2.81	2.82	2.84	2.82	2.83	2.78	2.74	2.71	2.68	2.64	2.65	2.61	2.73	2.57
Furniture and fixtures.....	2.70	2.70	2.70	2.70	2.68	2.68	2.64	2.62	2.62	2.60	2.58	2.56	2.54	2.62	2.47
Stone, clay, and glass products.....	3.28	3.27	3.28	3.28	3.26	3.25	3.21	3.18	3.17	3.17	3.14	3.10	3.06	3.18	2.99
Primary metal industries	3.84	3.85	3.87	3.85	3.85	3.87	3.84	3.79	3.76	3.75	3.74	3.71	3.69	3.79	3.55
Fabricated metal products.....	3.44	3.44	3.43	3.40	3.39	3.39	3.33	3.32	3.33	3.31	3.29	3.28	3.26	3.33	3.16
Machinery, except electrical.....	3.71	3.71	3.71	3.67	3.67	3.63	3.57	3.55	3.56	3.56	3.54	3.52	3.51	3.58	3.36
Electrical equipment and supplies.....	3.19	3.17	3.16	3.12	3.13	3.13	3.09	3.09	3.08	3.07	3.05	3.04	3.04	3.09	2.93
Transportation equipment.....	3.97	4.01	4.04	3.98	3.96	3.95	3.93	3.91	3.86	3.83	3.84	3.82	3.83	3.90	3.69
Instruments and related products.....	3.26	3.27	3.26	3.24	3.22	3.20	3.16	3.14	3.15	3.13	3.11	3.10	3.10	3.16	2.98
Miscellaneous manufacturing industries.....	2.78	2.79	2.76	2.71	2.68	2.67	2.64	2.64	2.65	2.64	2.62	2.61	2.61	2.65	2.50
Nondurable Goods	3.01	3.01	2.99	2.97	2.96	2.95	2.92	2.92	2.89	2.88	2.87	2.85	2.84	2.91	2.74
Food and kindred products.....	3.08	3.07	3.04	3.00	2.97	2.96	2.93	2.97	2.94	2.95	2.94	2.93	2.91	2.95	2.80
Tobacco manufactures.....	2.86	2.87	2.69	2.64	2.52	2.54	2.52	2.77	2.79	2.74	2.68	2.66	2.63	2.64	2.49
Textile mill products.....	2.42	2.42	2.42	2.42	2.41	2.41	2.39	2.35	2.31	2.30	2.30	2.29	2.27	2.34	2.21
Apparel and other textile products.....	2.37	2.36	2.35	2.35	2.34	2.35	2.31	2.29	2.30	2.29	2.28	2.29	2.27	2.31	2.21
Paper and allied products	3.35	3.34	3.33	3.32	3.31	3.31	3.28	3.26	3.22	3.19	3.17	3.15	3.14	3.24	3.05
Printing and publishing.....	3.81	3.80	3.81	3.78	3.77	3.75	3.70	3.68	3.68	3.66	3.64	3.63	3.61	3.69	3.48
Chemicals and allied products.....	3.61	3.60	3.57	3.56	3.54	3.52	3.49	3.49	3.46	3.43	3.40	3.38	3.37	3.47	3.26
Petroleum and coal products.....	4.22	4.21	4.10	4.11	4.06	4.04	4.00	4.04	4.00	4.03	4.03	3.95	3.87	4.01	3.75
Rubber and plastics products, nec.....	3.15	3.15	3.14	3.13	3.13	3.13	3.09	3.09	3.05	3.04	3.02	3.00	3.01	3.07	2.92
Leather and leather products.....	2.47	2.45	2.44	2.42	2.40	2.38	2.35	2.34	2.35	2.35	2.35	2.34	2.33	2.36	2.23
WHOLESALE AND RETAIL TRADE	2.68	2.66	2.61	2.63	2.61	2.59	2.56	2.55	2.55	2.54	2.52	2.51	2.51	2.56	2.40
Wholesale trade.....	3.39	3.37	3.34	3.33	3.29	3.29	3.24	3.23	3.24	3.20	3.18	3.16	3.16	3.23	3.05
Retail trade.....	2.40	2.38	2.34	2.36	2.35	2.33	2.30	2.30	2.30	2.29	2.27	2.26	2.26	2.30	2.16
FINANCE, INSURANCE, AND REAL ESTATE	3.03	3.01	2.98	2.98	2.94	2.93	2.92	2.91	2.93	2.90	2.88	2.89	2.90	2.92	2.75

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: Data for the 2 most recent months are preliminary. For additional detail see Employment and Earnings, table C-2.

21. Gross average weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, by industry division and major manufacturing group

Industry division and group	1970		1969											Annual average	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969	1968
TOTAL PRIVATE	\$117.18	\$116.12	\$117.25	\$117.00	\$117.25	\$117.80	\$116.51	\$115.82	\$115.14	\$113.48	\$111.75	\$111.67	\$110.11	\$114.61	\$107.73
MINING	162.26	157.78	160.58	160.58	159.71	157.91	156.88	154.30	150.88	155.30	154.78	148.54	149.60	154.73	143.05
CONTRACT CONSTRUCTION	184.23	179.78	189.25	184.02	190.08	192.96	187.77	183.91	181.34	179.92	174.46	171.86	166.90	181.64	164.56
MANUFACTURING	130.54	131.93	134.89	132.36	131.87	132.84	129.51	129.20	129.65	128.61	127.58	127.39	124.80	129.51	122.51
Durable goods	140.19	141.69	145.53	142.14	142.42	143.45	139.33	137.83	139.44	138.69	137.20	137.45	135.05	139.59	132.07
Ordnance and accessories.....	145.96	146.32	145.14	144.49	141.05	141.69	139.09	136.91	140.76	138.85	138.11	137.23	135.54	139.32	135.71
Lumber and wood products.....	110.76	109.87	113.36	113.32	113.93	114.33	111.76	108.78	110.30	109.08	106.13	107.86	104.40	109.75	104.34
Furniture and fixtures.....	104.22	105.03	110.16	108.81	108.81	109.08	107.71	104.01	106.90	105.04	103.46	103.42	100.84	105.85	100.28
Stone, clay, and glass products.....	135.46	133.09	137.76	137.76	137.57	138.45	136.75	133.24	134.41	134.41	131.57	129.27	126.38	133.56	124.98
Primary metal industries.....	157.82	159.01	160.99	159.39	160.55	162.93	160.51	157.66	157.92	157.13	157.45	155.82	153.14	158.42	147.68
Fabricated metal products.....	138.98	141.04	143.72	141.44	141.36	142.72	138.86	136.78	139.86	138.03	136.21	136.45	133.01	138.53	131.77
Machinery, except electrical.....	154.71	156.56	159.90	154.87	155.61	155.00	149.94	148.39	151.66	151.66	150.80	151.36	148.82	152.15	141.46
Electrical equipment and supplies.....	126.96	127.75	129.24	126.36	126.45	127.39	124.53	122.98	125.36	124.34	122.92	123.42	120.69	124.84	118.08
Transportation equipment.....	157.61	160.80	170.49	165.17	165.92	167.09	159.17	162.66	160.58	158.18	157.44	157.38	157.03	161.85	155.72
Instruments and related products.....	132.36	132.44	134.64	133.16	131.70	131.84	128.61	127.17	129.15	127.39	125.96	126.17	123.07	128.61	120.69
Miscellaneous manufacturing industries.....	108.14	107.97	108.74	106.50	105.32	104.66	103.22	101.38	103.88	102.96	102.44	102.05	98.40	103.35	98.25
Nondurable goods	117.39	118.29	119.60	118.21	117.51	118.00	116.51	116.22	115.31	114.34	113.08	113.15	110.48	115.53	109.05
Food and kindred products.....	123.51	124.34	124.64	123.00	120.88	123.73	121.30	122.36	120.25	119.77	117.89	118.08	116.40	120.36	114.24
Tobacco manufactures.....	104.10	106.76	99.26	98.74	96.77	98.81	94.50	104.43	111.32	103.02	95.94	94.70	95.21	98.74	94.12
Textile mill products.....	96.80	97.04	99.95	99.46	98.57	98.81	97.99	95.65	95.63	94.07	92.92	93.66	90.57	95.47	91.05
Apparel and other textile products.....	83.90	83.07	84.37	84.13	83.77	84.13	83.85	82.21	83.49	82.67	81.85	83.13	79.90	82.93	79.78
Paper and allied products.....	141.37	141.95	143.86	142.43	142.33	142.99	141.04	140.18	138.46	137.17	135.99	135.45	132.19	139.32	130.85
Printing and publishing.....	143.26	143.64	148.59	145.15	144.77	144.75	142.82	141.31	141.31	140.18	138.68	139.03	136.10	141.33	133.28
Chemicals and allied products.....	150.18	150.12	149.94	149.52	147.62	146.78	145.53	145.53	144.63	143.72	142.46	140.95	139.86	145.05	136.27
Petroleum and coal products.....	171.75	175.98	170.97	175.50	173.36	172.10	171.60	176.14	170.00	174.50	174.10	168.67	161.38	170.83	159.38
Rubber and plastics products, n e c.....	128.52	128.21	130.31	128.64	129.27	129.90	126.69	126.07	125.97	125.25	123.82	123.30	121.30	126.18	121.18
Leather and leather products.....	91.64	92.61	93.45	90.51	88.80	87.58	87.19	87.52	88.83	87.66	85.78	87.28	83.18	87.79	85.41
WHOLESALE AND RETAIL TRADE	94.07	93.37	92.92	92.58	92.13	92.46	93.70	93.08	91.55	89.92	88.96	88.85	88.60	91.14	86.40
Wholesale trade.....	136.28	135.47	135.60	133.87	132.59	132.59	131.22	130.17	129.92	128.00	127.20	126.40	126.08	129.85	122.31
Retail trade.....	80.16	79.73	79.79	79.30	79.20	79.69	81.19	80.96	79.35	77.63	76.73	76.61	76.39	78.66	74.95
FINANCE, INSURANCE, AND REAL ESTATE	112.41	111.37	110.26	110.86	109.07	108.41	108.04	107.96	108.70	107.30	106.85	107.22	107.59	108.33	101.75

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

NOTE: Data for the 2 most recent months are preliminary. For additional detail see Employment and Earnings, table C-2.

22. Gross and spendable average weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls, in current and 1957-59 dollars, 1960 to date

Year and month	Total private						Manufacturing					
	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	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars	Current dollars	1957-59 dollars
1960	\$80.67	\$78.24	\$65.95	\$63.62	\$72.96	\$70.77	\$89.72	\$87.02	\$72.57	\$70.39	\$80.11	\$77.70
1961	82.60	79.27	67.08	64.38	74.48	71.48	92.34	88.62	74.60	71.59	82.18	78.87
1962	85.91	81.55	69.56	66.00	76.99	73.05	96.56	91.61	77.86	73.87	85.53	81.15
1963	88.46	82.91	71.05	66.59	78.56	73.63	99.63	93.37	79.82	74.81	87.58	82.08
1964	91.33	84.49	75.04	69.42	82.57	76.38	102.97	95.25	84.40	78.08	92.18	85.27
1965	95.06	86.50	78.99	71.87	86.30	78.53	107.53	97.84	89.08	81.06	96.78	88.06
1966	98.82	87.37	81.29	71.87	88.66	78.39	112.34	99.33	91.57	80.96	99.45	87.93
1967	101.84	87.57	83.38	71.69	90.86	78.13	114.90	98.80	93.28	80.21	101.26	87.07
1968	107.73	88.89	86.71	71.54	95.28	78.61	122.51	101.08	97.70	80.61	106.75	88.08
1969	114.61	89.75	90.96	71.23	99.99	78.30	129.51	101.42	101.90	79.80	111.44	87.27
1969:												
January	110.25	88.84	87.76	70.72	96.68	77.90	126.05	101.57	99.36	80.06	108.78	87.66
February	110.11	88.37	87.65	70.35	96.57	77.50	124.80	100.16	98.44	79.00	107.82	86.53
March	111.67	88.91	88.80	70.70	97.76	77.83	127.39	101.43	100.34	79.89	109.81	87.43
April	111.75	88.41	88.86	70.30	97.82	77.39	127.58	100.93	100.48	79.49	109.95	86.99
May	113.48	89.50	90.13	71.08	99.13	78.18	128.61	101.43	101.24	79.84	110.74	87.33
June	115.14	90.24	91.35	71.59	100.40	78.33	129.65	101.61	102.00	79.94	111.54	87.41
July	115.82	90.34	91.85	71.65	100.92	78.68	129.20	100.78	101.67	79.31	111.20	86.74
August	116.51	90.53	92.35	71.76	101.45	78.83	129.51	100.63	101.90	79.18	111.44	86.59
September	117.80	91.11	93.30	72.16	102.44	79.23	132.84	102.74	104.34	80.70	114.01	88.17
October	117.25	90.33	92.89	71.56	102.01	78.59	131.87	101.59	103.63	79.84	113.25	87.25
November	117.00	89.66	92.71	71.04	101.82	78.02	132.36	101.43	103.99	79.69	113.63	87.07
December	117.25	89.30	92.89	70.75	102.01	77.69	134.89	102.73	105.85	80.62	115.61	88.65
1970:												
January	116.12	88.10	93.43	70.89	101.97	77.37	131.93	100.10	105.28	79.88	114.48	86.86

¹ For comparability of data with those published in issues prior to August 1969, see footnote 1, table 11. For employees covered, see footnote 1, table 17.

Spendable average weekly earnings are based on gross average weekly earnings as published in table 21, less the estimated amount of the workers' 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 1957-59 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.

NOTE: Data for the most recent month are preliminary. For additional detail see Employment and Earnings, table C-5.

23. Consumer and Wholesale Price Indexes, annual averages and changes, 1949 to date

[Indexes: 1957-59=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
1949	83.0	-1.0	87.1	-2.6	72.6	4.6	83.5	-5.0	94.3	-11.7	80.0	-2.1
1950	83.8	1.0	87.6	0.6	75.0	3.3	86.8	4.0	98.8	4.8	82.9	3.6
1951	90.5	8.0	95.5	9.0	78.9	5.2	96.7	11.4	112.5	13.9	91.5	10.4
1952	92.5	2.2	96.7	1.3	82.4	4.4	94.0	-2.8	108.0	-4.0	89.4	-2.3
1953	93.2	0.8	96.4	-0.3	86.0	4.4	92.7	-1.4	101.0	-6.5	90.1	.8
1954	93.6	0.4	95.5	-0.9	88.7	3.1	92.9	.2	100.7	-3	90.4	.3
1955	93.3	-0.3	94.6	-0.9	90.5	2.0	93.2	.3	95.9	-4.8	92.4	2.2
1956	94.7	1.5	95.5	1.0	92.8	2.5	96.2	3.2	95.3	-6	96.5	4.4
1957	98.0	3.5	98.5	3.1	96.6	4.1	99.0	2.9	98.6	3.5	99.2	2.8
1958	100.7	2.8	100.8	2.3	100.3	3.8	100.4	1.4	103.2	4.7	99.5	.3
1959	101.5	.8	100.9	.1	103.2	2.9	100.6	.2	98.4	-4.7	101.3	1.8
1960	103.1	1.6	101.7	.8	106.6	3.3	100.7	.1	98.6	.2	101.3	-----
1961	104.2	1.1	102.3	.6	108.8	2.1	100.3	-0.4	98.6	-----	100.8	-0.5
1962	105.4	1.2	103.2	.9	110.9	1.9	100.6	.3	99.6	1.0	100.8	-----
1963	106.7	1.2	104.1	.9	113.0	1.9	100.3	-0.3	98.7	-0.9	100.7	-0.1
1964	108.1	1.3	105.2	1.1	115.2	1.9	100.5	.2	98.0	-0.7	101.2	.5
1965	109.9	1.7	106.4	1.1	117.8	2.3	102.5	2.0	102.1	4.2	102.5	1.3
1966	113.1	2.9	109.2	2.6	122.3	3.8	105.9	3.3	108.9	6.7	104.7	2.1
1967	116.3	2.8	111.2	1.8	127.7	4.4	106.1	.2	105.2	-3.4	106.3	1.5
1968	121.2	4.2	115.3	3.7	134.3	5.2	108.7	2.5	107.6	2.3	109.0	2.5
1969	127.7	5.4	120.5	4.5	143.7	7.0	113.0	4.0	113.5	5.5	112.7	3.4

¹ Historical price changes are shown in greater detail and for earlier years in the Bureau's "Handbook of Labor Statistics, 1969" (BLS Bulletin 1630), in tables 108-120.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items

[The official name of the index is, "Consumer Price Index for Urban Wage Earners and Clerical Workers." It measures the average change in prices of goods and services purchased by families and single workers. The indexes shown below represent the average of price changes in 56 metropolitan areas, selected to represent all U.S. urban places having populations of more than 2500.]

[1957-59=100 unless otherwise specified]

Item and group	General summary													Annual average 1969
	1970			1969										
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	
All items	132.5	131.8	131.3	130.5	129.8	129.3	128.7	128.2	127.6	126.8	126.4	125.6	124.6	127.7
All items (1947-49=100)	162.5	161.7	161.1	160.1	159.3	158.6	157.9	157.3	156.6	155.6	155.0	154.1	152.9	156.7
Food	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	123.7	123.2	122.4	121.9	125.5
Food at home	127.4	126.6	125.8	123.8	122.9	123.6	123.6	123.0	121.8	119.8	119.3	118.5	118.1	121.5
Food away from home	151.5	150.6	149.9	149.0	148.1	146.7	145.8	144.8	143.7	142.8	142.2	141.3	140.7	144.6
Housing	132.2	131.1	130.5	129.8	129.2	128.6	127.8	127.0	126.3	125.8	125.3	124.4	123.3	126.7
Rent	121.8	121.3	121.0	120.5	120.1	119.7	119.3	118.8	118.5	118.1	117.8	117.5	117.2	118.8
Homeownership	148.5	146.8	145.4	144.5	143.6	142.6	141.3	140.0	138.7	138.0	137.1	135.7	133.6	139.4
Apparel and upkeep	130.0	129.3	130.8	130.7	129.8	128.7	126.6	126.8	127.0	126.6	125.6	124.9	123.9	127.1
Transportation	127.3	127.3	126.4	125.6	125.7	123.6	124.2	124.3	124.6	124.0	124.6	124.3	122.0	124.2
Health and recreation	140.7	140.1	139.6	139.1	138.6	138.4	137.7	137.0	136.3	135.7	135.1	134.3	133.7	136.6
Medical care	160.1	159.0	158.1	157.4	156.9	157.6	156.8	155.9	155.2	154.5	153.6	152.5	151.3	155.0
Special groups:														
All items less shelter	130.3	129.8	129.5	128.6	128.1	127.6	127.1	126.7	126.3	125.4	125.0	124.4	123.5	126.3
All items less food	133.0	132.3	131.9	131.4	130.8	130.0	129.3	128.8	128.4	127.9	127.5	126.8	125.6	128.6
All items less medical care	130.8	130.1	129.7	128.9	128.2	127.6	127.0	126.5	126.0	125.2	124.7	124.0	123.0	126.1
Commodities	124.2	123.7	123.6	122.9	122.4	121.7	121.4	121.0	120.5	119.6	119.3	118.7	117.8	120.5
Nondurables	128.4	127.8	127.7	126.7	126.1	125.8	125.2	124.7	124.1	123.0	122.5	121.8	121.1	124.1
Durables	113.7	113.7	113.6	113.5	113.2	111.6	111.9	111.9	111.7	111.3	111.4	111.1	109.7	111.6
Services	150.7	149.6	148.3	147.2	146.5	146.0	145.0	144.0	143.3	142.7	142.0	140.9	139.7	143.7
Commodities less food	120.4	120.1	120.3	120.2	119.8	118.7	118.2	118.1	118.0	117.5	117.2	116.8	115.7	118.0
Nondurables less food	125.8	125.2	125.7	125.5	125.1	124.4	123.3	123.1	123.0	122.4	121.9	121.4	120.5	123.0
Apparel commodities	129.3	128.6	130.3	130.4	129.3	128.1	125.9	126.2	126.4	126.0	124.9	124.3	123.1	126.5
Apparel commodities less foot-wear	126.2	125.5	127.5	127.7	126.6	125.3	122.8	123.5	123.7	123.4	122.2	121.6	120.5	123.7
Nondurables less food and apparel	123.7	123.2	123.0	122.6	122.6	122.2	121.7	121.3	121.0	120.3	120.2	119.7	118.9	121.0
Household durables	106.9	106.6	106.5	106.5	106.4	106.2	106.0	106.0	105.8	105.6	105.0	104.4	103.7	105.5
Housefurnishings	111.1	110.5	110.6	110.4	110.2	109.9	109.4	109.3	109.0	108.8	108.3	107.8	107.1	109.0
Service less rent	157.1	155.8	154.3	153.1	152.3	151.7	150.7	149.6	148.8	148.1	147.4	146.1	144.6	149.2
Household services less rent	155.0	153.2	152.4	151.4	150.4	149.5	148.2	146.9	145.7	145.0	144.2	142.5	140.6	146.4
Transportation services	154.1	152.9	148.4	145.8	145.1	144.0	143.1	142.5	142.3	141.8	141.4	140.9	139.8	142.9
Medical care services	175.2	173.8	172.8	171.8	171.2	172.2	171.1	170.1	169.1	168.2	167.2	165.8	164.3	168.9
Other services	149.8	149.4	148.9	148.2	147.6	147.2	146.5	145.7	145.2	144.7	144.2	143.2	142.7	145.5
Other index bases	U.S. average for groups, subgroups, and selected items													
FOOD	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	123.7	123.2	122.4	121.9	125.5
Food away from home	151.5	150.6	149.9	149.0	148.1	146.7	145.8	144.8	143.7	142.8	142.2	141.3	140.7	144.6
Restaurant meals	151.6	150.7	150.2	149.3	148.3	147.2	146.2	145.1	144.0	143.0	142.3	141.4	140.8	144.9
Snacks	132.0	131.4	129.9	129.2	128.8	126.2	125.6	125.1	124.4	124.1	123.7	123.0	122.4	125.4
Food at home	127.4	126.6	125.8	123.8	122.9	123.6	123.6	123.0	121.8	119.8	119.3	118.5	118.1	121.5
Cereals and bakery products	126.3	125.5	124.9	124.1	123.7	123.0	122.6	122.6	122.0	121.6	121.3	121.2	120.8	122.4
Flour	112.1	111.9	110.9	111.2	111.6	111.2	111.4	111.6	112.1	112.2	111.7	111.5	111.7	111.5
Cracker meal	130.2	127.8	127.9	127.2	126.9	125.8	124.7	123.3	122.1	119.3	117.9	117.8	117.6	122.3
Corn flakes	130.2	130.2	130.0	129.7	129.6	129.4	129.4	129.0	129.0	127.9	128.4	129.3	129.4	129.2
Rice	114.2	113.8	113.4	113.0	113.0	112.9	112.6	112.3	112.1	112.0	111.7	111.6	111.6	112.3
Bread, white	132.6	132.2	131.1	129.7	129.1	128.8	128.1	128.2	127.2	127.1	127.2	127.4	126.8	128.1
Bread, whole wheat	125.5	124.4	124.1	123.4	122.5	121.6	120.3	120.9	119.6	119.6	119.5	119.2	118.5	120.5
Cookies	101.7	101.3	100.9	99.8	99.8	101.0	100.9	100.9	100.1	100.9	101.1	100.8	99.5	100.6
Layer cake	119.9	118.1	118.0	117.1	115.4	113.2	113.8	113.6	114.1	113.9	112.3	111.1	111.3	113.7
Cinnamon rolls	116.7	116.3	115.8	115.1	115.2	113.2	112.8	113.4	113.2	111.9	112.1	111.8	111.5	113.1
Meats, poultry, and fish	129.7	128.8	127.2	127.2	127.6	129.0	127.9	127.6	125.3	119.9	118.4	116.5	116.2	123.2
Meats	133.9	132.9	131.3	131.1	132.0	133.1	131.9	131.7	129.5	123.4	121.2	119.1	119.0	126.8
Beef and veal	133.0	132.2	130.6	131.5	132.9	135.0	135.4	136.8	134.6	127.9	125.1	121.4	121.3	129.5
Steak, round	126.4	126.2	123.2	125.2	126.8	128.1	129.9	132.5	131.0	124.1	121.4	116.8	117.0	124.4
Steak, sirloin	120.4	121.4	119.0	121.1	123.4	128.3	127.4	131.1	129.6	120.7	117.2	113.5	113.8	121.7
Steak, porterhouse	126.4	126.6	123.9	125.9	129.0	132.9	132.7	135.5	133.0	125.2	121.6	118.5	118.6	126.4
Rump roast	120.1	120.7	118.8	119.5	121.1	122.1	123.4	125.0	123.0	117.2	115.4	112.3	111.9	118.4
Rib roast	141.8	141.6	140.5	140.9	140.8	145.9	146.5	150.1	147.1	138.1	133.6	129.3	130.8	139.7
Chuck roast	126.7	122.1	123.2	122.7	125.3	127.2	128.7	131.0	127.9	121.5	119.2	114.3	114.0	122.3
Hamburger	140.5	138.7	137.8	138.4	139.1	140.9	140.5	140.0	137.9	131.4	128.3	125.0	124.4	134.0
Beef liver	119.9	118.7	118.6	117.9	117.8	117.8	117.8	115.4	112.1	109.6	101.1	107.7	108.1	113.2
Veal cutlets	166.0	164.0	162.0	162.1	162.8	162.8	162.1	161.1	159.8	154.2	150.6	147.7	146.1	156.4

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970				1969								Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
FOOD—Continued															
Meats, poultry, and fish—Continued															
Meats—Continued															
Pork.....		137.2	135.6	133.3	132.0	132.7	133.7	130.2	129.0	126.1	118.8	117.5	116.4	116.6	125.2
Chops.....		139.5	136.9	135.7	134.1	134.0	137.6	135.7	136.4	134.8	122.4	122.0	121.0	121.9	129.6
Loin roast.....	Apr. 60	146.2	143.7	143.4	140.4	141.8	143.0	141.3	141.9	139.7	129.8	128.1	126.6	127.8	135.8
Pork sausage.....	Dec. 63	148.6	146.7	146.8	148.3	149.1	149.6	146.0	143.6	137.2	130.0	127.4	125.7	125.5	137.8
Ham, whole.....		134.0	136.9	130.7	124.8	123.9	121.8	117.0	114.2	114.2	111.1	108.0	113.1	112.4	117.1
Picnics.....	Dec. 63	139.9	137.7	134.7	136.0	136.5	135.5	134.5	130.9	124.8	121.5	121.1	118.3	118.4	127.5
Bacon.....		138.8	136.7	133.1	132.4	134.9	135.6	128.7	126.8	124.1	118.4	117.3	114.3	113.6	124.3
Other meats.....															
Lamb chops.....	Dec. 63	136.0	135.3	134.4	133.6	133.3	132.6	131.2	128.8	127.2	124.0	122.2	122.0	121.4	127.7
Frankfurters.....		140.8	140.9	140.4	139.4	139.9	139.7	139.3	140.9	139.1	136.2	133.7	132.4	131.9	137.0
Ham, canned.....	Dec. 63	134.2	134.2	134.6	134.7	134.7	135.4	133.7	129.4	127.6	122.2	120.4	119.2	118.5	127.4
Bologna sausage.....	Dec. 63	136.6	134.8	130.4	127.8	125.1	122.6	120.6	115.6	117.6	116.6	115.3	117.2	115.0	120.0
Salami sausage.....	Dec. 63	137.7	137.2	136.6	136.1	136.2	136.2	134.5	132.0	128.8	123.7	122.4	121.8	121.8	129.3
Liverwurst.....	Dec. 63	128.6	128.0	127.9	127.1	127.2	127.0	126.0	123.7	121.5	118.6	116.6	116.6	116.7	122.1
	Dec. 63	131.4	130.1	129.9	129.8	129.9	128.0	126.3	125.0	122.2	120.6	118.8	118.3	118.4	123.7
Poultry.....															
Frying chicken.....		99.1	99.5	97.9	99.1	98.2	102.0	101.4	100.4	97.3	93.3	95.3	94.2	92.3	96.9
Chicken breasts.....	Dec. 63	98.5	99.4	97.9	99.5	98.6	103.8	103.3	103.1	99.2	94.7	97.9	95.5	93.0	98.1
Turkey.....	Dec. 63	110.4	110.1	110.4	110.8	112.0	113.8	113.0	109.4	107.6	104.4	106.7	105.3	103.9	108.4
	Dec. 63	115.9	114.4	110.3	110.0	107.2	105.9	104.7	101.8	101.1	98.7	93.4	99.7	100.5	102.8
Fish.....															
Shrimp, frozen.....	Dec. 63	138.3	137.0	135.4	134.0	133.4	132.2	131.5	130.6	129.8	129.5	128.4	127.7	127.7	130.6
Fish, fresh or frozen.....		126.2	125.4	124.4	122.9	122.5	121.0	120.8	119.7	118.3	118.2	116.8	116.5	115.6	119.3
Tuna, fish, canned.....		148.1	145.2	143.4	141.1	139.9	138.6	137.2	134.5	133.1	132.0	130.2	128.6	128.3	134.6
Sardines, canned.....	Dec. 63	121.6	120.5	117.9	116.7	116.2	114.9	114.4	113.6	113.8	112.4	113.1	112.4	113.3	114.4
	Dec. 63	126.5	126.0	125.4	125.0	124.9	124.2	123.5	124.4	124.0	123.7	123.7	123.5	123.9	124.2
Dairy products.....															
Milk, fresh, grocery.....		128.8	128.4	127.6	126.3	125.8	125.5	125.0	124.4	124.0	123.6	122.9	123.0	122.8	124.5
Milk, fresh, delivered.....	Dec. 63	126.2	126.1	125.0	123.4	122.8	122.8	122.3	121.7	121.3	120.7	120.5	120.7	120.3	121.8
Milk, fresh, skim.....		133.1	132.7	132.3	130.4	130.1	129.4	128.7	128.0	127.6	127.3	126.8	127.0	126.7	128.4
Milk, evaporated.....	Dec. 63	127.3	127.4	126.0	125.0	124.3	124.8	124.3	122.9	122.3	121.7	121.5	121.4	121.1	123.0
	Dec. 63	127.4	126.4	125.0	124.3	123.8	124.1	124.1	123.9	124.0	123.8	122.9	122.4	121.8	123.5
Ice cream.....		102.1	102.1	102.0	100.7	99.9	100.1	99.5	99.0	99.8	98.8	97.0	98.9	99.4	99.5
Cheese, American process.....		154.8	153.1	152.4	151.0	149.9	148.9	148.5	147.7	146.6	147.1	143.6	142.5	142.7	146.8
Butter.....		119.5	119.9	119.6	119.4	119.9	118.3	118.0	118.0	117.8	117.9	117.4	117.4	117.6	118.3
Fruits and vegetables.....															
Fresh fruits and vegetables.....		132.4	130.9	132.1	127.0	124.0	126.8	130.2	132.3	130.8	130.0	127.9	127.6	124.7	128.4
Apples.....		144.5	141.9	144.1	135.4	130.1	134.9	141.0	145.0	142.4	140.9	137.6	137.2	132.3	138.1
Bananas.....		135.8	134.0	129.3	125.7	131.7	174.6	190.5	192.9	185.3	171.4	167.4	164.7	160.1	162.5
Oranges.....		96.5	94.5	93.3	93.9	100.7	99.6	97.4	97.7	94.5	96.3	91.7	91.4	94.7	95.3
Orange juice, fresh.....	Dec. 63	124.5	121.5	125.0	132.4	131.9	132.1	132.7	127.9	125.4	126.2	126.4	126.9	126.6	128.4
	Dec. 63	90.7	90.5	91.5	91.8	92.0	92.1	92.0	91.4	91.8	91.2	91.7	90.2	88.0	90.9
Grapefruit.....		151.7	143.7	142.0	144.1	184.0	205.9	194.6	156.6	143.5	137.3	134.5	134.3	141.6	155.1
Grapes.....		(1)	(1)	(1)	154.3	144.0	137.8	147.4	188.3	(1)	(1)	(1)	(1)	(1)	154.4
Strawberries.....		(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	126.8	121.5	147.5	(1)	131.9
Watermelon.....		(1)	(1)	(1)	(1)	(1)	(1)	116.1	119.6	159.9	(1)	(1)	(1)	(1)	131.9
Potatoes.....		151.1	144.3	142.0	140.1	137.6	144.5	159.0	165.2	154.5	143.8	141.2	139.1	136.4	144.8
Onions.....		166.9	140.5	136.4	133.2	134.2	139.0	152.2	141.5	135.0	130.5	124.3	123.6	128.2	134.1
Asparagus.....	Dec. 63	(1)	141.6	(1)	(1)	(1)	(1)	(1)	129.6	121.1	118.9	152.2	171.5	(1)	138.7
Cabbage.....		211.3	188.7	173.4	150.6	145.9	135.6	138.3	145.7	155.6	152.6	148.8	149.7	153.8	152.0
Carrots.....		145.3	139.2	146.6	127.1	129.6	128.3	139.6	129.5	119.8	109.7	114.0	113.0	114.3	123.8
Celery.....		143.6	140.5	132.2	131.2	115.5	120.1	130.2	151.8	139.2	134.3	113.2	110.6	111.6	125.6
Cucumbers.....	Dec. 63	208.5	203.4	176.5	122.5	118.5	111.7	122.5	123.0	124.6	161.1	161.9	145.3	171.5	148.1
Lettuce.....		122.7	137.6	189.5	177.9	133.3	130.8	124.2	126.8	120.2	149.3	166.1	156.0	115.3	144.4
Peppers, green.....	Dec. 63	283.9	231.2	217.2	160.9	145.7	147.8	146.4	165.6	180.7	188.0	163.7	192.9	192.1	172.4
Spinach.....	Dec. 63	122.0	120.3	121.8	116.5	120.1	118.0	117.2	118.8	111.1	109.6	113.4	110.0	110.3	114.8
Tomatoes.....		134.8	168.1	177.5	146.7	119.0	103.2	116.3	131.0	158.0	173.8	118.7	144.3	133.2	138.1
Processed fruits and vegetables.....															
Fruit cocktail, canned.....		117.3	117.1	117.1	116.8	116.6	116.9	116.7	116.4	116.3	116.3	115.9	115.8	115.3	116.3
Pears, canned.....	Dec. 63	104.9	105.3	106.2	105.4	105.6	106.6	106.3	107.1	106.3	106.0	106.5	106.6	106.9	106.4
Grapefruit-pineapple juice, canned.....	Dec. 63	103.7	103.0	102.4	102.6	102.2	101.8	101.0	100.4	99.9	99.1	99.6	99.4	98.7	100.5
Orange juice concentrate, frozen.....		96.5	96.4	97.4	97.2	98.2	99.4	100.0	100.4	101.0	103.7	102.1	99.5	94.8	98.9
Lemonade concentrate, frozen.....	Apr. 60	94.8	95.1	94.7	94.1	93.8	93.3	92.5	90.6	92.3	92.5	92.3	91.4	91.2	92.5
Beets, canned.....	Dec. 63	114.1	113.9	113.6	113.3	112.8	113.1	112.8	113.3	112.7	113.4	113.1	113.5	113.2	113.2
Peas, green, canned.....		122.2	122.4	122.4	123.1	122.9	122.9	122.7	121.7	121.0	121.1	121.3	120.6	120.1	121.7
Tomatoes, canned.....		127.2	126.7	126.6	125.5	124.8	124.1	124.6	124.5	124.1	123.8	123.6	124.3	124.9	124.7
Dried beans.....		123.4	123.1	123.3	123.6	124.3	125.0	125.0	124.7	124.9	125.4	124.6	124.8	125.3	124.7
Broccoli, frozen.....	Dec. 63	111.8	110.8	109.6	108.0	106.7	107.5	106.7	105.4	104.9	103.2	101.1	101.3	100.7	104.7
Other food at home.....															
Eggs.....		118.1	117.7	116.6	112.9	111.0	110.5	110.5	107.2	106.6	107.1	109.0	108.5	109.4	109.9
Fats and oils:		141.0	143.0	140.6	122.3	114.5	113.8	114.4	95.6	92.5	97.4	109.8	108.5	116.2	112.1
Margarine.....		105.6	105.6	105.0	103.7	102.7	102.2	102.4	103.1	103.5	102.8	102.6	103.0	102.3	103.0
Salad dressing, Italian.....	Dec. 63	101.9	102.5	102.6	102.5	102.8	102.3	102.3	102.4	103.4	103.2	102.9	102.6	102.3	102.6
Salad or cooking oil.....	Dec. 63	127.2	126.2	124.8	123.9	123.0	123.6	123.6	123.5	123.3	122.7	122.3	122.8	123.1	123.4
Sugar and sweets.....		128.6	12												

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Item or group	Other index bases	1970		1969										Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
FOOD—Continued															
Other food at home—Continued															
Nonalcoholic beverages.....		110.7	109.1	107.4	106.1	104.3	103.7	103.8	103.3	103.4	102.7	102.6	102.5	102.2	103.7
Coffee, can and bag.....		97.4	94.9	92.3	90.0	87.0	86.6	85.7	86.3	86.8	86.6	86.8	87.0	87.0	87.5
Coffee, instant.....	July 61	111.0	109.6	108.0	106.0	104.2	103.8	103.9	103.6	103.7	103.0	102.1	101.2	99.7	103.2
Tea.....		103.6	103.1	102.9	102.2	102.1	102.0	102.2	102.0	102.0	100.8	101.0	101.6	101.5	101.8
Cola drink.....		160.3	159.3	158.4	158.7	158.0	156.8	156.6	155.3	155.1	153.8	153.8	152.8	152.4	155.3
Carbonated fruit drink.....	Dec. 63	126.0	125.5	124.8	124.7	124.5	123.4	123.1	122.7	121.9	120.4	119.8	119.3	119.1	121.9
Prepared and partially prepared foods.....	Dec. 63	109.0	108.5	108.2	107.6	107.4	106.9	106.7	106.2	105.9	106.0	105.8	105.1	104.5	106.2
Bean soup, canned.....	Dec. 63	110.9	109.7	108.8	107.2	106.3	105.6	105.4	105.1	105.1	105.2	104.5	103.5	102.4	105.0
Chicken soup, canned.....	Dec. 63	101.1	100.8	100.3	99.5	98.3	98.1	98.3	98.0	97.8	98.2	97.5	96.7	96.2	98.0
Spaghetti, canned.....	Dec. 63	121.1	120.8	120.4	119.8	118.9	117.2	117.3	117.0	116.4	116.2	116.0	115.7	115.1	117.1
Mashed potatoes, instant.....	Dec. 63	110.3	109.7	109.6	110.0	109.6	108.9	108.5	108.1	107.7	107.7	106.4	104.5	103.2	107.2
Potatoes, french fried, frozen.....	Apr. 60	92.8	92.7	92.5	92.1	92.8	92.7	92.5	91.8	90.8	90.6	91.2	90.7	89.0	91.4
Baby foods, canned.....	Dec. 63	112.0	112.1	111.9	111.4	111.7	112.7	112.1	111.7	110.7	110.9	111.1	111.1	111.8	111.6
Sweet pickle relish.....	Dec. 63	116.0	115.6	115.0	114.3	114.2	112.6	112.0	111.0	111.8	112.5	113.2	112.8	112.3	112.8
Pretzels.....	Dec. 63	108.3	107.1	107.5	107.0	107.6	107.6	107.6	107.4	107.0	106.8	106.9	106.7	106.9	107.1
HOUSING.....															
Shelter.....		140.9	139.6	138.5	137.7	137.0	136.1	135.1	134.0	133.0	132.4	131.6	130.5	128.9	133.6
Rent.....		121.8	121.3	121.0	120.5	120.1	119.7	119.3	118.8	118.5	118.1	117.8	117.5	117.2	118.8
Homeownership.....		148.5	146.8	145.4	144.5	143.6	142.6	141.3	140.0	138.7	138.0	137.1	135.7	133.6	139.4
Mortgage interest rates.....	Dec. 63	143.5	139.9	139.6	139.3	138.8	138.2	137.1	135.8	134.9	134.3	133.5	129.5	126.1	134.4
Property taxes.....		133.6	133.0	132.0	131.5	130.5	130.4	129.9	128.7	128.2	128.3	128.3	127.7	126.4	129.0
Property insurance rates.....		152.8	152.5	153.3	152.3	150.7	149.5	150.3	149.6	147.4	146.9	146.0	146.1	146.0	148.7
Maintenance and repairs.....		146.9	146.4	145.8	144.9	144.5	143.8	142.4	141.5	140.8	139.6	138.0	137.4	135.4	140.7
Commodities.....	Dec. 63	116.5	116.1	115.9	116.0	116.2	116.7	117.2	117.5	117.8	117.5	117.0	115.9	113.9	116.1
Exterior house paint.....		119.8	119.3	119.1	118.7	118.0	117.6	116.5	115.7	115.6	115.9	116.2	115.5	114.6	116.5
Interior house paint.....	Dec. 63	114.8	114.1	114.3	113.6	113.8	113.1	113.1	112.3	112.2	111.6	111.7	111.6	111.2	112.4
Services.....	Dec. 63	144.7	144.1	143.5	142.2	141.6	140.4	138.2	136.9	135.7	134.2	132.9	132.0	130.1	136.4
Repainting living and dining rooms.....		185.4	184.6	183.6	182.6	181.8	179.7	178.3	176.1	174.0	171.5	167.9	167.1	166.5	174.6
Reshingling roofs.....		165.4	164.9	164.1	163.0	162.3	161.4	157.6	155.4	154.2	152.3	151.4	150.4	149.4	155.8
Residing houses.....	Dec. 63	135.0	134.6	134.0	134.2	133.7	133.0	130.0	129.3	128.6	127.6	126.5	125.3	123.3	129.0
Replacing sinks.....	Dec. 63	145.6	145.2	144.5	142.6	142.0	140.4	139.0	137.8	137.2	135.3	134.7	133.7	131.1	137.4
Repairing furnaces.....	Dec. 63	151.3	150.0	149.7	145.2	144.1	142.8	141.2	139.7	137.7	136.4	135.0	134.5	131.5	139.1
Fuel and utilities.....		114.9	114.6	114.6	114.2	113.5	113.3	113.0	112.6	112.7	112.6	112.6	112.2	111.8	112.9
Fuel oil and coal.....		120.6	119.7	119.2	118.9	118.4	118.1	117.7	117.4	117.5	117.5	117.4	117.2	116.9	117.8
Fuel oil, #2.....		117.5	116.6	116.2	116.0	115.5	115.4	115.2	115.0	115.0	114.9	114.8	114.5	114.3	115.1
Gas and electricity.....		114.6	114.1	113.7	113.2	112.2	112.0	111.5	110.9	111.3	111.2	111.2	110.6	110.2	111.5
Gas.....		121.5	120.5	119.8	118.8	116.9	116.7	116.1	115.7	116.4	116.4	116.5	116.2	116.1	116.8
Electricity.....		107.4	107.4	107.2	107.2	106.9	106.8	106.4	105.6	105.7	105.5	105.4	104.5	104.0	105.8
Other utilities:															
Residential telephone services.....		102.8	103.0	103.8	103.7	103.6	103.6	103.6	103.6	103.6	103.4	103.3	103.4	103.1	103.5
Residential water and sewerage.....		147.5	147.5	147.5	147.5	145.3	145.3	145.3	145.3	143.4	143.4	143.4	143.4	141.6	144.4
Household furnishings and operation.....		120.8	120.1	120.0	119.6	119.3	119.0	118.5	118.2	117.9	117.4	116.9	116.4	115.8	117.9
Housefurnishings.....		111.1	110.5	110.6	110.4	110.2	109.9	109.4	109.3	109.0	108.8	108.3	107.8	107.1	109.0
Textiles.....		115.7	114.2	116.1	115.7	115.0	115.2	113.8	114.8	114.8	114.4	114.6	113.6	112.7	114.4
Sheets, percale or muslin.....		120.8	117.3	122.2	121.7	120.1	119.8	116.2	118.7	120.2	118.3	121.0	119.6	119.6	119.6
Curtains, tailored, polyester mar- quisette.....		112.7	111.6	112.3	112.1	112.0	112.0	112.0	111.6	111.5	111.1	110.4	109.3	108.0	110.9
Bedspreads, chiefly cotton, tufted.....		116.6	115.0	117.6	117.7	117.1	116.9	115.7	116.5	116.9	117.3	117.3	116.3	113.5	116.2
Drapery fabric, cotton or rayon/ acetate.....		125.8	125.0	126.6	126.0	124.1	124.5	125.0	124.8	122.2	122.1	121.3	121.1	120.1	123.1
Slipcovers, ready made, chiefly cotton.....	Dec. 63	112.3	111.0	110.4	110.0	111.1	110.0	110.3	110.1	109.6	109.4	109.3	108.6	108.0	109.6
Furniture and bedding.....		124.6	124.1	123.9	123.7	123.6	122.9	122.4	122.1	121.8	121.6	120.5	119.7	118.3	121.5
Bedroom suites, good or inexpen- sive quality.....		129.5	128.6	128.0	128.0	127.6	127.2	125.8	125.3	124.8	124.4	123.0	122.3	121.2	124.9
Living room suites, good and inex- pensive quality.....		126.1	126.0	126.3	125.8	125.9	124.9	124.8	123.9	123.4	123.3	122.4	121.9	121.2	123.7
Lounge chairs, upholstered.....	Dec. 63	120.0	120.0	118.8	118.6	118.9	119.0	117.9	116.5	116.2	114.6	113.3	112.7	112.0	115.8
Dining room suites.....	Dec. 63	131.1	130.3	129.5	129.4	128.7	127.5	126.0	126.6	126.1	126.7	125.7	125.0	124.5	126.6
Sofas, upholstered.....	Dec. 63	116.5	116.3	116.5	115.7	115.9	114.8	115.1	114.3	113.8	114.3	113.3	112.7	112.0	114.2
Sofas, dual purpose.....		120.0	120.5	120.0	120.2	118.9	118.8	118.6	117.9	117.1	116.2	116.0	114.8	114.1	117.2
Box springs.....	Dec. 63	122.5	122.4	122.6	122.5	124.1	123.7	123.2	123.0	123.0	122.8	121.6	120.4	119.7	122.0
Cribs.....	Dec. 63	119.9	119.6	119.8	119.5	119.2	117.1	118.0	117.7	117.5	117.1	115.8	115.1	113.2	117.0
Floor coverings.....		106.9	106.8	107.1	107.1	107.1	107.0	106.3	106.4	106.2	106.2	106.2	106.1	106.1	106.5
Rugs, soft surface.....		104.0	104.0	104.7	104.8	104.9	104.9	104.1	104.4	104.1	104.2	104.4	104.4	104.5	104.5
Rugs, hard surface.....		113.6	113.2	112.5	112.5	112.1	111.8	111.6	111.5	111.2	111.1	110.3	110.0	110.0	111.2
Tile, vinyl.....	Dec. 63	111.3	110.3	110.3	110.1	109.6	109.3	108.5	108.2	103.0	108.0	107.7	107.2	106.8	108.4
Appliances.....		86.6	86.5	86.4	86.3	86.2	86.0	86.0	85.9	85.8	85.6	85.6	85.4	85.4	85.8
Washing machines, electric, auto- matic.....		92.3	91.8	91.5	91.2	90.9	91.0	90.8	90.5	90.5	90.2	90.1	89.9	90.0	90.6
Vacuum cleaners, canister type.....		81.5	81.8	81.4	81.4	81.5	81.3	82.1	82.0	81.8	81.4	81.2	81.1	81.1	81.5

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970		1969										Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
HOUSING—Continued															
Household furnishings and operation—Con.															
Appliances—Continued															
Refrigerators or refrigerator-freezers, electric.....		86.8	86.1	86.0	85.8	85.8	85.8	85.7	85.4	85.2	84.9	84.8	84.7	84.7	85.3
Ranges, free standing, gas or electric.....		99.3	99.0	99.0	98.8	98.5	98.1	98.2	97.6	97.4	97.0	97.1	97.1	96.5	97.7
Clothes dryers, electric, automatic.....	Dec. 63	101.3	100.8	100.6	100.5	99.8	99.6	99.7	99.5	99.5	99.1	98.9	98.8	98.4	99.4
Air conditioners, demountable.....	June 64	(1)	(1)	(1)	(1)	(1)	(1)	99.8	99.7	99.5	99.2	99.3	(2)	(1)	99.5
Room heaters, electric, portable.....	Dec. 63	100.6	100.6	100.4	99.8	99.6	(1)	(1)	(1)	(1)	(1)	(1)	98.0	97.5	98.8
Garbage disposal units.....	Dec. 63	105.9	105.5	105.0	105.0	104.7	104.3	103.9	103.9	103.6	103.6	103.1	102.8	103.2	103.9
Other house furnishings:															
Dinnerware, earthenware.....	Dec. 63	137.1	136.2	135.6	135.2	134.8	134.3	133.5	133.6	132.7	132.5	132.2	132.0	131.8	133.3
Flatware, stainless steel.....	Dec. 63	120.1	119.2	119.0	119.6	119.6	119.8	119.6	119.5	118.9	118.1	118.1	117.0	117.0	118.7
Table lamps, with shade.....	Dec. 63	118.6	118.3	118.7	118.3	117.8	116.0	115.4	115.3	114.0	113.6	113.0	112.4	111.3	114.6
Housekeeping supplies:															
Laundry soaps and detergents.....		108.8	108.1	107.1	106.2	106.8	107.4	107.4	106.4	106.5	106.1	105.7	105.6	105.3	106.3
Paper napkins.....		131.3	129.8	131.0	130.0	129.0	128.6	128.0	127.2	128.1	127.1	127.0	127.5	127.6	128.2
Toilet tissue.....		123.5	121.9	120.3	121.2	121.2	120.7	119.1	119.5	119.8	118.0	117.7	116.8	116.5	118.9
Housekeeping services:															
Domestic service, general housework.....		182.0	180.5	179.9	178.7	177.6	175.1	173.9	172.9	172.2	171.9	171.1	170.2	169.8	173.5
Baby sitter service.....	Dec. 63	138.6	137.6	137.4	136.6	135.7	135.6	134.9	134.5	133.7	133.1	131.9	131.0	130.1	133.7
Postal charges.....		165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5	165.5
Laundry, flatwork, finished service.....	Dec. 63	147.9	147.5	146.8	144.3	143.2	142.7	141.4	140.6	140.2	139.6	139.0	137.9	136.6	140.6
Licensed day care service, pre-school child.....	Dec. 63	132.0	132.0	131.8	131.8	130.7	130.3	129.7	128.4	128.1	127.2	125.3	124.1	123.7	127.9
Washing machine repairs.....	Dec. 63	138.3	136.6	135.4	135.1	135.2	134.4	133.5	133.0	131.6	131.0	129.2	129.0	127.3	131.7
APPAREL AND UPKEEP															
Men's and boys'															
Men's:															
Topcoats, wool.....		141.0	143.7	147.4	148.5	145.9	144.0	(1)	(1)	(1)	(1)	(1)	137.7	137.5	142.9
Suits, year round weight.....	June 64	153.9	154.2	158.2	158.2	156.4	154.5	150.7	149.6	150.0	150.1	148.1	146.8	144.6	150.9
Suits, tropical weight.....	Dec. 63	(1)	(1)	(1)	(1)	(1)	(1)	(1)	127.7	130.8	130.0	128.1	126.2	(1)	128.6
Jackets, lightweight.....		125.6	125.5	125.7	125.6	125.4	125.2	125.0	125.1	125.6	125.3	124.6	123.1	122.7	124.6
Slacks, wool or wool blend.....		129.6	130.0	131.2	131.7	130.4	128.9	127.1	126.1	126.6	126.3	126.5	125.3	123.4	127.4
Slacks, cotton or manmade blend.....		119.4	117.6	117.6	117.1	115.6	115.2	114.5	112.1	114.3	114.3	114.2	112.9	111.0	113.9
Trousers, work, cotton.....		116.4	116.0	117.2	117.0	116.9	116.9	116.8	116.9	116.7	116.5	116.0	115.5	115.1	116.4
Shirts, work, cotton.....		124.9	124.4	124.2	124.7	124.2	123.2	123.3	123.1	123.4	122.6	122.2	121.8	121.1	122.9
Shirts, business, cotton.....		123.2	122.5	122.3	122.2	122.2	121.8	121.6	121.5	121.7	121.3	120.5	120.4	120.1	121.3
T-shirts, chiefly cotton.....		133.3	132.4	131.9	131.8	131.5	130.6	130.6	130.1	129.4	128.8	129.0	129.2	128.7	130.0
Socks, cotton.....		121.3	120.9	120.9	120.4	121.1	121.6	121.6	121.1	120.5	119.4	118.9	118.1	117.5	119.8
Handkerchiefs, cotton.....	Dec. 63	113.9	113.8	113.8	113.3	112.9	112.7	112.4	112.3	112.3	111.5	111.6	111.4	110.9	112.1
Boys':															
Coats, all purpose, cotton or cotton blend.....	Dec. 63	114.3	114.2	116.1	115.9	115.2	113.5	(1)	(1)	(1)	(1)	(1)	108.7	108.2	112.4
Sport coats, wool or wool blend.....	Dec. 63	(1)	127.8	130.3	131.0	126.4	122.5	(1)	(1)	(1)	(1)	(1)	(1)	(1)	125.6
Dungarees, cotton or cotton blend.....		129.4	128.9	127.1	127.9	126.9	127.4	127.4	127.2	127.0	126.0	125.2	124.3	124.9	126.3
Undershorts, cotton.....		129.9	130.1	130.3	130.3	129.0	128.9	128.4	127.9	126.6	126.1	125.6	125.0	124.0	127.1
Women's and girls'															
Women's:															
Coats, heavyweight, wool or wool blend.....		(1)	124.9	136.2	139.9	139.9	136.0	(1)	(1)	(1)	(1)	(1)	(1)	(1)	134.4
Skirts, wool or wool blend.....	Sept. 61	121.0	135.6	144.6	145.3	133.9	129.4	(1)	(1)	(1)	(1)	(1)	(1)	104.4	129.3
Skirts, cotton or cotton blend.....	Mar. 62	(1)	(1)	(1)	(1)	(1)	(1)	121.8	130.7	135.0	134.4	124.4	(2)	(1)	129.3
Blouses, cotton.....		124.9	126.9	127.6	127.2	125.4	122.7	122.2	122.4	122.7	123.4	123.2	123.1	121.2	123.6
Dresses, street, chiefly manmade fiber.....		158.7	155.9	158.3	158.8	155.9	152.5	147.3	147.6	147.3	147.7	148.8	148.4	146.3	150.2
Dresses, street, wool or wool blend.....		(1)	144.2	145.7	144.8	145.7	140.8	(1)	(1)	(1)	(1)	(1)	(1)	(1)	141.0
Dresses, street, cotton.....		(1)	(1)	(1)	(1)	(1)	(1)	136.6	149.9	150.6	150.5	148.5	(1)	(1)	147.2
Housedresses, cotton.....		153.5	152.3	153.0	152.1	150.7	149.0	148.8	148.8	149.6	147.3	146.4	144.2	142.5	147.9
Slips, nylon.....		114.6	113.4	112.3	112.2	111.9	111.9	111.6	109.7	110.5	110.1	110.3	109.4	109.4	110.8
Panties, acetate.....		112.7	112.0	111.2	111.4	110.5	109.9	109.1	108.6	108.4	108.8	108.5	107.9	108.1	109.2
Girdles, manmade blend.....		120.9	120.5	120.8	120.5	120.2	119.5	119.4	119.0	118.7	119.0	119.1	118.2	118.2	119.1
Brassieres, cotton.....	Dec. 63	125.6	124.4	124.9	123.8	123.1	122.9	122.5	122.2	122.0	120.8	120.7	119.4	119.1	121.7
Hose, nylon, seamless.....		98.3	98.5	99.8	99.8	99.4	99.2	98.8	99.6	99.0	99.1	98.7	99.1	98.0	99.1
Anklets, cotton.....	Dec. 63	122.5	121.0	121.5	118.5	118.5	118.4	118.2	118.1	117.6	116.6	115.2	114.7	114.6	117.2
Gloves, fabric, nylon or cotton.....	Dec. 63	111.0	110.7	110.5	109.8	109.2	109.0	109.3	108.9	108.9	108.6	108.4	107.8	106.7	108.6
Handbags, rayon faille or plastic.....	Dec. 63	118.5	116.4	117.3	117.2	115.5	114.8	114.1	113.8	113.7	113.0	112.1	111.4	110.8	113.6
Girls':															
Raincoats, vinyl plastic or chiefly cotton.....	Dec. 63	118.9	118.1	125.6	124.4	121.7	120.8	(1)	(1)	(1)	(1)	(1)	118.3	118.9	120.9
Skirts, wool or wool blend.....		(1)	117.4	123.2	123.4	124.0	(2)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	121.4

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970			1969										Annual average 1969
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	
APPAREL AND UPKEEP—Continued															
Women's and girls'—Continued															
Girls' Continued															
Dresses, cotton		132.3	129.8	133.6	136.3	137.4	136.9	135.4	134.2	133.9	134.1	134.1	133.5	132.5	134.4
Slacks, cotton	Dec. 63	125.4	128.4	131.8	131.7	127.9	(1)	(1)	(1)	(1)	(1)	(1)	(2)	117.7	125.8
Slips, cotton blend	Dec. 63	107.8	108.0	108.0	108.6	108.5	107.7	108.0	108.1	107.2	107.0	107.0	106.9	106.6	107.5
Handbags	Dec. 63	114.9	113.7	114.2	114.7	111.1	108.9	108.3	108.2	106.5	108.5	108.8	108.0	107.7	109.3
Footwear															
Men's:															
Shoes, street, oxford		145.0	144.4	144.4	143.9	143.3	142.3	141.5	139.9	140.1	139.6	138.4	137.6	136.8	140.3
Shoes, work, high		142.3	141.3	142.6	142.1	141.5	140.1	138.7	137.5	138.6	138.2	136.7	136.0	134.4	138.4
Women's:															
Shoes, street, pump	Dec. 63	151.6	151.8	152.7	152.5	152.0	150.8	149.9	147.3	147.9	148.0	147.2	145.9	144.9	148.6
Shoes, evening, pump	Dec. 63	124.8	124.2	123.2	122.9	122.9	122.3	121.8	121.0	120.0	119.1	118.0	117.9	117.4	120.3
Shoes, casual, pump	Dec. 63	135.7	134.2	134.0	133.4	132.0	129.6	128.9	126.8	128.2	127.1	125.5	123.3	122.5	127.7
Houseslippers, scuff	Dec. 63	127.8	128.0	127.5	127.1	126.6	126.4	125.4	123.9	124.0	123.9	123.4	123.0	122.7	124.7
Children's:															
Shoes, oxford		145.9	144.3	144.3	143.3	142.3	141.4	140.7	140.2	139.8	139.4	138.2	137.6	137.1	140.1
Sneakers, boys', oxford type	Dec. 63	120.0	119.6	119.5	119.3	119.1	118.9	118.1	116.9	116.2	115.8	115.8	115.7	115.7	117.2
Dress shoes, girls', strap	Dec. 63	136.6	136.6	136.4	135.7	134.6	134.1	133.1	130.6	131.9	130.7	129.1	127.6	127.7	131.5
Miscellaneous apparel:															
Diapers, cotton gauze		104.3	104.0	104.0	104.1	103.8	103.9	104.0	103.5	103.2	102.7	102.3	101.7	101.9	103.0
Yard goods, cotton		124.6	123.3	123.5	123.1	123.5	123.2	123.2	122.1	123.2	120.5	119.3	118.1	115.8	120.9
Apparel services:															
Drycleaning, men's suits and women's dresses	Dec. 63	134.6	133.8	133.3	132.9	132.2	132.0	131.7	130.5	130.2	129.8	129.9	129.4	129.1	130.8
Automatic laundry service	Dec. 63	112.3	112.0	112.0	111.8	111.4	111.3	111.0	111.0	110.4	110.3	108.4	108.4	107.9	110.1
Laundry, men's shirts	Dec. 63	128.0	126.8	126.7	124.3	123.8	123.4	123.2	123.0	122.5	122.1	122.2	121.9	121.3	122.9
Tailoring charges, hem adjustment	Dec. 63	127.4	127.0	127.4	127.6	127.5	126.5	125.4	125.2	125.1	123.5	122.7	121.8	121.3	124.5
Shoe repairs, women's heel lift		125.0	124.6	123.7	123.6	122.7	123.1	121.3	121.1	120.4	120.1	120.1	119.6	119.6	121.3
TRANSPORTATION															
Private															
Automobiles, new		123.3	123.3	123.4	122.7	122.8	120.5	121.3	121.4	121.8	121.2	121.9	121.6	119.3	121.3
Automobiles, used		104.6	104.7	104.9	105.1	104.2	99.5	101.0	101.6	101.8	101.8	101.9	102.4	102.3	102.4
Gasoline, regular and premium		117.8	120.7	123.9	124.9	125.8	121.4	125.4	127.0	128.2	126.8	131.2	130.5	122.6	125.3
Motor oil, premium		116.7	116.6	116.9	116.3	118.0	117.7	118.0	117.7	118.6	117.3	117.8	117.2	114.5	117.0
Tires, new, tubeless		141.4	140.7	140.2	140.1	139.6	139.1	138.7	138.1	137.4	136.7	136.0	135.5	134.6	137.5
Auto repairs and maintenance		118.5	118.2	118.2	118.0	117.4	117.0	116.0	116.3	115.5	115.6	115.7	114.8	114.9	116.2
Auto insurance rates		140.2	139.2	137.3	136.6	136.1	135.2	134.5	133.8	133.3	132.9	132.3	132.0	131.1	133.8
Auto registration		176.0	173.4	171.5	164.6	163.7	163.2	160.3	159.0	158.7	158.1	157.2	156.1	155.7	160.2
Public		140.3	140.3	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	134.2	133.5	130.7	133.6
Local transit fares	Dec. 63	165.4	165.1	153.0	151.1	150.3	150.3	149.7	149.5	149.1	148.0	148.0	147.5	145.5	148.9
Taxicab fares	Dec. 63	183.8	183.3	163.2	163.0	161.7	161.7	160.8	160.5	159.9	159.6	159.6	158.6	158.4	160.4
Railroad fares, coach	Dec. 63	131.5	131.5	131.5	127.5	127.5	127.5	127.5	127.5	127.5	124.8	124.8	124.8	124.8	126.7
Airplane fares, chiefly coach	Dec. 63	117.2	117.2	117.2	115.5	115.1	115.1	114.9	114.9	114.9	114.6	114.6	114.6	108.4	114.0
Bus fares, intercity	Dec. 63	117.4	117.4	117.4	111.6	111.6	111.6	112.1	112.1	112.1	110.7	110.7	110.7	103.3	110.6
HEALTH AND RECREATION															
Medical care															
Drugs and prescriptions	Dec. 63	160.1	159.0	158.1	157.4	156.9	157.6	156.8	155.9	155.2	154.5	153.6	152.5	151.3	155.0
Over-the-counter items	Dec. 63	100.0	99.7	99.6	99.6	99.4	99.3	99.3	99.2	99.3	99.3	99.0	98.8	98.6	99.2
Multiple vitamin concentrates	Dec. 63	107.2	107.2	107.1	107.1	106.9	106.9	107.0	106.9	107.1	107.0	105.8	106.6	106.4	106.9
Aspirin compounds	Dec. 63	90.8	92.3	92.8	92.4	92.5	92.4	92.4	92.1	92.2	92.4	92.2	92.2	92.2	92.4
Liquid tonics	Dec. 63	107.4	106.2	106.6	106.2	106.1	105.5	106.8	106.4	106.6	106.2	105.3	106.5	105.6	106.2
Adhesive bandages, package	Dec. 63	101.2	101.3	101.3	101.3	100.8	100.9	100.9	100.8	100.9	100.9	100.9	100.9	101.0	101.0
Cold tablets or capsules	Dec. 63	118.2	117.8	117.7	117.1	117.4	117.0	116.5	116.5	117.0	116.9	116.6	116.4	116.5	116.9
Cough syrup	Dec. 63	111.5	111.0	110.5	110.0	109.6	109.1	109.2	109.1	109.5	109.3	109.3	108.8	108.1	109.2
Prescriptions	Mar. 60	113.0	113.4	112.9	114.7	113.7	115.1	114.8	114.8	115.2	115.1	114.5	113.5	113.8	114.5
Anti-infectives	Mar. 60	89.7	89.3	89.1	89.0	89.0	88.8	88.7	88.6	88.6	88.6	88.3	88.2	88.0	88.6
Sedatives and hypnotics	Mar. 60	63.0	62.8	62.8	62.8	63.0	62.9	62.9	62.8	63.1	63.1	62.5	62.5	62.4	62.8
Ataractics	Mar. 60	112.0	110.6	110.4	109.6	108.9	107.8	107.6	107.1	106.9	106.4	105.1	105.9	105.0	107.2
Anti-spasmodics	Mar. 60	90.0	90.0	89.8	89.8	89.8	89.8	89.7	89.9	90.0	90.0	89.9	89.7	89.8	89.8
Cough preparations	Mar. 60	101.6	101.5	101.3	101.3	101.3	101.2	101.0	101.0	101.2	101.1	100.9	101.1	101.1	101.1
Cardiovasculars and antihypertensives	Mar. 60	115.2	112.7	112.0	111.7	111.4	111.1	110.8	110.2	109.7	109.3	108.5	106.7	106.4	109.4
Analgesics, internal	Mar. 67	98.8	98.3	98.0	98.0	97.9	97.7	97.6	97.1	97.0	96.9	96.9	96.5	95.9	97.1
Anti-obesity	Mar. 67	105.0	104.3	103.3	103.2	103.1	103.1	103.1	102.9	102.8	103.0	103.0	102.4	102.1	102.8
Hormones	Mar. 67	105.5	104.8	104.3	104.3	104.2	103.6	103.3	102.9	102.6	102.6	102.4	102.8	102.1	103.1
Professional services:		93.6	93.6	94.2	93.9	94.3	93.9	93.9	93.8	93.9	94.9	94.7	94.3	94.7	94.3
Physicians' fees		161.6	160.7	160.0	159.0	158.3	158.0	156.8	156.0	155.5	154.3	153.3	152.6	151.1	155.4
Family doctor, office visits		164.0	163.1	162.4	161.0	160.6	160.3	158.7	158.3	157.6	155.8	154.9	154.1	152.0	157.2
Family doctor, house visits		169.0	167.9	167.6	166.2	165.9	165.6	163.9	163.8	163.4	162.9	162.4	161.5	158.8	163.3
Obstetrical cases		157.6	155.9	155.0	154.9	153.9	153.2	152.8	150.1	149.4	148.6	147.4	146.5	145.9	150.2
Pediatric care, office visits	Dec. 63	147.7	146.5	145.9	145.5	144.2	144.1	142.8	140.9	140.3	140.2	139.9	139.6	139.0	141.4
Psychiatrist, office visits	Dec. 63	133.7	133.0	132.6	132.6	131.7	131.7	130.9	129.3	129.6	129.2	126.6	125.5	125.2	129.1

See footnotes at end of table.

24. Consumer Price Index—general summary and U.S. average for groups, subgroups, and selected items—Continued

Index or group	Other index bases	1970		1969										Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
HEALTH AND RECREATION—Continued															
Medical care—Continued															
Professional services—Continued															
Physicians' fees—Continued															
Herniorrhaphy, adult.....	Dec. 63	126.7	126.3	125.4	125.2	124.6	124.6	124.3	124.3	124.1	123.9	123.2	123.1	122.8	123.9
Tonsillectomy and adenoidectomy..		152.6	152.3	151.6	151.3	149.3	149.1	149.0	148.1	147.8	147.3	146.5	146.4	146.3	148.2
Dentists' fees.....		148.4	148.0	147.6	147.2	146.9	146.0	145.5	144.9	144.2	143.6	142.9	140.1	139.4	143.9
Fillings, adult, amalgam, one surface.....		150.3	149.8	148.7	148.3	148.3	147.1	146.4	145.7	145.1	144.6	144.0	141.1	140.2	144.9
Extractions, adult.....		145.9	146.0	147.0	146.7	145.9	145.3	144.7	144.5	143.4	142.6	141.8	138.9	138.4	143.1
Dentures, full upper.....	Dec. 63	131.3	130.6	130.2	129.7	129.5	128.9	128.8	128.3	127.7	127.3	126.5	124.3	124.1	127.4
Other professional services:															
Examination, prescription, and dispensing of eyeglasses.....		135.7	134.6	133.9	133.8	132.8	132.4	132.2	131.7	131.2	130.8	129.5	128.9	128.5	131.1
Routine laboratory tests.....	Dec. 63	119.8	119.6	119.5	119.4	118.5	118.5	118.6	118.0	117.9	117.6	115.6	115.4	115.1	117.4
Hospital service charges:															
Daily service charges.....		275.6	271.6	267.9	265.4	263.8	261.9	259.9	256.7	253.8	252.4	251.4	249.2	246.2	256.0
Semiprivate rooms.....		271.9	268.0	264.1	261.7	260.1	258.4	25.3	253.0	250.0	248.4	247.4	245.1	242.2	251.1
Private rooms.....		265.9	261.8	258.7	256.1	254.7	252.6	250.8	247.9	245.5	244.4	243.5	241.6	238.4	247.5
Operating room charges.....	Dec. 63	175.4	172.8	170.9	170.6	170.9	168.7	167.6	166.4	165.6	164.8	163.0	160.4	158.1	165.2
X-ray, diagnostic series, upper G.I.....	Dec. 63	125.4	124.7	124.7	124.5	124.8	124.6	123.2	122.7	122.3	122.1	121.8	121.4	120.3	122.7
Personal care.....															
Toilet goods.....		129.0	128.5	128.1	127.8	127.3	127.3	126.8	126.6	126.2	125.8	125.5	124.8	124.1	126.2
Toothpaste, standard dentifrice.....		112.4	112.0	111.6	111.8	111.6	111.7	111.4	111.2	110.9	110.4	110.4	109.8	109.2	110.7
Toilet soap, hard milled.....		114.3	114.1	114.6	114.7	114.4	113.8	113.4	112.9	113.6	113.2	114.1	113.9	113.3	113.7
Toilet soap, hard milled.....		124.3	123.0	123.4	124.8	125.1	126.3	123.3	125.1	123.6	123.9	124.2	123.9	123.5	124.1
Hand lotions, liquid.....	Dec. 63	110.0	109.2	109.1	109.7	110.7	111.1	111.2	110.4	109.0	107.7	107.0	106.4	105.4	108.6
Shaving cream, aerosol.....		102.1	102.1	101.9	101.6	102.0	102.1	102.1	101.4	102.3	102.3	101.9	101.9	102.4	102.0
Face powder, pressed.....		129.1	128.1	127.6	127.5	127.2	126.8	126.6	126.1	125.0	124.0	124.4	123.1	121.4	125.0
Deodorants, cream or roll-on.....	Dec. 63	96.1	95.0	94.5	95.0	95.1	95.3	95.5	95.0	94.9	95.4	95.1	94.9	93.9	94.9
Cleansing tissues.....		114.4	113.8	112.5	111.8	109.2	108.4	109.3	109.3	108.7	107.9	108.0	107.1	106.8	108.8
Home permanent refills.....		98.6	98.6	98.7	98.6	98.5	99.2	99.1	98.8	99.3	98.4	97.5	96.6	96.0	98.0
Personal care services.....															
Men's haircuts.....		149.5	148.9	148.5	147.5	146.7	146.5	145.8	145.5	144.9	144.7	144.2	143.2	142.5	145.2
Beauty shop services.....		158.7	158.0	157.8	156.4	155.2	154.8	154.5	154.7	153.8	153.1	152.3	151.7	150.5	153.7
Women's haircuts.....	Dec. 63	140.0	139.2	138.8	138.0	137.7	137.5	136.6	136.0	135.6	135.7	135.4	134.2	133.9	136.1
Shampoo and wave sets, plain.....		125.4	125.3	125.2	124.0	123.4	123.2	121.9	121.2	120.9	121.7	121.4	120.7	120.5	122.0
Permanent waves, cold.....		157.5	156.8	156.3	155.3	154.9	154.6	153.6	152.8	152.3	152.1	151.7	150.1	149.7	152.7
Permanent waves, cold.....		108.9	107.5	107.2	107.2	107.1	107.0	106.9	106.7	106.5	106.5	106.1	105.4	105.3	106.4
Reading and recreation.....															
Recreational goods.....	Dec. 63	133.2	133.1	132.7	132.3	132.0	131.6	131.2	130.7	130.4	130.2	129.6	128.7	128.4	130.5
TV sets, portable and console.....		99.2	99.1	99.1	99.2	99.1	99.0	98.8	98.7	98.6	98.6	98.4	97.9	97.7	98.6
TV replacement tubes.....	Dec. 63	79.9	80.0	80.2	80.3	80.2	80.0	79.7	79.8	80.0	80.1	80.1	79.8	80.1	80.1
Radios, portable and table model.....		117.3	116.6	116.3	116.3	115.9	115.7	115.4	115.6	115.8	115.6	115.3	114.8	114.7	115.5
Tape recorders, portable.....		76.1	76.4	76.5	76.5	76.6	76.9	76.5	76.5	76.6	76.6	76.5	76.3	76.3	76.5
Phonograph records, stereo-phonics.....	Dec. 63	90.2	90.0	90.1	91.2	91.4	91.5	91.4	91.5	91.9	91.7	91.7	91.2	91.1	91.3
Movie cameras, Super 8, zoom lens.....	Dec. 63	97.9	98.0	98.0	98.0	98.1	97.6	97.7	97.9	97.5	97.5	96.6	96.4	95.9	97.2
Film, 35mm, color.....	Dec. 63	81.6	82.1	82.3	83.4	83.1	83.5	83.4	83.5	84.1	85.0	84.9	84.8	84.5	84.0
Bicycle, boys'.....	Dec. 63	99.7	99.1	99.1	99.1	99.4	99.6	99.2	99.1	99.0	99.0	98.9	98.9	98.6	99.0
Tricycles.....	Dec. 63	111.2	110.7	110.4	110.0	109.7	109.9	109.5	109.7	109.1	109.0	108.6	107.8	107.3	109.0
Recreational services.....	Dec. 63	112.0	112.0	111.6	111.4	111.9	111.6	111.2	109.4	109.2	108.5	107.9	107.5	107.2	109.6
Indoor movie admissions.....		133.7	133.9	133.2	132.6	132.1	131.7	131.1	130.1	129.7	129.2	128.7	127.1	126.7	129.9
Adult.....		210.5	211.7	210.3	208.3	207.0	206.5	204.2	200.2	198.3	197.4	196.3	193.2	192.6	200.6
Children's.....		206.1	207.3	205.4	203.2	201.9	201.6	198.8	194.4	192.9	192.0	191.5	188.6	188.2	195.5
Drive-in movie admissions, adult.....	Dec. 63	225.4	226.9	227.1	225.4	224.5	223.2	222.1	219.6	216.7	215.6	212.5	208.6	207.4	217.6
Bowling fees, evening.....	Dec. 63	167.0	165.6	165.5	165.0	164.5	164.1	163.5	161.9	160.1	157.0	156.0	153.1	153.6	159.9
Golf greens fees.....	Dec. 63	115.0	115.3	113.7	113.6	112.1	110.9	110.3	110.4	110.6	110.6	110.8	110.4	110.1	111.1
TV repairs, picture tube replacement.....		(2)	(2)	(2)	(2)	135.5	135.9	135.8	134.7	134.6	133.8	130.9	132.7	125.0	131.8
Film developing, black and white.....	Dec. 63	99.5	100.2	100.2	100.0	101.4	101.0	101.0	101.0	102.2	102.3	103.3	102.7	102.6	101.7
Reading and education:		117.7	117.4	117.7	117.9	117.9	118.3	118.4	118.9	119.2	120.0	120.5	120.2	120.0	119.1
Newspapers, street sale and delivery.....	Dec. 63	159.8	160.2	158.2	156.7	156.4	155.9	155.8	155.2	154.3	153.7	153.2	152.7	152.3	154.7
Piano lessons, beginner.....		127.7	127.6	127.3	126.7	126.5	126.1	123.8	122.8	122.3	122.2	122.2	121.7	121.6	123.7
Other goods and services.....															
Tobacco products.....		134.3	133.9	133.5	133.1	132.2	131.3	130.1	129.1	127.9	126.9	126.6	126.1	125.8	129.0
Cigarettes, nonfilter tip, regular size.....		154.9	154.1	153.8	153.1	151.5	150.6	148.7	146.7	144.0	142.3	142.1	141.8	141.7	146.5
Cigarettes, filter tip, king size.....	Mar. 59	162.7	161.8	161.4	160.7	158.9	158.0	155.8	153.7	150.8	149.3	149.1	148.7	148.6	153.6
Cigars, domestic, regular size.....		154.8	154.0	153.5	152.6	151.0	150.0	148.1	146.2	143.4	141.0	140.9	140.7	140.5	145.7
Alcoholic beverages.....		108.7	109.0	110.0	109.9	109.4	109.6	108.7	107.1	106.5	106.1	106.0	105.9	105.9	107.6
Beer.....		121.4	121.0	120.6	120.4	120.0	119.1	118.2	117.7	117.4	116.8	116.5	115.9	115.6	117.8
Whiskey, spirit blended and straight bourbon.....		116.9	116.5	116.5	116.6	116.3	116.4	115.3	114.8	114.5	114.2	113.9	113.5	113.0	114.8
Wine, dessert and table.....	Dec. 63	111.3	111.2	111.5	111.4	111.3	110.4	110.1	109.8	109.4	109.2	109.2	108.9	108.9	109.9
Beer, away from home.....	Dec. 63	116.8	116.5	115.2	114.5	113.6	112.0	110.6	110.2	109.5	108.8	108.6	108.0	107.8	110.5
Financial and miscellaneous personal expenses:		127.6	127.1	125.9	125.6	125.0	123.0	122.3	121.8	121.5	120.5	119.9	118.9	118.8	121.8
Funeral services, adult.....	Dec. 63	118.1	117.7	117.4	117.3	116.9	116.5	115.9	115.5	115.2	114.6	114.0	113.6	113.1	115.2
Bank service charges, checking accounts.....	Dec. 63	110.0	110.2	110.3	109.9	109.1	108.3	103.4	108.2	108.2	107.9	107.8	107.5	107.4	108.3
Legal services, short form will.....	Dec. 63	142.7	142.3	141.2	139.5	139.5	138.8	137.8	135.0	134.5	132.9	130.8	129.5	128.2	134.7

¹ Priced only in season.
² Not available.

NOTE: Monthly data for individual nonfood items not available for 1968.

25. Consumer Price Index¹—U.S. city average, and selected areas

[1957-59=100 unless otherwise specified]

Area ²	1970		1969										Annual avg.	
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	1969
All Items														
U.S. city average³	132.5	131.8	131.3	130.5	129.8	129.3	128.7	128.2	127.6	126.8	126.4	125.6	124.6	127.7
Atlanta, Ga.	(4)	(4)	129.9	(4)	(4)	128.6	(4)	(4)	126.1	(4)	(4)	124.9	(4)	126.7
Baltimore, Md.	(4)	(4)	131.9	(4)	(4)	130.4	(4)	(4)	127.9	(4)	(4)	125.7	(4)	128.3
Boston, Mass.	(4)	136.1	(4)	(4)	134.7	(4)	(4)	132.1	(4)	(4)	129.8	(4)	(4)	131.8
Buffalo, N.Y. (Nov. 1963=100)	125.3	(4)	(4)	123.2	(4)	(4)	121.2	(4)	(4)	120.2	(4)	(4)	(4)	120.5
Chicago, Ill.—Northwestern Ind.	129.3	129.1	128.3	127.7	126.9	127.2	126.1	125.3	124.6	123.6	123.2	122.9	121.9	124.9
Cincinnati, Ohio—Kentucky	(4)	(4)	127.7	(4)	(4)	125.5	(4)	(4)	124.6	(4)	(4)	122.7	(4)	124.6
Cleveland, Ohio	132.3	(4)	(4)	129.5	(4)	(4)	127.3	(4)	(4)	125.3	(4)	(4)	(4)	123.1
Dallas, Tex. (Nov. 1963=100)	125.6	(4)	(4)	123.7	(4)	(4)	121.2	(4)	(4)	119.4	(4)	(4)	(4)	116.8
Detroit, Mich.	132.2	131.1	130.8	129.8	129.2	128.6	128.5	127.6	127.3	126.4	125.7	125.1	123.4	127.1
Honolulu, Hawaii (Dec. 1963=100)	(4)	(4)	119.7	(4)	(4)	118.1	(4)	(4)	116.6	(4)	(4)	115.6	(4)	117.0
Houston, Tex.	(4)	130.9	(4)	(4)	129.8	(4)	(4)	127.0	(4)	(4)	125.5	(4)	(4)	127.0
Kansas City, Mo.—Kansas	(4)	(4)	133.2	(4)	(4)	131.4	(4)	(4)	130.4	(4)	(4)	128.1	(4)	130.1
Los Angeles—Long Beach, Calif.	131.6	131.2	131.1	130.0	130.1	129.6	128.9	128.6	127.9	126.9	126.9	126.6	125.2	128.0
Milwaukee, Wis.	128.5	(4)	(4)	127.0	(4)	(4)	123.9	(4)	(4)	122.8	(4)	(4)	(4)	120.8
Minneapolis—St. Paul, Minn.	(4)	132.8	(4)	(4)	130.3	(4)	(4)	128.0	(4)	(4)	125.1	(4)	(4)	127.4
New York, N.Y.—Northeastern N.J.	138.1	137.0	136.0	134.6	134.1	133.5	132.5	132.1	131.6	130.8	130.5	129.6	128.3	131.8
Philadelphia, Pa.—N.J.	134.1	132.9	132.2	131.7	131.2	131.0	130.2	129.2	128.2	127.5	127.6	127.0	126.0	128.9
Pittsburgh, Pa.	(4)	(4)	(4)	(4)	128.5	(4)	(4)	127.7	(4)	(4)	126.0	(4)	(4)	127.0
Portland, Oreg.—Wash. ⁴	(4)	130.7	(4)	(4)	130.1	(4)	(4)	128.4	(4)	(4)	127.9	(4)	(4)	128.4
St. Louis, Mo.—Ill.	(4)	(4)	130.7	(4)	(4)	129.2	(4)	(4)	127.0	(4)	(4)	125.4	(4)	127.5
San Diego, Calif. (Feb. 1965=100)	118.6	(4)	(4)	117.0	(4)	(4)	116.0	(4)	(4)	114.4	(4)	(4)	(4)	115.1
San Francisco—Oakland, Calif.	(4)	(4)	134.5	(4)	(4)	132.8	(4)	(4)	130.8	(4)	(4)	128.9	(4)	131.1
Scranton, Pa. ⁵	134.4	(4)	(4)	127.3	(4)	(4)	130.5	(4)	(4)	128.1	(4)	(4)	(4)	129.2
Seattle, Wash.	132.2	(4)	(4)	130.0	(4)	(4)	129.5	(4)	(4)	127.6	(4)	(4)	(4)	128.3
Washington, D.C.—Md.—Va.	134.6	(4)	(4)	132.0	(4)	(4)	130.8	(4)	(4)	128.8	(4)	(4)	(4)	129.5
Food														
U.S. city average³	131.5	130.7	129.9	128.1	127.2	127.5	127.4	126.7	125.5	123.7	123.2	122.4	121.9	125.5
Atlanta, Ga.	130.7	129.0	128.4	126.9	126.5	126.7	126.3	124.4	122.8	121.2	121.8	120.7	120.0	123.8
Baltimore, Md.	135.4	134.9	134.1	132.3	131.5	131.8	130.8	130.1	127.9	126.2	126.3	125.3	124.1	128.8
Boston, Mass.	135.0	134.3	133.1	131.6	131.2	131.4	131.8	130.2	129.5	127.8	127.5	126.3	126.0	129.3
Buffalo, N.Y. (Nov. 1963=100)	127.0	125.4	125.1	122.8	121.9	121.8	122.5	122.4	121.2	118.9	118.2	117.4	117.2	120.6
Chicago, Ill.—Northwestern Ind.	133.2	132.8	131.3	129.4	128.3	130.2	130.5	129.0	127.5	125.3	124.4	123.9	123.0	127.2
Cincinnati, Ohio—Kentucky	127.8	127.2	126.6	125.1	124.1	123.6	123.2	123.3	121.9	120.7	120.2	119.1	118.8	122.1
Cleveland, Ohio	128.4	129.0	128.5	125.7	125.0	125.1	125.2	123.3	123.2	122.3	120.1	119.6	120.0	123.2
Dallas, Tex. (Nov. 1963=100)	125.9	125.0	124.2	122.8	121.7	122.0	121.9	120.6	120.1	118.2	116.9	116.5	116.2	119.8
Detroit, Mich.	130.2	129.8	129.3	126.8	126.1	126.5	127.3	126.5	124.5	122.7	121.9	120.8	119.9	124.3
Honolulu, Hawaii (Dec. 1963=100)	122.9	123.0	120.8	119.5	119.7	119.1	118.0	116.9	116.3	116.1	115.8	115.7	115.7	117.4
Houston, Tex.	133.3	132.3	131.2	129.2	128.7	129.2	129.0	127.7	126.8	125.2	124.3	124.3	123.8	126.9
Kansas City, Mo.—Kansas	135.8	135.1	134.4	132.9	131.2	131.9	131.3	130.7	129.8	127.5	126.6	125.6	125.5	129.4
Los Angeles—Long Beach, Calif.	127.2	126.2	125.8	124.7	124.0	124.0	123.9	124.0	123.0	121.6	121.2	120.3	119.6	122.6
Milwaukee, Wis.	130.1	129.5	128.4	127.8	127.6	127.9	127.6	126.5	125.1	123.3	122.9	122.0	121.4	125.2
Minneapolis—St. Paul, Minn.	130.6	129.5	128.2	127.2	126.5	125.9	126.4	125.4	122.8	121.3	120.7	120.2	119.3	123.7
New York, N.Y.—Northeastern N.J.	134.7	133.8	132.9	130.6	129.6	129.1	128.7	128.1	126.6	124.9	124.7	123.6	123.1	127.1
Philadelphia, Pa.—N.J.	132.0	130.7	129.7	128.0	127.0	127.2	127.2	126.0	124.5	123.1	124.3	123.2	122.9	125.5
Pittsburgh, Pa.	128.0	127.5	127.1	125.7	123.3	123.2	123.9	124.2	123.2	120.9	119.6	119.2	118.7	122.4
Portland, Oreg.—Wash. ⁴	(4)	126.7	(4)	(4)	124.4	(4)	(4)	125.2	(4)	(4)	122.7	(4)	(4)	124.0
St. Louis, Mo.—Ill.	137.4	136.6	135.5	133.5	132.4	132.6	131.2	129.8	128.6	126.9	126.4	125.8	125.2	129.5
San Diego, Calif. (Feb. 1965=100)	121.3	120.6	120.0	119.1	117.8	118.3	118.6	118.7	118.1	116.4	115.3	114.5	113.8	117.0
San Francisco—Oakland, Calif.	128.7	128.2	127.2	126.2	125.6	124.9	124.9	125.9	124.3	122.7	122.3	121.4	120.2	123.8
Scranton, Pa.	131.3	(4)	(4)	131.9	(4)	(4)	127.5	(4)	(4)	123.4	(4)	(4)	(4)	125.0
Seattle, Wash.	129.2	127.8	127.6	126.2	125.2	125.9	126.2	125.8	125.0	123.6	123.2	122.3	121.5	124.5
Washington, D.C.—Md.—Va.	136.2	134.8	133.5	131.2	130.5	131.6	132.5	131.3	129.1	128.3	127.6	126.3	126.0	129.5

¹ See table 23. 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 1965).

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.

26. Wholesale price indexes,¹ by group and subgroup of commodities[1957-59=100 unless otherwise specified]²

Code	Commodity Group	1970		1969										Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
	ALL COMMODITIES	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	112.8	111.9	111.7	111.1	113.0
	FARM PRODUCTS AND PROCESSED FOODS AND FEEDS	118.7	118.2	116.4	115.7	114.3	114.3	114.6	115.5	115.5	114.1	110.9	110.7	110.0	113.5
	INDUSTRIAL COMMODITIES	115.5	115.1	114.6	114.2	113.8	113.2	112.8	112.4	112.2	112.2	112.1	112.0	111.4	112.7
	FARM PRODUCTS, AND PROCESSED FOODS AND FEEDS														
01	Farm products.....	113.7	112.5	111.7	111.1	107.9	108.4	108.9	110.5	111.2	110.5	105.6	106.5	105.0	108.5
01-1	Fresh and dried fruits and vegetables.....	117.2	116.6	112.4	125.3	101.3	103.4	106.7	103.1	112.9	126.7	106.8	112.1	108.7	111.0
01-2	Grains.....	85.9	85.9	82.9	81.7	84.8	83.4	81.9	83.7	85.6	86.7	83.1	81.6	82.0	83.3
01-3	Livestock.....	124.9	117.3	120.2	116.6	118.7	119.2	123.6	126.8	130.4	123.0	113.8	112.5	109.2	118.3
01-4	Live poultry.....	87.1	94.8	86.9	86.3	85.3	89.0	92.3	90.2	89.8	90.7	87.0	95.5	94.3	89.8
01-5	Plant and animal fibers.....	65.4	65.3	65.7	66.0	66.1	66.4	66.9	67.7	67.7	67.7	67.3	67.3	67.7	67.1
01-6	Fluid milk.....	140.8	140.5	138.3	137.6	136.8	135.6	135.1	134.9	134.6	134.1	133.5	132.8	132.6	134.8
01-7	Eggs.....	136.9	152.2	155.8	139.8	113.8	122.5	100.5	117.0	85.9	80.6	97.3	110.9	108.1	112.9
01-8	Hay, hayspeeds, and oilseeds.....	106.3	107.7	105.1	103.4	101.2	105.7	107.3	111.3	110.6	115.1	113.8	112.5	112.4	109.2
01-9	Other farm products.....	115.2	116.3	113.1	115.9	116.7	110.6	109.5	106.9	106.2	105.6	106.1	106.8	106.4	109.1
02	Processed foods and feeds.....	125.2	125.1	122.6	121.8	121.6	121.3	121.5	122.0	121.4	119.4	117.3	116.4	116.3	119.8
02-1	Cereal and bakery products.....	123.3	122.3	122.0	121.9	121.2	120.4	120.1	119.9	119.7	119.4	119.3	119.3	119.3	120.2
02-2	Meats, poultry, and fish.....	124.9	125.8	121.9	120.5	120.2	122.9	124.5	127.5	126.5	121.0	114.0	112.2	111.4	119.5
02-3	Dairy products.....	134.1	133.9	133.9	131.2	130.7	133.4	133.0	133.0	133.0	132.5	131.4	130.4	130.2	131.9
02-4	Processed fruits and vegetables.....	117.3	116.9	116.4	116.3	116.0	116.6	116.8	116.6	115.6	115.7	115.4	115.1	114.5	115.7
02-5	Sugar and confectionery.....	127.7	129.1	127.1	127.9	127.7	127.2	127.2	122.3	123.0	122.7	120.2	119.5	119.2	123.6
02-6	Beverages and beverage materials.....	118.3	117.4	116.1	116.0	115.0	113.1	112.6	112.6	112.4	111.8	111.4	111.3	111.1	112.9
02-7	Animal fats and oils.....	115.7	111.0	115.6	123.0	118.3	104.0	105.0	96.4	91.2	89.0	90.8	96.1	90.3	100.3
02-72	Crude vegetable oils.....	99.5	86.4	86.1	97.0	88.4	79.8	80.0	80.0	81.9	81.0	80.6	83.0	83.4	83.5
02-73	Refined vegetable oils.....	99.8	97.8	97.9	91.1	88.9	85.0	84.7	89.4	89.4	89.4	89.4	91.6	95.0	90.3
02-74	Vegetable oil end products.....	107.5	107.5	108.0	106.5	104.7	102.1	102.1	102.1	103.3	103.3	103.3	103.1	102.9	103.5
02-8	Miscellaneous processed foods.....	127.4	126.5	126.4	127.2	131.6	121.2	119.8	119.5	118.6	118.6	119.0	119.3	119.1	121.5
02-9	Manufactured animal feeds.....	131.3	131.7	121.8	119.5	119.9	119.3	118.2	118.7	116.9	114.9	118.3	115.7	117.5	118.2
	INDUSTRIAL COMMODITIES														
03	Textile products and apparel.....	109.4	109.5	109.2	109.2	109.1	109.0	108.7	107.7	107.2	106.9	107.1	107.1	107.2	108.0
03-1	Cotton products.....	106.1	106.1	106.1	106.0	105.8	105.9	105.7	105.3	104.5	104.6	104.5	104.6	104.8	105.2
03-2	Wool products.....	104.3	104.3	104.3	104.6	104.5	105.0	104.8	105.0	105.0	104.3	104.3	104.2	104.4	104.6
03-3	Manmade fiber textile products.....	91.0	91.5	91.1	91.5	91.6	92.1	92.7	92.6	92.7	92.6	92.4	92.1	92.3	92.2
03-4	Silk yarns.....	196.3	193.5	191.1	184.6	183.9	181.2	177.1	168.2	164.6	157.9	155.4	155.0	156.4	169.7
03-5	Apparel.....	117.5	117.2	116.9	116.7	116.5	116.2	115.8	113.9	113.3	112.9	113.0	112.8	112.7	114.5
03-6	Textile housefurnishings.....	109.0	109.1	108.1	108.0	108.0	107.3	104.7	104.2	104.2	103.2	107.7	107.7	107.6	106.7
03-7	Miscellaneous textile products.....	124.3	129.0	127.8	129.6	127.2	121.4	119.6	120.3	118.0	114.7	119.7	121.9	127.1	122.8
04	Hides, skins, leather, and related products.....	126.7	126.6	126.5	126.8	127.4	128.2	126.4	126.4	125.7	126.1	126.0	123.4	123.4	125.8
04-1	Hides and skins.....	101.1	102.8	108.9	110.4	118.0	128.7	123.1	123.0	117.4	122.6	125.8	109.1	106.3	116.9
04-2	Leather.....	117.3	119.6	119.7	119.6	120.3	121.7	121.0	121.2	121.5	121.7	122.3	116.4	116.5	119.9
04-3	Footwear.....	136.9	135.9	135.0	135.5	132.5	134.9	132.7	132.7	132.3	132.1	131.9	131.5	132.2	133.2
04-4	Other leather and related products.....	119.8	119.2	118.5	118.6	118.4	117.9	117.6	117.5	117.2	117.0	116.0	115.3	114.8	116.9
05	Fuels and related products and power.....	106.4	105.6	106.1	105.5	105.4	104.7	104.7	105.0	105.0	104.5	104.5	104.2	102.7	104.6
05-1	Coal.....	131.7	125.4	124.6	123.5	120.6	115.9	115.5	115.4	114.2	113.5	112.8	112.7	112.7	116.2
05-2	Coke.....	126.9	126.9	126.9	126.9	126.9	120.3	120.3	120.3	120.3	120.3	120.3	120.3	120.3	122.0
05-3	Gas fuels (Jan. 1958=100).....	135.2	132.4	131.8	128.8	128.7	123.0	121.8	121.6	121.8	121.6	121.8	124.6	124.0	124.5
05-4	Electric power (Jan. 1958=100).....	103.6	103.4	103.4	103.4	103.7	103.5	102.4	102.5	102.6	102.5	102.3	102.3	102.2	102.7
05-61	Crude petroleum.....	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.7	104.7	104.7	99.9	103.7
05-7	Petroleum products, refined.....	101.2	101.0	102.2	101.6	101.6	101.8	102.5	103.2	103.3	102.4	102.5	101.7	99.5	101.8
06	Chemicals and allied products.....	99.5	99.1	98.8	98.9	98.6	98.9	98.7	98.2	98.3	98.1	97.9	98.0	97.8	98.3
06-1	Industrial chemicals.....	97.7	97.9	97.8	97.8	97.6	98.2	98.2	97.7	97.0	96.9	96.7	97.9	98.1	97.7
06-21	Prepared paint.....	122.0	121.7	120.3	120.3	120.3	119.2	119.2	119.2	119.2	118.7	118.7	118.2	119.2	119.2
06-22	Paint materials.....	92.8	93.4	93.4	93.1	93.9	93.3	93.3	93.2	92.8	92.8	92.2	91.9	92.0	92.8
06-3	Drugs and pharmaceuticals.....	94.6	94.5	94.6	94.2	94.0	94.0	93.8	93.8	93.8	93.7	93.6	93.4	93.8	93.8
06-4	Fats and oils, inedible.....	94.3	95.0	92.8	100.5	98.9	102.1	99.3	90.5	86.8	83.3	83.7	80.4	73.6	88.7
06-5	Agricultural chemicals and chem. products.....	91.4	87.6	86.7	86.7	86.3	87.4	88.4	88.6	92.1	92.1	92.1	92.3	92.2	89.8
06-6	Plastic resins and materials.....	80.3	80.0	80.1	79.6	80.2	81.0	80.7	80.2	80.8	80.8	80.9	81.3	81.5	80.7
06-7	Other chemicals and allied products.....	115.7	115.5	115.1	114.9	114.3	113.9	112.9	112.8	112.8	112.7	112.2	111.2	111.1	112.9
07	Rubber and plastic product ³	104.6	104.7	104.5	104.4	103.5	102.7	103.0	102.5	101.2	101.1	101.2	100.9	100.5	102.1
07-11	Crude rubber.....	89.4	89.3	88.1	88.7	89.7	90.6	92.5	90.7	89.7	89.5	90.1	88.9	87.5	89.4
07-12	Tires and tubes.....	101.7	101.7	101.7	101.7	100.6	99.2	99.2	98.4	96.3	96.3	96.3	96.3	96.3	98.2
07-13	Miscellaneous rubber products.....	114.3	114.0	113.4	113.0	111.7	110.7	110.8	111.0	110.2	110.2	110.1	109.7	109.5	110.8
07-21	Plastic construction products (Dec. 1969=100).....	99.1	99.8	100.0											
08	Lumber and wood products.....	120.2	121.6	122.5	123.9	122.6	123.2	124.0	125.3	129.8	138.0	143.3	149.5	144.5	132.0
08-1	Lumber.....	124.1	126.9	128.2	129.3	128.0	129.5	131.1	133.4	142.3	155.9	164.9	164.7	155.8	142.6
08-2	Millwork.....	130.7	131.5	131.7	133.2	133.9	134.4	135.1	135.6	136.0	134.3	132.3	128.8	126.7	132.2
08-3	Plywood.....	96.3	95.5	96.9	99.6	95.8	94.4	93.6	93.9	94.2	103.5	111.0	146.9	146.5	109.3
08-4	Other wood products (Dec. 1966=100).....	119.5	119.5	118.4	116.7	116.7	116.5	116.8	115.6	115.1	114.7	112.6	112.4	111.2	114.8

See footnotes at end of table.

26. Wholesale price indexes,¹ by group and subgroup of commodities—Continued[1957=100 unless otherwise specified]²

Code	Commodity Group	1970				1969								Annual average 1969	
		Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.		Feb.
INDUSTRIAL COMMODITIES—Continued															
09	Pulp, paper, and allied products.....	111.8	111.1	109.5	109.3	109.0	108.8	108.7	108.4	108.3	108.1	108.0	107.4	106.8	108.2
09-1	Pulp, paper, and products, excluding building paper and board.....	112.5	111.8	110.1	109.9	109.6	109.3	109.2	108.9	108.6	108.3	108.3	107.7	107.1	108.6
09-11	Woodpulp.....	104.7	103.7	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0	98.0
09-12	Wastepaper.....	108.2	107.5	106.7	107.0	107.2	108.4	110.3	111.2	108.8	107.1	109.1	108.1	107.8	108.3
09-13	Paper.....	121.5	120.3	117.4	117.0	118.5	116.5	117.2	117.1	117.0	116.7	116.4	116.1	115.7	116.6
09-14	Paperboard.....	97.1	96.0	96.0	96.0	95.9	95.9	95.8	93.7	93.5	93.5	93.5	93.6	92.6	94.4
09-15	Converted paper and paperboard products.....	112.2	111.9	110.7	110.6	110.3	109.8	109.2	109.0	108.7	108.4	108.3	107.6	106.8	108.8
09-2	Building paper and board.....	93.0	93.4	93.9	94.4	94.6	95.1	95.2	95.9	99.4	100.7	100.4	99.6	98.2	97.1
10	Metals and metal products.....	126.1	124.9	123.8	122.9	122.4	121.7	120.4	118.7	117.9	117.5	116.5	115.8	115.2	118.9
10-1	Iron and steel.....	117.0	114.6	113.9	113.7	113.7	113.2	112.7	111.1	110.3	109.9	108.9	108.8	108.0	111.0
10-13	Steel mill products.....	117.7	115.5	116.4	116.4	116.4	115.5	115.4	113.6	112.8	112.7	111.9	111.7	110.7	113.7
10-2	Nonferrous metals.....	152.8	152.8	150.1	146.4	144.8	143.5	139.5	136.1	135.5	134.2	132.4	129.9	128.9	137.4
10-3	Metal containers.....	125.0	120.6	120.6	120.6	120.6	120.3	119.7	119.7	119.7	119.7	119.7	119.4	119.4	119.7
10-4	Hardware.....	124.7	124.2	123.0	122.7	122.2	121.0	120.6	120.5	119.9	119.9	119.9	119.9	119.1	119.0
10-5	Plumbing fixtures and brass fittings.....	122.8	122.8	122.8	122.2	120.8	120.2	119.4	119.4	117.9	117.1	116.6	116.6	116.1	118.7
10-6	Heating equipment.....	99.9	99.7	99.7	99.3	98.7	98.0	97.7	97.7	97.2	97.0	96.8	96.6	96.3	97.6
10-7	Fabricated structural metal products.....	114.6	114.0	113.7	113.6	113.4	112.8	112.6	112.0	111.0	110.8	110.2	109.6	109.4	111.5
10-8	Miscellaneous metal products.....	125.2	124.9	124.5	124.4	124.4	124.2	123.2	121.3	120.7	120.5	120.2	120.4	120.4	122.0
11	Machinery and equipment.....	122.8	122.5	121.9	121.0	120.5	119.9	119.1	119.0	118.6	118.3	118.0	117.8	117.3	119.0
11-1	Agricultural machinery and equipment.....	137.2	136.7	136.4	135.8	133.2	133.0	132.3	132.3	132.0	131.9	131.8	131.7	131.6	132.8
11-2	Construction machinery and equipment.....	140.3	140.2	139.8	138.6	137.7	136.1	134.9	134.8	134.5	134.3	134.1	134.0	133.6	135.5
11-3	Metalworking machinery and equipment.....	139.3	138.6	138.0	136.5	135.4	134.4	133.5	133.3	132.3	132.1	131.8	131.4	131.1	133.4
11-4	General purpose machinery and equipment.....	126.5	126.1	124.8	123.7	123.4	122.6	121.8	121.5	121.2	120.3	120.0	119.8	119.1	121.4
11-6	Special industry machinery and equipment (Jan. 1961=100).....	133.4	133.3	132.8	130.6	130.2	129.6	129.2	129.2	128.1	128.0	127.2	126.9	126.6	128.7
11-7	Electrical machinery and equipment.....	106.9	106.8	106.2	106.0	105.6	105.4	104.7	104.8	104.7	104.5	104.3	104.2	103.5	104.8
11-9	Miscellaneous machinery.....	121.7	121.5	121.0	120.4	120.0	119.2	118.5	118.1	117.8	117.6	116.6	116.5	116.1	118.1
12	Furniture and household durables.....	107.9	107.5	107.2	106.9	106.5	106.4	106.2	106.1	105.9	105.9	105.8	105.7	105.4	106.1
12-1	Household furniture.....	125.1	124.3	123.6	123.6	123.3	123.0	123.0	122.8	122.3	121.9	121.5	121.3	121.0	122.3
12-2	Commercial furniture.....	124.5	124.4	124.1	124.0	122.4	121.7	119.5	119.5	119.3	119.0	118.0	117.8	117.2	120.0
12-3	Floor coverings.....	93.5	93.5	93.1	93.1	93.1	93.2	93.2	93.2	93.8	94.6	95.0	95.5	95.5	94.1
12-4	Household appliances.....	94.4	94.4	93.6	93.6	93.1	93.0	93.0	93.0	92.9	93.0	93.0	92.8	92.5	93.0
12-5	Home electronic equipment.....	77.2	77.2	77.8	77.7	77.9	77.9	77.9	77.9	78.1	78.1	78.5	78.6	78.7	78.2
12-6	Other household durable goods.....	134.8	133.0	133.3	131.1	131.2	131.4	131.2	130.2	130.0	130.0	130.0	129.6	129.1	130.6
13	Nonmetallic mineral products.....	116.9	116.5	114.5	113.9	113.8	113.5	113.0	113.0	112.8	112.6	112.3	111.9	111.2	112.8
13-11	Flat glass.....	119.0	118.4	117.8	116.2	116.2	116.2	116.2	116.2	115.2	114.6	113.4	112.3	110.8	114.6
13-2	Concrete ingredients.....	120.6	120.1	116.7	116.7	116.6	116.5	116.1	116.1	115.9	115.6	115.6	115.5	113.8	115.6
13-3	Concrete products.....	116.4	115.9	114.2	113.6	113.5	113.2	112.4	112.3	111.6	111.6	111.3	111.2	110.8	112.2
13-4	Structural clay products exc. refractories.....	119.4	119.4	118.5	118.5	117.8	117.5	117.0	116.9	116.9	116.8	116.7	116.0	115.9	117.0
13-5	Refractories.....	125.1	123.5	120.9	117.2	117.2	117.2	117.0	113.6	113.6	113.6	113.6	112.6	112.6	115.1
13-6	Asphalt roofing.....	100.8	101.8	101.2	94.0	96.7	96.7	96.7	100.9	100.2	97.9	99.2	99.2	99.6	98.3
13-7	Gypsum products.....	108.3	107.3	104.3	109.8	105.9	106.1	103.2	104.9	108.7	108.7	106.2	106.2	106.2	106.4
13-8	Glass containers.....	120.9	120.9	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1
13-9	Other nonmetallic minerals.....	111.0	111.0	110.6	110.6	110.6	109.6	109.2	109.0	109.0	109.0	109.0	107.6	107.6	109.1
14	Transportation equipment (Dec. 1968=100).....	102.9	102.9	102.7	102.7	102.3	100.0	99.9	100.4	100.3	100.2	100.1	100.0	100.1	100.7
14-1	Motor vehicles and equipment.....	109.1	109.1	109.0	109.0	108.7	106.1	106.0	106.6	106.6	106.5	106.4	106.3	106.4	107.0
14-4	Railroad equipment (Jan. 1961=100).....	117.7	117.4	115.7	115.1	115.1	114.4	114.3	114.3	111.8	111.1	110.2	110.2	108.5	112.4
15	Miscellaneous products.....	117.5	117.4	117.0	117.0	116.7	116.4	115.9	115.5	115.1	112.8	112.7	112.5	112.5	114.7
15-1	Toys, sporting goods, small arms, ammunition.....	114.2	114.1	112.7	112.8	112.3	112.1	111.8	111.2	110.9	110.7	110.8	110.5	110.1	111.3
15-2	Tobacco products.....	124.0	124.0	124.0	124.0	123.8	123.8	123.5	123.4	123.2	117.0	116.9	116.7	116.7	120.8
15-3	Notions.....	109.0	107.2	107.2	107.2	106.7	106.7	106.7	102.0	102.0	102.0	100.8	100.7	100.7	103.6
15-4	Photographic equipment and supplies.....	115.8	115.7	115.3	115.0	114.9	113.9	111.4	111.4	112.6	112.4	112.1	112.0	112.7	113.0
15-9	Other miscellaneous products.....	114.8	115.1	114.9	114.9	114.8	114.3	114.2	114.1	112.6	111.7	111.7	111.4	111.2	113.1

¹ As of January 1967, the indexes 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 1962, the indexes were converted from the former base of 1947-49=

100 to the new base of 1957-59=100. Technical details and earlier data on the 1957-59 base furnished upon request to the Bureau.

³ Retitled to cover the direct pricing of plastic construction products; continuity of the group index is not affected.

NOTE: For a description of the general method of computing the monthly Wholesale Price Index, see "BLS Handbook of Methods for Surveys and Studies" (BLS Bulletin 1458, October 1966), Chapter 11.

27. Wholesale price indexes for special commodity groupings¹[1957-59=100, unless otherwise specified]²

Commodity group	1970	1969											Annual average 1969	
	Jan. ³	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.		Jan.
All commodities—less farm products.....	116.3	115.4	115.0	114.7	114.1	113.8	113.6	113.3	112.9	112.5	112.3	111.8	111.3	113.4
All foods.....	125.0	123.3	123.1	119.8	120.1	119.9	120.7	119.9	119.0	115.4	115.7	115.0	115.5	119.0
Processed foods.....	124.5	122.8	122.1	121.8	121.6	121.9	122.5	122.0	119.9	117.0	116.2	115.8	115.4	119.9
Textile products, excluding hard and bast fiber products.....	101.3	101.0	101.1	101.1	101.3	101.3	101.0	100.8	100.6	100.9	100.8	101.0	101.5	101.0
Hosiery.....	92.8	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.7	92.4	92.5	92.7
Underwear and nightwear.....	116.2	115.9	115.7	115.7	115.6	115.6	115.6	114.5	114.3	114.2	114.3	114.2	114.3	115.0
Refined petroleum products.....	101.0	102.2	101.6	101.6	101.8	102.5	103.2	103.3	102.4	102.5	101.7	99.5	98.9	101.8
East Coast.....	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4
Mid-Continent.....	101.2	103.9	102.5	98.7	98.0	103.9	98.8	103.9	101.0	103.2	106.9	101.1	101.8	102.0
Gulf Coast.....	98.4	100.7	99.8	101.4	101.4	101.4	104.8	103.2	102.4	101.8	99.5	96.8	95.2	100.7
Pacific Coast.....	92.5	92.5	92.5	92.3	94.9	94.9	94.9	93.6	93.6	93.6	91.0	91.0	90.9	93.0
Midwest (Jan. 1961=100).....	98.0	99.1	98.4	97.4	97.0	97.0	97.0	98.7	97.4	97.6	98.4	95.8	95.8	97.5
Pharmaceutical preparations.....	97.0	97.1	96.7	96.5	96.5	96.2	96.3	96.2	96.2	96.2	96.1	95.9	95.9	96.3
Lumber and wood products excluding millwork and other wood products ⁴	119.3	120.6	122.2	120.1	120.8	121.7	123.5	130.0	142.5	151.1	161.6	155.0	146.0	134.6
Special metals and metal products ⁵	120.6	119.9	119.2	118.8	117.5	116.6	115.7	115.2	114.9	114.3	113.7	113.4	112.9	116.0
Machinery and motive products.....	118.4	117.9	117.4	116.9	115.5	115.1	115.2	114.9	114.7	114.4	114.3	114.0	113.8	115.3
Machinery and equipment, except electrical.....	132.6	131.9	130.6	129.9	129.0	128.3	128.1	127.5	127.1	126.6	126.4	126.0	125.5	128.1
Agricultural machinery, including tractors.....	139.3	139.1	138.5	135.5	135.3	134.6	134.7	134.3	134.3	134.4	134.4	134.1	133.7	135.2
Metalworking machinery.....	145.2	144.6	143.6	143.4	141.7	140.9	140.9	139.2	138.9	138.6	138.1	137.8	137.7	140.5
Total tractors.....	142.8	142.5	141.3	139.4	138.4	137.1	137.0	137.0	137.0	137.0	136.8	136.8	136.8	138.1
Industrial valves.....	128.5	127.3	125.8	125.8	124.8	124.8	125.8	126.5	123.5	123.1	122.4	120.4	120.6	124.2
Industrial fittings.....	123.2	119.4	118.6	118.0	118.0	115.3	115.3	115.9	115.9	114.7	114.7	113.0	112.0	115.9
Abrasive grinding wheels.....	107.1	107.1	107.0	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	102.6	103.3
Construction materials.....	117.4	116.9	116.9	116.3	115.9	115.7	115.9	116.9	118.9	120.2	121.6	119.8	117.4	117.7

¹ See footnote 1, table 26.² See footnote 2, table 26.³ Current monthly indexes are not available for this issue.⁴ Formerly titled "Lumber and wood products, excluding millwork."⁵ Metals and metal products, agricultural machinery and equipment, and motor vehicles and equipment.

28. Wholesale price indexes, ¹ by stage of processing[1957-59=100]²

Commodity group	1970		1969											Annual average 1969
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	
ALL COMMODITIES	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	112.8	111.9	111.7	111.1	113.0
CRUDE MATERIALS FOR FURTHER PROCESSING	113.0	110.7	109.9	109.0	108.7	108.7	109.5	110.2	111.2	109.7	105.7	105.2	103.8	107.9
Foodstuffs and feedstuffs.....	115.5	112.9	112.2	111.0	110.5	110.4	112.1	113.8	115.6	113.5	107.6	107.6	105.9	110.4
Nonfood materials except fuel.....	106.9	105.3	104.2	104.0	104.0	104.8	104.1	102.6	102.1	101.8	101.1	99.5	98.3	102.0
Manufacturing.....	105.9	104.3	103.2	103.0	103.0	103.9	103.2	101.6	101.0	100.8	100.0	98.3	97.0	101.0
Construction.....	117.5	116.4	115.3	115.3	115.1	114.9	114.1	114.1	113.8	113.2	113.2	113.1	112.8	114.0
Crude fuel.....	124.7	122.2	121.5	121.1	119.9	118.1	117.2	117.1	116.8	116.4	116.2	115.8	115.4	117.6
Manufacturing industries.....	121.2	119.6	118.8	118.6	117.8	116.7	115.6	115.5	115.3	115.0	114.9	114.7	114.2	116.0
Nonmanufacturing industries.....	129.4	125.8	125.0	124.5	122.8	120.1	119.4	119.3	118.7	118.2	117.8	117.4	117.1	119.8
INTERMEDIATE MATERIALS, SUPPLIES AND COMPONENTS	114.7	114.4	113.5	113.1	112.8	112.4	111.9	111.4	111.4	111.4	111.4	111.4	110.7	111.8
Materials and Components for Manufacturing.....	113.9	113.6	112.9	112.6	112.2	111.8	111.4	110.6	110.4	110.2	109.8	109.6	109.1	110.8
Materials for food manufacturing.....	121.5	121.1	119.9	120.0	119.2	118.3	118.4	117.8	117.8	116.3	114.1	113.4	113.1	116.8
Materials for nondurable manufacturing.....	102.3	102.3	101.6	101.7	101.5	101.7	101.7	101.2	101.1	100.9	100.8	100.7	100.6	101.2
Materials for durable manufacturing.....	122.7	122.1	121.4	120.4	120.0	119.6	118.7	117.4	117.1	117.5	117.3	117.0	116.0	118.1
Components for manufacturing.....	118.0	117.7	117.0	116.7	116.1	115.1	114.3	113.9	113.4	113.1	112.6	112.4	111.9	114.0
Materials and Components for Construction.....	117.3	117.3	116.8	116.7	116.2	115.8	115.5	115.4	116.0	117.6	118.4	119.7	118.3	116.9
Processed fuels and lubricants.....	103.0	102.4	102.7	102.1	102.3	101.0	100.6	100.8	100.9	100.5	100.3	100.4	99.6	100.9
Manufacturing industries.....	106.0	105.3	105.1	104.5	104.8	103.2	102.3	102.4	102.4	102.4	102.2	102.8	102.8	103.1
Nonmanufacturing industries.....	98.3	97.8	99.0	98.4	98.4	97.6	97.8	98.4	98.5	97.5	97.2	96.7	94.7	97.4
Containers.....	117.6	116.2	114.8	114.6	114.5	114.2	113.7	113.3	113.2	113.1	112.9	112.3	111.7	113.3
Supplies.....	120.1	119.7	116.9	115.9	115.6	115.1	114.4	114.3	113.8	113.3	113.9	112.9	113.0	114.4
Manufacturing industries.....	120.9	120.5	119.4	118.7	118.0	117.8	117.4	116.8	116.7	116.5	116.3	115.8	115.2	117.0
Nonmanufacturing industries.....	119.1	118.6	115.1	113.9	113.9	113.3	112.4	112.5	111.9	111.2	112.1	111.0	111.4	112.5
Manufactured animal feeds.....	122.8	123.7	114.1	111.6	112.3	111.7	110.5	110.8	109.3	107.4	110.8	108.1	109.8	110.6
Other supplies.....	113.4	112.3	111.8	111.4	111.0	110.4	109.7	109.7	109.6	109.4	109.2	108.8	108.6	109.8
FINISHED GOODS (Including Raw Foods and Fuels)	118.8	118.8	118.0	117.6	116.5	116.0	115.7	115.9	115.4	114.7	113.8	113.7	113.3	115.3
Consumer Goods.....	117.3	117.3	116.5	116.2	115.1	114.7	114.4	114.8	114.2	113.5	112.3	112.2	111.7	114.0
Foods.....	125.9	126.4	124.5	123.9	121.2	121.6	121.2	122.3	121.3	120.1	116.9	117.1	116.4	120.3
Crude.....	128.0	131.6	129.5	131.0	114.2	116.9	112.4	114.9	111.3	116.0	111.4	117.4	115.1	117.5
Processed.....	125.4	125.3	123.5	122.5	122.4	122.4	122.8	123.7	123.1	120.9	117.9	116.9	116.5	120.7
Other nondurable goods.....	114.6	114.2	114.1	113.8	113.6	113.3	113.0	112.6	112.2	111.4	111.5	111.2	110.7	112.3
Durable goods.....	107.6	107.4	107.2	107.1	106.9	105.3	105.2	105.6	105.5	105.4	105.4	105.3	105.1	105.8
Producer Finished Goods.....	123.1	122.9	122.3	121.5	120.8	119.9	119.3	119.3	118.7	118.5	118.1	118.0	117.8	119.3
Manufacturing industries.....	128.4	128.0	127.5	126.2	125.8	125.0	124.4	124.4	123.5	123.2	122.7	122.6	122.3	124.1
Nonmanufacturing industries.....	118.2	118.0	117.4	117.0	116.1	115.0	114.4	114.5	114.2	113.9	113.7	113.7	113.5	114.7
SPECIAL GROUPINGS														
Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds and leaf tobacco.....	118.5	116.0	114.5	114.1	113.7	113.9	112.5	110.7	110.2	109.7	109.0	107.2	105.5	110.5
Intermediate materials supplies and components, excluding intermediate materials for food mfg., and mfr.'d animal feeds.....	113.9	113.5	112.9	112.6	112.2	111.8	111.3	110.9	110.8	111.1	111.0	111.1	110.4	111.3
Consumer finished goods, excluding consumer foods.....	111.9	111.7	111.5	111.3	111.1	110.3	110.1	110.0	109.7	109.2	109.2	109.0	108.7	109.9

¹ See footnote 1, table 26.² See footnote 2, table 26.

NOTE: For description of the series by stage of processing, see "Wholesale Prices and Price Indexes," January 1967 (final) and February 1967 (final).

29. Wholesale price indexes,¹ by durability of product[1957-59=100]²

Commodity group	1970		1969											Annual average 1969
	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	
All commodities.....	116.4	116.0	115.1	114.7	114.0	113.6	113.4	113.3	113.2	112.8	111.9	111.7	111.1	113.0
Total durable goods.....	120.0	119.6	119.0	118.4	117.9	117.1	116.5	116.1	115.9	116.1	116.0	116.1	116.1	116.6
Total nondurable goods.....	113.9	113.4	112.4	111.9	111.2	111.1	111.1	111.3	111.2	110.3	108.8	108.6	108.0	110.3
Total manufactures.....	116.4	116.1	115.3	114.9	114.6	113.9	113.6	113.5	113.2	112.8	112.4	112.2	111.7	113.3
Durable.....	119.7	119.4	118.8	118.3	117.9	117.0	116.4	116.1	116.0	116.2	116.2	116.2	116.3	116.6
Nondurable.....	113.2	113.0	111.9	111.6	111.4	111.0	111.0	111.0	110.6	109.6	108.9	108.3	108.0	110.1
Total raw or slightly processed goods.....	116.0	114.8	113.9	113.1	111.0	111.6	111.5	112.2	112.6	112.1	108.6	109.1	107.8	110.9
Durable.....	133.8	128.9	125.3	124.0	122.8	123.7	119.7	114.8	114.9	113.3	110.6	108.1	107.1	115.8
Nondurable.....	115.1	114.1	113.3	112.5	110.3	110.9	111.1	112.1	112.4	112.0	108.5	109.1	107.8	110.7

¹ See footnote 1, table 26.² See footnote 2, table 26.

NOTE: For description of the series by durability of product and data beginning with 1947, see "Wholesale Price and Price Indexes, 1957" (BLS Bulletin 1235, 1958).

30. Industry-sector price indexes for the output of selected industries¹

[1957-59=100 unless otherwise indicated]

1963 SIC Code	Industry	Other bases	1969												1968 Dec.	Annual average 1968
			Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.		
MINING																
1111	Anthracite.....		118.4	114.9	111.4	111.4	108.0	108.0	104.2	104.2	106.2	107.4	107.4	107.0	107.0	99.9
1211	Bituminous coal.....		124.9	124.2	121.3	116.2	116.1	116.0	115.0	114.1	113.4	113.1	113.1	113.1	113.1	107.2
1311	Crude petroleum and natural gas.....		110.9	110.9	110.8	110.9	110.6	110.5	110.6	110.7	110.9	109.9	106.6	106.5	106.4	106.0
1421	Crushed and broken stone.....		114.5	114.5	114.2	114.2	113.6	113.6	112.6	112.6	112.5	112.5	112.5	111.3	109.5	
1442	Construction sand and gravel.....		123.0	123.0	123.0	122.5	121.5	121.5	120.7	120.6	120.8	120.6	119.8	119.8	118.6	116.6
1475	Phosphate rock.....		147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4	147.4
1476	Rock salt.....		107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	107.0	100.8	100.8	100.8	100.8	100.8
1477	Sulfur.....		115.8	115.8	124.1	165.4	165.4	165.4	165.4	165.4	165.4	165.4	165.4	173.7	173.7	171.6
MANUFACTURING																
2011	Meat slaughtering plants.....	12/66	114.0	113.5	113.8	116.2	117.4	121.7	121.2	114.8	108.0	104.6	103.9	104.2	100.1	101.1
2013	Meat processing plants.....	12/66	121.3	118.5	119.1	120.3	122.0	118.7	117.0	109.7	104.8	103.4	101.7	100.3	100.7	92.8
2015	Poultry dressing plants.....		105.7	103.3	101.7	104.0	107.8	103.3	101.7	102.3	96.1	99.6	98.5	95.9	90.4	93.8
2021	Creamery butter.....	12/66	106.3	105.1	105.1	105.1	104.9	104.9	104.8	104.8	104.9	103.4	103.3	103.4	105.0	102.6
2033	Canned fruits and vegetables.....	12/66	109.8	109.7	109.5	109.0	108.7	108.7	107.7	107.7	107.8	107.7	107.6	107.4	107.3	109.4
2036	Fresh or frozen packaged fish.....		150.8	154.1	146.5	145.9	143.8	146.4	139.9	140.4	136.8	141.7	141.4	140.1	139.0	131.5
2044	Rice milling.....		94.0	94.0	94.0	93.1	92.6	92.6	93.8	93.8	93.8	93.8	93.8	93.8	93.8	96.6
2052	Biscuits, crackers and cookies.....	12/66	109.7	109.7	108.0	107.1	104.5	104.4	104.4	104.4	104.3	104.3	104.3	104.3	104.3	104.3
2061	Raw cane sugar.....	12/66	107.0	110.1	110.5	109.6	108.9	104.5	109.5	109.5	109.0	108.5	107.7	107.5	106.8	105.4
2062	Cane sugar refining.....	12/66	108.9	109.3	109.2	108.4	108.1	107.6	107.6	107.2	105.8	103.9	103.6	103.6	103.2	101.9
2063	Beet sugar.....	12/66	106.1	106.6	106.7	106.4	106.3	105.7	106.7	104.9	105.0	102.3	102.2	102.6	102.5	102.3
2073	Chewing gum.....		106.2	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.0
2082	Malt liquors.....		107.3	107.3	107.7	107.1	107.2	107.2	106.7	106.0	104.9	104.9	104.9	104.9	104.9	104.6
2083	Malt.....	12/66	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2084	Wines and brandy.....		118.3	118.3	118.3	115.5	115.5	115.7	115.7	115.7	115.7	115.7	115.5	115.5	115.2	
2091	Cottonseed oil mills.....		99.4	95.8	91.5	97.0	97.2	98.3	92.9	92.7	93.9	93.6	93.7	95.0	94.5	108.9
2092	Soybean oil mills.....	12/66	88.6	88.0	91.0	85.7	87.4	87.1	87.0	86.3	85.6	84.8	83.1	83.3	82.2	86.9
2094	Animal and marine fats and oils.....	12/66	96.4	104.9	102.1	105.8	104.6	99.6	93.8	89.0	88.9	85.1	82.9	81.3	79.7	79.0
2096	Shortening and cooking oils.....		108.8	107.2	105.5	102.6	102.5	102.3	103.3	103.1	103.2	103.1	102.9	101.0	100.3	100.5
2098	Macaroni and noodle products.....	12/66	101.9	101.9	101.9	101.9	101.8	101.9	101.8	101.8	101.5	100.4	100.3	100.3	100.3	100.3
2111	Cigarettes.....		125.1	125.0	125.0	125.0	125.0	125.0	124.9	117.5	117.5	117.4	117.4	117.4	115.8	
2121	Cigars.....		107.3	107.3	106.8	106.8	105.2	103.8	102.7	102.7	102.7	102.1	102.0	102.0	101.7	101.6
2131	Chewing and smoking tobacco.....		141.4	140.6	138.5	138.3	138.1	138.1	137.1	137.0	136.0	134.7	134.7	132.4	132.4	130.7
2254	Knit underwear mills.....	12/66	107.8	107.7	107.7	107.7	107.7	107.7	106.3	106.4	106.3	106.3	106.3	106.3	105.7	104.7
2311	Men's and boys' suits and coats.....		142.7	142.2	140.4	139.4	138.5	137.1	135.8	134.4	134.7	134.3	134.3	134.2	133.4	127.3
2321	Men's dress shirts and nightwear.....		122.1	121.0	121.0	120.6	120.6	118.3	118.2	118.2	118.8	118.8	118.9	118.7	115.5	114.4
2322	Men's and boys' underwear.....	12/66	109.1	109.0	109.0	107.9	107.9	107.7	106.9	107.0	107.1	107.1	107.0	106.9	106.4	104.5
2327	Men's and boys' separate trousers.....	12/66	106.9	106.8	106.8	106.4	106.3	106.1	106.1	104.8	104.8	104.7	104.7	104.7	103.9	102.8
2328	Work clothing.....		119.1	119.0	119.0	118.3	117.7	117.4	117.4	116.6	116.6	116.6	116.6	116.5	115.1	114.3
2381	Fabric dress and work gloves.....		137.1	135.4	135.4	134.8	132.1	131.9	131.9	131.9	131.7	130.8	130.6	130.1	128.4	127.5
2426	Hardwood dimension and flooring.....	12/66	116.5	116.6	116.7	117.2	117.3	117.8	119.0	120.7	121.1	120.6	118.8	116.5	114.7	106.6
2442	Wirebound boxes and crates.....	12/67	110.7	110.0	110.0	110.0	108.6	108.3	107.4	107.4	106.5	106.4	106.4	106.3	105.6	104.6
2515	Mattresses and bedspreads.....	12/66	108.2	108.7	108.5	108.5	108.5	108.3	108.2	108.2	108.3	108.2	108.2	106.7	104.3	103.7
2521	Wood office furniture.....		139.2	138.9	137.6	135.9	134.3	134.3	134.3	133.4	132.8	132.2	131.7	131.1	131.1	128.0
2647	Sanitary paper products.....	12/66	115.3	115.3	113.9	113.5	113.1	112.3	111.5	111.1	111.1	111.1	110.2	108.0	108.0	107.1
2654	Sanitary food containers.....	12/66	101.3	101.2	100.6	100.4	100.4	100.1	100.7	100.6	100.6	100.4	100.7	100.8	100.5	101.5

See footnotes at end of table.

30. Industry-sector price indexes for the output of selected industries ¹—Continued

1963 SIC Code	Industry	Other bases	1969												1968	Annual Average 1968
			Dec. ²	Nov.	Oct.	Sept.	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	
MANUFACTURING—Continued																
2822	Synthetic rubber.....		96.0	96.0	96.0	96.0	95.9	95.9	95.9	95.9	95.8	95.3	95.3	94.5	94.7	95.3
2823	Cellulosic man-made fibers.....		95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.6	95.8	95.8	95.8	95.7	95.2
2824	Organic fibers, noncellulosic.....	12/66	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.0	96.1
2871	Fertilizers.....	12/66	85.0	85.0	85.4	88.3	88.5	88.7	99.2	99.2	99.2	99.4	99.4	99.4	100.3	102.0
2872	Fertilizers, mixing only.....	12/66	90.6	90.6	91.2	92.7	92.6	93.1	93.3	93.3	93.3	93.9	93.7	94.1	94.8	98.4
2892	Explosives.....		117.1	117.3	117.3	117.4	117.5	117.4	117.5	116.9	115.0	114.8	114.1	114.1	114.6	113.8
2911	Petroleum refining.....		97.8	97.3	97.3	97.5	98.1	98.8	98.8	98.0	98.0	97.1	95.1	94.7	95.1	96.3
3111	Leather tanning and finishing.....		120.4	120.5	121.2	122.3	121.5	121.7	122.1	122.2	122.8	116.7	116.7	117.0	116.1	112.7
3121	Industrial leather belting.....	12/66	118.3	117.2	117.4	117.6	118.2	117.5	113.5	115.4	112.0	111.5	110.5	109.7	111.0	110.4
3221	Glass containers.....		116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1	110.3	108.4
3241	Cement, hydraulic.....		114.9	114.9	114.9	114.9	114.8	114.8	114.8	114.8	114.8	114.7	111.7	108.5	105.9	105.7
3251	Brick and structural clay tile.....		125.1	125.1	124.4	124.4	123.5	123.5	123.4	123.2	123.0	121.5	121.5	121.4	121.2	117.8
3255	Clay refractories.....		126.2	122.2	122.2	122.2	122.0	117.8	117.8	117.8	117.8	116.7	116.7	116.7	116.7	116.0
3259	Structural clay products, n.e.c.....		116.4	116.4	115.9	115.1	115.0	114.4	114.8	115.3	115.3	115.3	115.1	115.0	114.1	114.3
3261	Vitreous plumbing fixtures.....		104.6	104.2	103.4	102.4	102.4	102.4	100.9	100.8	99.8	99.8	99.7	99.5	99.1	98.2
3262	Vitreous china food utensils.....		143.7	143.7	139.8	139.8	139.8	139.8	137.2	137.2	137.2	134.3	134.3	134.3	134.3	130.8
3263	Fine earthenware food utensils.....		131.2	131.2	130.9	130.9	130.9	130.9	127.0	127.0	127.0	123.3	123.3	123.3	123.3	123.1
3271	Concrete block and brick.....		115.4	115.0	114.9	114.6	114.5	114.5	113.7	114.2	114.2	114.5	113.4	112.9	111.7	110.8
3273	Ready mixed concrete.....	1958	115.7	114.9	114.7	114.4	113.7	113.5	112.7	112.6	112.3	112.0	111.8	111.7	110.3	108.6
3275	Gypsum products.....		104.7	110.1	106.2	106.4	103.6	105.2	108.9	108.9	106.5	106.5	106.5	106.5	106.5	105.8
3312	Blast furnace and steel mills.....		115.3	115.3	115.2	114.4	114.3	112.5	111.8	111.7	110.8	110.6	109.5	109.3	107.7	107.6
3315	Steel wire drawing, etc.....	12/66	108.6	108.5	108.4	107.5	107.0	106.4	106.3	105.9	105.1	105.1	105.1	104.5	103.7	101.5
3316	Cold finishing of steel shapes.....	12/66	113.6	113.7	113.7	112.1	112.1	109.0	109.0	108.7	107.5	107.4	107.4	107.2	107.0	104.6
3317	Steel pipe and tube.....	12/66	110.5	110.4	110.4	108.4	107.8	107.7	107.3	107.3	107.2	105.7	105.6	104.8	104.7	103.6
3333	Primary zinc.....	12/66	107.7	107.7	107.4	105.6	105.6	100.6	100.5	100.4	97.1	96.9	96.9	97.2	93.9	93.9
3334	Primary aluminum.....	12/66	114.0	114.0	114.0	110.0	110.0	110.0	109.0	109.0	109.0	109.0	109.0	109.0	105.4	104.0
3339	Primary nonferrous metals, n.e.c.....	12/66	134.8	138.9	133.9	131.8	123.8	120.5	120.1	120.1	120.3	119.5	119.8	122.3	119.4	122.3
3351	Copper rolling and drawing.....		171.4	166.4	166.4	165.9	160.6	154.5	152.3	151.7	147.8	144.6	142.8	142.8	134.3	140.3
3411	Metal cans.....	12/66	109.0	109.0	109.0	109.0	109.0	108.9	108.9	108.9	108.9	108.9	108.8	106.3	106.2	105.6
3423	Hand and edge tools.....	12/67	110.8	110.6	109.6	108.4	108.4	107.8	107.1	106.9	107.2	106.3	105.9	105.0	104.8	102.6
3431	Metal plumbing fixtures.....		100.4	100.3	99.8	99.4	98.8	98.7	97.3	96.6	95.8	95.8	95.7	95.3	95.0	93.5
3493	Steel springs.....	12/66	107.2	107.2	107.2	106.8	106.8	106.3	106.0	105.9	105.8	105.8	105.8	105.8	105.2	102.6
3496	Collapsible tubes.....	1958	103.8	103.7	103.7	103.7	103.6	103.6	103.5	103.2	103.2	103.1	103.0	102.9	101.5	100.2
3498	Fabricated pipe and fittings.....		130.9	130.8	130.4	130.4	130.3	130.3	129.7	129.7	129.7	123.4	123.4	123.4	122.7	119.8
3519	Internal combustion engines.....	12/66	110.9	110.8	110.1	109.7	109.1	108.0	108.3	108.3	107.9	107.5	106.9	106.7	106.6	104.5
3533	Oil field machinery.....		125.1	122.7	122.5	122.4	121.8	121.5	121.0	120.8	120.4	120.0	119.1	119.0	118.0	114.6
3534	Elevators and moving stairways.....	12/66	110.5	107.7	107.7	107.6	107.6	107.6	104.5	104.5	104.5	104.5	103.9	103.9	103.9	102.8
3537	Industrial trucks and tractors.....		134.0	133.9	133.6	132.6	131.2	131.2	130.5	129.1	128.6	128.6	128.2	128.1	127.2	123.7
3562	Ball and roller bearings.....	12/66	105.7	103.7	103.7	102.6	102.6	102.2	102.2	102.1	102.1	102.1	102.1	101.6	101.6	100.8
3572	Typewriters.....	12/66	103.9	103.8	103.2	103.1	103.1	101.5	101.4	101.3	100.5	100.6	100.6	100.6	100.6	101.3
3576	Scales and balances.....		133.4	133.2	133.0	133.0	129.9	129.9	128.6	127.0	127.0	126.9	126.9	126.3	126.4	123.4
3612	Transformers.....	12/66	100.3	99.3	100.2	101.6	101.6	101.3	101.1	100.2	100.8	102.2	102.3	104.6	104.6	106.1
3613	Switchgear and switchboards.....	12/66	107.1	106.7	105.7	105.9	103.6	104.4	104.9	104.0	103.6	104.3	104.9	104.8	104.4	104.3
3624	Carbon and graphite products.....	12/67	104.8	104.4	104.4	104.3	104.3	104.3	103.0	101.1	101.0	101.0	101.0	101.0	101.0	100.8
3635	Household vacuum cleaners.....	12/66	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.7	99.7	99.5	101.2
3641	Electric lamps.....	12/66	98.4	98.5	99.2	101.1	100.3	99.6	104.1	103.1	103.6	102.7	103.0	103.0	103.0	104.9
3652	Phonograph records.....		123.5	123.5	123.5	122.6	122.6	122.6	122.6	122.3	122.3	122.3	122.3	121.3	119.8	119.8
3671	Electron tubes, receiving type.....	12/66	121.2	121.3	121.3	121.2	117.8	117.8	117.8	117.8	117.8	117.7	109.6	105.9	105.9	105.9
3672	Cathode ray picture tubes.....	12/66	87.5	89.7	90.0	90.0	90.0	89.9	89.9	89.9	89.9	89.9	89.9	89.9	92.4	94.5
3673	Electron tubes, transmitting.....	12/66	103.2	103.2	103.1	103.0	102.9	102.9	102.1	102.1	102.0	102.0	102.0	102.1	102.0	101.4
3674	Semiconductors.....	12/66	92.7	92.8	92.7	92.6	92.7	92.6	92.6	92.7	92.7	92.6	92.4	92.4	92.5	92.3
3692	Primary batteries, dry and wet.....		115.4	115.4	115.3	115.2	115.2	115.2	115.2	115.2	115.2	114.9	113.8	112.5	111.3	111.3
3693	X-ray apparatus and tubes.....	12/67	117.4	115.6	115.4	113.1	112.8	112.8	112.5	112.6	111.0	111.3	111.4	111.1	107.7	105.1
3941	Games and toys.....	12/66	112.1	112.2	111.4	111.4	111.4	111.1	111.1	111.1	111.1	111.1	111.1	110.3	110.1	109.3

¹ For a description of the series, see BLS Handbook of Methods for Surveys and Studies (BLS Bulletin 1458), Chapter 12. See also, "Industry and Sector Price Indexes," in Monthly Labor Review, August 1965, pp. 974-982.

² Current monthly industry-sector price indexes are not available for this issue. At the beginning of each calendar year, changes in the sample for some indexes must be

made and necessary internal reweighting accomplished; this has caused the delay. Indexes beginning with January 1970 will be published in a later report.

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.

31. Work stoppages resulting from labor-management disputes ¹

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	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
1945.....	4,750	-----	3,470	-----	38,000	0.31
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
1967: January.....	286	443	94.4	163.5	1,247.9	.09
February.....	292	485	104.1	159.2	1,275.8	.10
March.....	368	545	129.9	195.4	1,507.8	.10
April.....	462	638	397.6	438.8	2,544.8	.19
May.....	528	769	277.8	584.9	4,406.4	.30
June.....	472	759	211.8	405.0	4,927.4	.33
July.....	389	682	664.6	865.5	4,328.7	.32
August.....	392	689	91.3	233.1	2,859.5	.18
September.....	415	681	372.8	473.6	6,159.8	.45
October.....	449	727	178.8	458.7	7,105.6	.47
November.....	360	653	277.1	559.5	3,213.2	.22
December.....	182	445	74.4	209.5	2,546.5	.18
1968: January.....	314	483	187.8	275.7	2,668.5	.18
February.....	357	569	275.0	451.3	4,104.1	.29
March.....	381	618	174.5	368.7	3,682.0	.26
April.....	505	748	537.2	656.7	5,677.4	.38
May.....	610	930	307.3	736.2	7,452.2	.49
June.....	500	810	168.5	399.9	5,576.8	.40
July.....	520	880	202.0	465.1	4,611.9	.30
August.....	466	821	153.8	359.6	4,048.9	.26
September.....	448	738	169.8	349.0	3,081.1	.22
October.....	434	741	279.0	414.5	3,991.7	.25
November.....	327	617	129.9	306.1	2,430.5	.17
December.....	183	408	64.1	189.2	1,692.5	.11
1969: January ²	320	480	182	255	3,380	.22
February ²	330	500	137	266	2,590	.19
March ²	420	600	112	261	2,080	.14
April ²	570	770	253	303	2,740	.18
May ²	660	870	219	329	3,530	.24
June ²	560	800	181	302	3,370	.22
July ²	500	760	220	307	3,420	.22
August ²	500	770	160	280	2,890	.19
September ²	490	740	157	215	1,830	.12
October ²	510	750	317	372	2,850	.17
November ²	310	550	132	323	4,050	.29
December ²	175	385	33	208	3,990	.25
1970: January ²	260	420	55	233	3,730	.25

¹ 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. ² Preliminary.

32. Output per man-hour, hourly compensation and unit labor costs, private economy, seasonally adjusted

[Indexes 1957-59=100]

Year and quarter	Output		Man-hours		Output per man-hour		Compensation per man-hour ¹		Real compensation per man-hour ²		Unit labor costs	
	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm	Private	Private nonfarm
1967: 1st quarter.....	146.4	148.2	110.6	115.5	132.4	128.3	147.9	143.5	129.0	125.2	111.7	111.9
2d quarter.....	147.2	148.9	109.6	114.9	134.4	129.6	150.3	145.5	130.1	126.0	111.9	112.3
3d quarter.....	148.9	150.7	110.3	115.3	134.9	130.6	152.2	147.6	130.4	126.4	112.9	113.0
4th quarter.....	150.2	152.1	110.9	116.0	135.4	131.1	154.3	149.7	131.1	127.2	114.0	114.2
Annual average.....	148.2	150.0	110.4	115.4	134.3	129.9	151.2	146.6	130.1	126.2	112.6	112.9
1968: 1st quarter.....	152.4	154.3	111.2	116.4	137.0	132.6	158.5	153.6	133.3	129.2	115.7	115.9
2d quarter.....	155.2	157.5	112.2	117.5	138.3	134.1	160.8	155.7	133.7	129.4	116.3	116.1
3d quarter.....	156.7	159.0	112.7	118.3	139.0	134.4	163.7	158.1	134.5	129.8	117.8	117.6
4th quarter.....	158.1	160.6	112.6	118.3	140.4	135.8	167.8	162.0	136.3	131.5	119.6	119.4
Annual average.....	155.6	157.9	112.2	117.6	138.7	134.2	162.7	157.4	134.4	130.0	117.4	117.3
1969: 1st quarter.....	159.1	161.5	113.7	119.6	139.9	135.0	170.5	164.4	136.7	131.8	121.8	121.8
2d quarter.....	159.9	162.3	114.6	120.7	139.5	134.5	172.7	166.5	136.2	131.3	123.8	123.8
3d quarter.....	160.8	163.1	115.0	121.4	139.8	134.4	175.8	169.1	136.8	131.5	125.8	125.8
4th quarter.....	160.6	163.4	114.3	121.0	140.5	135.0	179.3	172.1	137.5	132.0	127.7	127.5
Annual average.....	160.1	162.6	114.4	120.6	139.9	134.8	174.6	168.0	136.8	131.7	124.8	124.7
Percent change over previous quarter at annual rate ³												
1967: 1st quarter.....	-1.4	-2.2	0.0	-0.3	-1.4	-1.9	3.9	4.9	3.2	4.1	5.3	6.9
2d quarter.....	2.3	1.9	-3.7	-2.1	6.2	4.1	6.7	5.5	3.7	2.6	0.5	1.4
3d quarter.....	4.5	4.8	2.9	1.7	1.5	3.0	5.2	5.8	0.9	1.6	3.6	2.7
4th quarter.....	3.6	3.9	2.1	2.4	1.5	1.5	5.6	5.9	2.1	2.3	4.1	4.4
1968: 1st quarter.....	6.0	6.0	1.0	1.2	4.9	4.8	11.3	10.9	6.8	6.5	6.0	5.9
2d quarter.....	7.4	8.4	3.5	3.8	3.8	4.5	6.0	5.5	1.1	0.7	2.1	1.0
3d quarter.....	4.1	4.0	1.9	2.8	2.1	1.1	7.5	6.4	2.3	1.3	5.3	5.3
4th quarter.....	3.5	4.0	-0.3	0.0	3.8	4.0	10.4	10.3	5.5	5.4	6.3	6.0
1969: 1st quarter.....	2.6	2.2	3.8	4.6	-1.2	-2.3	6.4	5.8	1.4	0.8	7.6	8.3
2d quarter.....	1.9	2.0	3.2	3.5	-1.3	-1.4	5.4	5.4	-1.4	-1.4	6.8	6.9
3d quarter.....	2.2	2.0	1.3	2.4	0.8	-0.4	7.4	6.2	1.5	0.4	6.5	6.6
4th quarter.....	-0.3	0.6	-2.2	-1.3	2.0	1.9	8.2	7.5	2.3	1.7	6.0	5.5
Percent change over previous year ⁴												
1968: 3d quarter.....	5.3	5.6	2.1	2.6	3.1	2.9	7.6	7.2	3.1	2.7	4.4	4.1
4th quarter.....	5.3	5.6	1.5	1.9	3.7	3.6	8.8	8.3	3.9	3.4	4.9	4.5
1969: 1st quarter.....	4.4	4.6	2.2	2.8	2.1	1.8	7.6	7.0	2.6	2.0	5.3	5.1
2d quarter.....	3.0	3.0	2.2	2.7	0.8	0.3	7.4	7.0	1.9	1.5	6.5	6.6
3rd quarter.....	2.6	2.6	2.0	2.6	0.5	0.0	7.4	6.9	1.7	1.3	6.8	7.0
4th quarter.....	1.6	1.7	1.5	2.3	0.1	-0.6	6.8	6.2	0.9	0.4	6.7	6.8

¹ Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplementary payments for the self-employed.

² Compensation per man-hour adjusted for changes in the consumer price index.

³ Percent change computed from original data.

⁴ Current quarter divided by comparable quarter a year ago.

SOURCE: Output data from the Office of Business Economics, U.S. Department of Commerce. Man-hours and compensation of all persons from the Bureau of Labor Statistics.

NOTE: Data for 1967, 1968, and first quarter 1969 have been revised to reflect new benchmark information on output, employment and compensation.

Scheduled release dates for major BLS statistical series, May 1970

Title	Date of release ¹	Period covered	MLR table numbers
Productivity.....	May 1	1st quarter	32
The employment situation.....	May 8	April	1-14
Wholesale Price Index, final.....	May 11	April	26-30
Consumer Price Index.....	May 20	April	24-25
Work stoppages.....	May 27	April	31
Wholesale Price Index, preliminary.....	May 27	May	26-30
Factory labor turnover.....	May 28	April	15-16

¹ Dates of press releases are subject to change because of delays resulting from the recent mail strike.

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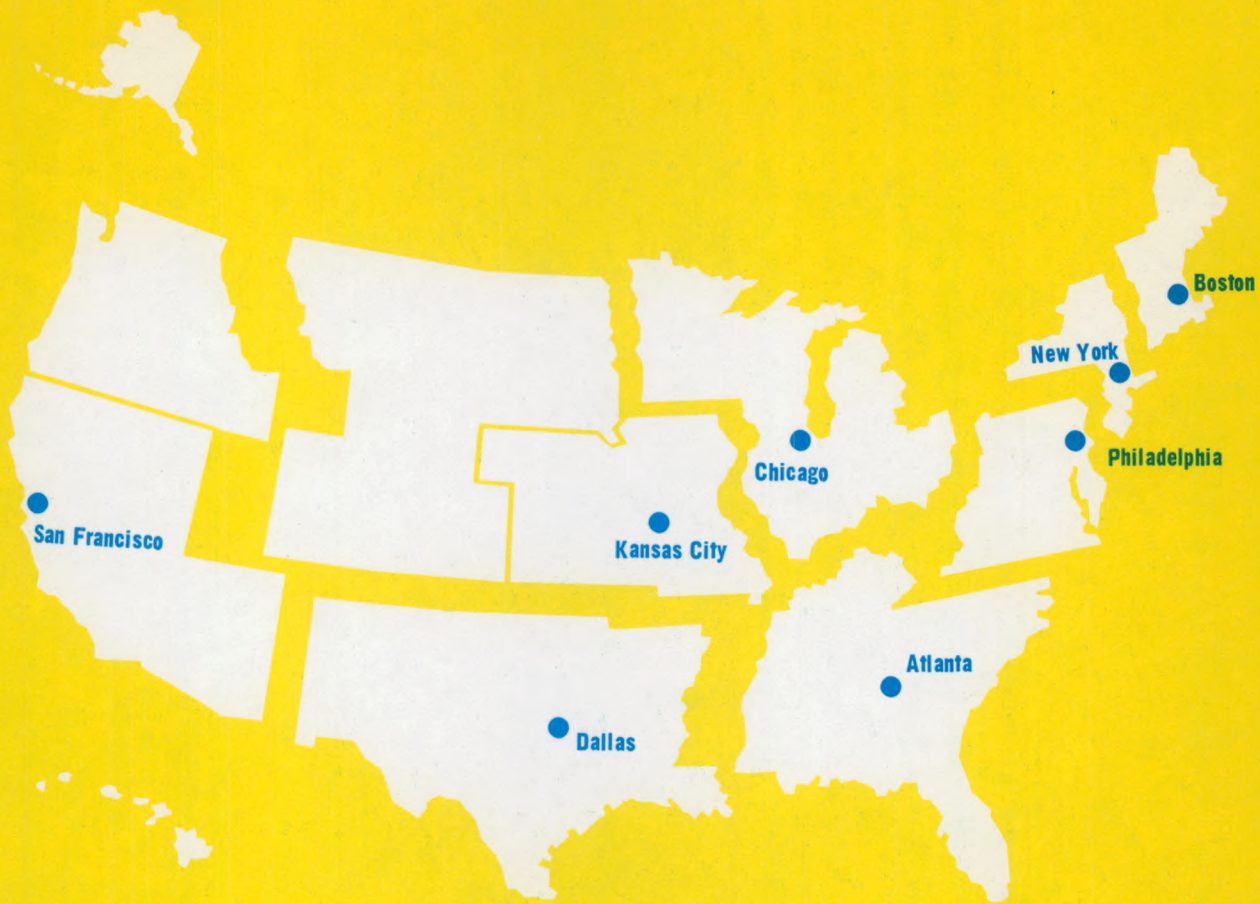
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